

ORIGINAL

THE STATE OF SOUTH CAROLINA
In the Supreme Court

APPEAL FROM GREENWOOD COUNTY
Court of General Sessions

Eugene C. Griffith, Jr., Circuit Court Judge

Order (S.C. Ct. App. filed February 5, 2016)
Appellate Case No: 2015-002315

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SC SUPREME COURT

THE STATE

PETITIONER,

v.

DAVID Z. LEDFORD

RESPONDENT.

APPENDIX
Volume 1 of 2

C. RAUCH WISE
305 Main Street
Greenwood, South Carolina 29646
(864) 229-5010

ATTORNEY FOR RESPONDENT

ALAN WILSON
Attorney General

J. BENJAMIN APLIN
Senior Assistant Deputy Attorney General

Office of the Attorney General
P.O. Box 11549
Columbia, SC 29211
(803)734-3727

DAVID M. STUMBO
Solicitor, Eighth Judicial Circuit

P.O. Box 516
Greenwood, South Carolina 29648
(864-942-8800

ATTORNEYS FOR PETITIONER

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STATE OF SOUTH CAROLINA
COUNTY OF GREENWOOD

EIGHTH JUDICIAL CIRCUIT
IN THE COURT OF COMMON PLEAS

STATE OF SOUTH CAROLINA,)
)
 PLAINTIFF,)
)
 -VS-)
)
 DAVID ZACKERY LEDFORD)
)
 DEFENDANT.)
 _____)

2015-GS-24-0668
TRANSCRIPT OF RECORD

NOVEMBER 2-5, 2015
GREENWOOD, SOUTH CAROLINA

B E F O R E:

THE HONORABLE FRANK R. ADDY, JR., JUDGE (JURY SELECTION ONLY)
THE HONORABLE EUGENE GRIFFITH, JUDGE, (TRIAL JUDGE), AND A
JURY

A P P E A R A N C E S:

ATTORNEY FOR PLAINTIFF:
ELIZABETH WHITE, ASSISTANT SOLICITOR
YATES BROWN, ASSISTANT SOLICITOR

ATTORNEY FOR DEFENDANT:
C. RAUCH WISE, ESQUIRE

TARA T. SCOTT, CVR
CIRCUIT COURT REPORTER

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1 THE COURT: Ms. White, will you call the case, please.

2 MS. WHITE: Thank you, Your Honor. The State calls
3 indictment number 2015-GS-24-668, The State of South
4 Carolina vs. David Zackery Ledford for inflicting great
5 bodily injury upon a child.

6 (Whereupon, a brief sidebar was held.)

7 THE COURT: Ladies and gentlemen, we're about to begin
8 the trial of the State of South Carolina vs. David Zackery
9 Ledford. I've been presented with an indictment, number
10 2015-GS-24-668 which charges Mr. Ledford with the offense of
11 inflicting great bodily injury upon a child. Ladies and
12 gentlemen, I will tell you at the outset that an indictment
13 is nothing more than the allegation against a defendant. It
14 is merely a piece of paper by which this charge is formally
15 brought into court. Of course, this indictment is not, in
16 any sense of the word, proof of any of the allegations
17 contained in the indictment. Obviously, in this case Mr.
18 Ledford has pled not guilty to these charges and that puts
19 the burden of proof on the State of South Carolina to prove
20 all elements of this indictment beyond a reasonable doubt.
21 So, again, this is just a piece of paper. But the State
22 does allege that Mr. Ledford on or about December 16, 2013
23 in Greenwood County willfully and unlawfully inflict great
24 bodily injury upon a child in that Mr. Ledford did violently
25 shake or hit the alleged victim, minor whose

1 date of birth is August 28, 2013, which acts caused great
2 bodily injury to that child in violation of Section 16-395
3 and against the peace and dignity of this state.

4 Ladies and gentlemen, in this case the State of South
5 Carolina is being represented by Elizabeth White and Yates
6 Brown. Ms. White if you would care to introduce yourself
7 and anyone seated at counsel table with you, please.

8 MS. WHITE: Thank you, Your Honor. Good morning, ladies
9 and gentlemen. My name is Elizabeth White and I am the
10 violent crimes prosecutor for the Eighth Circuit which is
11 Abbeville, Greenwood, Laurens, and Newberry. Also trying
12 the case with me is Deputy Solicitor Yates Brown, also with
13 the Eighth Circuit. Investigator Courtney Smith is with the
14 Eighth Circuit Solicitor's Office. And Investigator
15 Donchell Hill with the Greenwood County Sheriff's Office.

16 THE COURT: Thank you, Ms. White. Mr. Ledford is being
17 represented in this case by Rauch Wise of the Greenwood Bar.
18 Mr. Wise, if you care to introduce yourself and certainly
19 your client and anyone else.

20 MR. WISE: I am Rauch Wise, an attorney practicing law
21 here in Greenwood, South Carolina. This is Zack Ledford who
22 lives up in the Ware Shoals area.

23 THE COURT: Thank you, Mr. Wise. I now have certain
24 questions that are specific to this case that I need to ask
25 you. As we did earlier, ladies and gentlemen, if a question

1 applies to you just stand and let me know, okay? First of
2 all, is there any member of the jury panel who has
3 previously been represented or is currently being
4 represented by any of the attorneys in this case? Either
5 Ms. White, Mr. Brown, or Mr. Wise. Anybody who is currently
6 or has previously been represented by any of the lawyers.
7 If so, please stand. No one is standing.

8 Is there any member of the jury panel who has any
9 close, business, social, or familial relationship with any
10 of the attorneys involved in this case?

11 (Whereupon, a member of the jury pool stood.)

12 THE COURT: What's your name, sir?

13 JUROR: Tom Berry.

14 THE COURT: That's Mr. Berry, Juror number 10. Who do
15 you know, Mr. Berry?

16 JUROR: Rauch Wise.

17 THE COURT: How do you know Mr. Wise?

18 JUROR: I used to be a play-by-play announcer for a
19 local radio station and he did call for me.

20 THE COURT: For the basketball games?

21 JUROR: Yes.

22 THE COURT: All right. The fact that you and Mr. Wise
23 worked -- how long ago was that?

24 JUROR: Five or six years.

25 THE COURT: He's still doing it. Six years ago?

1 JUROR: I know I have to say that.

2 THE COURT: Certainly. The fact that you had this
3 relationship with Mr. Wise, would that affect your ability
4 to be fair and impartial to both sides?

5 JUROR: No, not at all. I just wanted to let you know
6 that I knew him.

7 THE COURT: Fair enough. Thank you, Mr. Berry.

8 Anyone else? No one is standing. The Defendant in
9 this case, again ladies and gentlemen, is David Zack
10 Ledford. Is there any member of the jury panel related by
11 blood or marriage to Mr. Ledford or has any close business
12 or social relationship with Mr. Ledford or any close member
13 of his family? If so, please stand. No one is standing.
14 For obvious reasons I'm not going to ask the same questions
15 of the alleged victim in the case.

16 Ladies and gentlemen, I am going to read a list of
17 potential witnesses who might testify in this particular
18 case. I don't know if all these individuals are going to
19 testify. Probably not, but I need you to pay close
20 attention to this list because after I read this list I am
21 going to ask if you are related by blood or marriage to any
22 of these folks or if you have any business or social
23 relationship with any of these individuals. Here are the
24 possible witnesses in this case. Toni Dickey, David
25 Pendergrass, Carolyn Franks, David Lanier, Christine

1 Cauthen, C-A-U-T-H-E-N, Dr. Richard Graham, Kenny Downing,
2 Donchell Hill, D-O-N-C-H-E-L-L Hill, Dr. Nancy Henderson,
3 Dr. Anthony Johnson, Dr. Christopher Troupe, Dr. Erik
4 Berning, B-E-R-N-I-N-G, Brianna Dickey, Bryan Penn, B-R-Y-A-
5 N is how you spell Bryan, P-E-N-N, Nicholas Edward, Kelly
6 Addy, Johnny Ledford, and Dr. John Galaznik, G-A-L-A-Z-N-I-
7 K, who I believe practices out of Tuscalousa, Alabama. Is
8 there any member of the jury panel related by blood or
9 marriage to any of those potential witnesses or has any
10 close business or social relationship with any of those
11 folks? If so, please stand.

12 (Whereupon, a member of the jury pool stood.)

13 THE COURT: Yes, sir. What's your name?

14 JUROR: David Walden.

15 THE COURT: Mr. Walden, which of those witnesses do you
16 know, sir?

17 JUROR: I went to school with Toni Dickey.

18 THE COURT: With who?

19 JUROR: Toni Dickey.

20 THE COURT: How long ago was that?

21 JUROR: High school.

22 THE COURT: Do you still keep in touch?

23 JUROR: No, but I do see her around town.

24 THE COURT: The fact that you see her around town or
25 that you've been in touch with her periodically, would that
26 affect your ability to be fair and impartial to both sides?

1 JUROR: No.

2 THE COURT: Okay. You can be fair to everybody
3 concerned and judge the case based solely on the evidence
4 and the law?

5 JUROR: Yes.

6 THE COURT: Thank you. What's your name, please?

7 JUROR: Waldrop, 133.

8 THE COURT: Mr. Waldrop, yes, sir. Who do you know?

9 JUROR: Donchell Hill.

10 THE COURT: How do you know Mr. Hill?

11 JUROR: I went to school with him.

12 THE COURT: How long ago was that, sir?

13 JUROR: Twenty years.

14 THE COURT: Twenty years? If he were to testify in this
15 case would that affect your ability?

16 JUROR: No, sir.

17 THE COURT: Very good. Thank you, sir. Yes, sir. Your
18 name?

19 JUROR: Ira Champion.

20 THE COURT: Juror number 24, Ira Champion. Who do you
21 know?

22 JUROR: Toni Dickey and Brianna Dickey.

23 THE COURT: How do you know those folks?

24 JUROR: Our children grew up together.

25 THE COURT: How long has it been since you've had any
26 real close contact with them, or do you see them regularly?

1 JUROR: I see them off and on. Not like we used to.

2 THE COURT: You still see them periodically?

3 JUROR: Yes.

4 THE COURT: If they were to testify in this particular
5 case, would that affect your ability to be fair and
6 impartial to both the State and the Defendant?

7 JUROR: I think I'd be fine.

8 THE COURT: And you're sure, sir? Very good. You can
9 have a seat. Yes, ma'am.

10 JUROR: Peggy Deloach. I've known Toni all her life.

11 THE COURT: Okay. Are you related to her or a family
12 friend?

13 JUROR: Family friend.

14 THE COURT: How often do you see Toni?

15 JUROR: I haven't seen her in years.

16 THE COURT: More than five years perhaps?

17 JUROR: Uh-huh.

18 THE COURT: Do you keep in touch with any members of her
19 family?

20 JUROR: I see posts on Facebook.

21 THE COURT: If any of those folks were to testify would
22 that affect your ability to be fair and impartial to both
23 the State and the Defense?

24 JUROR: (Shook her head, Negative)

25 THE COURT: It would not? Very good, ma'am. You can
26 have a seat. Anyone else? No one is standing. Ladies and

1 gentlemen, the State alleges that this incident took place
2 on December 16, 2013. Again, the alleged child victim in
3 this case, her name is minor [REDACTED]. It's alleged that
4 this assault of Miss Ledford took place out at Folly Bend
5 out toward the YMCA, or at least that's where it was called
6 in. Is there any member of the jury panel who has formed or
7 expressed any opinion about this case or who thinks that
8 they may know anything about the allegations involved in
9 this case? If so, please stand.

10 (Whereupon, a potential juror stood.)

11 THE COURT: Yes, sir. What's your name?

12 JUROR: John Turner.

13 THE COURT: Mr. Turner, I'm going to ask that you step
14 forward and speak with me down here next to the Court
15 Reporter, please.

16 (Whereupon, juror complied.)

17 THE COURT: What is it that you think you might have
18 heard?

19 JUROR: I know what happened because of friends and
20 family that knew him and knew the situation. I - because of
21 that I already kind of thought that -

22 THE COURT: You've kind of already formed an idea of
23 guilt or innocence?

24 JUROR: Yeah.

25 THE COURT: You don't need to tell me that.

26 JUROR: My ex-girlfriend was real good friends with --

1 THE COURT: Your name again?

2 JUROR: John Turner.

3 THE COURT: Mr. Turner, I'm going to let you sit this
4 case out. Stay with us, but you're not going to be serving
5 on this jury.

6 While I'm down here, ladies and gentlemen, I'm going to
7 ask some additional questions of you. If you need to come
8 forward - if this question applies to you and you need to
9 come forward, I'm going to ask that you simply stand up and
10 come forward when I ask these questions of you one by one.

11 First question, is there any member of the jury panel
12 or any close relative or close friend who has ever had a
13 child who was the victim of child abuse? Any member of the
14 jury panel who themselves, any of you who have ever been the
15 victim of child abuse or you've got a close relative or
16 friend who has been the victim of child abuse? If so,
17 please stand.

18 (Whereupon, juror stands.)

19 THE COURT: Yes, sir. Come on down here. Just form a
20 line down here.

21 JUROR: Darrell Moore.

22 THE COURT: What is your situation?

23 JUROR: I was recently involved in a case in North
24 Carolina where it was a little girl I became great friends
25 with and she died as a result of it. The case actually
26 became a federal law. It was the Kyla Davenport Act. Her

1 mom signed it into law. So I've been involved in that for a
2 couple of years. Pretty tough thing.

3 THE COURT: Darrell, this involves allegations of child
4 abuse. Do you think your involvement with this kid may just
5 touching on just a little too close?

6 JUROR: It's tough for me. I'm not going to lie to you.

7 THE COURT: I'm going to let you sit this one out. Go
8 ahead and take a seat and I'm going to excuse you with the
9 rest of the folks. Don't leave yet.

10 I'm Frank Addy. Your name, sir?

11 JUROR: Carlos Waldrop. My God-daughter was sexually
12 abused. That was several years ago.

13 THE COURT: This does not involve allegations of sexual
14 abuse. Do you feel like you can put aside anything like
15 that and be fair to everybody involved?

16 JUROR: As long as it's not sexual abuse.

17 THE COURT: Good enough. Thank you, sir. Number 133,
18 Mr. Waldrop. Yes, ma'am?

19 JUROR: Melinda Searles.

20 THE COURT: Ms. Searles, yes, ma'am. You work at MEG'S
21 House or something like that?

22 JUROR: I do.

23 THE COURT: So you're kind of familiar with abusive
24 situations?

25 JUROR: Uh-huh. (Affirmative)

26 THE COURT: The fact that you work at MEG'S House, would

1 that affect your ability to be fair to everybody concerned
2 here?

3 JUROR: No.

4 THE COURT: You're certain?

5 JUROR: Yes.

6 THE COURT: Absolutely certain?

7 JUROR: Yes, sir.

8 THE COURT: Thank you, Ms. Searles. You can have a
9 seat.

10 Hey.

11 JUROR: Number 57. My husband went to prison for sexual
12 misconduct with my daughter. Physical. Same difference.

13 THE COURT: This does involve allegations that either
14 the child was struck or the child was shaken. Would that
15 subject matter be hitting too close to home for you for you
16 to be fair, or can you be fair to both sides even though you
17 went through this with your husband and your daughter? I
18 just need an honest answer. I mean, if you can't you need
19 to tell me, or if you're worried.

20 JUROR: I have forgiveness, but yeah, that hits kind
21 of close to home.

22 THE COURT: Ms. Huff, I'm going to let you sit this one
23 out, okay. You won't be called to serve on this jury, but I
24 need you to stick around and I will release you with the
25 rest of the jurors.

1 JUROR: Thank you.

2 THE COURT: No one else is standing. Next question,
3 ladies and gentlemen. Is any member of the jury panel a
4 close relative or a close friend who has ever been accused
5 of child abuse? Any member of the jury panel who has ever
6 been accused of child abuse or any member of the jury panel
7 have a close family member or friend? If so, please stand.
8 Yes, ma'am. Please come on down.

9 I'm trying to remember your name.

10 JUROR: Gonzales.

11 THE COURT: Yes, ma'am, Ms. Gonzales.

12 JUROR: My ex-husband and his wife actually had a case
13 going for years over the abuse of their daughter.

14 THE COURT: Was it prosecuted here in Greenwood? How
15 long ago was that?

16 JUROR: She's thirteen. When she was born she had eight
17 broken bones that had healed on their own.

18 THE COURT: How are these people --

19 JUROR: My kids stay in their home.

20 THE COURT: This case involves an alleged assault or
21 shaken baby involving an infant. Is this subject matter
22 hitting a little too close to home for you to feel
23 comfortable?

24 JUROR: No. It's fine.

25 THE COURT: You can be fair to everybody involved?

1 JUROR: Yes, sir.

2 THE COURT: Your name, again, ma'am?

3 JUROR: Terri Gonzales.

4 THE COURT: Ms. Gonzales, thank you. Have a seat.

5 She's eligible. Is there any member of the jury panel who
6 has been approached by anyone concerning this case in the
7 week or so -- last couple of weeks since you got your
8 subpoena? Has anyone been approached by anyone trying to
9 talk about this particular case? If so, please stand.

10 No one is standing.

11 (Whereupon, the Court confers with counsel off the
12 record briefly.)

13 Is there any member of the jury panel who has read any
14 articles or studied what is known as Shaken Baby Syndrome?
15 Any member of the jury panel who has studied that type of
16 thing? I don't mean just passing reference to it in news
17 reports or maybe a short article, but anyone who has studied
18 it or feels like they may know a great deal about Shaken
19 Baby Syndrome?

20 Yes, ma'am. Y'all come on down.

21 THE COURT: What's your name again, ma'am?

22 JUROR: Dorothy Lake. I worked with the Department of
23 Social Services.

24 THE COURT: Oh, you worked with DSS.

25 JUROR: I worked with them for five years and worked

1 under Human Services and know about Shaken Baby Syndrome. I
2 know the signs of it and some of the causes.

3 THE COURT: Do y'all have any follow up questions of her
4 based on that information?

5 MR. WISE: Just if knowing what she's read and studied
6 can she be --

7 THE COURT: Even though you've read about it and studied
8 it and been involved with it through DSS, can you still keep
9 an open mind --

10 JUROR: I would have an open mind.

11 THE COURT: You can keep an open mind and listen to the
12 various testimony of the doctors, et cetera, and that type
13 of thing.

14 JUROR: Yes, I would.

15 THE COURT: You're fine then.

16 MR. WISE: What's her number?

17 THE COURT: Sixty-eight. Dorothy Lake. Yes, ma'am.

18 JUROR: Mya Kennedy.

19 THE COURT: Ms. Kennedy? Yes, ma'am.

20 JUROR: I have studied Early Childhood Development.

21 THE COURT: That was when you were in school or college
22 or something like that?

23 JUROR: Yes.

24 THE COURT: And that was part of the course work that
25 y'all did?

1 JUROR: Yes.

2 THE COURT: And you're working now at Kraft?

3 JUROR: Yes.

4 THE COURT: So you're not regularly employed through DSS
5 or another organization like that?

6 JUROR: Yes.

7 THE COURT: No additional followup based on that? Thank
8 you ma'am. Have a seat. That was Ms. Kennedy, 66. Ladies
9 and gentlemen, is there any member of the jury panel who
10 knows or is close friends with or has any relatives who work
11 at the Eighth Circuit Solicitor's Office here in Greenwood?
12 The Solicitor's Office also covers Abbeville, Greenwood,
13 Laurens, and Newberry Counties. Is there any member of the
14 jury panel who has any close friend or relative who works at
15 the Solicitor's Office? If so, please stand. No one is
16 standing. Is there any member of the jury panel who has any
17 deeply held moral or religious beliefs which would prevent
18 you from serving on a jury, listening to the facts, or
19 finding the facts as they may be and applying them to the
20 law? Any member have any religious problem or deeply held
21 moral problem with serving on a jury, please stand. No one
22 is standing. Is there any member of the jury panel who has
23 any reason whatsoever why you cannot give the State of South
24 Carolina and the Defendant in this case, Mr. Ledford, a fair
25 trial? Any reason why you feel like you just cannot be

1 objective in this case? If so, please stand. No one is
2 standing. Additional voir dire from the State?

3 MS. WHITE: No, sir.

4 THE COURT: Any from the Defense?

5 MR. WISE: No, sir.

6 THE COURT: All right. Very good. Strikes will be five
7 and five, subject to the objection we'll put on the record
8 in just a moment.

9 Ladies and gentlemen, we select a jury in criminal
10 cases a little bit differently than we do in civil cases.
11 What we do is if your name is called I need you to come
12 forward where this microphone is and then turn around and
13 face towards the back of the courtroom where the clock is.
14 At that point in time the State will have an opportunity to
15 either seat you or to excuse you. The Defense will have a
16 similar opportunity to either seat you or to excuse you.
17 Ladies and gentlemen, I'm going to tell you what I tell
18 every jury. If for some reason one of the attorneys ask
19 that you not serve on this case, don't take it personal.
20 There are about 14,000 lawyers in the State of South
21 Carolina and I guarantee you that every one of those 14,000
22 has a different way of picking a jury. It ain't personal
23 it's just business. So if they ask that you don't serve on
24 this case, again, don't take offense at it.

25 Again, ladies and gentlemen, if your name is called I

1 need you to come forward bringing any items that you brought
2 to the courthouse today. Stand where the microphone is,
3 turn around, and face the back of the courtroom.

4 Madame Clerk, if you'll give me a jury.

5 CLERK: 74, Bennie Mathis, Jr.

6 (Whereupon, juror comes forward.)

7 What says the State?

8 MS. WHITE: Please present Mr. Mathis.

9 CLERK: What says the Defense?

10 MR. WISE: Swear the juror.

11 CLERK: 132, Kenneth Walden.

12 (Whereupon, juror comes forward.)

13 What says the State?

14 MS. WHITE: Please present Mr. Walden.

15 CLERK: What says the Defense?

16 MR. WISE: Swear the juror.

17 CLERK: 113, Malinda Searles.

18 (Whereupon, juror comes forward.)

19 What says the State?

20 MS. WHITE: Please present Ms. Searles.

21 CLERK: What says the Defense?

22 MR. WISE: Please excuse Ms. Searles from the trial of
23 this case.

24 CLERK: 46, Terri Gonzalez.

25 (Whereupon, juror comes forward.)

1 What says the State?

2 MS. WHITE: Please present Ms. Gonzalez.

3 CLERK: What says the Defense?

4 MR. WISE: Please excuse Ms. Gonzalez from the trial of
5 this case.

6 CLERK: 140, Steve Webber.

7 (Whereupon, juror comes forward.)

8 What says the State?

9 MS. WHITE: Please excuse Mr. Webber from the trial of
10 this case.

11 CLERK: 66, Miya Kennedy.

12 (Whereupon, juror comes forward.)

13 What says the State?

14 MS. WHITE: Please present Ms. Kennedy.

15 CLERK: What says the Defense?

16 MR. WISE: Please excuse Ms. Kennedy from the trial of
17 this case.

18 CLERK: 133, Carlos Waldrop.

19 (Whereupon, juror comes forward.)

20 What says the State?

21 MS. WHITE: Please present Mr. Waldrop.

22 CLERK: What says the Defense?

23 MR. WISE: Excuse Mr. Waldrop from the trial of this
24 case.

25 CLERK: 112, Terri Seabolt.

1 (Whereupon, juror comes forward.)
2 What says the State?
3 MS. WHITE: Please present Ms. Seabolt.
4 CLERK: What says the Defense?
5 MR. WISE: Swear the juror.
6 CLERK: 24, Ira Champion.
7 (Whereupon, juror comes forward.)
8 What says the State?
9 MS. WHITE: Please present Mr. Champion.
10 CLERK: What says the Defense?
11 MR. WISE: Excuse Mr. Champion from this trial.
12 CLERK: 25, Ernestine Colson.
13 (Whereupon, juror comes forward.)
14 What says the State?
15 MS. WHITE: Please present Ms. Colson.
16 CLERK: Any excuse for cause?
17 MR. WISE: No excuse for cause. Seat the juror.
18 CLERK: 103, Michael Riddle.
19 (Whereupon, juror comes forward.)
20 What says the State?
21 MS. WHITE: Please present Mr. Riddle.
22 CLERK: What say the Defense?
23 MR. WISE: Swear the juror.
24 CLERK: 68, Dorothy Lake.
25 (Whereupon, juror comes forward.)

1 What says the State?

2 MS. WHITE: Please present Ms. Lake.

3 CLERK: What say the Defense?

4 MR. WISE: We would ask the juror be excused for cause.

5 THE COURT: Please approach.

6 (Whereupon, a bench conference was held out of the
7 hearing of the jury pool.)

8 THE COURT: The Defense motion is granted. Ms. Lake,
9 you may have a seat, ma'am.

10 CLERK: 72, John Martin.

11 (Whereupon, juror comes forward.)

12 What says the State?

13 MS. WHITE: Please excuse Mr. Martin from the trial of
14 this case.

15 CLERK: 100, Jonathan Reynolds.

16 (Whereupon, juror comes forward.)

17 What says the State?

18 MS. WHITE: Please excuse Mr. Reynolds from the trial of
19 this case.

20 CLERK: 102, Mark Rhodes.

21 (Whereupon, juror comes forward.)

22 What says the State?

23 MS. WHITE: Please present Mr. Rhodes.

24 CLERK: Any excuse for cause?

25 MR. WISE: No cause.

1 CLERK: 26, Laurie Craatz.
2 (Whereupon, juror comes forward.)
3 What says the State?
4 MS. WHITE: Please present Ms. Craatz.
5 CLERK: Any excuse for cause?
6 MR. WISE: No excuse for cause. Seat the juror.
7 CLERK: 35, James Duncan.
8 (Whereupon, juror comes forward.)
9 What says the State?
10 MS. WHITE: Please present Mr. Duncan.
11 CLERK: Any excuse for cause?
12 MR. WISE: No excuse for cause. Seat the juror.
13 CLERK: 3, Tonia Ashley.
14 (Whereupon, juror comes forward.)
15 What says the State?
16 MS. WHITE: Please present Ms. Ashley.
17 CLERK: Any excuse for cause?
18 MR. WISE: No excuse for cause. Seat the juror.
19 CLERK: 6, Diana Baquet.
20 (Whereupon, juror comes forward.)
21 What says the State?
22 MS. WHITE: Please seat Ms. Baquet.
23 CLERK: Any excuse for cause?
24 MR. WISE: No excuse for cause. Seat the juror.
25 CLERK: 33, Peggy Deloach.

1 (Whereupon, juror comes forward.)

2 What says the State?

3 MS. WHITE: Please present the juror.

4 CLERK: Excuse for cause?

5 MR. WISE: May we approach?

6 THE COURT: Come on up.

7 (Whereupon, a bench conference was held outside of the
8 hearing of the jury pool.)

9 The Defendant's objection is overruled. Ma'am, you may
10 have a seat in the jury box.

11 CLERK: 96, David Pitts.

12 (Whereupon, the juror comes forward.)

13 What says the State?

14 MS. WHITE: Please excuse Mr. Pitts from the trial of
15 this case.

16 CLERK: 135, Willie Lou Walters.

17 (Whereupon, juror comes forward.)

18 What says the State?

19 MS. WHITE: Please present the juror.

20 CLERK: Any excuse for cause?

21 MR. WISE: No excuse for cause. Seat the juror.

22 CLERK: Alternates?

23 THE COURT: We are going to pick one alternate. Strikes
24 one and two.

25 MR. WISE: Are we going to pick one or two alternates?

1 THE COURT: We'll do two. Let me make sure we have
2 enough. Give me two out of an abundance of caution.

3 CLERK: 78, Martavious Moates.

4 (Whereupon, the juror comes forward.)

5 What says the State?

6 MS. WHITE: Please excuse Mr. Moates from the trial of
7 this case.

8 CLERK: 89, Kenzie Owens.

9 (Whereupon, the juror comes forward.)

10 Any excuse for cause?

11 MS. WHITE: Not from the State.

12 CLERK: From the Defense?

13 MR. WISE: Seat the juror.

14 CLERK: 143, Vickie White.

15 (Whereupon, the juror comes forward.)

16 What says the State?

17 MS. WHITE: Please present Ms. White.

18 CLERK: Defense?

19 MR. WISE: Excuse the juror from this trial.

20 CLERK: 125, Rita Thomas.

21 (Whereupon, the juror comes forward.)

22 What says the State?

23 MS. WHITE: Please present Ms. Thomas.

24 CLERK: Defense?

25 MR. WISE: Swear the juror.

1 THE COURT: Any issues, aside from the Defendant's
2 objection earlier, any issues concerning selection or
3 composition from the State?

4 MS. WHITE: No, sir.

5 THE COURT: From the Defense?

6 MR. WISE: None from the Defense.

7 THE COURT: Ladies and gentlemen who were selected on
8 this jury I am going to ask that you step back into the jury
9 room in a moment. What I am going to do is release these
10 folks, have some parting words for them, and then I am going
11 to bring you out and probably release you until about 2:00.
12 I do need to give you some preliminary instructions before
13 Judge Griffith gets here. So if you would, adjourn to the
14 back and I'll have you back out here in about five to ten
15 minutes. Of course, don't talk about the case yet.

16 (Whereupon, the jury exited the courtroom at 12:00 p.m.
17 Jury pool released for the day.)

18 THE COURT: We're back on the record. The jury is out
19 of earshot. They are back in the jury room. Mr. Wise did
20 make at the time of the selection of the jury he made two
21 motions to excuse for cause. He asked to excuse Juror
22 number 68, that was the lady who came forward earlier and
23 indicated that she had worked for DSS and knew the signs of
24 Shaken Baby Syndrome and was very familiar with that
25 condition. I did grant his motion to excuse for cause based

1 upon those grounds. The next juror, Juror number 33 was Ms.
2 Peggy Deloach who I think indicated during voir dire that
3 she had known one of the individuals involved in this
4 action. I think she indicated that she hadn't seen that
5 person for five years or more, or words to that affect. The
6 record says what it says. I declined Mr. Wise's motion to
7 excuse her because, in the Court's opinion, she would be
8 able to be fair and impartial in this particular case having
9 had a chance to see her and judge her demeanor. I'm firmly
10 convinced that she was quite candid when she said she could
11 follow the law and impartially judge the facts in this case.
12 Your objection with regard to Juror 33 is noted for the
13 record. You also, previous to selection of the jury, at a
14 sidebar, Mr. Wise, approached and did request concerning the
15 strikes. I'll allow you to put on the record, Mr. Wise,
16 what you put on the record at sidebar. I said you were
17 protected and we did not need to put it on the record at
18 that time.

19 MR. WISE: I think Section 14-7-1110 violates equal
20 protection laws on the ground that it gives ten strikes to a
21 person charged with burglary, arson, criminal sexual
22 conduct, grand larceny and breach of trust when it is
23 prosecuted as a grand larceny, perjury, and forgery.
24 Virtually all those cases, except some of the criminal
25 sexual conduct cases, carry less time than my client is

1 looking at in this case, which is 20 years. And to tell him
2 he's only got five strikes while somebody who is charged
3 with perjury, which only carries seven years gets seven, I
4 think is denial of equal protection. I would further like
5 to put on the record that Juror 103 who was seated on this
6 jury is a juror that I would have stricken based simply upon
7 my personal observation and my notes before the jury
8 selection process started. Obviously I objected to Juror 33
9 and I would've stricken her had I had ten strikes, and I
10 also would've stricken Juror 135, which was the last juror
11 seated, based upon the preliminary report -- looking at them
12 and assessing them visually -- was another one that I
13 would've used a strike on.

14 THE COURT: The State does not wish to be heard on that
15 motion?

16 MS. WHITE: No, sir.

17 THE COURT: Very good. I respect your position Mr.
18 Wise. You make some very valid points. Some very good
19 points. The law is what the law is and I cannot see where
20 that is an equal protection violation, but your objection is
21 noted. I am not going to swear the jury. I will let Judge
22 Griffith do that at 2:00. I will go ahead and --

23 MR. WISE: Just for planning purposes, if we are going
24 to have some conversation about the statements of my
25 Defendant and some of them, while they are Jackson v. Denno,

1 some of them are just logistically is this coming in and if
2 so how, is this going to take at least thirty minutes?

3 MS. WHITE: The recording is an hour.

4 MR. WISE: If Judge Griffith comes back at --

5 THE COURT: If he's here at 2:00 then maybe I get the
6 jury back at 3:00 and they wait?

7 MR. WISE: Well, he doesn't have to listen to all the
8 hour, but he certainly has to listen to a good portion of
9 it. It's an hour and two minutes long if you want to get
10 exact about it.

11 THE COURT: The jury can blame me then. I'm going to go
12 ahead and ask that they be back at 3:15. I'll tell them
13 that they have some pretrial matters and then I can be the
14 bad guy since I'm going to be in Laurens anyway.

15 Let's have the jury out, please.

16 (Whereupon, the jury entered the courtroom at 12:13
17 p.m.)

18 THE COURT: Let the record reflect that the jury is back
19 and seated. Ladies and gentlemen of the jury, obviously I
20 am going to be on the road to Laurens in just a few moments.
21 Judge Griffith is going to be on his way here. I'm thinking
22 he's probably finished selecting his jury for the case that
23 I'm going to try over that way. But before I let you go, I
24 just need to give you a few ground rules and do a few
25 things. I'm not going to have the Clerk administer your

1 oath to you yet as jurors, but first of all I'm going to
2 appoint Mr. Riddle. Who is Mr. Riddle, Mike Riddle? If
3 it's okay with you I'm going to appoint you the foreperson.
4 Is that okay?

5 MR. RIDDLE: No, sir, no, sir.

6 THE COURT: You don't want to do it?

7 MR. RIDDLE: No, sir.

8 THE COURT: Well, let's find somebody else here. Let's
9 find another volunteer here. How about Mr. Mathis? Who is
10 Mr. Mathis? You were the first person selected. If it's
11 alright with you I'm going to appoint you as the foreperson,
12 Mr. Mathis.

13 MR. MATHIS: That's all right.

14 THE COURT: All right. No heavy lifting involved, sir.
15 All you have to do is be sure that everybody has their fair
16 say, okay? So when the jury is deliberating, just make sure
17 that everybody has time to say their piece and have a fair
18 say. Obviously, your vote will count no more than any other
19 juror's vote simply because you're the foreperson. If need
20 be you'll be the jury spokesperson here in court, okay, Mr.
21 Mathis? If you'll stay in that seat throughout the trial.
22 Our two alternates, Ms. Owens and Ms. Thomas, if y'all will
23 stay in those seats. The rest of you can move about as you
24 need to.

25 I anticipate that Judge Griffith is going to instruct

1 you that if you have any trouble hearing just raise your
2 hand and get someone's attention and that will be the
3 Judge's or the attorney's cue to ask you to speak up -- or
4 ask the witness to speak up while the trial is going on.
5 Judge Griffith will review this with you in greater detail,
6 but obviously, ladies and gentlemen, while this case is
7 going on you can't discuss this case with anyone. Not
8 friends, family members, not even your fellow jurors. You
9 can only start talking about the case once the case has been
10 submitted to you, you've heard the argument of counsel,
11 you've heard all the evidence, and you've received Judge
12 Griffith's instruction on the law. So at that point in time
13 when he tells you that you can talk about the case, that's
14 when you can start discussing it.

15 Ladies and gentlemen, on any breaks if you happen to go
16 to lunch with a friend, family member, one of your fellow
17 jurors that's perfectly fine. But, again, just don't talk
18 about the case. You can speak about anything else, but it's
19 very very important that you follow that instruction.
20 Additionally, it would be a violation of the oath you're
21 going to take after lunch if you were to perform any kind of
22 independent research, any sort of independent investigation
23 of the facts involved in this case. Don't go home tonight
24 and start Googling peoples' names. Don't decide that you're
25 going to play Dick Tracy and start investigating this

1 yourself. I think you appreciate probably the reason that
2 this is necessary.

3 Ladies and gentlemen, what's online and what's in the
4 paper, there's no filter for that. Someone can simply put
5 something out and it can be a one hundred percent boldfaced
6 lie. The rules of evidence are designed to give you the
7 best information to judge this case and the same simply
8 cannot be said by stuff that's put online. So, again, do
9 not perform or conduct any kind of independent research into
10 the facts of this case.

11 Judges have been faced with situations where jurors
12 disregarded that instruction and decided to go home and say,
13 "Oh, well. He must have been out of his mind when he gave
14 me that instruction," and started researching and Googling
15 stuff. When that information came to the attention of the
16 judge, I guarantee you they weren't happy at all. That
17 judge was not happy with that particular juror. So please
18 don't put Judge Griffith in that position; all right?
19 You'll get the information that you need from the witness
20 stand and from the other testimony and exhibits which are
21 presented. Now, the attorneys did tell me that there are a
22 few pretrial motions that need to be addressed in this case.
23 Again, since I cannot try this case I can't pass upon those
24 motions.

25 Normally, what I would do is let you go right now and

1 have you back at 2:00, but because Judge Griffith is going
2 to be getting here at 2:00 he is going to have some stuff
3 pretrial in this particular case and that may take him a
4 little bit of time. So, I'm going to ask that you be back
5 here at the courthouse at around 3:15 this afternoon.

6 If it turns out that we can't get moving on this case
7 with actual testimony, I'm sure Judge Griffith will let you
8 know because my law clerk is going to stay here and kind of
9 try to bring him up to speed on what we've done so far.
10 Switching judges like this midstream is a little bit
11 unusual. I've never seen it done, so we're kind of making
12 it up as we go along. That's why my law clerk is going to
13 try to fill him in when he gets here.

14 I'm not going to keep you any longer. If you would,
15 just be back at the courthouse at 3:15. Wear those buttons
16 back. They'll help identify you as jurors to security
17 downstairs and they'll get you into the proper room, either
18 the jury room here if that's possible or they'll bring you
19 into the jury assembly room where you were this morning.
20 But just look for the guys in the green jackets and they'll
21 get you where you need to be. I hope you have a great lunch
22 and be back at 3:15, and I'm sorry I won't see you guys
23 again this week. Have a great week. Thank you.

24 (Whereupon, the jury exited the courtroom for lunch at
25 12:17 p.m.)

1 THE COURT: Before we go off the record, just one word
2 of warning to anyone who is present, anyone who is in
3 attendance. Judge Griffith and I actually do agree on this
4 particular point. Jurors are not to be messed with while
5 the case is going on, so if there is anyone out there who is
6 in earshot of my voice and there is any effort to mess with
7 or to tamper with any of the 14 individuals who are selected
8 on a jury, my only regret will be that I will not be in a
9 position to deal with you as harshly as I'm sure Judge
10 Griffith will. So while the case is going on absolutely no
11 contact is to be had with any of the potential jurors by
12 anyone. That means by telephone, carrier pigeon, Facebook,
13 messenger, email, smoke signal, traditional mail, or what
14 have you. No contact whatsoever with any of the individuals
15 on that particular jury.

16 Your client has been out on bond?

17 MR. WISE: That's correct, Your Honor.

18 THE COURT: I will allow him to remain out on bond over
19 lunch. I am not going to mess with what Judge Griffith
20 does. You can convince him to let him stay out if Judge
21 Griffith is inclined to do that. Mr. Ledford, you do
22 understand that if you do fail to show up at any point in
23 the trial of this case, whether it's after lunch or in the
24 morning, that the case obviously will go on in your absence.
25 Do you understand that, sir?

1 DEFENDANT: Yes, sir.

2 THE COURT: So you promise you'll be back?

3 DEFENDANT: Yes, sir.

4 THE COURT: Obviously, Mr. Wise would much rather have
5 you present in this case. He would be at a severe
6 disadvantage if you were to leave. Very good. I think
7 that's got it. Take care.

8 (Whereupon, the trial was in recess until 2:00 p.m.
9 Judge Eugene Griffith replaced Judge Frank Addy as the trial
10 judge at this time.)

11 THE COURT: All right. We've had a brief in-chambers
12 conference and we've got to deal with several Jackson v.
13 Denno issues. Is that right, Mr. Brown?

14 MR. BROWN: That's correct.

15 THE COURT: And Mr. Wise?

16 MR. WISE: That's correct.

17 THE COURT: All right. Call your witness Mr. Brown or
18 Ms. White.

19 MR. BROWN: The State calls Donchell Hill.

20 MR. WISE: Let me speed things up a little bit. There's
21 a written statement, a recorded statement, and then some
22 mention of one in Greenville. Is that summarized in the
23 incident report?

24 MS. WHITE: There's the written statement from the
25 incident date and then the recorded statements from

1 Greenville.

2 MR. WISE: Oh, that's in Greenville?

3 MS. WHITE: Yes, sir.

4 MR. WISE: I thought the recording was here for some
5 reason. I think one of those conversations his father was
6 present. The other one he wasn't.

7 THE COURT: So there's just two statements; one written
8 and one recorded. Will that be video or audio?

9 MR. WISE: Audio.

10 MR. BROWN: Audio.

11 THE COURT: Okay. All right. Present them in whichever
12 order you like.

13 (Whereupon, DONCHELL HILL, having first been duly
14 sworn, testified as follows:)

15 DIRECT EXAMINATION

16 BY MR. BROWN:

17 Q. Please state your name.

18 A. Donchell Hill.

19 Q. Mr. Hill, where do you work?

20 A. The Greenwood County Sheriff's Office.

21 Q. What division are you in?

22 A. Criminal investigations.

23 Q. For purposes of this hearing, did you investigate the
24 case we're here for trial?

25 A. Yes, sir.

- 1 Q. When did you get involved in this case?
- 2 A. I believe it was on December 16th.
- 3 Q. 2013?
- 4 A. Yes, sir.
- 5 Q. And on the 16th of December, 2013, did you have an
- 6 opportunity to speak with Zack Ledford?
- 7 A. I did.
- 8 Q. Is Mr. Ledford here in the courtroom?
- 9 A. Yes, he is.
- 10 Q. How did that meeting start?
- 11 A. I was called by the shift captain that night to respond
- 12 to the hospital in reference to a three-month-old
- 13 infant. When I got there he briefed me on what had
- 14 happened and at that point I asked Mr. Ledford would he
- 15 follow me back to the Sheriff's Department. He was the
- 16 last person with the child that night.
- 17 Q. Where were you when you asked him to follow you back to
- 18 the Sheriff's Office?
- 19 A. I was at Self Regional Hospital.
- 20 Q. Who drove Mr. Ledford back to the Sheriff's Office?
- 21 A. His father.
- 22 Q. Is his father here in the courtroom today?
- 23 A. Yes, sir.
- 24 Q. Once you were back at the Sheriff's Office, did you, in
- 25 fact, speak to Mr. Ledford?

1 A. I did.

2 Q. Who else was present?

3 A. His father.

4 Q. At that time was Mr. Ledford under arrest?

5 A. No, sir. He was not.

6 Q. Did he appear to be under the influence of any kind of
7 alcohol or drugs?

8 A. No.

9 Q. Did he appear to have any kind of mental disability or
10 some kind of physical disability that would cause him to not
11 understand your questions?

12 A. No.

13 MR. WISE: Your Honor, maybe to speed things up a little
14 bit, we are not seriously contesting the first statement
15 because his father was present. Our main concern is the
16 ones after that because his father was not present.

17 THE COURT: All right.

18 MR. WISE: If this is the one that resulted in the
19 three-page written statement?

20 MR. BROWN: That's right.

21 THE COURT: So is it stipulated that that statement was
22 received by the Sheriff's Department consistent with Jackson
23 v Denno warnings and advisement of rights and it is
24 admissible for the purposes of trial?

25 MR. WISE: Right, with his father present and a sixteen-

1 year-old there with his father.

2 THE COURT: So that would be a handwritten statement by
3 someone, but not the audio statement?

4 MR. WISE: Let me see the one you -- I think -- I'm
5 pretty sure, but give me one second. Three page? Four
6 page? Yeah.

7 THE COURT: Okay. So that one would be --

8 MR. BROWN: I'm going to mark it as State's Exhibit 1.

9 THE COURT: So y'all are not challenging the
10 voluntariness of that statement?

11 MR. WISE: I think with his father present it would be
12 very difficult.

13 THE COURT: Very good. All right, Mr. Brown. Focus on
14 the other one.

15 MR. BROWN: Well, Judge, just a few more questions
16 regarding this one.

17 RESUMED DIRECT EXAMINATION BY MR. BROWN:

18 Q. Mr. Hill, when you gave him -- when Mr. Ledford gave
19 you this statement -- I'm showing you State's Exhibit
20 number 1. Did you, in fact, read his Miranda warnings
21 to him?

22 A. Yes, sir. I did.

23 Q. How did you read those warnings? What did you read off
24 of?

25 A. A card that I carry.

1 Q. Did he fully understand those warnings?

2 A. He did.

3 Q. At any time did he ask for an attorney to be there?

4 A. He did not.

5 Q. And he freely and voluntarily gave that written
6 statement?

7 A. Yes.

8 Q. On the 16th of December, 2013?

9 A. Yes.

10 Q. Mr. Hill, did his father ever ask for an attorney to be
11 present at that time?

12 A. No.

13 Q. Mr. Hill, moving forward to December 20, 2013, did you
14 have the opportunity to speak with Zack Ledford again?

15 A. Yes.

16 Q. Where did you speak with Mr. Ledford again?

17 A. We were in Greenville, I believe it was at the
18 children's hospital.

19 Q. Was it part of the main hospital?

20 A. I believe it was.

21 Q. Who was present during that interview?

22 A. Investigator Downing, Agent Christine Cauthen from
23 SLED, and myself.

24 Q. And Mr. Ledford?

25 A. And Mr. Ledford.

1 Q. Was that interview recorded?

2 A. Yes.

3 Q. By audio?

4 A. By audio.

5 Q. On that recording does it capture the entire interview?

6 A. Yes.

7 Q. At the beginning of the interview did you read Mr.
8 Ledford his Miranda warnings?

9 A. I did.

10 Q. Was Mr. Ledford under arrest at that time?

11 A. Not at that time.

12 (Whereupon, Advice of Rights was marked as State's Exhibit
13 number 2 for identification.)

14 Q. I'm going to show you what's been marked as State's
15 exhibit 2. What is that?

16 A. This is a Miranda -- advice of his rights.

17 Q. And when you are reading him those rights did he appear
18 to be under the influence of any alcohol or drugs?

19 A. No.

20 Q. Did he appear to have any kind of emotional outbursts
21 or anything like that that would cause him not to
22 understand those rights?

23 A. No.

24 Q. And, again, you already said this was at Greenville
25 Memorial Hospital?

- 1 A. Yes.
- 2 Q. Were any promises or threats made to Mr. Ledford to get
- 3 him to make that statement?
- 4 A. No.
- 5 Q. Was he free to leave at any time?
- 6 A. Yes.
- 7 Q. Was he denied any access to bathroom, food, or water?
- 8 A. No.
- 9 Q. Was he under arrest at that time?
- 10 A. No.
- 11 Q. In that room did he ever ask for an attorney to be
- 12 present?
- 13 A. No.
- 14 Q. Did he ever ask for his daddy to be present?
- 15 A. No.
- 16 Q. From what you understand, by looking at him, did he -
- 17 did you feel he understood everything you were asking
- 18 him?
- 19 A. Yes.
- 20 Q. Did he understand his rights?
- 21 A. Yes.
- 22 Q. By understanding his rights, did he initial -- did you
- 23 read all his Miranda warnings to him?
- 24 A. I did.
- 25 Q. For all of the different points of Miranda?

- 1 A. I did.
- 2 Q. What did Mr. Ledford do when those were read to him?
- 3 A. After I read it to him I asked him did he understand
- 4 and he initialed one through seven.
- 5 Q. His initials?
- 6 A. His initials, yes.
- 7 Q. And at the bottom of it did he make any signature?
- 8 A. Yes, he signed.
- 9 Q. What was the date?
- 10 A. December 20, 2013.
- 11 Q. What time did he make that? What time of day?
- 12 A. 3:28.
- 13 Q. In the afternoon?
- 14 A. Yes.
- 15 Q. During the interview with Mr. Ledford did he ever ask
- 16 for his father to be present?
- 17 A. No.
- 18 Q. Did he ever ask for any adult to be present?
- 19 A. No.
- 20 Q. He never asked for an attorney?
- 21 A. No.
- 22 Q. During his -- during this interview, who all asked Mr.
- 23 Ledford questions?
- 24 A. Investigator Downing, Agent Cauthen, and I asked him a
- 25 few myself.

1 Q. And to the best of your knowledge, was Zack Ledford's
2 statement freely and voluntarily given?

3 A. Yes.

4 Q. Again, was he ever threatened or coerced to give a
5 statement?

6 A. No.

7 Q. And he didn't appear to have trouble understanding his
8 rights?

9 A. No.

10 Q. Investigator Hill, when you were questioning Zack
11 Ledford, were you aware that he had been arrested on
12 prior occasions?

13 A. Yes.

14 Q. He had been around the system before, the judicial
15 system?

16 A. Yes.

17 Q. Mr. Hill, during this whole investigation was Mr.
18 Ledford the only person you talked to in this case or
19 did you talk to other family members?

20 A. I talked to his girlfriend at one point.

21 Q. The mother of the child?

22 A. Yes.

23 Q. And the grandparents of the child?

24 A. Yes.

25 Q. Trying to get an idea of what happened?

1 A. Yes.

2 Q. When did you seek a warrant for Mr. Ledford's arrest?

3 A. I believe it was right after the second interview with
4 him.

5 Q. Do you know when the warrant was served?

6 A. I don't recall.

7 Q. I'm going to show you State's Exhibit number 4 and see
8 if you can pinpoint a date that you presented that
9 warrant to a magistrate.

10 A. January 24, 2014.

11 Q. Is that when it was served on Mr. Ledford?

12 A. Yes.

13 Q. So it was actually over a month after his audio
14 statement you, Agent Cauthen, and Investigator Downing
15 made?

16 A. Correct.

17 Q. The warrant was presented to Mr. Ledford?

18 A. Correct.

19 MR. BROWN: No further questions with regard to this
20 hearing.

21 CROSS EXAMINATION

22 BY MR. WISE:

23 Q. Officer, the first time you talked to Zack his father
24 was present?

25 A. Yes.

1 Q. How did that initial conversation come about?

2 A. I just wanted to get a feel for the incident that took
3 place that night since he was the last person with the
4 child.

5 Q. Where did it take place?

6 A. It was at the Greenville County Sheriff's Office.

7 Q. How did he get to the Greenville County Sheriff's
8 Department?

9 A. His father.

10 Q. Did you call him and ask him to come down?

11 A. As far as my memory, I believe he was already at the
12 hospital.

13 Q. At the hospital?

14 A. His father was, if I can recall.

15 Q. Okay. And you asked him to come over to the Sheriff's
16 Department?

17 A. Yes, I asked him could he come --

18 Q. Okay, and his father came with him?

19 A. Uh-huh.

20 Q. All right.

21 THE COURT: Let me make sure I understood you. First
22 interview --

23 MR. WISE: First interview --

24 THE COURT: -- is at Greenwood, Self Hospital,
25 Greenwood Sheriff's Department. Second interview is at

1 Greenville Hospital at the Greenville Hospital?

2 MR. WISE: Right.

3 THE COURT: Okay. I wanted to make sure I heard that
4 right.

5 MR. WISE: Well, actually, the Ballentine --

6 THE COURT: Whatever. But there was a church hospital
7 up there in Greenville.

8 Q. So the first time he and his father came to see you?

9 A. Yes.

10 Q. And he and his father had no problem talking to you?

11 A. Right.

12 Q. Did he occasionally look to his father for some
13 guidance when you were talking to him?

14 A. I don't recall.

15 Q. You don't recall. All right. Well, at least you knew
16 he felt comfortable talking to you with his father
17 present.

18 A. Yes.

19 Q. All right. Now, the second conversation in Greenville
20 -- you were in Greenville and he was at the same
21 hospital you were at?

22 A. Yes.

23 Q. And you interviewed him in what room; if you recall?

24 A. It was like a waiting room, a few chairs in there.

25 Q. All right. Now, and he was up there with his daughter?

- 1 A. Yes.
- 2 Q. Did you seek him out to go talk to him or did he just
3 happen to be where you were?
- 4 A. I went up there to check on the child and he was there.
- 5 Q. And there's no question about the fact that, at least
6 by the 20th of December, Zack Ledford was a prime
7 suspect in this case.
- 8 A. Yes.
- 9 Q. Based upon what some doctors had told you.
- 10 A. Ye
- 11 Q. It wasn't based on what anybody else had told you.
- 12 A. Yes.
- 13 Q. Just the medical personnel.
- 14 A. Yes.
- 15 Q. Now, on the 20th, his father was not at the hospital
16 with him?
- 17 A. No.
- 18 Q. So did you ask him if he wanted his father present?
- 19 A. No.
- 20 Q. Did you think it would be relevant to have his father
21 present?
- 22 A. No, sir.
- 23 Q. Did you know how old he was?
- 24 A. Yes.
- 25 Q. You knew he was 16?

- 1 A. Yes.
- 2 Q. Not even old enough to go buy a car.
- 3 A. Yes, sir.
- 4 Q. Right?
- 5 A. Yes.
- 6 Q. Now, also in that interview, somebody -- I can't
- 7 remember who right now. There was a woman doing some
- 8 of the questioning?
- 9 A. Yes.
- 10 Q. Who was that?
- 11 A. That was Agent Cauthen.
- 12 Q. Okay. I believe she told Mr. Ledford at one point
- 13 that, "We can't help you unless you tell us the truth."
- 14 A. I don't recall.
- 15 Q. Words to that effect. Didn't she at one time tell him,
- 16 "We can't help you unless you tell us the truth." or
- 17 words to that effect?
- 18 A. I don't know if it was in that exact --
- 19 Q. Maybe not exact, but words to that effect.
- 20 A. Yes.
- 21 Q. Correct?
- 22 A. Yes
- 23 Q. And that is, to some extent, certainly a promise of
- 24 reward. You help us we'll help you. Correct?
- 25 A. I would think so.

- 1 Q. Well, he's 16. How do you think he would interpret it?
- 2 A. I mean, I could see where you would think that, but --
- 3 Q. You could see where a 16-year-old would think that;
- 4 correct?
- 5 A. Correct.
- 6 Q. You didn't correct that conversation?
- 7 A. Huh?
- 8 Q. You didn't tell her that, no, we can't promise you
- 9 anything if you tell us -- talk to us; correct?
- 10 A. Right.
- 11 Q. And you, at no time, asked him if he wanted his father
- 12 present.
- 13 A. No.
- 14 Q. Did you ask him if he had even called his father?
- 15 A. I did not.
- 16 Q. So you left his father out of the mix entirely?
- 17 A. Right. Correct.
- 18 Q. Notwithstanding the fact that the previous interview
- 19 his father was present.
- 20 A. Correct.
- 21 Q. And you didn't think it was necessary to call his
- 22 father?
- 23 A. No, sir.
- 24 Q. Or to ask him if he wanted his father there, or his --
- 25 I think by then did you know his mother lived in

1 Colorado?

2 A. Yes.

3 Q. So you knew the only adult -- the only parent he had
4 here was his father?

5 A. Yes.

6 Q. Were you present when Zack was told if somebody doesn't
7 tell us something the child is going to be put with a
8 foster parent?

9 A. I don't recall that.

10 Q. You don't remember that. Okay. You may not have been
11 present then. Also, the woman in that interview kept
12 telling Zack that you have to tell us exactly what
13 happened so we can get the doctors to help **minor** ;
14 didn't she?

15 A. Correct.

16 Q. Well, that's kind of a promise isn't it, or a threat?

17 A. I wouldn't say it's a threat. She --

18 Q. Well, basically what you're telling the 16-year-old is
19 if you don't tell us exactly what happened your child
20 could die.

21 A. I don't see it as a threat.

22 Q. Well, that wasn't a threat to you?

23 A. No, sir.

24 Q. But you admit that she said tell us what happened so
25 the doctors can help **minor** .

1 A. Yes.

2 Q. Do you know of anything the doctors could've done to
3 help minor with what he told them or did he have any
4 information that would've helped the doctors that you
5 know of?

6 A. No, sir. I don't.

7 Q. You didn't? So literally then that statement wasn't
8 correct, that you needed this information to help the
9 doctors?

10 A. (Non-verbal response)

11 Q. Excuse me?

12 A. Sir?

13 Q. That statement was not correct --

14 MR. BROWN: Judge, I don't know if he would be able to
15 answer that question. He's not a doctor.

16 MR. WISE: Let me rephrase it then.

17 THE COURT: All right. I'll let you rephrase it.

18 Q. Had you been given any information that potentially
19 Zack Ledford knew that could help the doctors? Had
20 anybody come up to you and said see if you can find out
21 A, B, and C so the doctors can help this child?

22 A. No, sir.

23 Q. So you had no medical information to back that up?

24 A. No.

25 Q. Thank you.

1 REDIRECT EXAMINATION

2 BY MR. BROWN:

3 Q. Again, Mr. Hill, during your questioning of Mr. Ledford
4 in Greenwood and in Greenville his Miranda rights were
5 read to him?

6 A. Yes.

7 Q. He was not under arrest?

8 A. Correct.

9 Q. And in Greenville did he ever ask for his dad to be
10 present?

11 A. No.

12 Q. Did he ever ask for an attorney to be present?

13 A. No.

14 Q. And to kind of touch on what Mr. Wise was asking you at
15 the end, the doctors, did they ever ask you to get some
16 particular information out? To your understanding,
17 were the doctors running tests on **minor**?

18 A. Yes.

19 Q. And the purpose of running tests on **minor** was to find
20 out problems or any disorders?

21 A. Any, yes.

22 Q. And they were searching for answers to help treat this
23 child?

24 A. Yes.

25 Q. Mr. Hill, on -- prior to this trial -- prior to this

1 hearing did you have a chance to review State's Exhibit
2 number 4?

3 A. Yes.

4 Q. Is that your signature on there?

5 A. Yes, it is.

6 Q. What is this disc?

7 A. It is the interview with Mr. Ledford.

8 Q. Thank you.

9 MR. BROWN: No further questions. Judge, at this time
10 we could go on and play the disc so you can hear it before
11 the other two officers take the stand.

12 MR. WISE: I'm trying to figure out a way to shorten it
13 down, but there's no way. Because you kind of have to
14 listen to the first part to understand the second part.
15 Probably not.

16 (Whereupon, audio cd, was published to the Court.)

17 MR. BROWN: Judge, the other two witnesses are here,
18 Agent Cauthen and Investigator Downing. I don't know what
19 they can add, really, to establish the voluntariness of this
20 statement. They are here for that purpose.

21 THE COURT: Let me hear from Mr. Wise as to the written
22 waiver that was signed and initialed that was discussed. Is
23 something written or not, the waiver? I heard conversations
24 about it and I thought they did.

25 MR. BROWN: Here's the Advisement of Rights form that

1 was presented to him before the audio and his initial and
2 signature.

3 THE COURT: Okay.

4 MR. BROWN: That was done at the very beginning of the
5 audio statement.

6 MR. WISE: That's on the 20th?

7 MR. BROWN: The 20th.

8 THE COURT: Mr. Wise, let me hear you, not to the
9 sufficiency of that advisement of rights. That appears to
10 be sufficient.

11 MR. WISE: Right.

12 THE COURT: Tell me what you believe -- what portion of
13 that will not create any problems for the Court and your
14 client.

15 MR. WISE: Excuse me one second.

16 THE COURT: Or would it be better if you tell me what my
17 thoughts are and then you address those?

18 MR. WISE: Well, I think there's a little testimony from
19 my client that we need to take.

20 THE COURT: All right. Let's bring him forward and put
21 him under oath for the purpose of the Jackson v. Denno
22 hearing.

23 Whereupon, Zackery Ledford, having first been duly
24 sworn, testified as follows:

25 DIRECT EXAMINATION

1 BY MR. WISE:

2 Q. Mr. Ledford, you talked to the police on the 16th with
3 your father.

4 A. Yes, sir.

5 Q. How did you feel talking to them with your father
6 present?

7 A. I didn't want to talk to them without him.

8 Q. Did you answer any question they had for you at that
9 time?

10 A. Yes, sir.

11 Q. After the 16th did you have any communication with the
12 Department of Social Services or someone else about
13 **minor** ?

14 A. Not that I recall.

15 Q. Did someone ever tell you what would happen to **minor**
16 if somebody didn't say something?

17 A. The day they came back to the hospital and questioned
18 me.

19 Q. They came to the hospital in Greenville?

20 A. Uh-huh.

21 Q. Okay. Go ahead.

22 A. They told me that if they don't find out who was
23 responsible for this that **minor** would be taken to DSS
24 or taken to the State.

25 Q. Away from her mother?

- 1 A. And wouldn't be able to go home.
- 2 Q. And her mother's parents and everything.
- 3 A. Yes.
- 4 Q. How did the conversation on the 20th come about?
- 5 A. They were just trying to get to the bottom of it or --
- 6 Q. Back up a little bit then. Where were you? How did
7 you run across them and so forth?
- 8 A. They showed up --
- 9 Q. You weren't expecting them?
- 10 A. Not that I know of.
- 11 Q. Had you received any phone calls about them coming to
12 see you?
- 13 A. No, sir.
- 14 Q. They show up and what do they ask you?
- 15 A. They asked to talk to me. No, they didn't ask to talk
16 to me. They were talking to me and they said what I
17 just said about --
- 18 Q. How did you get into a room where a recording was held?
- 19 A. I told them I had to talk to them -- I wanted to talk
20 to them about something, so they -- we came in there
21 and started talking and they asked me to record.
- 22 Q. Did you call your father?
- 23 A. I texted him and told him when they got there that they
24 were here I think he should come up here.
- 25 Q. Okay. You text him.

1 A. Uh-huh.

2 Q. Did they ever ask you about whether or not you wanted
3 your father present?

4 A. No, sir.

5 Q. Would you have preferred to have your father present?

6 A. I really wasn't thinking about it at the time, but
7 yeah.

8 Q. All right. They told you several times in that
9 interview words like or phrases like we can't help you
10 if you don't tell us the truth. Do you remember them
11 telling you that?

12 A. Yes, sir.

13 Q. And they told you things like you need to tell us so we
14 can tell the doctors.

15 A. Yes, sir.

16 Q. Did you take that -- how did you take that, those two
17 sayings?

18 A. I just took it as they didn't know how to treat her so
19 whatever I told them then they could treat her better.

20 Q. Now, did you feel like -- how did you feel like whether
21 or not you could voluntarily answer those questions?
22 Phrased that way.

23 A. What do you mean?

24 Q. Well, when they tell you you need to tell us what
25 happened to her to treat your daughter. Did you feel

1 like you had a choice whether or not to answer that
2 question?

3 A. No, sir.

4 Q. And you would've preferred to have your doctor there?
5 I mean -- not your doctor. You would've preferred to
6 have your father there?

7 A. Yeah, but I didn't think about it at the time in the
8 heat of the moment.

9 Q. And they didn't ask you about getting your father
10 there?

11 A. No, sir. If they would have I would've said yeah.

12 MR. WISE: Thank you.

13 THE COURT: Anything Ms. White?

14 CROSS-EXAMINATION

15 BY MS. WHITE:

16 Q. You didn't think about it at the time, but you wanted
17 your dad there?

18 A. Yes, ma'am.

19 Q. Wanted him there so much you weren't thinking about it
20 at all?

21 A. I was up under so much pressure I wasn't thinking about
22 my dad. I did text him and tell him to come, but I
23 didn't think they were going to question me that fast.

24 Q. Well, let's talk about that a little bit. You said in
25 that recording we just heard that you had been waiting

1 to talk to Mr. Hill over here, right?

2 A. Yes, ma'am.

3 Q. You said that you didn't want to tell your dad; right?

4 A. Yes, ma'am.

5 Q. In fact, from what I could hear in that recording it
6 sounded like you didn't want to discuss this with your
7 dad at all.

8 A. Not at the time.

9 Q. You said that you couldn't tell him because you were
10 afraid of how he would react.

11 A. Yes, but if I was telling him -- if I was telling him
12 I'd like for my dad to be there too so he could've
13 heard it too.

14 Q. You said a couple of times you referred to -- you had
15 been wanting to tell what had happened, but you had
16 lost Mr. Hill's card.

17 A. Yeah, I was going to call and ask if I could talk to
18 him.

19 Q. And you're **minor**'s father obviously.

20 A. Yes, ma'am.

21 Q. And you were aware of the treatment she was receiving
22 at the hospital.

23 A. Yes, ma'am.

24 Q. You knew that she was seeing a pediatric neurosurgeon,
25 she was seeing a forensic pediatrician.

- 1 A. Yes, ma'am.
- 2 Q. She was seeing an intensivist.
- 3 A. (No verbal response.)
- 4 Q. You have to answer yes or no.
- 5 A. I don't know what that is, but --
- 6 Q. Dr. Verning in the Pediatric Intensive Care Unit.
- 7 A. That was over two years ago. I don't really remember
- 8 all the doctor's names.
- 9 Q. There were probably, it's fair to say, ten to twenty
- 10 doctors she was seeing at the hospital; correct?
- 11 A. Yes, ma'am.
- 12 Q. And you're aware that she was not able to take a bottle
- 13 when she first came off of the ventilator?
- 14 A. Yes, ma'am.
- 15 Q. That she had to see occupational therapy?
- 16 A. I wasn't really at the hospital, 'cause after all --
- 17 they only done certain things while I was there, but
- 18 when they told me I had to leave the hospital that's
- 19 when she started getting better and started getting off
- 20 the machine.
- 21 Q. Okay. Well, you've been speaking with **minor**'s mother
- 22 over the past two years; haven't you?
- 23 A. Yes.
- 24 Q. And you're aware of how her treatment has gone over the
- 25 past two years; aren't you?

- 1 A. Yes, ma'am.
- 2 Q. And you're aware that she's had to go to therapy
3 appointments?
- 4 A. Yes.
- 5 Q. You're aware that she's had to see a Pediatric
6 Opthamologist?
- 7 A. Yes.
- 8 Q. She's been at occupational therapy?
- 9 A. The only thing I know is when Brianna would tell me
10 they went to the doctor. They didn't tell me what they
11 told them. That's the only thing I knew.
- 12 Q. So you are aware that after having -- after this day,
13 December 20th, she continued to see doctors, continued
14 to receive therapies, and is still, in fact, under a
15 doctor's care for these injuries?
- 16 A. Yes.
- 17 Q. So she's still receiving treatment based on what you
18 told them that day?
- 19 A. Not that I know of.
- 20 Q. And Investigator Hill went over your rights with you?
- 21 A. Yes, ma'am.
- 22 Q. And you initialed and signed that; correct?
- 23 A. Yes, ma'am.
- 24 Q. And your dad, he had been in and out of the hospital,
25 hadn't he? Over the four days.

1 A. He was there for three days and then went back to work,
2 'cause he was missing too many days and so he went back
3 to work. Yes, ma'am.

4 Q. So you had plenty of opportunities to talk to him?

5 A. Yes, ma'am.

6 Q. And you knew that everyone was looking at you as the
7 responsible party; correct?

8 A. Yes, ma'am.

9 THE COURT: Anything else?

10 MR. WISE: Nothing further.

11 THE COURT: You can step down.

12 MR. WISE: Now, do you want to give me your thoughts and
13 let me give mine?

14 THE COURT: That suits. That may be the easiest way.
15 My comments earlier, I don't know if Tara was taking them in
16 the thirty minute break. We had a break about thirty
17 minutes into the audio and I talked informally with the
18 lawyers about some of the things I heard. Revisiting those.
19 There were questions starting with the initial interview.
20 They went over the statement. Then there was a litany of
21 questions about what happened and he went through the steps;
22 fed and burped her, laid in bed beside me, all those things.
23 Then there was a comment, "Let's get to the nitty gritty."
24 I remember that one sticking out. "We can't help you if
25 you're not truthful." Was on probation a year ago,

1 marijuana charge. Starting with that comment about getting
2 to the nitty gritty through the SLED agent's comments about,
3 I had a child. I had things to do. Like a guy on the left-
4 hand lane driving when they really make you mad and all
5 sorts of comments about other things in life that can
6 aggravate you. And got down to describing the multi-layered
7 hemorrhages, the injuries to the child, and that sort of
8 thing. I really don't think -- that's more her telling him
9 the litany of things and that's not really him providing a
10 statement. I'm very concerned about that coming in, so just
11 preliminarily none of that is really relevant to his
12 confession. It's a summary of other things by the
13 interrogator. Now, I'm kind of concerned about this next
14 comment after this. "You mean, you're telling us if you
15 told the truth you don't think God would forgive you."
16 There's a comment in there about that. Once we get past
17 that we get back in and they start talking again about the
18 actual statement. So the comment all the way through God
19 forgiving you, there's just about ten minutes of talk from
20 "getting to the nitty gritty" to "God forgiving him" is kind
21 of a block of not question and answers. My gut says that
22 all of that block should not be introduced to the jury. But
23 they go back and this is where it picks back up. When you
24 panicked, was she pissing you off in any way. Well, you
25 know, had anything happened when you picked her up. That's

1 back into asking him, "What happened? What happened?" I'm
2 okay with that from here on. What was your day like. I was
3 suspended from school. I had kept her by myself five or ten
4 times on prior occasions. Then a gentleman started
5 questioning him. Did you lose your cool. Were you
6 frustrated when you got on the phone. He's questioning him
7 again. That all seems responsive to questions.

8 All right. Then there was a short break in the
9 interview, a very brief break. It seemed like two of the
10 interrogators stepped away and I think it was Mr. Hill was
11 there and the comment was made, "I understand why y'all
12 think I'm not telling the truth." I think the Defendant
13 said it to Mr. Hill. The response was, "Well, we know a lot
14 more about her injuries now than we did the night it
15 happened." That's them talking. That's all, to me,
16 responsive to his questions what was going on. Because his
17 response was, "I know I did shake her. I was crying. I had
18 my eyes closed. I didn't want to tell anyone." I couldn't
19 tell who it was, whether it was a grandmother figure or the
20 mother of the child. Then he talked about his dad later on.
21 But I shook her more than three times. It was more than
22 just one, two, three. And there was that question and
23 answer with Mr. Hill. Then the pace changed. I've been
24 sitting over here listening to your crap for the last 30
25 minutes. I'm tired of your crap. You're telling us half

1 truths. What set you off. You shook that baby harder than
2 you're saying. And it went on. I'm kind of concerned about
3 that little bit of conversation because that was a huge
4 change in pace for a question and answer. It was more of an
5 interrogator talking.

6 Then toward the end of the lady starting back saying we
7 don't have all of the information we need. The doctors may
8 not be able to treat her like they need to if they don't
9 have sufficient information. And then he's crying. We all
10 get frustrated. I never got mad. I don't know why I did
11 it. That seems to be responsive to me and that would be
12 allowed. That little comment from the comment, the SLED
13 agent says we need full information to treat her accurately.
14 As soon as he says that they start talking about smoking
15 dope again until my throat swells up and I did an
16 accommodation sale. I don't think that ought to come in.
17 It was right after that.

18 And so then it immediately goes back after another
19 break, which sounds like it would be allowed. If you were
20 nervous or scared. I opened my eyes and that's when I
21 stopped. I called Brianna before I called 9-1-1. I thought
22 she was choking. I never heard a sound like that before.
23 She didn't spit up. She went straight and then she went
24 limp. That's him talking. That, in my opinion, would be
25 allowed. And then somewhere in here I'm already on

1 probation. They called DSS. I'm not scared to go to jail.
2 He's crying. That would probably be out. So it was kind of
3 flipping back and forth. All right, then the very end. Mr.
4 Hill talks to him. I've been thinking about what we talked
5 about the first night and I've been asking myself the
6 question how hard did I shake her. That was at the very
7 end. Then the rest of it pretty well tells very little of
8 substance after that very brief conversation. That would be
9 where I would stop it.

10 So I have three, maybe four, areas of concern. I can
11 go back over and hit them. The first one starts with the
12 nitty gritty down to you think God wouldn't forgive you.
13 That's about -- I don't know how many minutes, but it's a
14 lengthy area in there. I would probably grant a motion to
15 suppress that. Then I'm tired of all your crap all the way
16 down to when the lady takes over. The lady interviewer
17 takes over. All of that kind of gives me concern because
18 it's not really a question and answer. It's more of a
19 commentary. Then the lady starts back with the doctors need
20 full information to be able to treat her and he starts
21 crying. The "I never got mad", and "I'm not sure why I did
22 it" comment, I would allow. Next comment, very close, very
23 short. Smoked dope only until my throat swole up, and it
24 was a description for an accommodation sale. That wouldn't
25 be coming in. A portion comes in about, "I was nervous and

1 scared. I called Brianna. I thought she was choking. I
2 never heard that sound before." Down to, "I'm not saying
3 you're a bad person." There's a little conversation there.
4 Then he responds, I'm already on probation, DSS, I'm not
5 scared to go to jail, and he was crying. That wouldn't come
6 in. That's pretty well -- those are the four areas that I
7 have concerns about.

8 MR. WISE: Those are your concerns. Obviously, I have
9 an overall concern too. And that's this. This young man,
10 at 16, could not go and buy an automobile legally. Right?
11 In essence, if you want to look at it that way, a Miranda
12 warning is nothing different between a contract with the
13 State in a sense, that they have basically said if you
14 invoke these rights we don't have to ask you a question. If
15 you don't invoke these rights we are going to ask you
16 questions. They had interviewed him with his father present
17 before. They never once asked him do you want your father
18 here. I think, and his answer on the stand was, if they had
19 asked me I would've said yes. I think the whole thing comes
20 out because -- granted, I've done a lot of research and
21 there's not a whole lot out there. But when you have a
22 sixteen-year-old who has once been interviewed with his
23 father present, and we have no objection to that. I think
24 that was totally proper. And then when the interviewer
25 began, knowing his father had been present at the previous

1 one, never gave him the option of do you want your parent
2 here. I think that goes to the totality of it. As for what
3 you redact out, I look at it this way as far as redacting.
4 The State cannot introduce into evidence through comments on
5 that audio facts or information that the investigator could
6 not testify to on the stand. So they can't be experts on
7 anything that they're not experts on without coming to the
8 stand. That's kind of my rule.

9 THE COURT: I think your best example is all those
10 things that you describe to me come from a baby being shaken
11 too hard. That comment was made. I heard that.

12 MR. WISE: And also I have concern with the shaken baby
13 film at the hospital with the lights coming on, and I don't
14 know what that's about. I think it leaves a bad impression
15 with the jury too, or potentially could. But my point is
16 that if you think the whole conversation is not excluded
17 because of the fact that he is sixteen and they didn't give
18 him the right to have his father there when he had his
19 father there before, then I'd have to listen to what the
20 State redacts to pass judgement on what's left.

21 THE COURT: All right. We'll hear from Ms. White.

22 MS. WHITE: Your Honor, there actually is case law
23 directly on point. On the first one I would point to is
24 State vs. Pittman 327 S.C.527 2008. That's the case of the
25 12-year-old in Chester who killed his grandparents. It was

1 in the media. I was actually clerking with Judge Goode when
2 it was going on. In that case a 12-year-old was interviewed
3 without any sort of parent/guardian or anyone acting in a
4 parental capacity. He had spent the entire day with the
5 investigator. At first he was giving a story where he
6 would've been a victim or a witness. Had given two
7 statements in that capacity, went to lunch with the
8 investigator, played Go-Fish with her, and then once the
9 investigator realized he was a suspect immediately turned
10 around, Mirandized him, and took a confession from him. I
11 think in that case -- and the Court said that even though he
12 was twelve years old and even though all of those factors
13 were at play he did not -- and from the totality of the
14 circumstances the fact that there wasn't anyone acting in a
15 parental capacity there did not render the confession
16 involuntary. I think in this case we've got a 16-year-old,
17 obviously much older than 12, much more mature than 12. He
18 is a father himself. I realize that he is young, but he is
19 a father himself. He, specifically in his interview, makes
20 references to the fact that he did not want to talk to his
21 father. Was wanting to talk to Investigator Hill. Had lost
22 his card but was waiting to talk to him. He was not in
23 custody. They were at the hospital. They took him to a
24 waiting room after having spoken to the grandparents, the
25 mother, just fleshing everything out. He wasn't arrested

1 until a month later.

2 Also, Your Honor, he had had prior contact with the
3 police. He had been on probation. He also had been
4 arrested before for an assault and battery first degree. So
5 this isn't an inexperienced person. This isn't like someone
6 pulled off the street without any chance to speak with their
7 parents and interviewed having never spoken to law
8 enforcement before. He knows -- he's been around the system
9 a little bit, kind of knows what's going on.

10 Also, I think the fact that his father had been there
11 on the 16th and had been in and out from the 16th to the 20th
12 negates any sort of involuntariness. He had had plenty of
13 opportunity to speak to his father. They had had plenty of
14 opportunity to obtain counsel, because it's apparent from
15 the very beginning that he's going to be the one that
16 everyone is looking at since he is the last one with the
17 child. So he has had that opportunity to be a little bit
18 more educated about it on the 20th than he was on the 16th.

19 Also, Your Honor, there is another case, State vs.
20 Parker 381 S.C. 68 where it was a 16-year-old and he had
21 been shot at, had had to go to the hospital, had spent the
22 night in the cold. It was a three and a half hour
23 interview, and the court in that circumstance said looking
24 at the totality of the circumstances it was admissible. So
25 I think the fact that his father was not present, I don't

1 think that renders the confession inadmissible. As far as
2 some of the redactions, I mean, I pretty much agree with The
3 Court. I would have to go back and listen. But based on
4 those two cases, Your Honor, the fact that he did not have
5 his father there does not render it involuntary.

6 THE COURT: All right. Back to you, Mr. Wise.

7 MR. WISE: Again, my distinction is the fact that the
8 officer who did the second questioning was well aware that
9 his father was present during the first questioning that
10 that, to me, should carry forward. That distinguishes the
11 Pittman and the other case from this one, that the officer
12 was aware that he had a father who wanted to be there and
13 had talked with her before.

14 MS. WHITE: It's the Defendant's right, not the
15 father's.

16 THE COURT: What he's arguing is capacity to waive that
17 right.

18 MR. WISE: Excuse me?

19 THE COURT: You're arguing capacity to waive that right
20 because he's a minor.

21 MR. WISE: I'm arguing not only capacity to waive it,
22 but whether or not once the interview is conducted with the
23 father do the police then have to get a waiver of the father
24 being there from him. And they didn't.

25 THE COURT: Okay. Here's what I believe. I believe the

1 State meets the parameter of a Jackson v. Denno subject to
2 some redactions, because it seems to me that the young man
3 made a -- I thought he made the comment that he initiated
4 the conversation with law enforcement. I've been wanting to
5 talk to y'all type of comment before the interview started,
6 and the did make comments during the interview that he
7 didn't want to say some things in front of his dad. I do
8 believe even though the statements were voluntary, some of
9 the commentary by the interviewers needs to be redacted,
10 consistent with some of my comments earlier. Also, I did
11 review in my notes. So, here's what I would like to do.
12 Portions of the statement are admissible under the
13 voluntariness test for Jackson v. Denno. He understood
14 them. He waived them. He was given the opportunity to
15 discuss it with law enforcement, but waived those rights.
16 He was not in custody. He had waived them before and waived
17 them again four days later. But, I would not believe or I
18 would not rule that all portions of that interview would be
19 admissible. I made fairly -- I won't say they are extremely
20 detailed, but detailed notes about what I wouldn't let in
21 and there were four parts. They start in the comments about
22 getting to the nitty gritty. So prior to you know why we're
23 here. Let's get to the nitty gritty. Starting then all the
24 way to if you tell the truth you didn't think God would
25 forgive you. That comment shouldn't come in. So there's a

1 whole bulk of things in there that I do not believe would be
2 admissible as a portion of this statement because of
3 commentaries in there by the interrogators. Then the
4 comment -- I'm going to agree with Mr. Wise. The lady
5 interrogator says, "You know all the things you're
6 describing happen after a child has been shaken. Everything
7 you've described to me is exactly what happens." That is,
8 to me, more in line of an expert opinion. She may be able
9 to qualify as an expert. That hasn't been done yet, so that
10 won't be admitted through this statement. Then when the
11 changing gears. When the other gentleman interrogator I'm
12 tired of your crap. I've been listening to it the last 30
13 minutes. Starting there down to the lady comes back in and
14 talks about not having stomach muscles to sit up by herself.
15 That portion would be inadmissible and it starts back with
16 the lady saying we don't have all the information the doctor
17 needs to treat her. That's when it would be -- I would pick
18 that back up saying that would be okay. His response is I
19 shook my child. She was crying. I never got mad. I don't
20 know why I did it. Immediately after that. Were you
21 smoking marijuana or weed or something along those lines and
22 she's asking questions. And he talks about his throat
23 swelling up. None of that. None of that. When she's
24 asking if he was smoking weed that day. One of them call it
25 weed and one calls it dope. That stays out. Then he starts

1 back talking again without the benefit of the marijuana.
2 That's when I stopped. I opened my eyes and I called
3 Brianna. All the way down to we're not saying you're a bad
4 person. Then we stop again because he talks about well what
5 was going through my head was I was already on probation,
6 they were talking about DSS, but I'm not scared to go to
7 jail. I just don't believe that's relevant to this thing,
8 unless y'all want that in. I'm going to other conduct. I
9 don't want that in. Then, okay, she was playing. I never
10 got mad. I was on the phone with Brianna and I asked her
11 where something was. That's in. Then the last thing is he
12 makes the comment to Investigator Hill, "I've been thinking
13 about what I told you on the first night we talked and was
14 questioning myself as to how hard did I shake her." That's
15 more or less about the end of the interview and it just
16 trails off. That's about where it stopped.

17 If there is something else that I missed, Mr. Wise,
18 that you think falls within consistently with that ruling
19 tell me and let me consider that. Those are my notes that I
20 saw. I didn't take copious notes, but five pages worth.

21 MR. WISE: Well, I can't -- I don't know whether some of
22 this is the part of the excluded, but there were phrases
23 like, "I can bend the rules", "long-arm versus short-arm
24 shaking", "we have to tell the doctors", "doctors need this
25 information". There's a demonstration in there about the 45

1 minute mark that I have no clue --

2 THE COURT: There were several demonstrations.

3 MR. WISE: -- what they were doing there. I cannot
4 tell a prosecutor that you helped. I can certainly help
5 you. Some of those are in that area that you were talking
6 about, but those are the type of things that I was looking
7 at.

8 THE COURT: I think some comments to your cooperation
9 and we'll tell prosecutors that you were helpful, as long as
10 they're in the context that -- my guess is that we may have
11 to go over this thing again. Let's redact it consistent
12 with my instructions and then after redacting it, perhaps
13 listen to it a second time and if you have any further
14 requests --

15 MR. WISE: We'll have to listen to it again.

16 THE COURT: Those big four are the ones I think should
17 come out, and then like you say it's almost impossible to
18 find out what's still in there. So we'll have to do that
19 early in the morning. That's my ruling on the admissibility
20 of the second audio. I want it redacted, at least to that
21 extent, and then either side can make suggestions to
22 something I've admitted. I'm not saying that's my final
23 ruling.

24 MR. WISE: I guess -- I don't want to tell them how to
25 do their job, but they should err on the side of not

1 redacting so they don't come in here and say, "Well, we need
2 to add this back in."

3 MS. WHITE: I wish our technology was such that I could
4 present a redacted copy, but I will just have to mute it and
5 fast forward. What I would suggest -- I am going to listen
6 to it tonight and get all of the times figured out, if Mr.
7 Wise would do the same and compare notes in the morning.

8 THE COURT: I had a trial in Florence and there was some
9 technological guy there and he was good. He peeled them
10 out.

11 MR. WISE: That creates another problem, because then
12 the jury is going to sit here and hear about eight minutes
13 of conversation and then it's going to jump forward twelve
14 minutes later or twenty minutes later and they're sitting
15 here saying, "Ten minutes? What was said during that period
16 of time?"

17 MS. WHITE: Judge, I've done that in every other trial
18 I've tried and what we usually do is the judge just
19 instructs the jury that there are portions of it that are
20 irrelevant and they have been removed for the purposes of
21 speeding the trial along.

22 MR. WISE: I've just got a problem with that. I think
23 that instruction is even needed for the redacted copy,
24 because it's going to be a little choppy. But it's worse
25 when --

1 THE COURT: There's a gap of time sitting in silence.

2 MR. WISE: Right. I mean, to eliminate 30 seconds the
3 jury can figure out something was irrelevant, but to
4 eliminate minutes of time.

5 THE COURT: There is a way to piece together those
6 segments on the computer and then recopy them back on the
7 media device.

8 MS. WHITE: Mr. Brown is telling me he may be able to do
9 it.

10 THE COURT: Y'all have some young prosecutors back there
11 that I know are tech savvy. So I'm going to -- I wasn't
12 suggesting it was those three, but there's somebody in your
13 office who knows how to do that.

14 MR. WISE: We get to be exempt from that tech savvy
15 group.

16 THE COURT: Absolutely. Y'all have children. They know
17 how to do this stuff. Recruit them. The jury has been
18 sitting back there over an hour. Y'all have got to work on
19 that audio tape. Now, Mr. Wise, you said something earlier.
20 Subject to my ruling whether or not you were going to need
21 this witness. Where does that leave you?

22 MR. WISE: No, no. Depending on what the witness says.
23 I've got to look at what was redacted to determine what I
24 can ask her on cross.

25 THE COURT: All right. Are we going to finish tomorrow

1 or not?

2 MS. WHITE: No, sir.

3 THE COURT: Is she just going to be gone tomorrow?

4 MS. WHITE: Yes, sir.

5 MR. WISE: They know the case better than I do on that
6 sense of what is going to be redacted. I don't know that
7 she adds much. To be frank with you, I'm not going to argue
8 a missing witness.

9 MS. WHITE: To be perfectly honest, Your Honor, at this
10 point I don't know that we're going to call her.

11 THE COURT: Y'all redact it. We'll work on it first
12 thing in the morning. I don't know that we need to bring
13 the jury first thing so we can work on this. But if she
14 needs to be at this class and as long as she's subject to be
15 available to Mr. Wise if he needs her Wednesday or after,
16 that should solve our problem. I don't want him to not have
17 her. He's not going to argue missing witness, but if
18 something comes up and she's needed, she's going to be
19 available to either of you. Fair enough.

20 MR. WISE: It would be unfair to argue missing witness.

21 MS. WHITE: Yes, sir.

22 THE COURT: I'm going to send them home.

23 MR. WISE: I think it would be proper for the Court to
24 explain that there was an interview, but that this woman had
25 to be in a class and she's not here.

1 THE COURT: Yes, and I think that's proper. And
2 switching judges created an issue. This would've been dealt
3 with today had Judge Addy been able to deal with it. That's
4 partially true. Bring them in.

5 (Whereupon the jury entered the courtroom to be
6 dismissed for the day.)

7 THE COURT: My name is Eugene Griffith. I'm the guy
8 that was in Laurens this morning and Judge Addy and I flip
9 flopped because of a potential witness issue. I'm told that
10 he told you about it. Judge Addy and I are good friends and
11 he and I are lucky enough to be able to do that. Anyway, I
12 let alternates sit wherever. In the end if nobody has been
13 excused or come down with anything like a stomach virus
14 tonight and not be able to get out of the bed or out of the
15 bathroom. If that happens the alternate gets pulled in. We
16 have two alternates. Until the end of the case all I have
17 is a foreperson. He's kind of the last one out of the jury
18 room and the last one out of the chair. Everybody else can
19 sit wherever you like.

20 Now, we got a slow start because of the witness issues.
21 Because of that I had to take up some pretrial issues that
22 Judge Addy hoped to take care of this morning. Since he
23 wasn't going to do it I got to do it for him. Anyway, long
24 story short we're not going to start today. We're going to
25 start first thing in the morning at 9:30. This is

1 important. Everything y'all need to decide this case you're
2 going to get in the courtroom. Okay? You'll get the facts,
3 the testimony and the evidence that the parties have
4 available for you. There is no need to do any independent
5 research. No need to look anything up on the internet. But
6 most importantly, there's no need to invite questions from
7 anyone. This is the biggest problem I face as a judge in
8 the internet age is Facebook, and Myspace, and Instagram,
9 and all those things that my kids are really good at. Y'all
10 can't know about the case until you've received everything.
11 That's why I brought you in here. I could've just sent you
12 on home, but I wanted to tell you this tonight before I sent
13 you on home. Y'all have got to receive the information here
14 together, all fourteen of you. Now, if you go home and put
15 on Facebook, you know, golly I got put on a jury, you're
16 inviting the question what kind of case is it from anybody
17 that reads Facebook. Don't do that, please. Y'all are to
18 be influenced as a group here together in here from the
19 witness stand, by the lawyers, on the court record that Ms.
20 Scott is taking. Not by some audience out there in computer
21 land or tv land or wherever. I always use this example in
22 Laurens. Don't read the newspaper. Laurens gets it wrong.
23 Now, y'all have seen Judge Addy this morning and me this
24 afternoon. The newspaper accused me of looking like Judge
25 Addy. I made some rulings and they said Judge Addy did this

1 and he did that in a case. It was me. So I brought the
2 newspaper in and said, "See? If y'all had read the
3 newspaper they had the wrong judge." Just because it's in
4 print doesn't make it right. The best way to avoid
5 confusion is to just not read the newspaper. I don't know
6 if a newspaper reporter has been in here. I don't know what
7 they look like really. But anything on the news, on the
8 internet, on television about this case -- if something
9 comes up and you read something let me know. I'd like to
10 clear it up that that's really not relevant. What's
11 testified to in here is the only thing that's relevant.

12 Another thing is, there's a lot of bad law on the
13 internet. Holy smoke. Let me ask y'all, do you remember
14 when you were younger and your mom said there's not but
15 three people in the front of a pickup truck or the policeman
16 will give you a ticket. I don't know of any such rule, but
17 that was an old mama's rule. She didn't want too many
18 people in the front to create an issue, so she just told me
19 that. Y'all may have been told something similar. It's my
20 job to tell you the law. I tell you the law at the very
21 end. The law in South Carolina requires a state to prove
22 one, two, three, four, whatever the things are in this case.
23 You can go on the internet and look and say, "Well, I wonder
24 what the law is on that." There's no telling what you would
25 read, so don't do it.

1 It's my job to give you the law as best I understand it
2 from Columbia. And if it changes I'm told. I'm supposed to
3 keep up with it. Judge Addy is supposed to keep up with it.
4 We do our best to keep apprised of it. The internet prints
5 whatever it is they want to sometimes, and I'm just amused
6 by it. Anyway, I don't want you on the social media sites.
7 You don't look like a Facebooker, but you never can tell.
8 Some grandmothers keep up with their grandchildren. You can
9 go on Facebook and chat and do your normal stuff, but don't
10 put, "I am a juror." That's what invites the conversation.
11 Don't talk with your spouses about the case. Judge Griffith
12 and Judge Addy said don't discuss the case with anybody.
13 That's all you've got to say. My bulldog, when I get home,
14 he's going to ask me and I'm not going to be able to tell
15 him. You don't discuss the case until I tell you, "All
16 right, it's time. Y'all can discuss the case." Until then
17 y'all are just receiving information. For that reason,
18 first thing in the morning when y'all get here find out if
19 anybody wants a notepad and let them have it. You're free
20 to take notes. You're not required to. I'll tell you more
21 about that later. I take notes because I have to. It's
22 part of my job, but normally I probably wouldn't. That's
23 just me. Some people do. Some people don't. There's no
24 prize given or points taken off for not taking notes. Y'all
25 have just got to listen to me and if taking notes makes you

1 comfortable doing that, that's what I want you to do. All
2 right, if anybody tries to communicate with you coming and
3 going from the courthouse -- these lawyers, they know.
4 Y'all may know some of them. I don't know. I wasn't here
5 when y'all got selected. They may know some of your faces
6 or whatnot. You may know some of the law enforcement,
7 because Greenwood's not huge. It's a small community. Good
8 morning. Nod your head. That's about all they're going to
9 do for you, either side. That's just how it is. That's the
10 rules. They can only try to influence you in here. Outside
11 the courtroom door they aren't allowed to talk to you,
12 because if either side tries to talk to you outside then
13 they're breaking the rules. They know the rules and they
14 won't try it. If anybody else does that is not in here
15 listening to my instructions and says, "I see you on the
16 jury. What do you think about the case?" Anything like
17 that, tell Mr. Willingham. Let me talk to you and make
18 certain that this person outside of the courtroom is not
19 improperly influencing my good jurors here. That's my job.
20 I want y'all to make a decision on this case from what you
21 hear in the courtroom and not what you hear in the
22 barbershop, the street corner, or what you've read on the
23 internet. That's what I'm trying to do. It's as simple as
24 that. It just takes a long time to try to explain all of
25 that. So you can't discuss it until the very end. Those

1 are the rules. I'm going to do my best to minimize y'all's
2 inconvenience. I've inconvenienced you today, making you
3 sit in there an hour. I won't do that again if I can help
4 it. I'm trying to get some predictability. Now that I'm up
5 to speed on some issues we should start about 9:30 in the
6 morning, roll on for about an hour, take a break for about
7 15 minutes, go on for another hour, take about a ten minute
8 break, roll on close to lunchtime and then take a nice lunch
9 break. I'm going to be pretty well locked to that, so you
10 won't be sitting too long but you won't be in the jury room
11 too long. That's what I'm going to hope to do for you. So
12 with those instructions I'll give you some more instructions
13 in the morning about who goes first and that kind of thing.
14 For now, go home and enjoy your evening and if you could be
15 back in the jury room -- Mr. Willingham may put you back out
16 there again because I've got to do something first thing in
17 the morning. Sometimes walking in here distracts my court
18 reporter and she's got to take down exactly what's said.
19 Sometimes when there's movement down here she has a hard
20 time listening. So sometimes I keep the courtroom shut and
21 minimize that for her and my benefit. That's it. Y'all
22 enjoy your evening. See you at 9:30 in the morning.

23 (Whereupon, the jury exited the courtroom for the day.)

24 DAY 2: 11/03/15

25 THE COURT: Let's get started. We'll get the jury out

1 and give them more preliminary instruction. Anything we
2 need to put them on the record before we bring them in?

3 MS. WHITE: Nothing from the State, Your Honor.

4 MR. WISE: Nothing from the Defense.

5 THE COURT: Bring them in, Mr. Willingham.

6 (Whereupon, the jury entered the courtroom at 11:01
7 a.m.)

8 THE COURT: Good morning everybody. Sorry for keeping
9 you all back there. Over there and over here. I had some
10 issues I needed to resolve and take up with the lawyers, on
11 this case and a couple other cases. But I had to hold you
12 all back there while I do these things. In any event, we're
13 ready to begin. You all are about to be placed under oath.
14 I want you to remember that oath. Listen attentively. Take
15 notes if you like. You're not required to. You won't be
16 penalized if you don't.

17 Now, the order of procedure works this way. The State
18 goes first. The State opens. Gives their opening comments
19 to you as what they believe the case is going to show. The
20 Defense will give their opportunity and say what they
21 believe the State may or may not show. But understand this.
22 Any person accused is presumed innocent throughout the
23 entire trial. The State has got to present testimony,
24 evidence through its witnesses, and then at the very end you
25 as a group will make a determination of whether or not the

1 State has approved its case beyond a reasonable doubt. And
2 I'll define that term to you then. For now, all you do is
3 listen. You don't get to ask questions. Sorry about that.
4 Generally at the end of the trial, I wish I could have asked
5 so and so a question. But they get to ask questions. The
6 other side gets to cross-examine. But a person comes into
7 court on an indictment accused of a crime, not presumed
8 anything other than innocent. So in this case the Defendant
9 is presumed innocent throughout the trial until we get to
10 the very end when you evaluate and weigh the evidence and
11 decide whether or not the State has met its burden of proof.

12 Now, since the State has the burden of proof it goes
13 first. Argues first. The Defense argues second. The State
14 calls its witnesses.

15 Now, once you all begin your deliberations and I say,
16 okay, start talking about the case and you all are in the
17 jury room, it'll just be you all 12. The alternates will
18 not be back there. It'll just be the 12 of you. Nobody
19 will be back there helping you. Now, if something comes up
20 during the trial as the presentation is going -- that's one
21 reason we kind of have these preliminary meetings is the
22 lawyers are trying to alert me and say, Judge, you -- we
23 know kind of what we're going to present. There may be an
24 issue here, an issue there. Heads up kind of thing. Now,
25 if something comes up and one of the lawyers jumps up and

1 says, Judge, I've got an objection, my practice is to tell
2 the lawyers give me about one word, two words. Kind of let
3 me know your issue. I've sat through enough trials. I kind
4 of -- I get it, I hope, of what's going on and I may make a
5 ruling right then, or I may call them up to the other side
6 and talk to them briefly to see what, you know, their
7 concern is. Now, if the issue is a legal issue and they
8 would like to present a more fuller argument for purposes of
9 the Court record, at that time I generally excuse the jury
10 because you all don't need to listen to the legal arguments.
11 That's my job. It's like calling my own strikes. That's
12 what I do. Pitchers, catchers, batters, they get up there
13 and play the game. The umpire calls the balls and strikes.
14 Sometimes they need an instant replay. When you all step
15 out that's kind of like me getting a little instant replay.
16 Just a little slower more full explanation. Judge, we
17 believe the legal issue is this, this and this and this rule
18 applies to that. The other side says, Judge, we read the
19 rule differently. We think it means thus and such. Well,
20 sometimes for me to rule I've got to hear the answer and
21 decide you know what, that is allowed or disallowed. I
22 can't just guess at what the answer will be. Well, you can
23 unring a bell after you've heard it. So it makes a
24 difference then. Okay?

25 So, when I'm doing my job and I'm making legal rulings

1 in a full record, sometimes I'm going to ask you to be
2 excused. There's no reason other than that's my job. Let
3 me do it. So don't take anything from it or anything
4 against it. It's just the way it is. Same as when you all
5 go back there and decide did the State prove its case. I'm
6 not back there listening to you all, no, no, that's not
7 right. Even if you -- you all do your job. I'll do my job.

8 Now, I think that's it. You all listen attentively.
9 My clerk is going to play you under oath. If you all would
10 stand.

11 MADAM CLERK: If you all would raise your right hand.

12 (Whereupon, the jury was sworn at 11:04 a.m.)

13 THE COURT: Mr. Brown.

14 MR. BROWN: If it please the Court.

15 THE COURT: Yes, sir.

16 OPENING STATEMENT

17 BY MR. BROWN: Ladies and gentlemen, first off I want
18 to thank you for your time and being here today and here
19 yesterday in this rainy weather. I know it would have been
20 easy to roll over in bed or go about your normal day-to-day
21 activities and say let somebody else go in my stead. But
22 again, we appreciate you being here, your time and your
23 patience, and ask for your attention during this trial. One
24 thing you all aren't here, the court system can't move.
25 We're not able to do what we're doing here today if you all

1 aren't here. And again, we thank you for that.

2 Before I get started I want to introduce you to this
3 little girl, [minor], born August 28th, 2013. She's
4 the reason why we're here today. She's a little over
5 two-years-old and we're lucky to have her here. Folks,
6 December 16th, 2013 is a date that [minor] almost lost her
7 life. She lives with her grandmother and granddad, Toni and
8 Kevin Dickey, and her mom is Brianna Dickey, and her dad is
9 Zack Ledford.

10 Zack and Brianna had [minor] at an early age. They were
11 both 15 years old when they had her. [minor] was a little
12 over two and a half months old December 16th, 2013. She was
13 with her grandmother, Toni, all day. Toni went to go pick
14 up Brianna from school. At that time she also went to Ware
15 Shoals to pick up Zack, where Zack lives with his dad. They
16 pick up Zack. They took Zack -- or were taking Zack,
17 Brianna and [minor] back to the Dickey's house on Folly Bend
18 up around the YMCA. Toni needed to take Brianna to the
19 doctor. She wasn't feeling good. So [minor] stayed with
20 Zack at the Dickey's home. This is sometime after school
21 let's out. Sometime after 3:30 in the afternoon. And while
22 [minor] is there with Zack, Zack calls Brianna and tells her
23 that [minor]'s not breathing. Something is wrong. [minor] is
24 not breathing. She's limp. Come on home. Toni Dickey and
25 Brianna leave the doctor's office, which was a short way

1 down the road, and race back to their house. On the way Ms.
2 Dickey calls 9-1-1 and gets them in route to their house at
3 104 Folly Bend Drive. Once Ms. Dickey gets there she sees
4 that **minor** is not breathing. She's limp. She's
5 non-responsive. She starts doing breaths to try to get her
6 some air. An officer gets there. Officer Pendergrass gets
7 there. He tries to help calm down the situation. A short
8 time later EMS gets there. Two EMS trucks get there, and
9 they take **minor** to EMS and take her to the hospital.
10 **minor** is then taken to Self. Initial tests are done, CTs
11 are done, to see what's going on. You'll hear from the
12 doctor himself during this trial. He'll tell you what he
13 finds. A short time later they fly her to Greenville to
14 Self. Once she gets to Self she sees another host of
15 doctors, and you'll hear what the doctors have to say. They
16 say she had an injured brain and bleed hemorrhages. She had
17 multilayered retinal hemorrhages in her eyes. They were
18 able to stabilizer her and she goes back -- goes about
19 rehabilitating up there at the hospital.

20 Luckily she's here with us today. She's like a normal
21 two-year-old. As you can see, she's agitated and wants to
22 get out of the -- doesn't want to sit still for a whole long
23 time. So you got to see her. But you'll also hear from the
24 doctors of what she's still battling today from those
25 injuries that took place on December 16th, 2013. We'll get

1 more in-depth with that from the witnesses that come up here
2 on this stand. They provide the evidence in this case.
3 You'll hear from a number of witnesses and their opinions on
4 what caused this and what type injuries these are.

5 Now, what is Zack Ledford charged with. He's charged
6 with the infliction or allowing great bodily injury upon a
7 child. It's unlawful to inflict great bodily injury on a
8 child. That's what it says. That's what the statute is.
9 What is great bodily injury. It means bodily injury which
10 creates a substantial risk of death for which causes serious
11 or permanent disfigurement or protracted loss or impairment
12 of the function of any bodily member. You'll hear more
13 about her injuries and what she's battling back from
14 throughout this trial.

15 Ladies and gentlemen, the State has the burden of proof
16 in this case. We have the burden of proof to prove to you
17 beyond a reasonable doubt that Zack Ledford did cause this
18 harm to **minor**. Proof beyond a reasonable doubt is proof
19 that leaves you firmly convinced of his guilt. It's not
20 beyond all doubt. It's not beyond every doubt. It's not
21 beyond any doubt. It's proof that leaves you firmly
22 convinced that he did inflict this great bodily injury upon
23 his daughter, **minor**.

24 Again, we appreciate you being here, and we appreciate
25 your time and your patience. I know you've been back there

1 waiting -- patiently waiting for us to begin. We appreciate
2 that. We ask for your attention. At the end of the trial
3 Ms. White will be back before you going over everything
4 you've heard from this witness stand.

5 OPENING STATEMENT

6 BY MR. WISE: Mr. Foreman, ladies and gentlemen of the
7 jury. When [minor] was born on August the 28th of 2013 Zack
8 Ledford was six weeks short of his 16th birthday. The
9 mother of the child was just about three weeks past her 16th
10 birthday. They were very young children to have children.

11 December the 16th, 2013 is a day that Zack Ledford will
12 always remember because that's the day he almost lost his
13 daughter. What you're going to find in this case is that
14 when [minor] was born Zack Ledford was not a "I don't know
15 what you're talking about" father. He took an active part
16 in [minor]'s life. He took an active part in [minor]'s life
17 in changing her diapers and learning how to feed her and
18 learning how to raise her. He was a fixture in the Dickey
19 household every day after school to be there with [minor],
20 and his father would have to come to Ware Shoals to pick him
21 up. He was a devoted father.

22 December the 16th, 2013 Zack Ledford gets a call and
23 says can you watch [minor] while I go to the doctor, from
24 [minor]'s mother. He said sure. They pick him up from Ware
25 Shoals and bring him over to the house. He's there with

1 **minor** . She's asleep when they first get there. He puts
2 her down. Nothing unusual happens. She wakes up. He gives
3 her a bottle. They watch Sponge Bob, Sponge Bob movie, or a
4 show. He gets up and goes to get some cereal. Makes cereal
5 for himself. When he's doing that, or finishes that up, he
6 hears a sound that he's not used to hearing from Summer. A
7 gurgling choking sound. He runs in and picks her up. He
8 relates that at that point she went stiff and then went limp
9 and collapsed. At that point he does shake her. Not
10 violently, but shake her trying to revive her, as any person
11 would normally do in those circumstances. He then
12 immediately calls her mother and says she's gone limp. You
13 know, doesn't appear right. Her instructions given about
14 suctioning her mouth and suction out her mouth and see if
15 something's choking her. They call 9-1-1. 9-1-1 gets
16 there. They try to revive her. As Mr. Brown said in his
17 opening, ultimately fortunately -- there was a good outcome
18 in this case.

19 Zack Ledford did nothing to cause the injury to that
20 child. The State has a theory, and will produce experts
21 that has a theory, and that theory is that he shook the
22 child. That theory is that he got mad for some unknown
23 reason and shook the child. We don't think that the State
24 is going to be able to back up that theory with good
25 scientific proof. You know, there are no witness in this

1 case. That's unfortunate. But we don't think the State can
2 back it up. We will have an expert of our own who will
3 explain this concept to you of what they call shaken baby
4 and how it really works and the problems with it and how
5 baby's have problems that go wrong with them. There's no
6 question about the fact that this child had a subdural
7 hematoma, and there's no question about hemorrhage in the
8 eyes. The cause of these are in dispute. And that's what
9 you're going to have to decide. Did Zack Ledford willfully
10 and intentionally and maliciously shake this child to cause
11 these injuries, or did this child just have something that
12 happens in children that fortunately she recovered from and
13 is okay today. As I say, the State will have a theory, but
14 I don't think you'll find that they have the facts to back
15 up that theory. Thank you.

16 THE COURT: Call your first witness, please.

17 MS. WHITE: The State calls Toni Dickey.

18 TONI DICKEY, having been first duly
19 sworn, testified as follows:

20 DIRECT EXAMINATION

21 BY MS. WHITE:

22 Q If you could introduce yourself to the jury.

23 A My name is Toni Dickey. I'm minor's grandmother.

24 Q Where do you live, Ms. Dickey?

25 A We live at 104 Folly Bend Drive in the Folly Bend

- 1 subdivision.
- 2 Q Is that in Greenwood County?
- 3 A It is.
- 4 Q Who lives there with you?
- 5 A Now or at the time?
- 6 Q At the time who lived there with you?
- 7 A At the time, my oldest son Blake, who was 19, our
- 8 daughter, who was 16, our youngest son Brice, he was five,
- 9 and then my husband and I and **minor**.
- 10 Q Your daughter, what's her name?
- 11 A Brianna.
- 12 Q And when's her date of birth?
- 13 A August the 1st, '97.
- 14 Q And is **minor** her daughter?
- 15 A Yes.
- 16 Q And what's **minor** birthday?
- 17 A August the 28th, 2013.
- 18 Q So in December -- December 16th of 2013 how old would
- 19 **minor** have been?
- 20 A She was about three and a half months.
- 21 Q What kinds of things -- you said **minor** lived with you?
- 22 A Uh-huh.
- 23 Q Who was, I guess, responsible for **minor** on a
- 24 day-to-day basis? Who took care of her?
- 25 A I took care of her while Brianna was at school, and

1 then after school Brianna would take care of her. And Zack
2 was -- he was there five to seven days a week.

3 Q At three and a half months old what sort of things was
4 minor able to do?

5 A She had started batting at her toys and was cooing.
6 She had good neck strength. Was able to hold her head up.

7 Q Had she started rolling at all back to front, front to
8 back?

9 A You know, I mean, she would try, but she had not -- she
10 had not started rolling over yet.

11 Q Was she able to pull herself up?

12 A No.

13 Q Was she able to grab something and pull at all? Like
14 grab it with her hand and pull up?

15 A Oh, no.

16 Q Was she able to sit up --

17 A No.

18 Q -- unassisted?

19 A No.

20 MS. WHITE: May I approach the witness, Your Honor?

21 THE COURT: Yes, you may.

22 Q I'm going to hand you what's been marked for
23 identification as State's Exhibit 5. What is that a picture
24 of?

25 A That's the day before minor injury on December the

1 15th. We had family pictures done.

2 MS. WHITE: The State offers Exhibit 5 into evidence at
3 this time, Your Honor.

4 MR. WISE: No objection.

5 THE COURT: No objection, State's Exhibit 5.

6 (Whereupon, State's Exhibit No. 5 was admitted into
7 evidence.)

8 THE COURT: Folks, as evidence comes in and is
9 submitted or ruled upon, you all will have it all in the
10 jury room. The State can broadcast it up, the Defense can
11 broadcast it up on the TV screen. But you'll have it in
12 your hand in the jury room so you can look at it. But
13 you'll have time to review it later also. Just so you know.

14 Q All right. You said this was **minor** the day before she
15 was injured?

16 A Right.

17 Q And you all had family pictures made?

18 A Yes.

19 Q What had happened, I guess, that weekend before the
20 16th?

21 A I do know -- well, I don't remember Friday. But
22 Saturday Brianna and Zack and his dad took **minor** up to
23 Atlanta and spent the night at a hotel there. And they came
24 home Sunday and everything was fine.

25 Q Was **minor** acting normally when they came home Sunday?

- 1 A Yes.
- 2 Q And, I guess, you all had the pictures made Sunday?
- 3 A Right. Sunday afternoon.
- 4 Q And did anything unusual happen Sunday night?
- 5 A No.
- 6 Q So going into Monday morning, what -- did Brianna go to
- 7 school that day?
- 8 A She did.
- 9 Q And was **minor** at home with you?
- 10 A She was home with me all day.
- 11 Q How was **minor** acting during the day with you?
- 12 A Normal. Just, you know, get up and eat, sleep, coo,
- 13 play a little bit.
- 14 Q Did **minor** have any sort of health problems that you
- 15 all were aware of?
- 16 A Acid reflux was the only thing.
- 17 Q And how were -- how was she being treated for that?
- 18 A She was taking Zantac, and also we would put a teaspoon
- 19 of cereal in her bottles. A teaspoon per ounce.
- 20 Q Okay. Did -- what happened the afternoon of December
- 21 16th, 2013?
- 22 A Brianna had called from school saying she was not
- 23 feeling well and that I needed to make her a doctor's
- 24 appointment. So I called the doctor's office, got her an
- 25 appointment at 4:00. Zack -- I took my youngest son to my

- 1 in-laws, went and picked Zack up, and [minor] was in the car
2 asleep. Then went and picked Brianna up from school, and
3 then we dropped Zack and [minor] off at the house about 3:45.
4 And she was in her carseat. I told him, I said, she's
5 overdue for a bottle, so go ahead and fix her one because
6 when she wakes up she's going to be hungry. And then
7 Brianna and I left and went to the doctor. And about just a
8 few minutes after 5:00, we had just gotten back into the
9 doctor's room, Brianna got a call from Zack saying [minor]
10 was not breathing. She was choking and was not breathing.
- 11 Q How far away from your house was the doctor's office?
- 12 A Maybe three minutes.
- 13 Q Where was -- where was the doctor's office?
- 14 A It's on the Old Abbeville -- I mean, the Abbeville
15 Highway. We live on the Old Abbeville Highway and it's on
16 the Abbeville Highway.
- 17 Q When you got the phone call that -- when Brianna got
18 the phone call that [minor] was not breathing what happened
19 after that?
- 20 A We just -- we took off out of the doctor's office.
21 Took off running. Told them we had to leave. [minor] wasn't
22 breathing. Got in the car and I called -- she was on the
23 phone with Zack, I believe, and I called 9-1-1.
- 24 Q And how -- do you know how long it took you to get from
25 the doctor's office back to your house?

1 A Two minutes maybe.

2 Q What did you see when you got back to the house?

3 A We went in through the garage and Zack was standing
4 there at the door. As you walk in there's the kitchen and
5 the little breakfast area, and he was standing there holding
6 her. And she was just lifeless. Limp and lifeless.

7 Q Did she appear to be breathing at all?

8 A No.

9 Q What happened after that?

10 A I grabbed her from Zack. I tried to do CPR -- well, I
11 stuck my finger down her throat because I thought she was
12 choking, trying to, you know, get whatever. Patted her on
13 her back. I did CPR. I ran next door to the neighbor's
14 house because I knew they both worked at the hospital and
15 thought maybe they could help her. And they were not home,
16 so I just kind of collapsed with **minor** in my arms on the
17 sidewalk there, and that's when the police officer showed
18 up. And then we walked back over to our house and waited on
19 EMS to get there.

20 Q You said she was limp and lifeless and that you stuck
21 your finger down her throat.

22 A Uh-huh.

23 Q Did you find anything keeping her --

24 A Some milk -- no. Some milk came out on my finger. I
25 think I had stimulated the gag reflex, you know, so some

1 milk came out on my finger.

2 Q Did she appear -- was she doing anything other than
3 just laying there?

4 A No, nothing.

5 Q So was she choking?

6 A No.

7 Q Was she gasping?

8 A No.

9 Q At any point did you try to do CPR on her?

10 A I did.

11 Q And what did you -- where were you when you did that?

12 A In the livingroom. In the livingroom. Laid her on the
13 couch. And then I also -- when we had ran next door I would
14 occasionally breath a breath of air in there. I don't know
15 what I thought I was doing, but I would breath some air into
16 her. And then came back home and I think I tried to do CPR
17 again, and that's when the EMS pulled up.

18 Q When you were carrying her, how were you carrying her?

19 A I think I was just holding -- you know, cradling her in
20 my arms, I believe, or she may have been up like this
21 (indicating) and I was holding her. I'm really not sure.

22 Q Okay. Do you remember if her head was flopping around
23 in any way --

24 A No.

25 Q -- or moving in any way?

1 A Not to my knowledge.

2 Q What was Mr. Ledford doing while all this was going on?

3 A He and Brianna both were just kind of standing back
4 watching. And I think Brianna ran across the road to get
5 another neighbor who we thought maybe could help. You know,
6 we were just panicking trying to get anybody to help us. I
7 mean, really that's it. They followed me next door and they
8 followed me back to the house and they were just -- I mean,
9 they were worried.

10 Q And when we say Zack Ledford, Brianna's father, is he
11 in the courtroom today?

12 A Yes. **minor**'s father, yes.

13 Q Okay. You're talking about the gentleman in the black
14 shirt with the kind of silver tie?

15 A The tie, uh-huh.

16 MS. WHITE: Your Honor, let the record reflect that
17 she's identified the Defendant.

18 THE COURT: So it will reflect.

19 Q Did he say anything about what had happened?

20 A Afterwards, when the EMS had gotten there and they had
21 **minor**, he was -- you know, they were -- Brianna come over
22 to me and said, momma, Zack thinks you're blaming him for
23 this. And he said, I didn't mean to. I'm sorry. You know,
24 I'm a terrible father. And just, you know, everybody was
25 panicking.

1 Q After EMS got there were they able to revive **minor** at
2 all that you saw?

3 A We did not see. They immediately put her in the
4 ambulance. And I think once they did get her breathing they
5 left.

6 Q And what did you do after that?

7 A The policeman said they had got her breathing but she's
8 not responsiveness. They're on their way to the hospital.
9 And Zack's dad pulled up, I believe, about that time and he
10 -- the police took Zack and Brianna to the hospital, and I
11 rode with Zack's father to the hospital.

12 Q And when you say you all went to the hospital did you
13 go to Self Regional in Greenwood?

14 A Right, Self Regional.

15 Q What happened after that?

16 A We were all just in the room waiting, and Dr. Graham
17 and told us that she had been without oxygen for some time
18 and there was some bleeding on the brain and they were
19 flying her immediately to Greenville.

20 Q And did you go to Greenville that night?

21 A Yes, we did.

22 Q How long did she stay in the hospital in Greenville?

23 A Almost three weeks. Maybe 18 days.

24 Q Who -- did you stay there with her a lot?

25 A Yes.

1 Q Who else was staying with her?

2 A My husband was there, my daughter was there and Zack
3 was there.

4 Q What -- without getting into what any of the doctors
5 may have told you, what could you observe about her
6 condition in Greenville?

7 A We didn't know. We didn't know whether she was going
8 to live or whether she was going to die. She was -- we at
9 that time did not know she had been shaken. As soon as we
10 got to Greenville the doctors --

11 MR. WISE: Objection, Your Honor. That's a conclusion.

12 THE COURT: Sustained. Rephrase the question.

13 Q Did **minor** have any seizures while she was in the
14 hospital?

15 A Yes.

16 Q Did -- at some point was she -- did she come off the
17 ventilator?

18 A They -- she came -- they tried to take her off one time
19 and it was not successful, so they put her back on the
20 ventilator. And then a few days later she took herself off
21 of it. She moved or something and pulled it loose. So they
22 decided to see how she did without it. And it was a rough
23 go, but she was successful in getting off of it.

24 Q When she came off the ventilator was she -- what was
25 she able to do, if anything?

1 A Nothing. She was still unresponsive. She could not --
2 she couldn't open her eyes. She was still pretty much in a
3 coma, I believe.

4 Q Was she able to take a bottle or anything like that?

5 A No, she -- no. She lost her sucking reflex.

6 Q Was she able -- before her injury could she focus?

7 A Yes.

8 Q Was she able to see --

9 A Yes.

10 Q -- to the best of your knowledge?

11 A Yes.

12 Q What about after?

13 A No.

14 MS. WHITE: Your Honor, I believe we're going to have a
15 matter of law on the next exhibit.

16 THE COURT: You have an issue with law; is that right?

17 MR. WISE: Correct.

18 THE COURT: Okay. All right, folks. You need to step
19 into the jury room. I've got to take something up before we
20 can forward. So you all are still the jury. Remember you
21 can't discuss the case. I promise not to have you back
22 there that long.

23 (Whereupon, the jury exited the courtroom at 11:30
24 a.m.)

25 MS. WHITE: Your Honor, the next exhibit is going to

1 be, I think, State's 6. I can go ahead and get it marked.

2 (Whereupon, State's Exhibit 6 was marked for
3 identification.)

4 MS. WHITE: It's a picture of **minor** in the intensive
5 care unit of the hospital. I think Mr. Wise has an
6 objection to that one.

7 MR. WISE: Yeah. I think that's highly prejudicial
8 than probative. The doctors can testify about any great
9 bodily injury, you know, very clearly and very explicitly.
10 But to show a picture of a child in a hospital like that, I
11 think, just evokes too much emotion for what it is allegedly
12 probative of. And I assume the only thing it's being
13 introduced for is to proof great bodily injury, but I think
14 the medical professors -- medical doctors can do that
15 without any undue prejudice to the Defendant.

16 MS. WHITE: Your Honor, it's actually being introduced
17 to show the swelling that she had that the doctors are going
18 to talk about. It does show her on the ventilator, the way
19 her head is wrapped up. Also, Your Honor, the Defense's
20 theory is that this child went from perfectly normal to this
21 in the space of a day with no intervening cause. I think
22 this picture is probative of that.

23 THE COURT: I think you can try to introduce them
24 through your doctor. I don't think it's the right witness.
25 For medical reasons I think the experts will be the more

1 proper foundation than this witness. I'm not saying it's
2 not coming in, but not through this witness.

3 MS. WHITE: Yes, sir.

4 THE COURT: All right. Anything else?

5 MS. WHITE: No, sir.

6 THE COURT: All right. Mr. Willingham, we're ready for
7 them. If any of you all need to step out real quick, can do
8 it quickly while they're doing that, I'm good with it. So,
9 I mean, if they're doing that, we can --

10 MS. WHITE: I'll take you up on that, Your Honor.

11 (Whereupon a brief recess was held.)

12 THE COURT: Bring them in.

13 (Whereupon, the jury entered the courtroom at 11:36
14 a.m.)

15 THE COURT: We'll continue.

16 MS. WHITE: Thank you, Judge.

17 Q Ms. Dickey, when was **minor I** released from the hospital?

18 A I don't remember the exact date. I believe it was
19 January the 2nd or third.

20 Q So she was there roughly three weeks-ish?

21 A Yeah, approximately.

22 Q After she was released from the hospital what -- what,
23 if any, sort of medical appointments did you have to take
24 her to?

25 A Numerous. We had physical therapy, occupational

1 therapy, speech therapy, an early interventionist that came
2 to the house weekly. We had neurosurgeons, neurologists,
3 pediatric ophthalmologist, and then her regular
4 pediatrician.

5 Q And were you having to take her to any of those
6 specialists before this happened?

7 A No.

8 Q Has she been released by most of those doctors at this
9 point?

10 A She's been released by the neurosurgeon. She has not
11 been released by the ophthalmologist or the neurologist.

12 Q Is **minor** wearing glasses now?

13 A When we can get her to keep them on.

14 Q Has she had any seizures since she was released from
15 the hospital?

16 A No.

17 Q Has she had any other episodes of choking or not
18 breathing --

19 A No.

20 Q -- since she was released?

21 A No.

22 Q Where did **minor** sleep at your house?

23 A Prior to the injury she slept in the bedroom with her
24 mother. They shared a room. She had her own crib. After
25 the injury we moved her into our room, my husband and I. We

1 moved her into our room -- or her crib in there.

2 Q And Brianna's room, how far is that from the kitchen in
3 your house?

4 A Eighteen to 20 feet.

5 Q And what kind of flooring do you have in there?

6 A In the bedrooms, carpet.

7 MS. WHITE: Please answer any questions Mr. Wise has
8 for you.

9 CROSS-EXAMINATION

10 BY MR. WISE:

11 Q Ms. Dickey, I assume -- well, after **minor** was -- first
12 of all, was Zack at the hospital when **minor** was born?

13 A He was.

14 Q And after she came home he was there on a pretty
15 regular basis?

16 A He was.

17 Q I believe for the first two months he was there just
18 about every day.

19 A Five to seven days a week.

20 Q And then I think the last month before this incident
21 his father said we need to slow it down a little bit or
22 something? He wasn't there quite as much?

23 A Yeah, because we were tired of -- the parents were
24 tired of driving back and forth every day.

25 Q Right.

- 1 A He came to Greenwood.
- 2 Q He was having to come to Ware Shoals to Greenwood and
- 3 so were you?
- 4 A Uh-huh.
- 5 Q And it just got too much on the parents?
- 6 A Right. So I think we said maybe three or four days a
- 7 week or something.
- 8 Q Right. Like 19 miles or something apart?
- 9 A It's a good, you know, 15 to 20 minutes. Yes.
- 10 Q And when Zack was there in your house he learned to
- 11 change **minor** 's diapers?
- 12 A Uh-huh.
- 13 Q Learned to feed **minor** ?
- 14 A He did.
- 15 Q And he showed great patience with her?
- 16 A He did.
- 17 Q And how -- and you had known him, of course, before
- 18 **minor** was born.
- 19 A He and Brianna had only dated a very short time when
- 20 she became pregnant.
- 21 Q All right. And how did he do as a father with these
- 22 diaper changing and feeding skills?
- 23 A I think he did fine.
- 24 Q Okay. And there were times when Zack was there that
- 25 you all would want to go do some errands? Some shopping or

1 grocery shopping or something like that?

2 A I'd say maybe two or three times before Brianna and I
3 had gone to the grocery store and left **minor** there with
4 him.

5 Q Left her there with Zack?

6 A With her daddy, uh-huh.

7 Q And you never had any concern about it?

8 A No.

9 Q You never saw with Zack a short temper, anything like
10 that?

11 A Toward the baby --

12 Q Right.

13 A -- no.

14 Q He seemed to do well with the responsibilities he
15 assumed?

16 A Uh-huh.

17 Q And he never complained to you about having to be there
18 instead of being out with his friends?

19 A No, sir.

20 Q All right. And he appeared to enjoy being there?

21 A Yes, sir.

22 Q And taking care of her?

23 A Yes, sir.

24 Q And he could do that, I guess, as well as anybody else?

25 A Absolutely.

1 Q He learned to -- he learned how to do it?

2 A Uh-huh, he did.

3 MR. WISE: Thank you.

4 THE COURT: Anything else?

5 MS. WISE: May we approach, Your Honor?

6 THE COURT: Yeah.

7 (Whereupon, a sidebar was held.)

8 MS. WHITE: Thank you, Ms. Dickey.

9 (Whereupon, the witness stepped down from the witness
10 stand.)

11 MS. WHITE: The State calls Carolyn Franks, Your Honor.

12 CAROLYN FRANKS, having been first duly
13 sworn, testified as follows:

14 DIRECT EXAMINATION

15 BY MS. WHITE:

16 Q If you could tell us your name for the record. Your
17 name.

18 A Carolyn Annette Bolen Franks.

19 Q And how are you employed, Ms. Franks?

20 A I'm a paramedic for Greenwood County.

21 Q How long have you been a paramedic for Greenwood
22 County?

23 A Seventeen and a half years.

24 Q Did you respond to a call at 104 Folley Bend on
25 December 16th, 2013?

1 A Yes.

2 Q And what was the nature of that call?

3 A It came out as an unresponsive infant, a child. Then
4 it came back it was saying a possible cardiac arrest. On
5 arrival I met the grandmother in the yard with the baby. I
6 took the baby from her. The baby was cyanotic and limp --

7 Q Let me stop you right there. What does cyanotic mean?

8 A Where they're not getting their oxygen. It's the
9 blueish-grey looking color where they're not getting the
10 proper amount of oxygen, or no oxygen.

11 Q So you said she was cyanotic and limp?

12 A Yes.

13 Q What did you do from there?

14 A I got the baby out of her arms. We started CPR. We
15 got in the back of the truck -- we were doing chest
16 compressions. We got in the back in the truck. That's when
17 we started ventilating the baby.

18 Q When you say ventilating the baby, what were you using
19 to do that with?

20 A A BVM to assist the ventilation of a child -- well, to
21 ventilate the child.

22 Q When you say a BVM, what is that?

23 A A bag valve mask that you put over their face and
24 breath for them.

25 Q Are you talking about the thing we might have seen on

1 TV where someone squeezes --

2 A Yes. You squeeze the bag. You squeeze the air in.

3 Q What -- after you had her in the truck and were using
4 the BVM what happened after that?

5 A We attempted to intubate where you put them on the
6 monitor if you attempt to intubate. I couldn't visualize
7 the cords. So you go back to the bag to make sure that they
8 was getting the proper amount of oxygen.

9 Q In your -- when you attempted to intubate her were you
10 able to -- did you find anything obstructing her airway?

11 A No. A child airway is floppy, and kind of floppy
12 anyway and is very narrow. So it's -- I haven't -- I've
13 practiced on a mannequin but I haven't intubated a child.

14 Q So would you say it's harder to intubate an infant than
15 an adult?

16 A Yes. Yes. The anatomy is different.

17 Q Would it also be harder to intubate someone in the back
18 of an ambulance as opposed to in the emergency room?

19 A Yes, it would be different. You're in a more stable
20 environment in a hospital.

21 Q So you did not see anything that she was choking on or
22 that was obstructing her airways?

23 A Well, I had suctioned her. Well, let me go back. She
24 had some milk or formula or something coming out of her nose
25 and a little bit out of her mouth when I got her in the

1 truck and put her on the stretcher. I suctioned her and
2 then I started ventilating her. I had to clear her airway
3 first.

4 Q But you said it was milk, but --

5 A It appeared to be milk or formula. I don't know
6 exactly what it was. It was a milky looking substance.

7 Q Was she attempting to breath at all at that point?

8 A When I got her she wasn't, but once we started with
9 chest compressions she started gasping maybe four to six
10 times a minute until we started ventilating her.

11 Q Did she ever start breathing or crying better?

12 A Yes. My partner, he attempted to ventilate -- I mean,
13 to intubate her. We wasn't successful with it, so we
14 reinsert what we call an OPA to hold the tongue out of the
15 airway. And as we was ventilating her with the BVM she
16 started flinching. We tried to start an IV. She flinched
17 with that. And then after we continuously bagged -- well,
18 ventilated her with the BVM she just spontaneously started
19 crying and breathing on her own.

20 Q And what did you do after that?

21 A You just keep them warm. After she was breathing on
22 her own her O2 sat was adequate. We just put her on a nasal
23 cannula at four liters. She continuously cried in route
24 until we turned patient care over at the hospital.

25 Q Do you have your report up there?

1 A Yes.

2 Q Can you -- and I'm asking you to look at the report
3 because I know this was a while ago. Do you know what time
4 the call came out from dispatch?

5 A I think it was 17:11, if I'm not mistaken. It was
6 received at 17:07. That's when we was dispatched, at 17:07.

7 Q And what time did you arrive on the scene?

8 A 17:11.

9 Q So that would be 5:11 in laymen's terms?

10 A Say what now?

11 Q 5:11 p.m.

12 A Yes.

13 Q How long were you on the scene before you went to the
14 hospital?

15 A About 14 -- about 14 minutes, I think.

16 Q And --

17 MS. WHITE: Beg the Court's indulgence.

18 Q And once you got to the hospital is that when the
19 hospital staff took over?

20 A Yes.

21 Q Please answer any questions Mr. Wise has for you.

22 CROSS-EXAMINATION

23 BY MR. WISE:

24 Q The O2 level was adequate on **minor**? The O2 Level was
25 adequate? The oxygen level? Is that what you said?

1 A Yes. Once --

2 Q When she was in the ambulance you checked her oxygen
3 level?

4 A Yes.

5 Q And it was adequate?

6 A Yes. Once we -- once we bagged her. Well, ventilated
7 her.

8 Q So she was getting oxygen into her blood and into her
9 system?

10 A Yes.

11 Q And you said a child's throat is very small and --

12 A The anatomy is different from an adult's anatomy. The
13 airway is smaller.

14 Q So they tend to choke easier?

15 A Yes.

16 Q And in choking -- I guess you could choke on
17 practically anything including formula that you spit up or
18 something?

19 A Yes.

20 MR. WISE: Thank you.

21 REDIRECT EXAMINATION

22 BY MS. WISE:

23 Q Ms. Franks, her O2 was adequate you said. Was her O2
24 adequate before you got her in the ambulance?

25 A Well, we hadn't measured it. We didn't have anything

1 to measure with. But just looking at the child, no. The --
2 when you're getting adequate oxygen your color would change
3 and she was a blueish-grey looking color that represents
4 there is no oxygen. Not an adequate amount of oxygen.

5 Q Thank you.

6 THE COURT: You can step down.

7 (Whereupon, the witness stepped down from the witness
8 stand.)

9 MR. BROWN: The State calls David Lindler.

10 DAVID LINDLER, having been first duly
11 sworn, testified as follows:

12 DIRECT EXAMINATION

13 BY MR. BROWN:

14 Q State your full name.

15 A David M. Lindler.

16 Q Mr. Lindler, where do you work?

17 A Greenwood County EMS.

18 Q How long have you worked with EMS?

19 A With Greenwood or EMS?

20 Q Greenwood.

21 A Fifteen years in Greenwood and 32 years.

22 Q Thirty-two years overall?

23 A Uh-huh.

24 Q Mr. Lindler, did you receive a call back on December
25 16th, 2013 to respond to an infant not breathing?

- 1 A Yes, sir. I did.
- 2 Q What was the address you were dispatched to?
- 3 A Let's see. It was 106 Folley Bend -- 104 Folley Bend
- 4 Road.
- 5 Q And what county is that in?
- 6 A Greenwood.
- 7 Q What time were you dispatched to that location?
- 8 A 17:11.
- 9 Q And what time did you arrive at that location?
- 10 A 17:15.
- 11 Q Once you arrived what did you see?
- 12 A I met Ms. Franks, which we were actually in the backup
- 13 truck. Ms. Franks was carrying the infant to her truck for
- 14 treatment.
- 15 Q And what did you notice about the infant?
- 16 A Pale, cyanotic, barely breathing.
- 17 Q So what does cyanotic mean again?
- 18 A Patient was blue around the lips and face and basically
- 19 white -- more whitish colors in the extremities.
- 20 Q What would cause that?
- 21 A Lack of oxygen.
- 22 Q And was the child responsive in any way?
- 23 A Unresponsive but attempting to breath.
- 24 Q Attempting to breath?
- 25 A Yeah. Barely breathing. Four -- maybe four to six

1 times a minute at the most, gasping.

2 Q Once -- what happened once you got there and once Ms.

3 Franks -- where was she going with the baby?

4 A She was going to her truck. She was going to her
5 ambulance to already continue the treatment she had started.

6 Q And once you got to the ambulance what treatment did
7 you all --

8 A We put the patient in the back. Supine on her back.
9 She had some formula obviously in her airway. She was
10 suctioned and then Ms. Franks attempted to intubate her
11 which is put an advanced airway in the windpipe to secure
12 the windpipe.

13 Q Now, is that an easy thing to do?

14 A No, sir. It's not.

15 Q How big -- a child of that age, how big is her
16 windpipe?

17 A We used a three millimeter tube. An infant or
18 anybody's windpipe is the same size as your nail bed. So if
19 you were to look at her nail bed, that would be the size of
20 the diameter of her trachea.

21 Q Nail bed on her pinky finger?

22 A Nail bed on the pinky finger.

23 Q So a small --

24 A I used -- we used a three millimeter tube, so that
25 should tell you that the windpipe was a little bit larger

1 than that.

2 Q Were you all successful in intubating her?

3 A No, sir. We weren't.

4 Q Since you weren't able to get a tube in her windpipe
5 what did you all do next?

6 A Basically you would suction them when you put back
7 what's called an oropharyngeal airway which is a plastic J.
8 It holds the tongue out of the way, and we immediately start
9 assisting them with a bag with 100 percent oxygen.

10 Q And when do you -- you and Ms. Franks did assist her
11 with oxygen, did she respond to that?

12 A Yes, she did.

13 Q How did she respond?

14 A Initially a little bit sluggish and then began to
15 breath more rapidly on her own. And by the time we got her
16 to the hospital basically she was screaming, or crying,
17 which is a good sign. Breathing on her own and moving all
18 her extremities, which is what -- exactly what you're
19 wanting to see.

20 Q Did her skin color improve?

21 A Everything picked up pretty much closer to normal.

22 Yes, sir.

23 Q And what would you attribute her recovery to?

24 A Rapid response and early oxygen. My understanding was
25 that someone had done CPR prior to us getting there. And

1 then Ms. Franks also had done some chest compressions on the
2 infant while she was going to the truck.

3 Q Now, once you got [minor] to the hospital what did you
4 and Ms. Franks do then?

5 A We -- basically we turned the patient over to the ER
6 physician, which was Dr. Graham, gave a report, and then the
7 patient would be left in the care of the ER.

8 Q And what time did you leave [minor] with Dr. Graham?

9 A 17:36. We got to the destination at 17:35 and the
10 patient was transferred at 17:36.

11 MR. BROWN: No further questions. Please answer any
12 questions Mr. Wise has.

13 CROSS-EXAMINATION

14 BY MR. WISE:

15 Q When you referred to Ms. Franks getting [minor] into her
16 truck, you're referring to her ambulance?

17 A Ambulance. Yes, sir. I'm sorry.

18 MR. WISE: That's it.

19 THE COURT: All right. You may step down.

20 (Whereupon, the witness stepped down from the witness
21 stand.)

22 MS. WHITE: The State calls Dr. Richard Graham.

23 DR. RICHARD GRAHAM, having been first
24 duly sworn, testified as follows:

25 DIRECT EXAMINATION

1 BY MS. WHITE:

2 Q If you could introduce yourself to the jury.

3 A Sure. I'm Dr. Richard Graham.

4 Q Where are you employed, Dr. Graham?

5 A Self Regional here in town.

6 Q And how are you employed with Self Regional?

7 A As far as a business model or as far as working in the
8 emergency room?

9 Q Working in the emergency room.

10 A Working in the emergency room, I've been there for
11 eight years.

12 Q And you're a physician in the emergency room?

13 A Yes, ma'am.

14 Q Tell us a little bit about your educational background.

15 A After college I was a paramedic for three years. I
16 also worked in a emergency department in what is called a
17 level two trauma center for that time as a tech.

18 THE COURT: Slow down. You're talking really fast.

19 THE WITNESS: I speak fast. It's part of my job. I
20 apologize.

21 A In addition to that I worked as a critical care
22 transport tech for three years as well. Went to medical
23 school at Brody School of Medicine at ECU. Graduated there
24 at the top of my class, Alpha Omega Alpha. And then from
25 there went on to Carolinas Medical Center of Charlotte where

1 I trained as an emergency medicine resident. Graduated
2 there chief resident. And then became board certified in
3 the same field through ABEM which is the boarding registry
4 for emergency medicine doctors. And since that point in
5 time I've been here working.

6 Q So when did you start working? I think you said 2008?

7 A 2007.

8 Q 2007. Have you ever testified in court before?

9 A Probably about 10 times here. Yes, ma'am.

10 MS. WHITE: Your Honor, at this time the State offers
11 Dr. Graham as an expert in emergency medicine.

12 MR. WISE: No problem.

13 THE COURT: Any voir dire? You stipulated? Folks, a
14 little different. Dr. Graham has been called as a witness.
15 He's been qualified as an expert in the field of emergency
16 medicine which means he can offer opinions in that field in
17 addition to offering any eyewitness testimony he may also
18 have, as opposed to a regular witness who may not have
19 speciality training. So he's an expert in emergency
20 medicine by agreement of the parties.

21 Q Dr. Graham, were you working on December 16th, 2013?

22 A Yes, ma'am.

23 Q Did you examine a patient who came in named minor
24 Ledford?

25 A Yes, ma'am.

1 Q What was her condition when you first examined her?

2 A As far as her standing we'd say critical care at that
3 time.

4 Q What were her symptoms?

5 A It was two-fold. Can I have a chart copy, by chance,
6 just to make sure that I'm clearly representing everything
7 that was there. On arrival -- patient presented by EMS.
8 The report initial was from the paramedics. Initially they
9 informed me that the patient was allegedly being fed and may
10 have choked on some rice cereal, which would be unusual. At
11 that time paramedics were concerned to the point where
12 respiratory status was decompensating. Was not breathing.
13 I think the grandmother had already performed CPR prior to
14 their arrival, and they attempted intubation, placement of
15 an advanced airway to breath for the patient. I believe
16 that did not happen otherwise because of difficult airway
17 or because of just difficulty obtaining access.

18 Q Let me interrupt you real quick. I'm going to show
19 this to Mr. Wise and hand you your chart.

20 A Also it should be noted that the paramedics informed me
21 that on arrival the child was cyanotic, as well as
22 unresponsive. Cyanotic is a clinical finding for low oxygen
23 level. It's where the skin turns purple or blue. A sign of
24 not breathing. Another term for that is apnea. And that's
25 the reason the paramedics attempted to place an advanced

1 airway to breath for the child.

2 Q Were the paramedics successful in intubating her?

3 A They were not. They tried one time without success.

4 And apparently the child became responsive and started
5 screaming intermittently. And for that purpose, since the
6 child had started breathing again and regained
7 consciousness, they stopped trying to place the advanced
8 airway.

9 Q And just kind of stopping you right there. How -- what
10 are some of the difficulties in placing and intubating a
11 three-month-old versus an adult?

12 A Sure. So there's a couple of things. From a paramedic
13 standpoint airways are more challenging than, say, in the
14 hospital. Placing an advanced airway you try to be in a
15 controlled environment. Obviously either in a house or an
16 ambulance your space is limited. Your lighting is limited.
17 Your ability to gain appropriate positioning to place the
18 airway is limited. So it's more challenging from that
19 standpoint. So for any airway for a paramedic I think their
20 level of difficulty is higher than, say, a physician in a
21 hospital or in an OR suite or somewhere along those lines.

22 The second fact is that for a child, specifically
23 somebody so young, paramedics do not intubate this age group
24 on a daily basis. In fact, they may go four, five, six
25 years without intubating a child this small. And so, while

1 they're very advanced at placing airways, when you're
2 intubating a child this age your stress level is already
3 through the roof, and then your fine motor skills diminish.
4 So it's very challenging at that time for placement of a
5 child.

6 As far as the anatomical anatomy of the airway for a
7 child, it's not any more difficult, per se, than intubating
8 or placing an airway for an adult, as long as you've done
9 numerous cases and had experience in the same.

10 Q So minor is brought to you in the ER --

11 A Yes, ma'am.

12 Q -- and you perform your initial assessment of her.
13 What happened from that point?

14 A So when I first saw the child -- let me pull back here.
15 My initial assessment was concerning the -- the story that I
16 was being told from the paramedics did not quite line up
17 with the presentation. Children who aspirate rice cereal,
18 they don't have complete airway obstruction. They also
19 don't act as this child did when the child arrived. This
20 child was intermittently screaming out inappropriately.
21 Obviously children can cry. Obviously children can scream.
22 But having dealt with so many children you kind of develop a
23 understanding of what is an appropriate cry, what is an
24 appropriate scream. Just like a mother might recognize a
25 cry of pain versus a cry of fussiness. The same for us in

1 the emergency room. This child's cry was completely
2 inappropriate and did not make sense with the story that was
3 being told. Recognizing the fact that the child was
4 responsive and awake and actually had a -- was breathing
5 okay and had a airway anatomically, we chose not to try to
6 put an airway in. We decided to go immediately to CT scan,
7 CAT scan, and advanced radiography to see what was
8 happening.

9 The story discrepancy with what I was seeing clinically
10 was so concerning that I deviated what I might normally do.
11 I felt like we needed to do a complete CT scan of the head,
12 the neck, the chest, the abdomen and pelvis. Typically
13 speaking, if it was just an airway issue, I may do an x-ray
14 of the chest. I may do a CAT scan of the chest. But
15 because of the discrepancy and, frankly, my initial concern
16 because of the discrepancy for possible child abuse,
17 non-accidental trauma, we proceeded on doing a full CAT scan
18 of the child.

19 Q And what did the CAT scan show?

20 A So before the child even got back to the emergency room
21 we were able to look at the CAT scan, the images itself, and
22 the CAT scan showed subdural hemorrhages. Basically
23 bleeding around the brain. At that point in time we knew we
24 had pretty much a life-threatening process beyond what was
25 explained.

1 Q And the subdural hemorrhages around the brain, would
2 you -- have you reviewed those CT scans yourself?

3 A Yes, ma'am.

4 Q Would you characterize those as acute or chronic?

5 A Absolutely acute.

6 Q And what does acute mean?

7 A Acute means within the last 12 to 24 hours. In other
8 words, somebody is actively hemorrhaging during that time
9 period. Most commonly we look at CAT scans and based on the
10 color density, in other words, how bright the color the
11 blood is, you can determine the age of the blood. Chronic
12 blood is dark. It is black in color. Almost a loss of
13 color. Acute blood is bright white. And this one was
14 definitely bright white appearing.

15 Q So would it be your medical opinion that whatever had
16 caused that injury to happen in the past 12 to 24 hours?

17 A Probably much less than that, to be honest with you. I
18 use the word 12 to 24 hours just to explain the word acute.
19 When you take that x-ray and CAT scan, but you put in the
20 clinical presentation of the child, which is as important,
21 the fact there was a rapid decline in consciousness and
22 airway, meant that this happened in very recent time.

23 Q Did you intubate minor --

24 A I did.

25 Q -- at that point?

1 A Yes, ma'am.

2 Q And why did you make the decision to do that?

3 A So two-fold. One, I already that the child was
4 unstable, just from the paramedics' explanation when they
5 arrived. The child was cyanotic, apneic, not breathing.
6 Again, without oxygen. And not acting appropriately from a
7 neurologic standpoint. Also we knew that this child was
8 going to be transferred immediately to the Greenville
9 hospital system for pediatric intensive care. Something we
10 do not have here at Self Regional.

11 So, from a transportation standpoint, I knew that the
12 likelihood of this child stopping breathing again was great.
13 And that, again, is much safer for any child to be intubated
14 to protect that airway in a controlled environment, in the
15 emergency department, where I have all those advanced
16 techniques and airways and lighting and positioning rather
17 than in the back of an ambulance, or a helicopter, or
18 however they were transporting at that time.

19 Q When you were examining **minor** did you notice any
20 obstructions in her neck or her airway, anything like that?

21 A No, ma'am. The child's anatomy and airway was
22 completely normal. Very easy intubation. Very easy airway
23 to manage.

24 Q Was there anything to suggest to you that she had
25 choked?

1 A No, absolutely not.

2 Q Can choking cause subdural hematomas?

3 A Absolutely not.

4 Q Dr. Graham, based on your experience in the ER, is it
5 odd to see that kind of bleeding on the brain without any
6 sort of history of trauma or injury to the skull?

7 A For this age group, yes. For an elderly patient, not
8 necessarily.

9 Q When she left your care what was your opinion as to her
10 outcome?

11 A Unfortunately I had to have a conversation with the
12 family and I explained that her situation was absolutely
13 critical, and there was a good chance of fatality from this
14 injury.

15 MS. WHITE: Please answer any questions Mr. Wise has
16 for you.

17 THE WITNESS: Of course.

18 CROSS-EXAMINATION

19 BY MR. WISE:

20 Q Have you got the CT scans that you saw?

21 A Do I have a copy of it?

22 Q Yes.

23 A No, sir. Not that I --

24 Q You saw two subdural hematomas?

25 A I saw one acute. That's correct.

- 1 Q And the other one was --
- 2 A The other --
- 3 Q -- not as acute? Is that a proper term?
- 4 A There was a -- the radiologist report was that there
- 5 was possibly a chronic subdural in addition. Although, it
- 6 also could have been a chronic, what's called, a hygroma, or
- 7 fluid collection. It also could have been representative of
- 8 just extra space between the brain and skull. I believe the
- 9 radiologist read it as more likely the last. More likely
- 10 just anatomic.
- 11 Q Do you have that report?
- 12 A Let's see.
- 13 Q Is this what you're looking for?
- 14 A That would be fantastic. Thank you.
- 15 Q Correct?
- 16 A Yes, sir.
- 17 Q Now, you're not a radiologist?
- 18 A No, sir. I'm not.
- 19 Q And -- but your information is acute means 24 hours?
- 20 A Or less.
- 21 Q And there's also one called -- this is on a CT scan,
- 22 hyperacute?
- 23 A On the report there?
- 24 Q No, no. The term hyperacute.
- 25 A No, sir. I've never heard that.

- 1 Q Not a term you've heard of --
- 2 A No, sir.
- 3 Q -- involving a radiologist?
- 4 A No, sir. Never used in the past.
- 5 Q Okay. And the reading, in the radiologist's opinion,
- 6 was basically a three-fold possibility. A chronic subdural
- 7 hematoma?
- 8 A Yes, sir.
- 9 Q And that would be one that's how old?
- 10 A Typically that's over more than three or four days.
- 11 Well, let me back up. That's an acute. So there's really
- 12 between 24 hours and about two weeks, a subacute process.
- 13 And the color change there is kind of a grey intermediate.
- 14 After about two weeks the chronic nature would be a
- 15 dark black color and a loss of color.
- 16 Q So what -- what you look -- what you see in an acute
- 17 situation is kind of a white color on a CT scan?
- 18 A Yes, sir.
- 19 Q And that white color would be basically blood --
- 20 A Yes, sir.
- 21 Q -- that's anywhere from 24 hours or less old?
- 22 A Yes, sir.
- 23 Q And you can't say whether it's three hours old or 24
- 24 hours?
- 25 A Not from the CAT scan, no.

1 Q Now, and then he uses a cystic hygroma?

2 A Yes, sir.

3 Q What is that?

4 A That's what I was talking about. A cystic hygroma is
5 one of the options for a chronic finding. Basically a dark
6 area around the brain that is a fluid collection. It can be
7 from a previous injury. It can be from just anatomical
8 changes.

9 Q And a fluid collection is a concern because the body
10 actually reabsorbs this blood back into the system?

11 A It does. Yes, sir.

12 Q And changes -- changes the -- what it's actually
13 looking like on the C scan -- CT --

14 A Yes, sir.

15 Q And it also, it becomes less blood like and more fluid
16 like?

17 A That's correct.

18 Q So one way you tell a chronic from an acute is the
19 change in color?

20 A Yes, sir.

21 Q And you assume that that fluid at that point could be
22 an old hemorrhaging of some sort?

23 A Could be, yes.

24 Q And some of it will look about the same as just fluid
25 on the brain?

- 1 A Yes, sir.
- 2 Q And what can cause fluid on the brain?
- 3 A Well, it can be congenital, traumatic, infectious. We
- 4 do have patients who have hydrocephalus, et cetera.
- 5 Q Now, this child had a smaller than average brain, or
- 6 skull?
- 7 A I can't say that I qualify that 100 percent.
- 8 Q Did you notice that?
- 9 A Notice the size of the brain in relation to the skull?
- 10 Q Well, not brain. The skull.
- 11 A The skull?
- 12 Q Uh-huh.
- 13 A You mean the size of the skull in relationship to his
- 14 age, or his body size size?
- 15 Q The size of the skull as opposed to normal.
- 16 A No, it seemed fairly normal to me. Anatomically
- 17 speaking from visualization it looked normal.
- 18 Q I ask you if you're familiar with this one?
- 19 A Yes, sir. This is a percentage in relation to birth
- 20 age. In other words, when you use measurements. For
- 21 example, when a child goes to a well child check, and in
- 22 relation to how big they are. How much do they weigh for
- 23 their age. But as far as anatomically speaking, the
- 24 proportionality of the child looked normal.
- 25 Q I understand that. But this child had a smaller than

- 1 normal skull?
- 2 A Yes, sir. For the age, less than third percentile.
- 3 Q Right. That's much smaller than normal?
- 4 A For the age. Yes, sir.
- 5 Q For the age?
- 6 A Yes, sir.
- 7 Q Right. Now, you also ordered a CT scan of the neck --
- 8 A Yes, sir.
- 9 Q -- and you found nothing?
- 10 A That's correct.
- 11 Q You ordered a CT scan of the chest?
- 12 A Yes, sir.
- 13 Q And you found nothing?
- 14 A That's correct.
- 15 Q And then -- I assume you were looking for injury to the
- 16 neck?
- 17 A Yes, sir.
- 18 Q And you were looking for injury to the ribs in the
- 19 chest in particular?
- 20 A Yes, sir.
- 21 Q Because in a shaking situation that's two things you
- 22 look for?
- 23 A That's correct.
- 24 Q Because you -- a baby's head is much heavier than the
- 25 body compared to us?

1 A That's correct.

2 Q And so, what you're looking is for that hyperflexion in
3 the neck area?

4 A Not necessarily hyperflexion. Hyperflexion injuries
5 are really only seen on MRI. So what I was looking for was
6 for any type of dislocation of the neck and/or fractures.

7 Q Where the head going back and forth could fracture the
8 neck?

9 A Yes, sir.

10 Q And then you were looking for rib injuries because when
11 a person grabs a baby, if they shake it real hard, that can
12 cause broken ribs?

13 A Yes, sir.

14 Q Bruised ribs. You wouldn't pick up a bruised rib,
15 would you?

16 A No, sir.

17 Q You'd pick up a cracked or fractured rib or one that's
18 completely broken?

19 A That's correct.

20 Q And you found none of that?

21 A That's correct.

22 Q You also examined this child physically, too, didn't
23 you?

24 A Yes, sir.

25 Q And you were looking for -- there you were looking for

1 bruises?

2 A Yes, sir.

3 Q And you were looking for bruises particularly in the
4 chest area?

5 A Anywhere.

6 Q I know. But in particular the torso area, where
7 someone would grab the child?

8 A Anywhere.

9 Q Anywhere. All right. You found no bruises except one
10 on the leg?

11 A That's correct.

12 Q And you were also looking for bruises on the head --

13 A Yes, sir.

14 Q -- to see if the head hit something?

15 A Uh-huh.

16 Q And you saw no bruises on the head?

17 A That's correct.

18 Q All right. So the only thing you saw was the subdural
19 hematoma?

20 A Yes, sir.

21 Q Are you aware of studies that have been done on
22 children that are born -- that a high number of children
23 that are born have subdural hematomas?

24 A That's correct.

25 Q And I believe that was a study done by Dr. Rooks.

1 A I'm not sure of the name, but probably.

2 Q Well, let me see if this refreshes your memory.

3 A I appreciate it. So I've not read this particular
4 study, no.

5 Q But you are aware of the fact that children are
6 frequently born with --

7 A Absolutely.

8 Q -- subdural hematomas. And those obviously --

9 A I wouldn't use the word frequently, but it does happen.
10 Yes.

11 Q Well, I forgot what her percentage was. It was pretty
12 high. Her study was 46 out of 100.

13 A I would say that's probably a single study and has not
14 been reviewed. So I probably wouldn't call it qualified.

15 Q But there's nothing -- let's put it this way. If you
16 did an MRI on a newborn and you found a subdural hematoma,
17 you would not be overly surprised?

18 A No. I'd be still overly concerned, but yes.

19 Q Correct. And nothing to indicate that those subdural
20 hematomas are caused by any sort of shaking or violence?

21 A No. It's usually from birth trauma.

22 Q Birth trauma.

23 A It's still a traumatic injury.

24 Q Yeah, but not by shaking?

25 A Agreed.

1 Q And do you know whether or not a child can, in fact,
2 have a spontaneous subdural hematoma?

3 A They can. They have anatomic derivation. In other
4 words, birth defects, congenital findings, or the child is
5 on blood thinners and has a simple fall injury without a
6 direct hit to the head. Yes, from those standpoint. But
7 nothing to qualify this child has any of those risk factors.

8 Q And a person can have the start of a subdural hematoma
9 and not show any outward signs immediately?

10 A You mean you could have a subdural hemorrhage but not
11 clinically be prevalent.

12 Q Correct.

13 A Or, in other words, you couldn't tell from just talking
14 to somebody; is that --

15 Q A layman anyway.

16 A Right. You can, yes. Especially with this age group a
17 child could have a subdural hemorrhage that if it is very
18 mild and very small and may not be recognized initially.

19 Q Do you recall how big the subdural hematoma was?

20 A No, sir. Not off the top of my head.

21 Q You don't know if it was small or large, big or what?

22 A I'd say small to intermediate.

23 Q I thought I had a copy of it, but I apologize.

24 A I think you did. Yes, sir.

25 Q You had it?

- 1 A I gave it back.
- 2 Q You didn't make any notes of the size in the report?
- 3 A I believe I did. I've got to look. No, sir. I did
- 4 not.
- 5 Q And so, you can't tell us how much was there as far as
- 6 -- as far as teaspoons and stuff like that?
- 7 A No, I can't tell you off the top of my head.
- 8 Q Do you think you could estimate that if you saw it?
- 9 A Potentially.
- 10 Q But you didn't make that notation?
- 11 A I did not. I put it on my chart that I reviewed the CT
- 12 scan.
- 13 Q Right. Other than the fact that it was --
- 14 A That's correct.
- 15 Q -- is what you recall?
- 16 A Whenever I use the word large, it would be so large
- 17 that it would be pressing the brain into the bottom of the
- 18 skull would be shifting the brain. That was not present.
- 19 Q And you know there's no shifting brain?
- 20 A That's correct.
- 21 Q So when you have a CT scan and if it's big it actually
- 22 the brain moves to one side?
- 23 A That's correct.
- 24 Q And you've got a little bit of space around the brain?
- 25 A Yes, sir.

1 Q Not a lot, but some?

2 A That's correct. Yes, sir.

3 Q Did the CT scan show any bruising to the brain?

4 A No, sir.

5 Q So there's no brain injury?

6 A I wouldn't go that far.

7 Q But you saw no bruising?

8 A Usually the word brain injury is very different from
9 what can be found on a CAT scan. You can absolutely have a
10 brain injury without any findings on a CAT scan. It's what
11 we call diffuse axonal injury.

12 Q Let's go -- let's be very precise. All right?

13 A Okay.

14 Q Based upon the CAT scan you saw no brain injury?

15 A I saw no bruising or trauma to the brain tissue itself,
16 yes.

17 Mr. Wise: Thank you.

18 MS. WHITE: Very briefly, Your Honor.

19 REDIRECT EXAMINATION

20 BY MS. WHITE:

21 Q Mr. Wise asked you about the CT scan on December 16th
22 on the radiologist's report. Do you still have that up
23 there?

24 A No, sir. I think we gave it back.

25 MS. WHITE: May I approach the witness, Your Honor?

1 THE COURT: Sure.

2 THE WITNESS: Thank you much. This is the same thing.

3 Q The prominent -- the fluid that Mr. Wise was asking you
4 about, I think there were three different options for what
5 that could have been. What were those options again?

6 A I will read directly from here. So three options were
7 prominent subdural space. Again, all that means is the
8 space between the brain and the skull. So it could have
9 been an extra space between the brain and skull. The second
10 option was a cystic hygroma, which is just a fluid filled
11 collection, a cyst around the brain. And then the last one
12 was a possibility -- or chronic subdural. Basically a bleed
13 that happened two weeks earlier.

14 Q And which did the radiologist feel was more likely or
15 less likely?

16 A Right.

17 MR. WISE: Your Honor --

18 A The most likely ---

19 THE COURT: Hold on.

20 MR. WISE: -- I'm going to object to him saying what
21 the radiologist said.

22 MS. WHITE: He asked the question, Your Honor.

23 THE COURT: He didn't ask that question. I don't think
24 he did.

25 MR. WISE: He can read the report. I have no objection

1 to him literally reading the report.

2 THE COURT: His report will be introduced. He can read
3 from the report, but --

4 MS. WHITE: I can rephrase the question.

5 THE COURT: -- I don't think he should be telling what
6 the radiologist said. He can say what the radiologist wrote
7 on that report.

8 Q Based on the report, what was the more likely
9 explanation for that fluid.

10 MR. WISE: I would object to that, because I don't
11 think he said -- I don't think he has a more likely in here.

12 THE COURT: Can I see that?

13 THE WITNESS: Yes, sir.

14 THE COURT: How about this. Publish the impression.

15 Q What was the radiologist's impression?

16 THE WITNESS: Read the whole thing?

17 THE COURT: Yes, sir.

18 A Very good. "Subdural hematomas adjacent to the right
19 temporal lobe and posterior to the right parietal lobe.
20 Prominent bilateral anterior subdural. Density collections
21 are nonspecific but likely related to prominent subdural
22 space. Less likely cystic hygroma or chronic subdural
23 hematomas could appear similar."

24 Q And based on your examination of **minor**, her
25 condition that day, was that related to a subdural hematoma

1 she sustained through birth trauma?

2 A No.

3 Q And based on your examination and your experience, was
4 her condition that day related to chronic subdural
5 hematomas?

6 A No, ma'am.

7 MS. WHITE: Thank you, Dr. Graham.

8 RECROSS-EXAMINATION

9 BY MR. WISE:

10 Q A chronic subdural hematoma is one that's happened in
11 the past and is on the way of healing itself?

12 A Yes, sir.

13 Q Because these things do heal themselves, more or less?

14 A If you survive it. Yes, sir.

15 Q Correct. Have you got the radiologist's report?

16 A Yes, sir.

17 Q You know, sometimes we're divided by an English --
18 common language. Look at the last sentence of his
19 impression. It says, "Less likely cystic hygroma," correct?

20 A Yes, sir. It says "Less likely cystic hygroma."

21 Q Then, "or chronic subdural hematomas could appear
22 similar."

23 A Yes, sir.

24 Q It doesn't necessarily mean that the chronic subdural
25 hematoma is less likely. It simply means that that could

1 appear similar?

2 A Well, he actually says it's less likely.

3 Q Well, no. He says --

4 A He says less likely --

5 Q It doesn't say less likely cystic hygroma and chronic.

6 He used the word or.

7 A Right.

8 Q And then or has the modifying phrase afterwards, "could
9 appear similar."

10 A I couldn't tell you his intentionality beyond this
11 statement. I'm sorry.

12 Q I understand. Like I say, sometimes we're divided by
13 common language.

14 A Yes, sir.

15 THE COURT: Fair enough. You may step down.

16 THE WITNESS: Thank you so much.

17 (Whereupon, the witness stepped down from the witness
18 stand.)

19 THE COURT: Is this a good time for a break?

20 MS. WHITE: The next witness is the forensic
21 pediatrician.

22 THE COURT: Excellent. Folks, we're ready for a lunch
23 break. It's 12:30. Can you all be back by 1:45? So an
24 hour and 15 minutes. Is that sufficient?

25 Don't discuss the case or talk to anybody about it.

1 You can't discuss the case. See y'all.

2 (Whereupon, the jury exited the courtroom at 12:30

3 p.m.)

4 THE COURT: See you all back at quarter to 2:00.

5 (Whereupon, a lunch break was held from 12:30 p.m. to

6 1:45 p.m.)

7 (Whereupon, the jury entered the courtroom at 1:45

8 p.m.)

9 THE COURT: Well, continue. Call your next witness.

10 MS. WHITE: The State calls Dr. Nancy Henderson.

11 DR. NANCY HENDERSON, having been first

12 duly sworn, testified as follows:

13 DIRECT EXAMINATION

14 BY MS. WHITE:

15 Q If you could introduce yourself to the jury.

16 A I'm Nancy Henderson.

17 Q How are you employed, Ms. Henderson?

18 A I'm head of the Division of Forensic Pediatrics at

19 Greenville Health System.

20 Q And can you tell us a little bit about your education

21 and your experience?

22 A Sure. I graduated Rutgers College of Pharmacy in 1980

23 and then went and did my medical education at Bowman Gray

24 School of Medicine in Winston-Salem, North Carolina and

25 graduated in 1984, and then did my pediatric residency at TC

1 Thompson Children's Hospital in Chattanooga, Tennessee. And
2 then moved here to -- well, to Greenville in 1992 and began
3 working at the hospital system.

4 Q In 1992 what was your practice at the hospital system?
5 What were you doing?

6 A I was board certified in general pediatrics and was
7 working in the outpatient clinic at the Center for Pediatric
8 Medicine teaching new residents.

9 Q Have you ever done any training or had any experience
10 in the field of child abuse pediatrics?

11 A Yes. I was doing a lot of child abuse as part of my
12 work there in the outpatient facility. But in 2009 the
13 Academy of Pediatrics developed a sub-boarded area child
14 abuse pediatrics which I sat for, and so now I am
15 sub-boarded in that area.

16 Q And have you ever been qualified as an expert in the
17 courts of South Carolina?

18 A Yes, I have.

19 Q Do you know approximately how many times?

20 A I am in family court and in general sessions court
21 probably about maybe three times a month.

22 MS. WHITE: The State offers Dr. Henderson as an expert
23 in general pediatrics and child abuse pediatrics.

24 MR. WISE: No objection.

25 THE COURT: Ladies and gentlemen, just like the prior

1 doctor, Dr. Henderson is qualified as an expert in the field
2 of pediatrics and child abuse pediatrics, so she can offer
3 opinions based upon her expertise and her training.

4 Continue on.

5 MS. WHITE: Thank you.

6 Q Did you examine minor [REDACTED] in December, 2013?

7 A Yes, I did.

8 Q When did you examine her?

9 A It was on the 17th of December.

10 Q And what were the findings from your examination of
11 minor [REDACTED]?

12 A I was involved as a consultant for child abuse
13 pediatrics, and at the time that I saw her for that initial
14 examine she was intubated, and so she was having trouble
15 breathing on her own. I was there when she had her eyes
16 examined and saw the findings of retinal hemorrhages. She
17 also had had a prior CT scan done at the referring hospital,
18 as well as one done at GHS. Both the CT scan of her head
19 and a MRI of her head which showed some extraaxial fluid
20 kind of on the area around her brain, as well as the CT scan
21 showing some subdural blood on the right side, and also some
22 subarachnoid blood in the occipital area on the right side.
23 The MRI showed a more bilateral bleeding. The rest of her
24 physical exam, she had some swelling edema of her eyelids.
25 She had her -- a very small, like three to four millimeter

1 bruise on her inner aspect of her left side, but there were
2 no other abnormal findings on her exam.

3 MS. WHITE: May I approach the witness, Your Honor.

4 THE COURT: You may.

5 Q I'm going to hand you what's been marked for
6 identification as State's Exhibit 6. Based on your review
7 of the records and your examine that day, is that an
8 accurate picture of **minor** ?

9 A Yes, it is.

10 Q And is that the way she appeared when you examined her
11 on December 17th?

12 A Yes, that's correct.

13 MS. WHITE: The State offers Exhibit 6 into evidence at
14 this time.

15 MR. WISE: Same objection as previously, Your Honor.

16 THE COURT: I understand your objection, but under a
17 403 analysis I'm going to allow it as probative. This is
18 the only one you're going to introduce?

19 MS. WHITE: Yes, sir.

20 THE COURT: Okay. That way we won't -- I mean, one
21 photograph is great. We won't be duplicative of prior
22 evidence submitted.

23 (Whereupon, State's Exhibit No. 6 was admitted into
24 evidence.)

25 Q Can you see the TV from where you're sitting, Dr.

1 Henderson?

2 A Yes, I can.

3 Q You were just talking she had some edema. Is that just
4 a medical term for swelling?

5 A That's correct. Especially in the -- you would really
6 notice it a lot in her eyelids. You could kind of see it a
7 little bit in her hands and feet. She has the gauze around
8 her head and that's because she -- at the time of my
9 examination they were doing a 24 hour EEG to look for
10 seizure activity. She has the tube in place for the
11 ventilator. She has the EKG monitor on her chest. IV in
12 site on her right lower toe. She has an O2 stat monitor,
13 and just her diaper in place.

14 Q You said that she was having a 24 hour EEG. Did that
15 note seizure activity?

16 A Yes, it did.

17 Q You said that the MRIs show bilateral hemorrhaging on
18 the brain. Was that significant to you in your analysis of
19 Miss Ledford?

20 A Well, obviously there shouldn't be any blood there. So
21 in that it is there it's very, very concerning. We often --
22 in children that have just an impact injury sometimes we'll
23 just see one localized area and either fracture or bleeding.
24 And in that this was a more diffuse process made -- made the
25 situation more concerning.

1 Q And you said you were present with Dr. Johnson when he
2 performed his eye examination?

3 A It was.

4 Q Did you -- what did Dr. Johnson note in his
5 examination?

6 A I was able to see at the time that **minor** had diffuse
7 too numerous to count blood in the back of both of her eyes
8 through all the layers of her retina, extremely significant.

9 Q And with the bilateral retinal hemorrhages and the
10 subdural hematomas do you have an opinion, to a reasonable
11 degree of medical certainty, what caused those injuries?

12 A I think the mechanism -- I did have the opportunity to
13 talk to mom and dad and the members of the -- what they had
14 shared with me really didn't explain the injuries that were
15 present on **minor**, and the presence of the retinal
16 hemorrhages. The significant amount of retinal hemorrhages,
17 along with the acute subdural hematomas. The subarachnoid
18 hematoma was very concerning for inflicted injury.

19 Q And when you say inflicted injury, are you talking more
20 of a shaking type injury or a blunt force trauma? What type
21 of inflicted injury would you be looking at?

22 A Well, I think shaking is certainly a more likely
23 mechanism. There was not a specific impact on her exam to
24 really say that there was impact injury. There wasn't a
25 fracture. There wasn't a localized bruising. Although you

1 can have impact along with shaking and not necessarily have
2 those findings, but I did not see anything on her exam
3 specifically to say that that had happened.

4 Q You mentioned the history that you got from [minor] 's
5 mother and father. Was there any history of trauma that you
6 were given whatsoever?

7 A No. In talking to both of them, [minor] had been doing
8 very well. She had a period of diarrhea some week prior to
9 that that really had resolved. She was -- she had traveled
10 with them over the weekend and really had been well. Mom
11 and grandma had dropped [minor] off with dad at the house.
12 At that point she was doing great. And dad did not report
13 any trauma to me at all during the time that he was with
14 her.

15 Q Now, let me ask you, Dr. Henderson, is it common for a
16 three-and-a-half-month old to -- well, let me strike that
17 question. Does choking cause subdural hematoma and retinal
18 hemorrhages in a three-and-a-half-month old?

19 A I mean, I think there's sometimes choking, which is
20 external --

21 Q I'm talking about internal choking. Choking on food or
22 choking on something along those lines.

23 A I would not expect for those -- those kind of -- that
24 choking to cause the finding that [minor] had.

25 Q Have you personally ever observed a child who choked on

1 a piece of food or something on the airway who had subdural
2 hematomas or hemorrhages as a result of that?

3 A I have not seen a child that had had that.

4 Q What about the possibility, Dr. Henderson, that the
5 subdural hematoma she had were a result of some sort of
6 birth trauma? What's your opinion on that?

7 A Well, it is not uncommon for children to have
8 occasional bleeding related to the trauma of birth.
9 Typically they resolve in the first four weeks of life.
10 There is -- on occasion you can see them up to three months.
11 They're small. They don't cause symptoms and they resolve.
12 The only reason why we know it, they're getting CT scans for
13 other reasons. But they don't cause the symptoms that we
14 have seen in **minor**.

15 Q Based on the symptoms that were seen in **minor**, can you
16 put a timeframe around the event that caused these injuries?

17 A I think the thing that I often try to do when I'm
18 hearing a history about a child is to understand how they
19 were, you know, when they were doing kind of their normal
20 things, you know. And for a young baby it's a little bit
21 harder. They're sleeping, they're eating, and that's really
22 -- maybe they're awake for a while. But parents usually are
23 pretty good about saying, okay, everything was great, great,
24 great and then boom, something changed. I mean, often when
25 you can hear when that change took place, then that really

1 is often a time that something may have happened to them.

2 Q Would you expect to see neck injuries in an infant that
3 had been shaken?

4 A I think we're definitely looking for that. Young
5 babies have fairly weak necks, big heads, and obviously
6 they're not able to support their head. That's why we're
7 always so careful about that. And it is not uncommon for us
8 to order MRIs of not only the head but the neck to try and
9 to look at that. So if it's there, it's helpful. But the
10 absence of that doesn't change the process of thinking what
11 may have happened.

12 Q But are all -- is every child that has been shaken when
13 they come into your care, is every child exactly the same?

14 A It really -- just like most problems in medicine, it
15 really runs a very big scale. There sometimes -- it's often
16 dependent on the amount of force that's used. If impact is
17 involved, how long it happens. If it's repeated over time.
18 All of those things affect children, so that there are some
19 children, like **minor**, who luckily, you know, really survive
20 it and do well. But there's often children that come in --
21 you know, those first 24 hours are really critical. A lot
22 of times with -- it's not really injury that happens. But
23 often when children do have inflicted injury people don't
24 rush to get treatment for them. So often there can be 10 to
25 12 hours delay, and that really worsens their prognosis,

1 because not only do they have the initial injury, but then
2 they might not have as good profusion, they have seizures,
3 and all of that really compounds everything they have, more
4 edema, and that often can be the demise and really cause the
5 death. So it really can run the full spectrum.

6 Q What -- after an infant is shaken, what are the
7 symptoms that you would typically expect to see right after
8 that?

9 A Well, again it depends on exactly what happened to
10 them. But sometimes it can be fairly mild. So it may just
11 look like a typical infant. They may be more fussy. They
12 may have -- instead of just spitting they may now have
13 vomiting. They may be more irritable, like crying, or they
14 could -- because crying is often one of the main causes for
15 children being shaken, they become quiet. So they become
16 very silent and go to sleep. And often they get laid down
17 hoping that things are going to go away. But they could
18 stop breathing, seizures. They could -- their blood
19 pressure could bottom out. They can die. So all of those
20 things can happen.

21 Q And are the symptoms that were reported in **minor**
22 consistent with having been shaken?

23 A Yes.

24 Q And I know, Dr. Henderson, there's -- in some of the
25 reports there's talk about this extraaxial fluid, and maybe

1 that there could have been some rebleeding into that.

2 What's your opinion on that?

3 A Well, extraaxial fluid in children -- again, it's the
4 area that's kind of on top of the brain, around the brain,
5 so it's not actually involving the brain tissue. It's
6 usually due to -- it's where cerebral spinal fluid kind of
7 sits and gets reabsorbed. And during that time, sometimes
8 around three or four months of age, some children either are
9 producing a little bit too much or are not able to reabsorb
10 it as quickly enough and they may get some more fluid in
11 there. Sometimes we often may see it in children that have
12 actual brain abnormalities where their brain kind of
13 shrinks, and it also creates a larger potential space for
14 them and can cause more fluid. And so, once there's this
15 space which doesn't remain empty there is fluid there --
16 cerebral spinal fluid. There is a possibility that vessels
17 can tear and cause a small bleed into that space.

18 Q And what symptoms would those children present with?

19 A Sometimes I think they can have some lethargy, some
20 vomiting. But it's usually typically very, very mild. If
21 anything, a lot of times what ends up getting picked up is
22 the child keeps going for their well child checkups and they
23 measure their head circumference and they see that their
24 head is growing much larger than the rest of their body, and
25 that usually is what initiates the CT scan and notes the

1 fluid. And so, then they become followed usually by a
2 neurosurgeon. And sometimes minor accidents can cause some
3 bleeding into that, but it doesn't cause them to come to the
4 ICU, stop breathing, retinal hemorrhages. Doesn't create
5 that picture.

6 Q Did **minor** have any sort of increased intracranial
7 pressure or edema of the brain?

8 A That was not noted on any of the scans that she had, so
9 that was really good. Nor on Dr. Johnson's exam. He was
10 able to look at the optic disc, and sometimes he can see
11 increased intracranial pressure that way, which he did not.

12 Q Would increased intracranial pressure -- and let me
13 back up. What would -- increased intracranial pressure,
14 what is that?

15 A Increased intracranial pressure is -- you know, we have
16 our head and our brain. You know, only some much kind of
17 room and space in there. And so, when there is a lot of
18 swelling that could happen with lots of different things;
19 head trauma, infections. There's many things that can cause
20 that. As the head swells there's not a lot -- it kind of
21 impedes the amount of profusion that happens to the brain.
22 And that often is what causes children to die is because the
23 blood flow to the brain becomes so, so decreased.

24 Q And would increased intracranial pressure in and of
25 itself, would that cause retinal hemorrhages?

1 A Not to the extent that she had.

2 Q Dr. Henderson, are you familiar with the research,
3 biomechanical studies that have been done that cannot
4 recreate this type of injury in a model?

5 A In the field of child abuse pediatrics this is
6 something that's really very aggressively trying to look
7 for. Unfortunately we can't say -- you know, what we do in
8 medicine often is, you know, one group takes a drug and you
9 see how the affect is, and one group doesn't and you can
10 watch that. Well, we -- clearly we can't do one group gets
11 shaken and one not and see the impact of that. So that is
12 the reason to try to create a model, and we just have not --
13 they've not been able to effectively create an infant model
14 to recreate what happens when a child has shaking and impact
15 injury.

16 Q And is the difficulty in creating that model a part of
17 just the anatomy of the brain and the way all of the blood
18 vessels are structured and the various ages?

19 A It's everything. You know, it's that -- the unstable
20 neck. It's the neurons are not well myelinated. So there
21 just -- it's not like an adult at all. So many things
22 changing. It's a bigger skull, smaller -- smaller head.
23 It's the mechanism of how they're shaken. All of those
24 things have an impact on what that might look like. And at
25 this point that's not been -- we've not been able to find

1 that in a laboratory setting.

2 Q So how -- how have child abuse pediatricians been able
3 to determine what injuries to look for in a case of
4 inflicted head trauma?

5 A Well, I think that the best studies, at this point in
6 time, has been where there's been no confessions. You know,
7 where children have -- many of the things **minor** had, some
8 additional findings, and the person that did it not only
9 says what they do, the law enforcement does a reenactment
10 and they can demonstrate exactly the same setting. You
11 know, talk about. And that has been the most helpful in
12 trying to -- at this point of really understanding when we
13 hear that, put that together with what we see clinically and
14 understand exactly what children are going through at that
15 point.

16 Q Is there any other, in your medical opinion,
17 explanation for the injuries that **minor** had other than
18 abusive head trauma?

19 A When we look at bleeding problems, to try to understand
20 that, and there was not any -- we looked at inborn area of
21 metabolism to see if that could be a problem. We do a lot
22 of things to try and make sure that we're not missing
23 anything, and we do lots of x-rays and other laboratory, and
24 she had CTs of her abdomen. Just lots of things to try to
25 make sure we are understanding exactly what is happening to

1 a child. And with **minor** there was not any reasonable
2 explanation for the injuries that she had, and the
3 explanation shared by the dad didn't explain it either.

4 Q Roughly how many doctors and residents would you say
5 she saw while at Greenville Hospital?

6 A My guess would be, I don't know, 15 to 20 over the
7 course of the three weeks. It could have been more than
8 that.

9 Q Would those have been across various -- what types of
10 specialties would have been involved in her care?

11 A Well, initially she comes in through an ER setting, but
12 then she gets seen by a general radiologist who does
13 skeletal surveys, a neuroradiologist, he does the MRI.
14 There's a pediatric intensivist that takes care of her while
15 she's in the ICU. There's numerous residents involved
16 during that. There was the neurosurgeon, Dr. Troup, who was
17 involved with her care the entire time. There was the
18 pediatric ophthalmologist, as you had mentioned, Dr.
19 Johnson, myself. And then when she moved out to the floor
20 she is seen by a hospitalist who then becomes in charge of
21 her, and then a new set of residents that are also involved.
22 I think she was also seen by an ENT because she had some
23 problems once the endotracheal tube was removed. Some
24 swelling with that. So she was also seen by that
25 subspecialist as well. I think that is the majority of

1 physicians that took care of her.

2 Q And do the physicians who see her, do you all consult
3 with each other and discuss your findings with one another,
4 or send notes to one another?

5 A Well, especially in the area of child abuse pediatrics
6 we really work as a group, because we need, not only inside
7 agencies, but Department of Social Services, law
8 enforcement, to help look at things on the outside as well.
9 So yes, we talk all the time from the get-go to say, you
10 know, I think maybe we need to look at this. What are you
11 thinking. We sometimes are not always on the same page, and
12 that's fine. But in this particular case there was not
13 anyone who, once we got everything back, had any other
14 thoughts or needed any other studies to kind of figure out
15 what was going on.

16 Q Dr. Henderson, what type of force would be needed to
17 produce these kind of injuries?

18 A Well, I think from those, you know, studies where they
19 had looked at perpetrators giving their disclosure and
20 demonstrating that -- that it has been said that anyone
21 witnessing it would know that it was just not a normal
22 response to just arousing a child. That it is significant
23 force, very quick. Usually about 15 seconds, 20 seconds,
24 that you just can't endure. A person can't -- an adult
25 can't endure the intensity in causing that type of injury

1 much longer than that.

2 Q And you touched a minute ago on some of the tests you
3 did to rule out any sort of other -- other explanations.
4 What were some of those tests?

5 A A lot of blood work. Looking for abdominal trauma. We
6 look at liver enzymes. We look at other enzymes from the
7 pancreas to see if there were injuries there. She had the
8 CT of her abdomen, as well as the neck. She had the
9 skeletal surveys which was done twice. We do one initially,
10 and then in two weeks to look for any fractures, or
11 additional fractures. Both of those were normal. We did a
12 urine metabolic screen. That gets sent to Greenwood
13 Genetics to look for any metabolic problems. Kind of an
14 inborn error of metabolism is kind of what we call it, that
15 she might have been born with. It often doesn't look like
16 this. Normally they have developmental delay. Their CTs
17 look different because the brain is not developing as it
18 should because of it. So some of the tests that we do isn't
19 necessarily that that's what I thought it was, but sometimes
20 we like to just have that onboard to make sure, again, that
21 we're not missing anything. We check for the most common
22 kind of bleeding problems. Von Willebrand's disease, which
23 often, again, doesn't normally cause bleeding in the head,
24 it often is the most common thing for bruising, and hers
25 came back normal. We did a test to look at Factor XIII,

1 which can cause sometimes bleeding in the head, not retinal
2 hemorrhages. It's extremely rare. And that was also normal
3 as well.

4 Q Again, Dr. Henderson, would choking on formula
5 thickened with rice cereal cause these type of injuries, in
6 your opinion?

7 A No.

8 Q And to a reasonable degree of medical certainty, do you
9 have an opinion as to what did cause these injuries?

10 A I do think that these were inflicted injuries to her.

11 Q And do you have an opinion as to when these injuries
12 were inflicted?

13 A Well, based on the history, I think, provided by mom,
14 dad and grandma, who I had the opportunity to talk to all of
15 them, **minor** was really well up until about 3:00 when they
16 dropped her off at home with dad, and then sometime between
17 3:30, 3:30 and 5:00, I think a couple of minutes after 5:00
18 when mom got a call from him, something had dramatically
19 changed, so I believe it happened during that time period.

20 MS. WHITE: Please answer any questions Mr. Wise has
21 for you.

22 THE WITNESS: Yes, ma'am.

23 CROSS-EXAMINATION

24 BY MR. WISE:

25 Q Dr. Henderson, the concept of shaken baby was first

1 developed by Dr. Caffey back in the early '70s?

2 A Yes, sir.

3 Q And that -- and his first premise was if you see
4 subdural hematomas and broken bones then you need to look to
5 see if this child's been abused?

6 A Both of those findings would be very concerning, yeah.

7 Q But that was his original theory?

8 A Yes.

9 Q So he connected cerebral subdural hematomas with broken
10 bones?

11 A Correct.

12 Q Then later it evolved into what they call a triad; is
13 that correct?

14 A Yes.

15 Q And what is the triad?

16 A The triad has been referred to as the subdural
17 hematomas, the retinal hemorrhages, and the cerebral edema.

18 Q And the cerebral edema is what?

19 A Brain swelling.

20 Q Brain swelling. So for years people said, well, if
21 you've got these three you've got potential for abuse,
22 right?

23 A Potential, yes.

24 Q Now we're down to two in this one.

25 A She did not have brain swelling.

1 Q Correct. So that triad is not present in this one?

2 A The triad is not present in this one.

3 Q Were there any medical studies done that eliminated the
4 broken bones from being the basis of -- with cerebral --
5 with subdural hematoma and broken bones, were there any
6 studies done that eliminated the broken bones as being part
7 of the criteria by which we determine whether or not there's
8 inflicted injury?

9 A Yes. Fractures are sometimes seen, but certainly not
10 part of the necessary triad as you -- as you had mentioned.

11 Q But it started out with broken bones were a necessity
12 with Caffey?

13 A Well, I think back at that time we really didn't have a
14 lot of great imaging. We didn't have MRIs. We didn't have
15 CT scans. We just had plain films and our eyes. And so,
16 all we could see were bruising, fractures.

17 Q Right. But you could still detect a subdural hematoma?

18 A We really didn't have CT scans back then.

19 Q Well, then how did Caffey put subdural hematoma in his
20 --

21 A We were just --

22 Q -- criteria?

23 A We were just starting in a very early, so it was not a
24 routine thing at that point in time.

25 Q So, in essence, he was saying let's do a CAT scan and

1 also see if we've got broken bones?

2 A Correct.

3 Q Is there any study that said, well, we don't need all
4 three? We just need one or two of them before we can deem
5 it to be inflicted injury?

6 A I think now in our field we are looking -- trying to
7 look at the entire picture of what's happening to the child.
8 The history. The findings on the exam. And there's not
9 this absolute that we have to have A, B, A, B and C to say
10 that that's exactly what's happening to a child.

11 Q Ten years ago they would have said -- well, they would
12 have said you need the triad, all three?

13 A They would have said that that would really kind of
14 make the case --

15 Q Right.

16 A Yes.

17 Q Otherwise it's speculative?

18 A It may not be as certain.

19 Q What medical tests were done where we can eliminate one
20 of these parts of the triad, or has that just kind of
21 evolved?

22 A I think we're looking at the history that's provided by
23 a family and the things that we see on exam, trying to put
24 that together, whether it's one thing that we see, two
25 things, three things. Obviously if we see five things it

1 makes things much more clearer. When we don't see all of
2 that we have to do much more investigation to try to figure
3 out -- as best we know, to figure out where we are and what
4 that diagnosis might be.

5 Q Have you got the CAT scan with you?

6 A No.

7 Q You don't? All right. I'm going to show you some and
8 see if you recognize them. I think this is the first one I
9 want. I hand you this one and ask you if you recognize -- I
10 think that's the MRI.

11 A Okay. Yes, it is.

12 Q Do you recognize that as --

13 A That's minor -- minor 's.

14 MR. WISE: I'd like to introduce this.

15 A It looks like it was done in April.

16 Q Excuse me. The dates on it.

17 A 4/24.

18 Q The date's on it.

19 A Yeah, I think that was --

20 Q I thought it was 12.

21 A Yeah, 12/17.

22 Q Yeah.

23 A 12/17, yeah.

24 Q So that would be the day after she got to Greenville?

25 A The day that I saw her.

1 Q Okay. Very good. I'm going to put up here --

2 THE COURT: Any objection?

3 MS. WHITE: No, sir.

4 THE COURT: State -- I mean, Defense 1 is admitted
5 without objection.

6 (Whereupon, Defense Exhibit No. 1 was admitted into
7 evidence.)

8 Q I'm going to put this up here. Is that easier if you
9 look at it that way or do I need to turn it around?

10 A It should be the other way around.

11 Q That way?

12 A Yes, sir.

13 Q Okay. Now, tell us what -- let me get one little thing
14 here. A pointer may help a little bit.

15 THE COURT: Mr. Wise, there's a wooden pointer here in
16 the witness box. A wooden rod.

17 MR. WISE: I've got something.

18 THE COURT: If she'd like right here in her hand.

19 Q Tell us what you see -- if this works. Yes, it does.
20 In this area right in here, what is that white part?

21 A So that's the subdural hematoma.

22 Q Now, that doesn't show up quite as good as it should on
23 there. It shows up a little better over there, doesn't it?
24 That's a subdural hematoma?

25 A Correct.

- 1 Q Now, the subdural hematoma is actually outside the
2 brain?
- 3 A Correct.
- 4 Q It's not in the brain tissue itself?
- 5 A Correct.
- 6 Q The -- it's below the dural, which is a covering?
- 7 A Correct.
- 8 Q And on the left side it's not as pronounced?
- 9 A Correct.
- 10 Q What is that little spot right there? Excuse me.
11 Right there?
- 12 A That's a area of what we call mixed. So it's not as
13 dense. So there's blood and not blood.
- 14 Q So it's different from the rest of it?
- 15 A Correct.
- 16 Q What is it?
- 17 A It could be fluid. Cerebral spinal fluid.
- 18 Q What else?
- 19 A I think that's -- I'm not a neuroradiologist, so they
20 would be the one to read that and get that differential.
21 But in reading the report, it is felt to be cerebral spinal
22 fluid and acute blood, as I had read in the report.
- 23 Q And acute blood?
- 24 A Yes, sir.
- 25 Q Meaning fresh blood?

1 A Correct.

2 Q Could that also be some form of clot?

3 A Sometimes you can see kind of densities that are kind
4 of super acute blood and acute blood, but I don't think it
5 would reflect that.

6 Q Is there a test by which -- a test you could have done
7 to determine whether or not that is a clot called an MRV?

8 A Well, MRV is looking at the vessels.

9 Q Correct.

10 A So, I mean, kind of through the brain and not actually
11 through actual blood in the subdural space. So I'm not
12 aware that a MRV would have been helpful to look at clots
13 and to look at the differences in the blood space in the
14 extraaxial area.

15 Q Okay. And then that little spot is also reflected over
16 on the left-hand side also?

17 A Yes, sir.

18 Q I don't know if you're -- well, let's see. Did you
19 also look at the CAT scans of --

20 A I saw the CAT scan that was done on the 17th. I was
21 not involved in the care after she left the hospital. I
22 know she had some subsequent scans, MRI done. But I think
23 Dr. Troup had been following her for that.

24 Q You had only been there through the 30th?

25 A Even before that. Yes, sir.

1 Q Do you recognize this? The date's not on this one.

2 The MRI from the 30th of December?

3 A There's no -- I wouldn't be able to recognize it. No,
4 sir.

5 Q You wouldn't be able to recognize it. Okay. And you
6 didn't bring yours with you to look at?

7 A No. I don't have that. That's not part of my
8 property.

9 Q Okay. Now, she continued to improve in the hospital,
10 correct?

11 A Correct. Yes, sir.

12 Q And then you did -- wasn't there an MRI done on the
13 30th?

14 A I did not do that. Again, I was just seeing her at the
15 beginning. But I did know that she did have an MRI done
16 then, and then even after discharge she had a subsequent MRI
17 done.

18 Q And on the 30th they noticed some more problems?

19 A Yes.

20 Q All right. She had been improving?

21 A Correct.

22 Q Getting better. And was actually getting very alert
23 and oriented by the 30th?

24 A Correct.

25 Q And notwithstanding the fact that she was alert and

1 oriented, the MRI on the 30th really caused some concern.

2 It was much bigger.

3 A I think it did show a change, but clinically she was
4 doing great. So sometimes those things can happen.

5 Q Right.

6 A And again, she did not have any clinical response to
7 more bleeding, and there was no increased pressure, no map
8 effect. So she continued to be watched clinically and then
9 was discharged home a few days after that.

10 Q Let me see if I can get mine real quick. I hand you
11 the report from Greenville Hospital System and the radiology
12 for 12/30 and let me ask you if you remember that.

13 A This is the discharge summary from the resident.

14 Q And on 12/30 what did they find?

15 A It says, "The MR brain worsened bilateral
16 supratentorial subdural hematoma interval development of
17 signal abnormality in the splenium of the corpus callosum
18 that's nonspecific."

19 Q What does that mean exactly?

20 A That -- I was just going to point to those pictures.
21 That where we saw that white area on top of her brain, that
22 that had gotten larger.

23 Q So the white area up where the little black mark is had
24 gotten larger?

25 A The white areas had gotten larger, yes.

1 Q And that would have been caused by?

2 A More bleeding in that area.

3 Q More bleeding?

4 A Yes, sir.

5 Q So she had been in the hospital at that point for
6 roughly two weeks, a little under two weeks, and then she
7 had had renewed bleeding?

8 A More bleeding.

9 Q More bleeding. And she was basically, as far as her
10 outward appearance is concerned, asymptomatic from anything
11 from this bleeding?

12 A Correct.

13 Q So you can have bleeding in the brain and be
14 asymptomatic?

15 A Correct. Just like we had mentioned before that
16 children that do have extraaxial fluid can have bleeding
17 into that area with minor trauma as that area stretches, and
18 usually, just like she was, clinically not affected by that.

19 Q And you can have children that have a mild fall have
20 some bleeding in the brain, and if nothing happens they
21 could go on and live a normal life and no one ever know it?

22 A I have seen children that have had short distance falls
23 that have a small subdural hematoma. They have a fracture
24 there. And usually they are in and out of the hospital
25 fairly quickly. So yes.

1 Q And, in fact, children can have a minor fall in the
2 home and a layperson wouldn't know there's anything wrong
3 with them?

4 A Well, most of the time children that have minor falls
5 are fine.

6 Q Yeah.

7 A They don't have any problems at all. So that happens
8 most of the time.

9 Q And we don't know exactly why some can have a minor
10 fall and be okay and some have a minor fall and not be okay?

11 A Well, we do know some things. We know that the height,
12 the distance of the fall, what the child falls, if there is
13 a velocity to that fall. So all those things have -- are
14 you able to break the fall. Were you being kind of ejected
15 out of someone's arms. All those will have impact. But the
16 majority of times children -- there was a great study with
17 children falling out of hospital beds, and they were
18 witnessed falls, had CT scans and they were normal. So the
19 majority of the time with short falls nothing happens.

20 Q And then there have been short falls where children
21 have died? There's been photographs -- or videos?

22 A No. No. Short falls do not cause children to die.

23 Q When you're talking about -- well, short fall may be a
24 relative term. There is a videotape of a child falling off
25 basically, what, a 30 something inch high sliding board?

1 A But I don't think that you're referring to is not one
2 where she just fell straight forward. It was more of
3 projectile fall. And I don't think she was a young child,
4 because I think she was climbing up on a slide. So that is
5 not kind of the area that we're looking at for inflicted
6 head trauma.

7 Q She was two or three years old.

8 A Yeah, very different picture.

9 Q And a two or three-year-old is more susceptible to a
10 short fall than a baby?

11 A Well, a short fall would probably be more susceptible
12 to a younger child, because when you're older you're able to
13 kind of brace you fall. So a two or three-year-old, you
14 know, normally they won't hit their head. They'll break
15 their arm as they brace their falls.

16 Q And some of them don't?

17 A I suppose so.

18 Q Okay. Now, we only have two of the three triads in
19 this case, correct?

20 A Correct.

21 Q We have no broken bones in the neck, or injured bones
22 in the neck?

23 A Correct.

24 Q And we have no -- I believe you did tests, MRI tests to
25 see if there were any injury to the neck at all?

- 1 A Correct.
- 2 Q And there's no injury to the neck?
- 3 A We did not see anything in the MRI.
- 4 Q And that's one thing you looked for?
- 5 A Correct.
- 6 Q Because it makes it a stronger case?
- 7 A Well, it really just is helpful in understanding what
- 8 the child is going through, so...
- 9 Q Well, as far as talking about inflicted injury, you're
- 10 talking about it makes it a stronger case, too?
- 11 A All of those things are very helpful to me in
- 12 understanding what's happened to a child.
- 13 Q And you also check to see if there's any damage of
- 14 injury to the ribs?
- 15 A We do a skeletal survey.
- 16 Q Correct. And you do that because in a typical shaken
- 17 baby case somebody grabs the baby by the chest and uses a
- 18 lot of pressure?
- 19 A You can see that, for sure, we see posterior rib
- 20 fractures.
- 21 Q And it wouldn't be unusual to have some sort of
- 22 fracture to the rib in there?
- 23 A It's something that we do see.
- 24 Q All right. And didn't see it in this case?
- 25 A That's correct.

1 Q All right. And you also looked for bruises that would
2 correspond with fingerprints?

3 A Bruises are fairly uncommon, but we always look for
4 them.

5 Q Right.

6 A But we often don't see that in young children with
7 these kind of injuries. But we do look.

8 Q But occasionally --

9 A She did have one bruise but it was not on her ribs.

10 Q You occasionally see bruises on there though? It can
11 be?

12 A Rarely, but we can.

13 Q But that would be a big factor if it were?

14 A Yes.

15 Q Now, would you agree that in this field or concept of
16 shaken baby syndrome there are honorable people trying to
17 understand this that disagree with you?

18 A Not in the medical field. It plays out in court where
19 there's a lot of people trying to disagree with the concept,
20 but not really in the medical field.

21 Q You mean, not really in the medical field?

22 A Not in peer review journals there's not a conflict.

23 Q Are you familiar with the publication The Western
24 Journal of Emergency Medicine?

25 A That's not a journal that I prescribe to.

1 Q You're not familiar with that one. All right. How
2 about the Journal of Neuropathology and Applied
3 Neurobiology?

4 A No.

5 Q Have you heard of the Journal of American -- the
6 Journal of the National Association of Medical Examiners
7 called Academic Forensic Pathology?

8 A Again, that's not a journal that as a pediatrician or
9 forensic pediatrician that I subscribe to.

10 Q Have you heard of it?

11 A No.

12 Q You've never heard of it?

13 A No, sir.

14 Q How about Forensic Science International? Ever heard
15 of them?

16 A No.

17 Q Do you know anything about it?

18 A I don't.

19 Q What about the Journal of -- the American Journal of
20 Forensic Medicine and Pathology?

21 A It's not a journal that I -- I don't know anything
22 about it.

23 Q You're not familiar with it either?

24 A No, sir.

25 Q How about Injury -- let's see. That's not the name of

1 the author. How about the Journal of Neurosurgery?

2 A I'm sure that would be one Dr. Troup would be familiar
3 with, but --

4 Q But you're not?

5 A No.

6 Q And I believe I asked you about Forensic Science
7 International, correct?

8 A Yes.

9 Q Are you familiar with Dr. Carole Jenny?

10 A Yes.

11 Q And she wrote a book about --

12 A Yes.

13 Q -- child abuse, correct?

14 A Yes.

15 Q And do you know --

16 A She edited a book about child abuse.

17 Q Well, yeah, that's more accurate. She got a bunch of
18 people to write chapters for it.

19 A Correct.

20 Q Okay. And are you familiar with the fact that she says
21 in that book, or whoever wrote the chapter, that,
22 "Unfortunately, nobody has yet marshaled a coherent and
23 comprehensive argument in support of shaking as a causal
24 mechanism for abusive head trauma -- abusive head injury?"

25 Excuse me.

1 A I would have to see where that was from in the book.

2 Q Here on 364. I should have highlighted it, but I
3 didn't. And it is on the second column at the top, right
4 here.

5 A Would it be okay if I just took a moment to look at
6 this?

7 Q Excuse me?

8 A Would it be okay if I took a moment to look at this?

9 THE COURT: She wants to look at it.

10 Q Yeah. Oh, sure, that's fine. I thought you were going
11 to look at it.

12 MS. WHITE: Judge, before he asks any questions about
13 that, can I take a look at it as well?

14 THE COURT: Sure. Do what, now?

15 MR. WISE: She wants to look at it. I have no
16 objection.

17 THE WITNESS: Should I answer?

18 THE COURT: I don't know that he asked you a question
19 yet. He said are you familiar with it, I thought.

20 She asked me can I answer. I didn't know you posed a
21 question yet. Hang on one second. Ms. White has to see it
22 also.

23 MR. WISE: Excuse me.

24 Q Do you need it back?

25 A Yeah. Thank you.

1 Q She starts out saying we don't really know how it
2 happens.

3 A I don't think that's what he's saying at all. Dr. Diez
4 is a neurosurgeon. He sees a lot of children in child
5 abuse. And I think what he's saying in that short paragraph
6 that you said, that there hasn't really been a concise
7 collection of information put together to explain it, and
8 that is the purpose of this chapter to --

9 Q And she's saying --

10 A He. It's a he.

11 Q He. I'm sorry. The author of the chapter was a man?

12 A Yes, sir.

13 Q And he said we're trying to do it here.

14 A Correct.

15 Q So there's research going on with this?

16 A Absolutely.

17 Q And do you agree with the author also, the book that
18 Carole Jenny put out, that "In the absence of visible
19 cranial facial soft tissue injuries, alteration or loss of
20 consciousness, seizure or cardiorespiratory compromise,
21 abusive head trauma is frequently misdiagnosed or not even
22 considered."?

23 A Yes, I do. Carole Jenny actually did an excellent
24 study looking at that in children that had come to the
25 emergency room for some of those minor findings, fussiness,

1 vomiting, and abusive head trauma was not picked up.

2 Q And in some of those that she did that study on the
3 parent would carry the child in there, being hyper-cautious
4 or whatever, the doctors even put down that the child was
5 alert and oriented?

6 A I don't know if that was in the actual study. But I
7 think they felt like -- many of these children are very
8 young, and so they're not doing a whole lot. But they hear
9 the history stated by a parent, and they don't have a
10 history of trauma, and at that moment in time they think the
11 baby is okay and don't do any other studies, CT scans,
12 x-rays to look for any other signs of trauma.

13 Q And that was a study done by Carole Jenny in the
14 American Medical Association?

15 A Well, that study, what it really showed is that 30
16 percent of the children had come into the ER that were
17 missed came back with significant head trauma after that.

18 Q I understand that. We'll get to that in a minute.

19 A Okay.

20 Q But that was published in the American Medical
21 Association?

22 A Yes.

23 Q And I hand you that article of the American Medical
24 Association. On page 623 there's a chart there that talks
25 about what was presented. What the doctors put down in

1 their reports.

2 A Okay.

3 Q And many of them were listed as alert and oriented?

4 A Yes.

5 Q And these were children that came back later and found

6 who, in fact, have subdural hematoma?

7 A Significant head trauma.

8 Q Right. And they found out later they had a subdural

9 hematoma?

10 A As part of that.

11 Q Right. So you've had children that had some sort of

12 head -- had some sort of contact with something, we can

13 argue about it later, who went to a hospital and were listed

14 as alert and oriented and sent home?

15 A That's correct.

16 Q So it would be easy for a parent to have a child have a

17 minor fall, not notice anything to take them to the hospital

18 and the child appear to be okay?

19 A I think we're talking about two different things. But

20 I think it is easy for a child to have a minor fall and

21 think everything is okay, because most of the time it is.

22 And it's being -- there are young children coming into the

23 ER who have inflicted head trauma that are on kind of one

24 end of that spectrum that I mentioned who overall were

25 clinically okay at that time without doing -- they don't

1 have bruises, fractures at that moment that they are seen.

2 Q It's not an exact science?

3 A There is a whole constellation of science that is put
4 together --

5 Q Right.

6 A -- to try to figure out what's going on.

7 Q And it's still not an exact science?

8 A I don't know if I understand what that term means.

9 Q Well --

10 A There's not a one specific test, like a step throat,
11 that you can do and say yeah --

12 Q Right, correct.

13 A -- we know that that -- we're looking for that. But
14 no, we don't have a test to say that this is inflicted head
15 trauma.

16 Q It's so much judgment?

17 A It's a lot of judgment and a lot of other tests that we
18 do.

19 Q So a child can have an injury to the head and have a
20 lucid interval of days or whatever?

21 A A child can have a minor injury to the head and be
22 okay. Children don't have significant head trauma related
23 to shaking and have lucid intervals. Two different things.

24 Q I understand. What g-force is necessary -- well, let
25 me back up a second. When you talk about shaking causing

1 hemorrhaging to the brain, you're contending that the
2 bridging vessels in the brain break?

3 A That is one of the reasons for the bleeding.

4 Q How much blood would a bridging vein leak into the
5 brain?

6 A I think that's very variable.

7 Q Well, I mean, it's a pretty -- it's a pretty -- I mean,
8 a bridging vein breaking puts a fair amount of blood into
9 the brain?

10 A Well, most of the time with shaking injuries, really
11 the amount of blood that we see is what we call a thin -
12 Really not a whole lot of blood. So often it's not quite --
13 not very much. And so, in that case, you know, there is not
14 a lot of symptoms because they don't have a lot of swelling.
15 It doesn't cause a lot of the irritability. And so, they
16 may present, you know, pretty well initially.

17 Q Can you establish that a bridging vein, in fact, broke
18 in this case?

19 A Luckily she didn't have an autopsy. And so, that is
20 not something that we could see on the studies that we do at
21 this point in time.

22 Q So you don't know if this is a bridging vein breaking
23 or another cause?

24 A We don't have any other causes for her to have
25 bleeding, but I don't know exactly where the bleeding was

1 coming from.

2 Q Bridging vein has some elasticity to it?

3 A Correct.

4 Q And it'll stretch about, what, 30 percent generally?

5 A I don't know that. Dr. Troup might be able to give
6 some -- since he sees it in surgery --

7 Q Right. You don't --

8 A -- and can really share that.

9 Q You don't know what g-force it takes to break a
10 bridging vein, do you?

11 A I do not.

12 Q And then you don't know how much g-force can be
13 generated by a person shaking?

14 A I don't think we have defined the g-force on bridging
15 veins because we haven't created it in a lab yet. I don't
16 think we either have done that in a lab, you know, having --
17 because we don't have a mechanism to have an actual baby to
18 demonstrate that. So they're using animal models to try to
19 look at that. But I don't know that I have the answer to
20 that question.

21 Q And when you say history in this case, you basically
22 mean a history of no one ever said the child fell and hit
23 his head a day or two earlier?

24 A That's part of the history and report. Yes, sir.

25 Q Right. And if the child had fallen and hit his head a

1 day or two earlier, that could impact your decision?

2 A Not this decision for this child, but certainly that's
3 always important information.

4 Q Right. Did you ever notice in the MRI -- or the CTs,
5 or the MRIs in this case, any subsequent bleeding in a new
6 place in the brain while the child was in Greenville
7 Hospital?

8 A I am not aware on a subsequent MRI that she had another
9 area of bleeding. Not that I can remember. Besides what
10 was seen initially.

11 Q Hold on one second.

12 A Again, I was not involved in that later MRI that she
13 had. I know they resolved in the last one.

14 MR. WISE: I'd like to mark this just for
15 identification.

16 THE COURT: All right.

17 (Whereupon, Defense Exhibit No. 2 was marked for
18 identification.)

19 Q This was just marked for identification. Let me check
20 on thing here. I'm looking for my label for this one,
21 because I try to keep them labeled.

22 MR. WISE: Let's go back to this one. Mark this one
23 for identification. This would be Identification 3.

24 (Whereupon, Defense Exhibit No. 3 was marked for
25 identification.)

1 Q I'm not going to ask you who this is. But on the third
2 picture from the left at the bottom. If that's an MRI of a
3 child's head, does that indicate bleeding? The one spot?

4 A In the posterior fossa. I think they saw that
5 initially. Saw some blood on that initial MRI.

6 Q Well, what about the one from the -- I believe the
7 initial MRI had it in the front and in the upper part here
8 near the optic area.

9 A That was on a CT scan.

10 Q That blood in that Exhibit 3 would be about how old?
11 That white?

12 A It looks fairly acute. That's all I could say about
13 it.

14 Q Two, three days at the most?

15 A It's really hard to time it more specifically. It
16 looks like acute blood.

17 Q Well, acute, we heard earlier was less than 24 hours.

18 A No. Acute could be within the first couple of days.

19 Q First couple of days?

20 A Yeah.

21 Q Excuse me. We were misinformed. So if there's an
22 acute subdural hematoma it could be, what, how many days?
23 Three or four?

24 A Yeah. MRIs sometimes it can -- we usually try to do it
25 at about five or six days. And so, that's still acute blood

1 in there.

2 Q All right. So five or six days?

3 A It could be in that whole range.

4 Q Right.

5 A It's not three or five.

6 Q A week?

7 A Yeah.

8 Q Say, in a week?

9 A Probably.

10 Q So what you're telling me then is in 9 for
11 identification -- or, excuse me, 3 for identification, the
12 little kind of half moon area could be -- could be about a
13 week or less old?

14 A Again, I would have to -- I would be looking at the
15 report independent of the radiologist -- the
16 neuroradiologist to help me with that.

17 Q All right. But there have been a lot of people who
18 have tried, as best science will allow us to do it, to talk
19 about whether or not there would be an injury to a neck in a
20 shaking case before you would have a subdural hemorrhage?

21 A We are looking at trying to understand neck injuries.
22 Sometimes the MRI is able to pick it up. Sometimes an MRI
23 is done and is only picked up on autopsy. So it is -- as
24 you have mentioned, it's where those areas that are still
25 evolving. We're still learning more about. I think there's

1 probably some unanswered questions about neck injuries.

2 Q But there are people who are out there trying to do
3 some studies on it?

4 A Correct.

5 Q Even Dr. Jenny Carole?

6 A Carole Jenny.

7 Q Excuse me. I always get that backwards.

8 A I don't know if she particularly is the one that's
9 doing research on that. I know there's a big group up at
10 the University of Pennsylvania that is looking at a
11 children's hospital. I think there's quite a few people
12 trying to help us understand that better.

13 Q Now, didn't Dr. Carole Jenny do a test with Japanese on
14 a doll that they had specially made?

15 A I don't think she did that test.

16 Q It has not been published, for what it's worth. Are
17 you familiar with this study by her?

18 A I have not had -- I have not had the opportunity to
19 look at this. You said it wasn't published?

20 Q No, it's not published.

21 A Yes. Then I have not. No, sir.

22 Q Hadn't been what they call peer reviewed either.

23 A Right.

24 Q I just wondered if you were familiar with it. What was
25 the last seminar you went to on shaken baby?

1 A I traveled actually to Switzerland -- not Switzerland.
2 Into Sweden. And there was an international conference on
3 abusive head trauma, and all types of trauma.

4 Q Right.

5 A And that was in June.

6 Q And there were discussions -- there were discussions
7 there on both sides of the issue?

8 A There was discussions medically about all the types of
9 things that can impact children related to trauma.

10 Q In abusive head trauma, shaken baby cases, generally
11 the people agree that these type injuries, if they're true
12 shaken baby, are worse than just a fall on the floor or
13 something?

14 A Absolutely.

15 Q Okay. And the outcome is usually worse?

16 A Absolutely.

17 Q And you also had damage to the brain?

18 A In varying degrees.

19 Q Right. And you can even see bruising of the brain
20 where it shakes and hits inside the head?

21 A Sometimes.

22 Q And in this case there's no damage to the brain?

23 A There was not any bleeding in her brain tissue, if
24 that's what you're referring to.

25 Q Well, that's one question. There's no bleeding of the

1 brain tissue?

2 A Correct.

3 Q There's no nerve damage in the brain?

4 A I don't know that. I have not seen her. I don't know
5 how she is developing. Sometimes it can be very subtle, so

6 --

7 Q Let me --

8 A -- I don't know the answer.

9 Q Let me rephrase my question then. On the MRI you
10 detected no brain injury?

11 A On the MRI they did not see any brain injury, correct.

12 Q And they detected no bruising of the brain?

13 A Correct.

14 Q And as I understand, inside the brain, portions of it
15 can be rough?

16 A I don't know what that means.

17 Q Well, abrasive?

18 A I don't --

19 Q All right. But in this case we have no brain damage on
20 the MRI. We have no swelling of the brain, right?

21 A Correct.

22 Q And do you know the physically -- well, not necessarily
23 physically, but exactly how retinal hemorrhages are created
24 with shaking?

25 A Well, I think Dr. Johnson is getting ready to testify

1 and he probably could give you that specific --

2 Q You don't know?

3 A Well, I think it's the same thing. There are vessels
4 that connect to the layers of the retina, and the same
5 phenomenon. When the head is shaken the globes of the eyes
6 shake to cause shear injury of those vessels to cause the
7 bleeding in the seven layers of the retina.

8 Q It's called shear injury?

9 A Shearing of the vein. Of the vessels.

10 Q And you don't know what force is necessary to do that?

11 A Significant force.

12 Q Right.

13 A To see it to the extent that she has, because we don't
14 see it very commonly in all the layers like she had.

15 Q But you don't know the g-force it requires?

16 A I don't think that's been done in a lab to be able to
17 tell that. But Dr. Johnson could share probably the latest
18 research.

19 Q It's clearly not going to be in a lab. But by the same
20 token, children involved in automobile accidents in which we
21 could get some idea of these forces, aren't they?

22 A I think there has been children that have had straight
23 falls that can have just localized hemorrhages to the back
24 of the posterior pole of the retina. But there's not too
25 many types of injury, except if it's a -- kind of expelling

1 the child out of the building that can cause extensive
2 retinal hemorrhages like she had.

3 MR. WISE: Thank you.

4 THE WITNESS: Yes, sir.

5 REDIRECT EXAMINATION

6 BY MS. WHITE:

7 Q What's the American Academy of Pediatrics' current
8 position on abusive head trauma? Do they believe it exists?

9 A Yes.

10 Q And what injuries would be consistent with abusive head
11 trauma in the opinion of the American Academy of Pediatrics?

12 A I think it's inflicted trauma to a child that causes
13 injuries to the head, and there is lots of degrees to it.

14 So even if we saw just an isolated fracture, or a small
15 blood underneath it like a subdural, and if it was due to
16 someone hitting a hammer to a child, that would be abusive
17 head trauma. So all of those things, as I had mentioned,
18 are so important in understanding the history of what we
19 see. It's very rare to just take one type of finding and
20 say, yeah, that's accident. Yeah, that's inflicted injury.
21 We really need to understand the big picture, look at all
22 the things that we possibly know to test for, and then come
23 to some conclusion about it.

24 Q Mr. Wise has asked you a number of questions about a
25 study that Carole Jenny did on whether child abuse, I guess,

1 was under diagnosed in emergency rooms?

2 A Correct.

3 Q And what were the findings of that study again?

4 A About 30 percent of children that were seen for -- came
5 in for -- some of them fairly -- all of them were fairly
6 minor findings initially. Obviously because they didn't
7 expect abuse. They had intact families. They just had
8 fussiness, spitting, maybe some increased sleepiness. About
9 30 percent when they came in with that there were not a lot
10 of other testing done. They went back home, and about 30
11 percent came back with significant head trauma.

12 Q And the 30 percent had came back with significant head
13 trauma, I think Mr. Wise was asking you this. Was that --
14 they went home with a parent who was later determined to be
15 abusive and were abused again, or is that they came back
16 with that same injury having gotten worse?

17 A Both.

18 Q In terms of brain damage, and I don't know if you can
19 answer this question or not, but if you were presented with
20 a patient who had sustained an inflicted head trauma and
21 then two years down the road had problems with her balance,
22 her vision and a lazy eye, would that be indicative of
23 something going on inside the brain that was damaged?

24 A I think the lazy eye and -- you said the --

25 Q Balance problems.

1 A And the third was?

2 Q Vision.

3 A Vision. So I think the vision and the lazy eye are --
4 those two are very related. And perhaps the balance as
5 well. I don't know if I would have just -- you know, if I
6 just was seeing her at age two or three would say, oh, she
7 absolutely was -- had inflicted head trauma. But like I had
8 mentioned, that the sequella of children is so variable that
9 I think with the findings of what she had on her eye exam
10 back at that point in time is not at all surprising that she
11 is having some sequella, and that's -- sounds like
12 significant sequella is related to the eye findings.

13 Q And you don't do an MRI every day she's in the
14 hospital, do you?

15 A No.

16 Q And the MRI, is that just a picture -- a snapshot of
17 her at that moment in time?

18 A Yes. The MRI is -- often will be done. The CT scan is
19 usually done initially because it's quick and you can really
20 see if there is that kind of mass effect where the child
21 really needs some acute intervention, but it has a lot of
22 radiation. And so, really subsequently after that point
23 MRIs are a better test. The problem with MRIs is that as
24 the child gets more active you have to sedate them. So it's
25 not an innocuous test. So it is done subsequently to try

1 and evaluate how things are going, but it definitely would
2 not be something that would even be done every day. And if
3 there was a critical acute change they may opt to do that
4 CT, or the MRI, but the MRI followed over time and probably
5 spaced out with months in between if a child is doing well.
6 Depending on what the findings are each time.

7 Q And **minor** never had any problems -- any critical
8 episodes once she was at the hospital, did she?

9 A Once she got her seizures under control and she was
10 able to be -- the breathing tube taken out, she really did
11 well after that.

12 Q And Mr. Wise started by asking you about some studies
13 that were done in the '70s. Is it fair to say that medical
14 technology has changed a lot since 1970?

15 A I think that's what took really so long for child abuse
16 pediatrics to really become kind of a field of its own and
17 -- not, again, until 2009, because there needed to be a
18 significant amount of science there to base our field on.
19 So I was a resident in the '80s, and I may have had a
20 lecture or two about child abuse pediatrics and it was
21 really based on what we saw. The bruising, the fracture.
22 That was really a case you could go forward with. A lot of
23 these other things we have, have learned a lot more over the
24 last 30 years or so.

25 Q And in 1968, 1970 would a subdural hematoma have been

1 apparent without some type of surgery or an autopsy?

2 A Honestly, I was not a doctor then, so I'm not exactly
3 sure how they were imaging that. CT scans came, you know,
4 in the late -- you know, I guess it was kind of in the early
5 '80s. That's when we were starting to look at right as I
6 was finishing medical school. So there may have been other
7 ways to scan the head to look at it. But I imagine some of
8 it did come through autopsies and emergency surgery and
9 things like that. But I don't know as much detail about
10 that.

11 Q And the science continues to evolve today, doesn't it?

12 A Absolutely.

13 Q So going to the neck injuries, or lack thereof. Is it
14 possible to have a neck injury that does not show up on MRI
15 that later does show up at autopsy if the child passes away?

16 A Yes.

17 Q And obviously **minor** was not autopsied in this case?
18 She didn't pass away?

19 A Correct.

20 Q Would a three-month-old -- are accidental falls common
21 in a non-ambulatory three-month-old?

22 A Falls are not that uncommon, but they don't occur from
23 the child alone. They occur falls from an arm, falls from
24 parents putting them on beds, falls from the changing table.
25 So accidents absolutely happen. We see them a lot. But

1 it's not just the child itself, because children at that age
2 are not turning. They just don't have that ambulation like
3 you had mentioned to cause their own accident, as opposed to
4 like a two-year-old.

5 Q Would it be something that a parent or caregiver would
6 more than likely had observed a fall or been present for?

7 A Either observed or heard. I mean, there are times
8 where parents leave a child on a bed, go to another room,
9 and the next thing they know they hear a scream and the
10 child's on the floor. So sometimes they don't actually
11 witness it, but they can recount the story of where they
12 laid the child, what happened, and then what happened. And
13 then the injuries -- either nothing, or would fit with that
14 injury. With that kind of mechanism. Like I'd mentioned a
15 skull fracture, nothing. A small subdural. Very focal
16 findings and the child, understandably, will do well.

17 Q And again, were you given any sort of a history from
18 Zack Ledford or Brianna Dickey or Toni Dickey as to any
19 falls that **minor** had?

20 A No. They did not share any of that information.

21 Q Is that a question you ask when you're talking --

22 A We do ask about any kind of injuries, accidental or
23 otherwise, to them and they did -- there was nothing that
24 they were aware of that they shared with me.

25 Q And would you expect to see the bilateral retinal

1 hemorrhages ascending the periphery with a fall?

2 A Typically with short falls you see nothing as far as
3 retinal hemorrhages. Again, especially if the CT scan is
4 normal or you -- if the CT scan may show a small subdural we
5 will have Dr. Johnson do an eye exam and he may see one or
6 two in one eye or other just at the posterior pole. So a
7 very different picture if you do see retinal hemorrhages
8 from a short fall.

9 MS. WHITE: Thank you, Dr. Henderson.

10 RECROSS EXAMINATION

11 BY MR. WISE:

12 Q Just a few questions. A child this age can have a
13 seizure?

14 A Yes.

15 Q And when a child has a seizure there could either be
16 something that you physically see and sometimes you don't
17 see it?

18 A Correct.

19 Q And when you physically see it the child would tend to
20 go stiff?

21 A That's one type of seizure.

22 Q Right. And then go limp?

23 A Post seizure?

24 Q Right. Post seizure. I mean, go stiff for a few
25 seconds and then just collapse.

1 A Not collapse, but just not be having the jerking that
2 you would see on a seizure. Not collapse.

3 Q Right. And you are familiar with the American Academy
4 of Pediatrics?

5 A Yes.

6 Q And you're familiar with the position paper that they
7 put out in 2009? April 29th.

8 A They put out a lot of position papers, so I would have
9 to --

10 Q This was entitled Abusive Head Trauma in Infants and
11 Children, with Cindy Christian as the lead author.

12 A I'm sure I've read that one.

13 Q And are you aware that the American Academy of
14 Pediatrics says in that paper, "In reality, all models and
15 theories have known limitations and many clinicians and
16 researches acknowledge that precise mechanisms of all
17 abusive injuries remain incompletely understood."

18 A Yes, I think that is correct.

19 MR. WISE: Thank you.

20 THE COURT: You may step down.

21 THE WITNESS: Thank you.

22 THE COURT: We've been going a long stretch. As soon
23 as Dr. Henderson steps down I'm going to let you all have a
24 break.

25 (Whereupon, the witness stepped down from the witness

1 stand.)

2 THE COURT: In case anybody needs to step outside and
3 stretch their legs, have any smokers, I'm on break until
4 3:30. So it's about 16 minutes by that clock. Okay? If
5 you don't want to stay in the jury room, if you all want to
6 step outside, tell the bailiff and he'll take you outside.
7 But you can't begin discussing the case.

8 (Whereupon, the jury exited the courtroom at 3:15 p.m.)

9 THE COURT: We'll stand at ease also until 3:30. Start
10 back promptly then.

11 (Whereupon, a recess was held from 3:15 p.m. to 3:30
12 p.m.)

13 THE COURT: Bring them in.

14 (Whereupon, the jury entered the courtroom at 3:30
15 p.m.)

16 THE COURT: All right. Mr. Brown, call your witness.

17 MR. BROWN: State calls Dr. Anthony Johnson.

18 THE COURT: Dr. Johnson.

19 DR. ANTHONY JERVEY JOHNSON, having been
20 first duly sworn, testified as follows:

21 DIRECT EXAMINATION

22 BY MR. BROWN:

23 Q Good afternoon, Dr. Johnson.

24 A Good afternoon.

25 Q Please state your full name.

- 1 A Anthony Jervey Johnson.
- 2 Q And, Dr. Johnson, were are you employed?
- 3 A Jervey Eye Group in Greenville, South Carolina.
- 4 Q How long have you been with Jervey?
- 5 A Since 1986.
- 6 Q And how long have you been a licensed physician?
- 7 A Since 1986, in practice in Greenville.
- 8 Q What type of medicine do you practice in?
- 9 A I'm a pediatric ophthalmologist.
- 10 Q And what's your educational background?
- 11 A Going to Texas Tech University, and for undergraduate
- 12 University of Texas, and San Antonio for medical school.
- 13 And did a general surgery internship and ophthalmology
- 14 residency at Tulane in New Orleans followed by a pediatric
- 15 ophthalmology fellowship in Atlanta and finished that in
- 16 1986. So I've been in Greenville since June, 1986.
- 17 Q And as a medical -- or being a physician, do you have
- 18 to regularly participate in continuing medical education?
- 19 A Yes, I do.
- 20 Q And do you kind of tailor your education towards your
- 21 particular field?
- 22 A Completely. Yes, sir.
- 23 Q Dr. Johnson, have you ever testified in a court of
- 24 General Sessions in South Carolina?
- 25 A I have.

1 Q Roughly how many times?

2 A Probably 20.

3 MR. BROWN: Judge, at this time State offers Dr.
4 Johnson as an expert in the field of pediatric
5 ophthalmology.

6 MR. WISE: Without objection.

7 THE COURT: He is so qualified, and he can likewise
8 offer opinions to the field of pediatric ophthalmology.

9 MR. BROWN: Thank you, Judge.

10 Q Dr. Johnson, did you have an opportunity to examine
11 minor [REDACTED] ?

12 A I did.

13 Q Do you know what date, or what the day was when you
14 examined her?

15 A The initial examination when I saw her in the pediatric
16 ICU in Greenville was December 17th, 2013.

17 Q To your knowledge, once you went in to exam minor [REDACTED], was
18 that the day of the incident or had it been reported to you
19 as the day before?

20 A It was reported as the day before.

21 Q And who was present during your examination?

22 A The nurse was present in the pediatric ICU room, Dr.
23 Henderson was present. If I recall, there were a couple
24 family members. I think at least her grandmother was there
25 and another family member. I'm not sure who that was.

1 Q Dr. Johnson, when you were performing this exam were
2 you able to take pictures or videotape this exam of Ms.
3 Ledford?

4 A Yes, I was.

5 Q Was it both or videotaped?

6 A Videotape. In the same process I was able to take some
7 still pictures as well.

8 Q Dr. Johnson, I want to show you what's been marked
9 State's ID 9 through 15. Take a look at these. Do you
10 recognize those photos?

11 A Yes, I do.

12 Q And what are those photographs portray?

13 A These are retinal photographs taken at the time of the
14 examination with a Keeler-Indirect Ophthalmoscope and they
15 show multiple extensive retinal hemorrhages.

16 Q And these are the retinal hemorrhages of **minor**
17 **minor**?

18 A Yes, they are.

19 MR. BROWN: Judge, at this time State moves to offer
20 States's Exhibit 9 through 15 as evidence.

21 MR. WISE: No objection.

22 THE COURT: 9 through 15 inclusive are introduced
23 without objection.

24 (Whereupon, State's Exhibit Nos. 9 through 15 were
25 admitted into evidence.)

1 Q Before we get to those. Dr. Johnson, in preparing for
2 this trial did you provide the State with a picture of a
3 normal eye?

4 A Yes, I did.

5 Q I show you what's been marked as State's ID 7, and also
6 8. Do you recognize those photographs?

7 A Yes, I do. One is an artist representation from a
8 textbook of a normal retina and optic nerve with labels, and
9 the other is actually a clinical photograph of a
10 non-identified patient with a normal retinal exam.

11 MR. BROWN: Judge, at this time State moves State's ID
12 7 and 8 in as Evidence 7 and 8.

13 THE COURT: Any objection to 7 and 8?

14 MR. WISE: No objection.

15 THE COURT: No objection to 7 and 8. They're all
16 submitted without objection.

17 (Whereupon, State's Exhibit Nos. 7 and 8 were admitted
18 into evidence.)

19 Q Dr. Johnson, before we get started on the actual exam
20 of what your findings were for **minor**, I direct your
21 attention to State's Evidence 7. Can you kind of

22 briefly go through the anatomy or the makeup of an eye to
23 try and educate everyone on how the eyeball is made up?

1 A Yes, I can. Should I go over there?

2 MR. BROWN: Or, Judge, if he could stand back here.

3 THE COURT: He's got a pointer stick right there in his
4 box. Whichever way he likes better.

5 (Whereupon, the witness steps down from the witness
6 stand.)

7 A This is a picture of -- if you're facing the patient,
8 it's a picture of a left eye and this is the optic nerve.
9 This is a portion here. You see in the front part where it
10 actually -- it begins, and the rest of it goes back behind
11 the eye and actually becomes part of the brain. This is
12 what transmits the 1.2 million nerve fibers from the retina
13 back to the brain. That's what carries all of our visual
14 signal back to the brain. And we'll be able to see the
15 optic nerve actually in a couple of these photographs of
16 minor . These are the major vessels that are leaving the
17 artery in the vein. They surround above and below. The
18 most important part of our -- where our vision is -- this is
19 where our 20/20 vision is. This is called the macular right
20 here. You notice that there are no vessels normally right
21 here. That's where perfect central 20/20 vision is. And
22 then the part of the retina that you can't see that's not
23 captured in the photograph extends this way. And this way,
24 this is the part of the retina that's toward our nose. And
25 this serves our peripheral vision out to the side. So

1 again, these are normal vessels here. Normal optic nerve,
2 normal macula. This area right here is just where the flash
3 from the artist's rendition of looking at a photograph, or
4 the flash is just reflecting off like a mirror. So this
5 tissue actually looks just like -- oh, actually it's the
6 artifact from the projector is what it is. So this looks
7 just like the rest of this area up here.

8 Q And just to be clear. Dr. Johnson, the -- me looking
9 at that picture, the left side, is that what we would see if
10 you're looking at an eyeball from looking at a person
11 straight on?

12 A If you're looking through the pupil you can see a
13 certain size view. You can't see the entire retina at one
14 time. But as you look around through the pupil you can see
15 this part over here. If you come farther from that side,
16 you can see in that direction. If you come more from this
17 side -- because remember, you're looking right through the
18 pupil. So the pupil in this -- of course, this is way
19 bigger than an eye. So if this were really a model of the
20 eye, the pupil would be about this far away in front of the
21 eye and we'd be looking through the pupil to see that. So
22 it would be like looking through a hole in a basketball
23 trying to see the other side, or a little bit over here, a
24 little bit over there. So you have to angle your view so
25 you can see the entire retina.

1 Q Dr. Johnson, what is making the eyeball keep its shape?

2 A Well, if -- we have this model and the front of the eye
3 is way out here. The volume of our eye is made up of
4 protein material. It's clear. It's transparent so light
5 can go through it. And it's called vitreous. And if you
6 think about the consistency of table Jell-O, if it's in the
7 refrigerator, the consistency of table Jell-O, it will
8 jiggle if it's a square of table Jell-O. It won't pour if
9 it's in the refrigerator but it will jiggle. So it's fairly
10 firm. So in a baby our vitreous is fairly firm. As we get
11 way up in our seventh and eighth and ninth decades of life
12 it becomes more liquid. But it's still a clear protein
13 material. And it's very, very adherent in certain places.
14 It's very adherent to the optic nerve. It's very adherent
15 to the vessels. It's very adherent out in the way in this
16 model that we're -- they're doing as a make believe model.
17 As the retina comes out this way, as I described like in a
18 basketball out in the peripheral retina, the vitreous is
19 very firmly adherent to it. And so, that becomes
20 significant as we talk about the mechanism of what causes
21 hemorrhages. But again, the vitreous is very adherent to
22 the vessels, to the optic nerve, to this area surrounding
23 our 20/20 vision, and way out in the peripheral retina where
24 the end of the retina is.

25 Q Now, Dr. Johnson, I'm going to show you what's been

1 marked as State's Evidence 8. What is this photograph
2 showing?

3 A The way this is projecting this is the opposite eye,
4 but you can tell it's just the mirror image of what that
5 artist rendition was. So here's the optic nerve right here.
6 And here, this is a real photograph of real healthy vessels.
7 This area right here with a little extra pigmentation is the
8 area of the macula. And you can see that as these vessels
9 go farther and farther out away from where they start in the
10 optic nerve they become smaller and smaller like the
11 branches on a tree. The farther out the branches of the
12 tree the farther out the branches on the tree the tinier the
13 vessels. And as they extend out to the peripheral retina
14 the vessels are very tiny.

15 Q Thank you.

16 (Whereupon, witness returns to the witness stand.)

17 Q Now, moving toward -- moving to your actual exam of
18 [REDACTED]. Again, you've stated you examined [REDACTED] on
19 December 17th, 2013?

20 A Yes.

21 Q The day after she was admitted to Greenville Healthcare
22 System?

23 A Yes.

24 Q Dr. Johnson, during your exam of [REDACTED] what did you --
25 what were -- what were the present findings? What did you

1 find by examining her eyes?

2 A Is it okay if I just read from my note that captures
3 that --

4 Q Yeah.

5 A -- for completeness sake? This is the official
6 dictated report from my exam that I dictated. "The patient
7 was examined from the bedside and the patient was on the
8 ventilator in the supine position. She was essentially
9 unresponsive, although she did react once to the bright
10 light from this bright ophthalmoscope. She did not appear
11 to be in any distress. Her external examination revealed
12 that she had some swelling of the right upper and upper
13 eyelids. The examination of the front of the eye revealed
14 no evidence of any blood in the front of her eye. She had
15 no evidence of traumatic cataracts in either eye. Her
16 widely dilated pupils allowed an excellent view of the
17 retina in the optic nerve. The right eye had an extensive
18 retinal hemorrhage involving all layers of the retina,
19 including a preretinal hemorrhage in multiple locations.
20 The optic nerve was visible with physiologic cupping and
21 otherwise healthy in appearance. The retinal hemorrhages
22 extended out to the peripheral retina and the hemorrhages
23 were too numerous to count and confluent in many areas,"
24 meaning that they were all just running together.
25 "Attention is turned to the left eye and the retina was

1 easily evaluated through the widely dilated pupil. There
2 were extensive retinal hemorrhages in the left eye as well
3 including hemorrhages in all layers of the retina that were
4 too numerous to count and extending out into the retinal
5 periphery." My impression at the time -- and again, this
6 was only maybe 16 or so hours after **minor. .**'s admission.
7 "This is a three and a half month old female with
8 unexplained intracranial hemorrhage and extensive bilateral
9 retinal hemorrhages involving all layers of the retina,
10 including the preretinal hemorrhages. The hemorrhages were
11 too numerous to count in both eyes and extended to the far
12 peripheral retina. The optic nerves were normal with no
13 evidence of any swelling. These findings, with no other
14 explanation in an otherwise healthy child, are extremely
15 suggestive of non-accidental trauma. These findings were
16 discussed both with Dr. Henderson and with the attending
17 physician, Dr. Vering."

18 Q Dr. Johnson, you mentioned multiple times multilayered
19 retinal hemorrhages. What is -- first of all, what's a
20 retinal hemorrhage?

21 A A retinal hemorrhage is any blood that is involving the
22 retina that's not in the retinal circulation. It's not
23 contained within the blood vessel.

24 Q And what does multilayered mean?

25 A Well, the retina, although it's microscopically thin,

1 has about 10 layers to it, and there are certain layers that
2 are more susceptible to hemorrhage. For instance, in a
3 diabetic -- and this has nothing to do with diabetes, but
4 we're all familiar with friends or family that have had
5 hemorrhages in the retina from diabetes. Those occur on the
6 surface right where the large retinal vessels are. And so,
7 in this case I described retinal hemorrhages within the
8 substance of the retina. In addition also, on the
9 superficial layer of the retina, as well as in front of the
10 retina. The pre-retinal hemorrhages. So those are the
11 multiple layers of hemorrhage.

12 Q Dr. Johnson, you also mentioned you were unable to --
13 you did not find any signs of cataracts?

14 A Yes.

15 Q And what is -- you also said no evidence of hyphema?

16 A That's blood in the front of the eye.

17 Q In front of the eye. And that the optic nerve seemed
18 to be normal?

19 A Yes, showing no signs of swelling. In this particular
20 situation it's important for the rest of the team, including
21 the neurosurgeon, because of the blood within the brain,
22 it's important to know that the optic nerves were not
23 exhibiting any swelling as a result of that and, therefore,
24 didn't make more of an emergency. The case for trying to
25 decrease the pressure within the substance of the brain.

1 Q Dr. Johnson, I'm going to show you State's Evidence 9.
2 What does this picture show?

3 A Well, it's a picture of retina, but it's hard to really
4 see any normal retina there. All of those red splotches are
5 retinal hemorrhages either in front of or within the
6 substance of the retina.

7 Q I'm trying to cut down on that glare. State's Evidence
8 10?

9 A And this is another example of not seeing essentially
10 any normal retina. But you can see two or three focal
11 hemorrhages that are right in front of the retina and
12 obscure the retina. So those are good examples of a
13 pre-retinal hemorrhage.

14 Q Now, those hemorrhages that you're pointing out, are
15 those the red blobs?

16 A Yes, they are.

17 Q Again, I just want to direct you back to State's
18 Evidence 8. Is that what a normal eye --

19 A That's a photograph of a normal retina looks like with
20 no retinal hemorrhage.

21 Q No red splotches or blobs all throughout the eye?

22 A Correct. This has no retinal hemorrhages.

23 Q State's Evidence 11?

24 A Again, this is just an additional photograph in a
25 different portion of the retina that shows essentially the

1 same thing. The more yellowish color there represents areas
2 of the retina where there's decreased normal circulation to
3 where it's not healthy and it's swollen.

4 Q State's Evidence 12?

5 A And as we look out into the peripheral retina we see
6 that the hemorrhages extend out into the far periphery.

7 Q And would that be the darker color here?

8 A Yes.

9 Q State's Evidence 13. Is that another photo of that?

10 A It's another photo of the similar area that overlaps,
11 yes.

12 Q And again, State's Evidence 14?

13 A And there you can see a portion of the optic nerve that
14 -- from which I made the comment that there is no evidence
15 of any swelling, and that's what we would expect to see with
16 the optic nerve.

17 Q Now, Dr. Johnson, in all those pictures that we were
18 just seeing, how is the vitreous -- how did that come into
19 play with -- with the multilayered retina?

20 A Well, the significance of the vitreous attachments, and
21 especially the consistency of vitreous as I described like
22 table Jell-O, if there's any type of acceleration and
23 deceleration type force that's tugging on the vessels, they
24 tend to break, and that's what causes the retinal
25 hemorrhages to happen. When there's any kind of repetitive

1 to and fro type motion with the acceleration/deceleration
2 type force.

3 Q So is that vitreous, which is your table jelly, or what
4 you're comparing it to, with that attaching to those vessels
5 into retina, the pulling breaks those vessels to cause the
6 hemorrhaging?

7 A Yes, it does. And that's why it's significant that one
8 of the areas of attachment is out in the far peripheral
9 retina where the vessels are tiny, and almost never do you
10 see hemorrhages out where the vessels are so tiny except in
11 a case of this acceleration/deceleration type force.

12 Q Dr. Johnson, based on a reasonable degree of medical
13 certainty, what -- how do you diagnose this and what do you
14 attribute the injury?

15 A Well, as I indicated in my initial assessment just
16 hours into this hospitalization, with intracranial
17 hemorrhage and extensive retinal hemorrhage in all layers of
18 the retina extending out to the peripheral retina, and after
19 the medical team completed their evaluation looking for any
20 other unusual causes, which were excluded, the only thing
21 that will cause this picture is a shake injury.

22 Q Would you classify this as a potential accident?

23 A I would not classify this as an accident.

24 Q How would you classify it?

25 A This is intentional inflicted injury.

1 Q As you said, it would be caused by
2 acceleration/deceleration force?

3 A Yes.

4 Q Dr. Johnson, would a fall from, say, a bed cause these
5 type of injuries to the eye?

6 A No. You would not see any hemorrhage like this from a
7 fall from a bed.

8 Q What about an automobile accident?

9 A If you have extensive enough trauma there are certainly
10 cases. In fact, there have been published papers where a
11 hundred consecutive patients admitted because of head
12 injury, some accidental -- in fact, most accidental. But
13 really not knowing the reason for the admission. Just a
14 hundred consecutive admissions to the neurosurgery service.
15 And all of those patients had their eyes examined just to
16 look at see, you know, what's the likelihood of having
17 retinal hemorrhage with severe injury, including injuries
18 like ejection from an automobile, a fall from two or three
19 stories and surviving, and you might see one or two or three
20 dot hemorrhages back in the area that I described that's in
21 the back of the eye where the vessels are large. And the
22 reason for those hemorrhages -- number one, you can count
23 them. But the mechanism of that hemorrhage is because
24 there's a sudden spike in the pressure within the vessel and
25 the vessel leaks. But if you have just one sudden

1 deceleration type force, but not repetitive, you never see
2 any hemorrhage like this that's in all layers of the retina
3 extending out to the peripheral retina. And in most cases,
4 as the photographs we just saw, I'm not seeing any normal
5 retina.

6 Q And, Dr. Johnson, if, for example, we use the
7 automobile example, would it be multilayered if there were
8 any hemorrhages in those eyes?

9 A It would most likely just be in the superficial layer
10 of the retina.

11 Q And if it were, in fact, a fall or an automobile
12 accident, would it be normal to find other injuries on a
13 child, or even a grownup, superficial like skin or a broken
14 bone, things of that nature?

15 A Definitely. And the history would also explain what
16 happened. So the findings would be -- would be consistent
17 with the history of whatever the accidental injury was.

18 Q During your actual exam of **minor** did you see any
19 bruising on her face, arms or body for that matter, that
20 stood out?

21 A I don't recall. I typically don't do a full body exam.
22 I do recall and described in my findings that she had some
23 swelling but not bruising of the right eye. I don't recall
24 any other facial bruising at all.

25 Q Dr. Johnson, going back to the falls and the

1 automobile, would a child that age have a seizure cause
2 multilayered retinal hemorrhages of which you saw?

3 A Seizures definitely do not cause retinal hemorrhages.

4 Q What about CPR?

5 A CPR is -- is a little bit of a confusing question, but
6 I think it's been asked many times, and as a result of the
7 question being asked there have been probably three or four
8 studies published about children in children's hospitals
9 that are severely ill for, you know, whatever reason with
10 life-threatening illnesses and undergoing resuscitation, and
11 often they have very abnormal clotting studies already.
12 Often they have abnormal electrolyte values and so on. In
13 other words, they're ill enough to -- for their heart or
14 lungs or both to stop functioning and require CPR. But
15 nevertheless, only maybe two or three out of a hundred would
16 have any hemorrhages at all, and if they did they were
17 superficial hemorrhages and countable. Like two, three,
18 four, something like that.

19 Q What would you classify those? Would that be TTI, what
20 you would cause the bruising in the eye, or would that be
21 some other type of hemorrhaging?

22 A If it were the skin you would call it that. But you
23 would just call it a dot hemorrhage if it was in the setting
24 that I just described with CPR.

25 Q And what about choking on food, a child this age?

1 Specifically formula with rice cereal in it?

2 A I've been in practice 29 years. I've never ever seen
3 retinal hemorrhages from any child that's ever choked on
4 anything.

5 Q Dr. Johnson, after you examined [minor] on December
6 17th, 2013 have you seen her since?

7 A I have seen her in the office a few times since then.
8 The most recent time in September.

9 Q And does she still -- is she still recovering from
10 these injuries?

11 A Well, she's got some permanent damage from these
12 injuries. I saw her two times before all the retinal
13 hemorrhages resolved, and she's had a complete resolution of
14 the hemorrhages but she's developed atrophy of her optic
15 nerve in the right eye, which just means that a number of
16 those 1.2 million fibrils that make up the optic nerve are
17 dying and not functioning well. Even though she's not old
18 enough now to prove her vision, we know that with optic
19 atrophy such as she's developed her vision is probably less
20 than 2200 in that right eye. It appears to be doing much
21 better in her left eye. Yet she's still not able to prove
22 that to us, but certainly based on her function and
23 observing what she can do she clearly has reasonably good
24 vision in her left eye.

25 Q Have you ordered any type of patching or any type thing

1 to try to strengthen her right eye?

2 A Yes. She's undergoing part-time patching to force her
3 to use the right eye, at least for a little while each day.
4 She's also developed some nearsightedness in the right eye,
5 which is one of the things as a consequence of severe injury
6 like this in a child we often see that they develop
7 asymmetrical nearsightedness, and that's what she's
8 developed. So even though it was very difficult to know for
9 sure at the time of the injury how much worse her right eye
10 was than the left, we can now, looking back, tell that based
11 on the optic nerve changes and the atrophy that's developed
12 we can tell that she did have more damage to the right eye
13 than the left. And the right eye has also become
14 nearsighted for which she's also wearing glasses.

15 Q Dr. Johnson, this may sound like an odd question. But
16 are peoples' eyes considered organs?

17 A Our eyes are an organ. Yes, they are.

18 Q And based on your findings, and actually continued
19 treatment, she does have long -- she does have lasting
20 affects from this trauma?

21 A Yes, she does. Optic atrophy does not resolve.

22 Q Dr. Johnson, you had already mentioned the type of
23 force, or what type of motion would need to be inflicted on
24 a child to create this type of multilayered retinal
25 hemorrhages. In meeting with you, did you provide the State

1 a copy of an animation to help explain movement of the eye?

2 A Yes, I did.

3 Q Would that help you explain what type of movement the
4 eye would be -- or what type of movement the eyeball, or the
5 shaking is needed to cause this type of injury?

6 A Yes. I think it clearly shows in an animated fashion
7 just what the eye does as a result of this
8 acceleration/deceleration force.

9 Q Dr. Johnson, does this animation -- is it an actual
10 copy from [REDACTED]'s injury?

11 A No. This is an artist animation of exactly what
12 happens. But it's not -- it does not involve a photograph
13 or video of actual injury.

14 Q Dr. Johnson, I want to show you what's been marked
15 State's ID 16. Do you recognize this?

16 A Yes, I do. I provided that and I initialed it.

17 Q Is this a copy of the animation?

18 A Yes, it is.

19 MR. BROWN: Judge, at this time the State offers
20 State's Exhibit 16 in as evidence.

21 MR. WISE: I have an objection to that, Your Honor. We
22 need to talk it over outside the presence of the jury.

23 THE COURT: All right. I've got a matter of law to
24 take up. You all step in the jury room. Can't begin
25 discussing the case.

1 (Whereupon, the jury exited the courtroom at 4:12 p.m.)

2 THE COURT: All right. Mr. Wise.

3 MR. WISE: No one has ever put a camera on an eye while
4 it's being injured, so precisely what happens we don't know.
5 This animation was not prepared by him. What it was based
6 on I don't know. It's to me somewhat speculative to say
7 this is exactly what happens in the eye when no one really
8 knows and say -- and put it out there as gospel. It's one
9 thing for him to articulate a theory. It's something else
10 to put an animation up there that basically says this is the
11 gospel of what happened.

12 MR. BROWN: Judge, he has been qualified as an expert
13 and this is based on his opinion --

14 THE COURT: He's given his opinion.

15 MR. BROWN: Sir?

16 THE COURT: He's given his opinion.

17 MR. BROWN: This helps explain his opinion. Judge, we
18 have actually introduced this in another case here in this
19 circuit.

20 THE COURT: That doesn't bother me a bit. I've never
21 seen it.

22 MR. BROWN: Would you like to see it?

23 THE COURT: I mean, I've never -- I didn't do the other
24 case.

25 MR. BROWN: That's right.

1 THE COURT: I had a video similar to this in the last
2 case I tried that I didn't let in because it didn't involve
3 the injury to the person involved in the civil case, by the
4 expert who didn't prepare it.

5 THE WITNESS: Can I say who prepared it?

6 THE COURT: No. That doesn't matter. How long is it?

7 MR. BROWN: Five seconds.

8 MR. WISE: It's not long. I've seen it.

9 THE COURT: He's given testimony pretty graphically
10 about acceleration/deceleration several times. I mean, is
11 it not cumulative?

12 MR. BROWN: Judge, it shows how an eye would move being
13 shaken, or accelerated/decelerated.1111

14 THE COURT: All right. I'd like to hear from the
15 witness. Who did prepare it?

16 THE WITNESS: It's prepared by the National Association
17 for Shaken Baby. It's an organization in Salt Lake City
18 that's been in existence for about 18 years that involves
19 attorneys, physicians, former -- former folks that have
20 actually done the shaking. It's a very reputable
21 organization.

22 MR. WISE: It's done by an advocacy group then. That's
23 my real problem also. And we don't know what information
24 they took to make this with. I mean, where do they get the
25 information from. I think if it's going to be admissible it

1 requires somebody from that organization to come in here and
2 say this is the scientific basis for what we see here in
3 this animation. But I don't think it would be admissible
4 then.

5 MR. BROWN: Judge, based on -- if I could ask him a few
6 follow-up questions based on his experience and education is
7 this, in his opinion, show what type of movement, what type
8 of acceleration/deceleration could cause these retinal
9 hemorrhages.

10 THE COURT: He's already testified exactly to that in
11 this case.

12 MR. BROWN: Exactly. Judge, it's almost like these
13 journals and other articles that are being presented that
14 are being tossed around as gospel as well.

15 THE COURT: They're not being tossed around as gospel.
16 None of them have been admitted, and they can't be admitted.
17 They can be published under the hearsay rule. It's
18 different. I've got a thorough education in that rule and
19 this rule in that case I was referring to a moment ago.

20 MR. BROWN: Yes, sir.

21 THE COURT: I think it's cumulative. I don't think
22 it's necessary for him to explain acceleration/deceleration.
23 That's not going to help the jury determine the question of
24 fact as to whether or not there was -- this young man caused
25 the trauma that caused this child's injuries. That's the

1 jury's question and I just don't think it helps them resolve
2 that.

3 MR. BROWN: Judge, actually in his statement that we'll
4 be getting into later on he talks about shaking and the
5 pulling and tugging, and this video would actually help --
6 the animation would actually help show what the eye is
7 actually going through with this quick forward thrust,
8 reverse thrust and the pulling and tugging which would cause
9 this multilayered retinal hemorrhage.

10 MR. WISE: I would dare say nobody could tell us what
11 the g-forces are on that eye to make this animation. I
12 mean, I may be wrong, but I dare say that's --

13 THE COURT: Well, the -- I'm not going to allow it.
14 You can proffer it, if you like, and then off the record
15 I'll tell you what happened in the other trial.

16 MR. BROWN: Judge, at this time I'll just show what the
17 video --

18 THE COURT: I mean, you don't have to proffer it on the
19 video. You can just say you're going to do it as a Court's
20 exhibit and I'll accept it as a proffer, because we're don't
21 have to watch it because they're not going to see -- the
22 jury's not going to see it.

23 MR. BROWN: Well, I don't see there's really any reason
24 to proffer it, Judge.

25 THE COURT: Well, I mean for your record. If you want

1 to --

2 MR. BROWN: The record is done after this trial. We
3 can't appeal it after that.

4 THE COURT: All right. I don't want to see it. Off
5 the record.

6 (Whereupon, an off the record discussion was held.)

7 MR. BROWN: We're ready to proceed.

8 THE COURT: All right. Bring them back in.

9 (Whereupon, the jury entered the courtroom at 4:16
10 p.m.)

11 THE COURT: Continue.

12 Q Dr. Johnson, again, with the -- you've testified that
13 acceleration -- rapid acceleration/deceleration causing
14 multilayered retinal hemorrhages.

15 A Yes.

16 Q And based on your opinion, what would the eye be doing
17 when a shaking is going on?

18 A Well, because this jelly like material has mass to it,
19 as the head is without much neck musculature not very
20 controlled the head is going back and forth, and also with
21 rotational forces, the eyeball is doing the same thing. And
22 as the vitreous is tugging backwards and forwards multiple
23 times it breaks the lining of the vessel and allows the
24 hemorrhage.

25 Q Dr. Johnson, based on your exam, did these injuries

1 appear to be acute, fresh?

2 A Yes.

3 MR. BROWN: No further questions.

4 CROSS-EXAMINATION

5 BY MR. WISE:

6 Q Acute being several days as opposed to two weeks or
7 three weeks?

8 A It's difficult to time them from the standpoint of
9 minutes or hours.

10 Q Or days. Weeks you could probably do?

11 A Days I could probably do.

12 Q All right. So this would have been within the last
13 several days?

14 A The retinal hemorrhage were definitely within the last
15 several days, but the change in mental status and the change
16 in how **minor** was doing was sudden. So all that happened at
17 the same time.

18 Q So you also do neurology?

19 A I'm a physician. I don't actually specialize in
20 neurology. But as a pediatric ophthalmologist I can
21 elaborate and take care of the whole body.

22 Q And you're aware that children three months old can
23 have a head injury and have some -- a lucid interval?

24 A And have what?

25 Q A lucid interval. Be asymptomatic for a while?

1 A What do you mean by a while?

2 Q A day or two.

3 A No. I disagree with that.

4 Q Twenty hours? Are you aware of the study by Carole
5 Jenny that there were doctors who missed serious subdural
6 hematomas in children?

7 A There's -- I know Carole Jenny myself, and she's an
8 excellent pediatrician, and I know that there have been
9 cases that have been missed.

10 Q She did a study that said about -- and actually, the
11 purpose of the study was to find missed subdural hematomas
12 in which she estimated that there were a number of patients
13 that went to the medical person and were listed as alert and
14 oriented by the doctor who came back later with a serious
15 subdural hematoma?

16 A I would interpret that to mean that you can have a
17 subdural that's not severe enough to cause a change in their
18 mental status.

19 Q Correct. You agree with that?

20 A I do agree with that.

21 Q So you can have bleeding on the brain that's not severe
22 enough to cause a change in your mental status?

23 A To not cause a change in your mental status.

24 Q Correct.

25 A A very tiny bleed. Yes, I do agree with that.

1 Q And that's one of the reasons when people carry their
2 children to the doctor and say the child fell and hit their
3 head and the doctor can't find anything, the doctor tells
4 those parents look for these symptoms. You know, look for,
5 you know, not being energetic, sleeping too much, vomiting,
6 stuff like that. That's what they tell children's parents
7 after a child hits their head, didn't they -- don't they?

8 A That's the common teaching. Yes, it is.

9 Q Right. Because those doctors know --

10 A 99.9 percent of those wind up doing fine.

11 Q Right. But those doctors know that you can have -- if
12 you have some bleeding in the brain that they didn't catch,
13 it can get worse and you have symptoms?

14 A The typical reason that they get worse is brain
15 swelling, not bleeding on the brain.

16 Q Right. And brain swelling is caused in part by
17 bleeding on the brain?

18 A The brain swelling is not caused by --

19 Q What's causing the brain swelling?

20 A Injury to the brain.

21 Q Injury to the brain. So if the brain is not injured --

22 A Impact or shaking.

23 Q So if the brain is not injured, there will be no
24 swelling?

25 A We'll defer that to the neurosurgeon.

1 Q Okay. What is the g-force -- let me ask this. To have
2 a vein or vessel in the eye to break -- now, in the eye are
3 they veins or is --

4 A There are both.

5 Q Both.

6 A And capillaries.

7 Q Okay. To cause these to break they're going to have to
8 stretch?

9 A Yes.

10 Q How far can you stretch them before they break?

11 A You can't measure that. And you can't measure that in
12 your skin either.

13 Q But there is some give and take, so to speak?

14 A We know that they do break because we see the
15 hemorrhage.

16 Q I mean, that's obvious, but we don't know what -- how
17 much stretch it takes to cause them to break.

18 A We know that an incredible amount of force that won't
19 cause it to break.

20 Q We know that what?

21 A There is an incredible amount of force that won't cause
22 it to break, like ejection through a windshield and impact,
23 falls from a three or four story window. Things like that.
24 We know that sudden impact, but isolated impact might cause
25 one or two or three retinal hemorrhages, but nothing like

1 the picture we saw today.

2 Q So if a child fell from a three-story window and hit on
3 something, you wouldn't expect to see retinal hemorrhaging?

4 A Maybe one or two at most, and probably not any.

5 Q And what would be the g-force of that child falling
6 from the three story window when the head hits?

7 A Well, the g-force of gravity is 9.8 meters square.

8 Q Well, what would the g-force be if you fall from a
9 three-story window? Do you know?

10 A Yes. It's gravity 9.8 meters per second square.

11 Q How many g's would the head be impacted when it hits?

12 A Well, that could probably be measured. But it would be
13 dependent upon the position of the body. It depends on what
14 position you're in whether it's 9.8 or not.

15 Q You don't know?

16 A The point is that it can be measured, but I'm not
17 measuring that.

18 Q And there are people who have tried to measure the
19 g-force to shake a baby's head, too, haven't they?

20 A There have been biomechanical models where it has been
21 measured.

22 Q Right. And --

23 A Successfully.

24 Q And some of those biomechanical models are shown that
25 you would expect to see a neck injury in a child before you

1 would see a subdural hematoma?

2 A That is all speculation. That's not ever been
3 published and proven.

4 Q It has not been published?

5 A It's not been proven. It might be someone's opinion.

6 Q Well, much of what you're talking about here is
7 someone's opinion also, isn't it?

8 A Not the findings that we saw today.

9 Q I understand. The finding of the retinal hemorrhaging
10 is not an opinion, it's a fact?

11 A Right.

12 Q Finding a subdural hematoma on an MRI is not an
13 opinion, it's a fact?

14 A Right.

15 Q The cause of all that is an opinion?

16 A Yes.

17 Q All right. Are you familiar with a study by Ferris
18 Bambach in the Forensic Science International concerning
19 shaken baby syndrome, a biomechanics analysis of injury
20 mechanisms?

21 A I'm not familiar with that journal or that article.

22 Q How about are you familiar with the American Journal of
23 Forensic Medicine and Pathology?

24 A I am familiar with that.

25 Q What about --

1 A I don't read it frequently.

2 Q I understand. But it's peer reviewed articles?

3 A It is.

4 Q And what is a peer reviewed article?

5 A A peer reviewed article is one that's -- there's an
6 editorial panel that's made up of experts in that field and
7 an article is submitted and it goes through very close
8 scrutiny, as opposed to what I call a pay for published
9 journal, which anybody can get something published and
10 there's no accountability whatsoever.

11 Q I understand that. And those create problems for
12 everybody. I will agree with you on that. But the American
13 Journal of Forensic Medicine and Pathology is a peer
14 reviewed article -- or a peer reviewed publication?

15 A Yes. That doesn't necessarily mean that everybody
16 agrees with what's published. But yes --

17 Q I understand that.

18 A -- it is a peer reviewed publication.

19 Q But peer reviewed means --

20 A It's been reviewed by experts.

21 Q It's been reviewed and it's serious enough that people
22 ought to read it and consider it, correct?

23 A At least an opinion of that editorial board.

24 Q Right. And you agree with this article of a
25 biomechanical analysis of the cause of traumatic brain

1 injury in infants and children, do you agree with them when
2 they say in their conclusions "It is usually not possible
3 based on medical signs and symptoms to determine if a given
4 head injury is due to abuse or accident"?

5 A I disagree with that.

6 Q And do you agree with the conclusion or the statement
7 that -- they talk about a lot of stuff in here about, you
8 know, traumatic injury to a child and all that, "That all of
9 the above and preceding questions demand an
10 interdisciplinary effort involving physicians, biogenicians
11 and other specialists to determine the actual unique
12 age-dependent mechanisms of pediatric head injury."

13 A I would defer to the neurosurgeon on that. That's --
14 you know, you can find thousands of articles, and when you
15 find one that's kind of an outlier that disagrees with what
16 the large body of medical information is, there's no doubt
17 that sometimes someone disagrees.

18 Q But if it's -- if people are putting it out as a peer
19 reviewed article it's a good faith disagree?

20 A But if it's one and a thousand others say something
21 else, then you have to put them in context.

22 Q Are you familiar with the National Association of
23 Medical Examiners, the Academic Forensic Pathology
24 publication?

25 A I recognize that name. I'm not familiar with it.

1 Q It's also peer reviewed. Let me ask you to look at
2 this and see if this will convince you.

3 A I would accept something from Carole Jenny since you
4 brought her name up.

5 Q Well, we can make to Carole in a minute then. Hold on.
6 You're not familiar with the Academic Forensic Pathology?

7 A No, sir. Who's the author?

8 Q The author is Evan Matshes, M-a-t-s-h-e-s, along with
9 -- he's the lead author, along with Keith Pinkerd and
10 Jeffrey Joseph.

11 A No, sir. I'm not familiar with them.

12 Q All right. Ever heard of the Western Journal of
13 Emergency Medicine?

14 A No, sir.

15 Q Have you reviewed the publication by Carole Jenny on
16 her test involving g-forces on children?

17 A She's collaborated with the Japanese on several
18 studies. I'm not familiar with her most recent work.

19 Q You've never read it?

20 A I haven't read anything recently from her with her
21 recent work. They have a lot of difficulty trying to
22 establish a model that they all felt good about for a number
23 of years.

24 Q And there have been studies on animals, and granted
25 animals are somewhat different, trying to duplicate retinal

1 hemorrhages in animals by shaking the head?

2 A Yes. They're totally different. Woodpeckers have been
3 one of the things since they bang their head constantly, and
4 they've been studied extensively as well.

5 Q And they've done a bunch of other animals. And they've
6 had a real problem duplicating retinal hemorrhaging from
7 shaking? In the animals I'm talking about.

8 A Rats have been shaken, they're a model, and they
9 definitely have retinal hemorrhages.

10 Q And then they've done it with some other animals,
11 monkeys and so forth, pigs, lambs.

12 A I'm not familiar with lambs, but yes. And I'm not
13 doing research, so I'm not keeping up with all those all the
14 time.

15 Q I got you.

16 A Definitely it's been duplicated in animals.

17 Q The eye is -- so you don't know -- other than saying it
18 takes a great force, you don't know what force it takes to
19 cause a retinal hemorrhage in an eye?

20 A We don't know numbers yet. That's right.

21 Q And do you know --

22 A But we know that it does cause a little bit more force
23 to cause the retinal hemorrhage than it cause -- than it
24 take to cause intracranial hemorrhage.

25 Q Do you know whether or not there's also a theory that

1 retinal hemorrhages can be caused by pressure?

2 A Retinal hemorrhages can be caused by increased vascular
3 pressure --

4 Q Right.

5 A -- as in Terson's syndrome and Peshner's retinopathy
6 which almost never happens in kids, especially in this age
7 group.

8 Q But pressure can also increase?

9 A Right. And that's why with trauma that we discussed
10 earlier and CPR, when you find one or two or three
11 hemorrhages, that's from a spike in the intravascular
12 pressure.

13 Q And a child's neck isn't as strong as an adult's
14 obviously?

15 A Correct. Especially in a three and a half month old.

16 Q Right. And you don't know to what extent how much
17 pressure it takes to damage that neck?

18 A I don't know how much pressure it takes.

19 Q Or how much --

20 A We know that there -- we know that there are many
21 examples on autopsy where there are retinal hemorrhages,
22 intracranial hemorrhages and nerve sheath -- nerve sheath
23 hemorrhages in the neck from shaking.

24 Q There's no swelling of the optic nerve in this case?

25 A No swelling of the optic nerve in this case.

1 Q What causes swelling of an optic nerve?

2 A Inflammation or increased intracranial pressure.

3 Q Two causes that do it. Both -- either one of those can
4 do it?

5 A Yes.

6 Q This child had a temperature?

7 A This child did not have a temperature that I'm aware
8 of.

9 Q Did not have a temperature that you're aware of. And
10 inflammation would cause a temperature?

11 A It could.

12 Q Up to 100 degrees or so.

13 A It could.

14 Q That would be inflammation?

15 A Well, the whole body -- anywhere in your body can have
16 -- has inflammation that causes increased temperature.
17 That's irrelevant for the retinal hemorrhages.

18 Q I thought you said inflammation could cause retinal
19 hemorrhaging?

20 A No. I said inflammation can cause the optic nerve to
21 swell.

22 Q Optic nerve, right. But you're not able to -- do you
23 know what level of g-force would cause an injury to a
24 child's neck?

25 A I don't know a level of g-force. But we don't even

1 need to know a number for that.

2 Q We don't?

3 A That doesn't change anything that we're doing to take
4 care of the child.

5 Q I understand that. I understand that. And that's a
6 totally different issue. Taking care of the child is a
7 totally different issue from determining the cause of the
8 injury to the child, isn't it?

9 A Yes, it's totally different.

10 Q It's two totally different things, right?

11 A Right.

12 Q But to determine the cause of the injury to the child
13 the g-force would be helpful?

14 A Well, for me, the constellation of findings of
15 intracranial hemorrhage, retinal hemorrhage, in this
16 particular child with all the things we know about this
17 child, there's no other thing that caused the retinal
18 hemorrhage other than acceleration/deceleration, and we
19 don't need to know what those forces were.

20 Q Well, if those forces are greater than what the child's
21 neck could stand, isn't that a problem? If there's no
22 injury to the neck?

23 A There are many cases where an admitted perpetrator
24 after the fact demonstrated what he did to shake and the
25 clinical findings of retinal hemorrhages, intracranial

1 hemorrhages, and severe injury to the child were present but
2 the child survived. And there was no damage to the neck
3 that was found.

4 Q And that perpetrator was honest in what he said he did?

5 A That's been actually shared on multiple occasions by
6 multiple perpetrators.

7 Q And people that do studies in this talk about the fact
8 that while that's helpful that's not really that reliable,
9 because you don't if they're minimizing what they did or
10 what, do you?

11 A We know that you can have these injuries and not have a
12 neck injury because there are a number of clinical examples
13 where that's been the case.

14 Q There are a number of clinical examples where you have
15 --

16 A A child has been injured with intracranial hemorrhage,
17 retinal hemorrhage, and no neck findings.

18 Q I understand that is extremely possible. A child falls
19 and hits their head or dropped and hits their head on the
20 floor they'll have these injuries with no neck injury.

21 A But you're not going to have retinal hemorrhages like
22 this.

23 Q You'll have something.

24 A You might have intracranial bleeding and a skull
25 fracture. You might have one or two dot hemorrhages. You

1 won't have the confluent retinal hemorrhages like we saw in
2 this child.

3 Q But it wouldn't be helpful to you at all in determining
4 cause to know what g-force is required, other than a drop
5 from a three story building, how much g-force it would take
6 on the neck in a shaking situation as far as cause is
7 concerned?

8 A For me to take care of the child that doesn't help
9 anything.

10 Q Well, you said that. And I'm not -- and you did a
11 great job taking care of this child, by the way. I mean,
12 the recovery has been remarkable. The eyesight has actually
13 improved recently, and that's good. But when you talk about
14 what caused the charge -- or what caused the injury then
15 that's what we are concerned about on g-forces, because if
16 the g-force from a three story building is applied to a
17 shaking situation would break the child's neck then we
18 should see it, shouldn't we?

19 A Well, that's a controversy that's been developed
20 especially by the biomechanical folks, but because you can't
21 actually do real research with this age group and compare
22 two different populations with one experiencing a certain
23 force and one experiencing another force. We can only
24 speculate.

25 Q And people have tried to duplicate as much as they can,

1 correct?

2 A Those efforts have been made, and to my knowledge
3 nobody has ever really measured that.

4 Q And a lot of the studies that have tried this have said
5 that before you'll get another g-force to cause the retinal
6 hemorrhaging and the subdural hematoma that you would break
7 the child's neck?

8 A I'm not aware of those opinions.

9 Q Now, you're aware of one time they looked -- you're
10 aware that Mr. Chaffe first came up with the concept of
11 shaken baby, or whiplash injury?

12 A Yes. That was back before CT scans and MRIs were
13 available.

14 Q Well, and he said at that point that you should look
15 for a subdural hematoma and broken bones, in his original
16 report?

17 A That was in 1965?

18 Q I believe '74.

19 A '74. Well, we've learned a lot since then.

20 Q I understand that. But we know -- but we've given up
21 on looking for broken bones, correct, as far as -- not skull
22 fracture but --

23 A Some children -- in this case the skeletal survey was
24 negative. You're right. But that's part of the process to
25 also look for broken bones. In some children who have

1 endured an injury like this have also had broken bones.

2 Q But we've given up looking for that?

3 A Well, that was his original description of that
4 particular case.

5 Q Well, it was original -- not a case. It was a study.

6 A And every one of them had broken bones?

7 Q No. His conclusion was if you see in a patient
8 subdural hematomas and broken long bones, arm and legs, then
9 you need to look for child abuse. That was his -- result of
10 his study, wasn't it?

11 A I don't remember exactly. But again, you were talking
12 about over 30 years ago and a lot's been learned since then.
13 And that was at the beginning of a CT scan before an MRI
14 study was even -- was even perfected.

15 Q And then they came up with the triad of subdural
16 hematoma, retinal hemorrhaging and brain swelling, correct?

17 A Yes, that was --

18 Q And you were taught 10 years ago that if you had those
19 three things then you probably got child abuse?

20 A Not necessarily. There's a whole process that's done
21 to evaluate and to see, you know, what else is possible. We
22 for this to be the conclusion.

23 Q Let me rephrase this. Let me rephrase this. You've
24 been taught 10 years ago that you had to have subdural
25 hematoma, retinal hemorrhaging and swelling of the brain

1 absent an adequate explanation. If you've got that, you
2 basically rule child abuse by the exclusion of anything
3 else?

4 A And 15 percent of those patients didn't have retinal
5 hemorrhages.

6 Q You were taught 10 years ago to look for the triad; is
7 that correct?

8 A I wasn't taught 10 years ago to look for a triad.

9 Q Were you ever taught to look for a triad?

10 A No. I was told to look at the entire picture. And if
11 you had an intracranial hemorrhage or retinal hemorrhages
12 and no adequate explanation then, yeah, it would be pretty
13 suspicious of child abuse.

14 Q Is this the Japanese study with Dr. Jenny that you were
15 referring to or you've seen it? It's not been published, by
16 the way.

17 A Well, I've not seen it if it's not been published.
18 What's the date on it?

19 Q I'm thinking six, seven years ago.

20 A I don't see a date on it. This looks like just some
21 information that they probably wanted to publish. Yes, I've
22 actually heard her even speak on this.

23 Q On that topic?

24 A Yes. About all the frustration and difficulty in
25 drawing conclusions from it.

1 Q Would it be safe to say that those who support the idea
2 that you can shake a baby and injure the skull without
3 injuring the neck don't have any evidence to support that
4 either?

5 A You know, I would just defer to the biomechanist on
6 that.

7 Q So you don't know?

8 A That doesn't really pertain to their eye care.

9 MR. WISE: Thank you.

10 REDIRECT EXAMINATION

11 BY MR. BROWN:

12 Q Dr. Johnson, he just showed you an unpublished thing
13 about Ms. Jenny with the Japanese. He just said six or
14 seven years ago?

15 A There was no date on it.

16 Q What would be the -- why wouldn't it be published if it
17 was six or seven years ago?

18 A Well, it could have been published if there was -- if
19 it was viewed as being valuable with new information by a
20 peer reviewed journal.

21 Q And it hasn't been published?

22 A He said it hasn't been published. I don't know that.

23 Q Dr. Johnson, he mentioned several times -- Mr. Wise
24 mentioned several times about g-force and falling out of
25 buildings and things of that nature. Would choking on

1 formula and rice cereal cause a g-force or any type of force
2 to cause those retinal hemorrhages?

3 A No, it wouldn't.

4 Q And again, based on your opinion and bringing
5 everything to totality of circumstances with her injuries,
6 with the history you learned from your exam, what were your
7 findings?

8 MR. WISE: I object. That's been asked and answered on
9 direct.

10 THE COURT: A very, very similar question was asked and
11 that has been answered already on direct.

12 Q Dr. Johnson --

13 THE COURT: I'm going to sustain the objection.

14 Q -- is this accidental trauma?

15 A No, this is not accidental trauma.

16 MR. BROWN: No further questions.

17 THE COURT: You can step down now.

18 THE WITNESS: Thank you.

19 (Whereupon, the witness stepped down from the witness
20 stand.)

21 THE COURT: All right, folks. It's been a long day.
22 You can't discuss the case. We'll start back first thing in
23 the morning at 9:30. You all understand I got you here
24 late, but once I got done I've been pretty punctual trying
25 to get you in and out. The breaks have been punctual and

1 that's been my goal. And the lawyers move quickly on some
2 and slower on the others, but we're just estimating how long
3 witnesses are taking. The next witness they've got is going
4 to be here in the morning, so that's why it suits me to
5 break right now.

6 Is 9:30 good? You all want to start earlier? 9:30 all
7 right? All right. Be in the jury room by 9:30 and we'll
8 start. I don't have anything in the morning is going to
9 slow me up. Okay? So we'll start at 9:30.

10 Can't discuss the case. I'll have you all some candy
11 again.

12 (Whereupon, the jury was excused for the day at 4:47
13 p.m.)

14 THE COURT: You all want to take a few minutes and
15 review our -- the statement we talked about redacting? I
16 know it's been redacted to some extent. Does that mean Mr.
17 Wise has to look through it again?

18 MR. BROWN: No. He's got some notes down on different
19 things.

20 MR. WISE: Probably listened to portions of it. What
21 did you do? You marked what you --

22 MR. BROWN: I didn't have the -

23 THE COURT: He worked on it the second time this
24 morning, I believe is what he just said.

25 MR. BROWN: Yeah, I've not done that.

1 THE COURT: Mr. Wise, you've listened to the redacted
2 tape version one?

3 MR. WISE: Right.

4 THE COURT: And you made some notes --

5 MR. WISE: I did.

6 THE COURT: -- while I listened to it this morning.

7 For the record, do you have any additional requested
8 redactions the State's not made yet? That's the question to
9 you.

10 MR. WISE: Yes. I mean, I've got several here. I
11 probably should make a copy.

12 THE COURT: Those are the notes you were taking this
13 morning before trial started?

14 MR. WISE: Right. I'm going to put my original notes
15 in as an exhibit, so it has a little -- staple them
16 together.

17 MS. WHITE: Can I get a copy so we're all working off of
18 the same one?

19 MR. WISE: The first one was kind of questionable, but
20 it's -- you know, they're saying to him "if you made a
21 mistake." I'll give up on that one.

22 The video at the hospital I do have a problem with,
23 particularly where the officer starts talking about the head
24 lighting up. Because I don't know what that's done. I
25 mean, that's not something my client said. It's something

1 they added when they were talking about it.

2 THE COURT: What do y'all have to say about that video?

3 I don't --

4 MR. BROWN: Judge, he brought up the video. Mr.

5 Ledford is the one that brought up and said, yeah, I watched

6 the video in the hospital and she just asked the question,

7 "Was it the one where the eyes light up?", and then they

8 kept on with their conversation. He brought it up because --

9 MR. WISE: His saying I watched the video probably I can

10 live with it. But when she starts describing it is the

11 problem, because I don't know -- I haven't seen that video.

12 I have no clue. And it just could be so misleading to the

13 --

14 THE COURT: I tend to agree with him on that one

15 because I don't know what it means either, nor do you. But

16 he watched some video.

17 MR. BROWN: And I think it's just the back and forth of

18 their conversation. He said yeah, I watched the video and

19 you're not supposed to shake a child when you leave the

20 hospital, and I think that would --

21 MR. WISE: If he had said the one where the head lights

22 up, I may have to live with it, but it's what she said in

23 there. I think I'm correct on that. If I'm wrong, I'm

24 wrong.

25 MR. BROWN: I think he responded. I'm not sure what he

1 said on the response to it. There might have been a yeah in
2 there. I'm not sure.

3 MR. WISE: And then they said, "I think it was harder
4 than you think it was." I think that's their opinion, and
5 they couldn't come into this court here on that stand and
6 testify to that. I mean, this officer couldn't come on the
7 stand after -- you know, and reply to his testimony and say,
8 no, I think it was harder than he thought it was. So I
9 don't see how he could say it on the tape.

10 THE COURT: Isn't that sort of similar to intoxication.
11 You were more intoxicated than you thought you were, or
12 something along those lines?

13 MR. WISE: Well, it's not quite the same, because when
14 you're talking about intoxication, the officer is seeing the
15 guy and saying no, I saw him. He was intoxicated. This is
16 saying based upon what my client said, based upon this
17 officer's opinion, "I think it was harder than you say it
18 was." But it's an opinion on his part, and there's no way
19 he'd be allowed to get on the stand and testify under oath
20 to that because it's an opinion.

21 MS. WHITE: Judge, I think that's part of the normal
22 back and forth of the interview process. It's no different
23 from an officer sitting there in a taped confession saying
24 we know you were there. Come clean. We know you were there.
25 And that's allowed all the time. It's -- the fact that -- I

1 mean, it's obvious that the officers think that he did more
2 than he said he did just by the fact that they continue
3 talking to him for another however many minutes after that.
4 So I don't think that it's -- I think to cut it out, we're
5 chopping this thing up so much that at some point it's going
6 to become nonsensical.

7 MR. WISE: Yates is doing a good job of smoothing it
8 over. I'll be frank with you, if I had a statement where
9 the officer said we know you were there and my client was
10 saying no, I wasn't, I wouldn't -- I would object to that
11 coming in, too, because it's implying that he has knowledge
12 above and beyond the four corners of the courtroom.

13 THE COURT: All right. Let me think about that one.
14 Keep going.

15 MR. WISE: All right. I'll get the serious one. They
16 say at 14:21, "I think something happened prior to that."
17 Again, that's an opinion. And granted, as far as give and
18 take, but still it's an opinion that they have of these
19 facts that they're not allowed to testify on the stand.

20 THE COURT: What have y'all got on that one?

21 MS. WHITE: I mean, Judge, the whole conversation is
22 based on the opinion of the officers that he shook the
23 child. And I think that's clear from the fact that they're
24 even talking to him and the way that they are. I mean, I
25 think that, you know, the officers -- again, it's part of

1 the back and forth. And what we're essentially going to end
2 up with is a lot of him saying things that we don't know
3 what it's even in response to.

4 THE COURT: I think it's kind of a voice inflected
5 question, is what I think it was.

6 MR. WISE: I don't care if it was voice inflected
7 question or a statement. It is something that this officer
8 would not be permitted in this courtroom to get on the stand
9 and say.

10 MS. WHITE: I think it's understood by the fact that
11 the officers placed him under arrest that that's what they
12 think.

13 MR. WISE: I -- but what they think --

14 THE COURT: They didn't put him under arrest here.

15 MS. WHITE: That's true, but that they ultimately did.

16 MR. WISE: But what they think is not admissible in
17 this courtroom.

18 MS. WHITE: I think it goes more to a question and to
19 the continuing, you know, tell us what happened, we don't
20 think you're telling us the truth, tell us what happened,
21 that explains why over the course of the hour he's in there
22 the confession gets progressively more detailed.

23 THE COURT: Keep moving.

24 MR. WISE: Suspended from school, I think, is clarified
25 later, so that kind of gets washed out. And my notes are

1 sort of confusing at 16:31. I've got, "At first less than
2 truthful. Get off chest." I don't know if -- I think
3 that's a statement that the officer is saying that again --

4 THE COURT: It was referring back to the first
5 statement, three days ago you were less than truthful --

6 MR. WISE: I know. I know.

7 THE COURT: -- I believe.

8 MR. WISE: At 7 -- at 27:40 there's a long discourse
9 about the officer talking about his son, which --

10 THE COURT: That was the local officer.

11 MR. WISE: It just doesn't really add anything. At
12 30:10 there's also a comment again by the officers about the
13 amount of force, which would be their opinion.

14 MR. BROWN: 30:10?

15 MR. WISE: 30:10.

16 THE COURT: Well, these are times on the new redacted
17 version.

18 MR. WISE: Right. Right. Right. And it may be off a
19 second or two, but it's going to be awfully close to them.

20 MS. WHITE: On the 30:10, is that when they're in the
21 middle? Like you can hear shaking in the background? Is
22 that when that is?

23 MR. WISE: I don't know. I don't think so. I think
24 that was earlier. Talking about him shaking the bottles. I
25 think that was earlier. I don't remember anything in there

1 that -- there was talk about how did you do it and he says
2 -- he demonstrated and he says up and down and so forth.

3 MR. BROWN: I think that amount of force is Donchell?
4 Did he say that? Because they get back in last opportunity.
5 I think that's with -

6 MR. WISE: I think it's a comment by the officer about
7 what he thinks is the amount of force necessary. I don't --

8 MR. BROWN: But I think that's -- I think he's saying
9 at that time that he did shake, he was shaking, or he closed
10 his eyes and he was shaking, and then the other two officers
11 come in. And the part we redacted is when Investigator
12 Downing starts getting a little louder, and then the next
13 part he says, "You shook that baby girl." That's more --
14 tones drop back down when he says, "Well, I just told
15 Donchell -- or told Mr. Hill what I did." And then it gets
16 more into about the shaking.

17 MR. WISE: If the officer says something about the
18 amount of force, I've got a problem with it. If it's my
19 client then I'm stuck with it. But I can't remember from my
20 notes. At 31:42, "You shook that baby harder." Again, it's
21 their opinion, and that's something they could not -- they
22 could not get on this stand and testify that, you know, Zack
23 Ledford shook that baby harder than he told us. So why do
24 they get it in through this?

25 At 32:24 again the officer says, "It was harder than

1 the small shake." That's the officer's statement. And then
2 he says at 32:57, "Harder because of the injury." And the
3 real -- the last real objection was 43:58 where they say,
4 "You freaked out and did not realize how hard you were
5 shaking her." And that's totally their opinion, too, that
6 they could not get on the stand and testify to. That's the
7 general criteria I go. If they can't get on the stand and
8 testify to it then I don't think it comes in through this
9 statement. Because you're trying to get the statement of
10 the Defendant in, not the officer's opinion about the
11 Defendant.

12 MS. WHITE: But, Judge, to get -- for his statement to
13 make sense you have to know what he's being asked, and some
14 of these are in the nature of questions. I think -- and
15 again, I can't remember exactly, but that last statement,
16 "Freaked out. Didn't know how hard you were shaking her," I
17 think he said something responsive after that. I could be
18 wrong.

19 MR. WISE: He may have, but it's still the officer's
20 opinion.

21 MR. BROWN: I actually think -- I actually think it's
22 probably the officers repeating what he had said earlier in
23 the interview.

24 MR. WISE: If he did, then that's one thing, but I
25 don't think he did.

1 MS. WHITE: And an officer could repeat what he said in
2 the interview on the stand.

3 MR. WISE: Right, correct. That's correct.

4 THE COURT: The Defendant did say, "I freaked out." I
5 heard him say that.

6 MR. WISE: Oh, he said that. Yeah.

7 THE COURT: No question about that.

8 MR. WISE: He said, "I freaked out." No question about
9 it. But then the officer says, "You freaked out and did not
10 realize how hard you were shaking her." Then he added to
11 it.

12 THE COURT: This is such a different type of interview
13 than I have seen.

14 MR. WISE: I had one like it in Spartanburg.

15 THE COURT: Here's what I'm going to do. The video at
16 the hospital, I'd like that comment redacted.

17 MR. BROWN: Which one?

18 THE COURT: The one about being at school at 3:34.
19 Very early on.

20 MS. WHITE: Just the comment from the officer?

21 MR. WISE: Yeah.

22 THE COURT: Yeah. You know, I saw the video. He said
23 -- the officer, the lady's comment. All these other things,
24 I think it's part of the question and answer. The voice
25 inflection questions. And I agree with Mr. Wise that their

1 -- these officers are going to testify?

2 MS. WHITE: Investigator Downing and Investigator Hill
3 are going to testify. We were not going to call Ms.
4 Cauthen, I think, subject to -- she was going to be
5 available for Mr. Wise if he --

6 THE COURT: Well, here's what I'm going to do. I'm
7 going to let this statement come in like it is, but Mr. Wise
8 gets some latitude on cross-examination. Some of these
9 questions you all did, you used this thing. That's just
10 your opinion. He's going to be allowed to ask that
11 question. Okay?

12 MR. WISE: That doesn't help me. It reinforces to the
13 jury that these people think the shaking was -- that the
14 officers think the shaking was harder. They're law
15 enforcement officers. To me it compounds the problem
16 instead of helping him to -- for me to have them say again
17 this is my opinion.

18 THE COURT: Well, I mean, that's -- that's the whole
19 question of fact is the shaking he admitted to, was it
20 sufficient to cause the injuries upon the child. That's --

21 MR. WISE: What do I do? What do I do? You have no
22 basis for saying that he used more force than he said.
23 Well, yes, I do. This doctor told me. I can see -- I can
24 see it coming out now. Or yes, I do, based upon some study
25 I went -- class I went to, this is what we were taught.

1 THE COURT: Good Lord.

2 MR. WISE: There's no way to effectively cross-examine
3 them and eliminate it, or minimize it, because it just opens
4 the door to how they -- why they think it.

5 THE COURT: I think it's clear that you're right.
6 That's exactly how they were thinking all the way through
7 it. But -- that is exactly what they're thinking.

8 MR. WISE: I agree with you. But they can't get on
9 that stand and testify as exactly what they were thinking,
10 but they're being permitted to do it through this interview.

11 THE COURT: Let's take a break. Go off the record.

12 (Whereupon, a recess was taken.)

13 THE COURT: I'm going to direct the State to redact out
14 the responsive comment by the female SLED officer about the
15 lights in the video that Mr. Ledford saw. All the other
16 questioning, back and forth statements, I'm going to leave
17 them unredacted. So that's my ruling. Now, I want to have
18 a -- I want chat with you all right now before we go any
19 further, because Mr. Wise made a good record on that.

20 (Whereupon, court was adjourned for the day.)

21 TRIAL DAY 3-11/04/15

22 THE COURT: Anything to put on the record before we
23 bring them in?

24 MS. WHITE: Your Honor, we have a Rule 5 issue. Mr.
25 Wise just handed us this morning two packets of material

1 that I assume were prepared by his expert. I served a
2 reciprocal Rule 5 on Mr. Wise over a year ago. April 28th,
3 2014, Your Honor, was when the reciprocal Rule 5 was
4 downloaded and was provided to Mr. Wise. I don't even know,
5 frankly, because it was just handed to us, I don't know
6 what's in here. I don't know what any of the underlying
7 articles are. There are pictures that I have no idea where
8 they come from.

9 Your Honor, my -- I have numerous objections. But
10 first and foremost would be in the reciprocal Rule 4 Mr.
11 Wise was required to give us any reports, anything he
12 intended to introduce in his case and chief.

13 MR. WISE: Your Honor, these are not --

14 MS. WHITE: And that would exclude this.

15 MR. WISE: -- these are not exhibits. What they are --
16 and one of them probably is a legitimate complaint. That's
17 no problem. We can work around that one. They are
18 PowerPoint presentations that my expert will be using to
19 illustrate his testimony. They will not be exhibits going
20 to the jury. You know, to be frank, he'd been working on up
21 until last night and came in this morning early and printed
22 them out for me. The pictures, I think they have a problem
23 with that, and that's no problem. That's why I gave it to
24 them to see what they are.

25 MS. WHITE: Your Honor --

1 MR. WISE: They're not exhibits. They're PowerPoint
2 presentations to illustrate his testimony.

3 MS. WHITE: Your Honor, I believe that he can testify,
4 but we were not allowed to present any sort of demonstrative
5 exhibits with our witnesses. Our witnesses testified and
6 their testimony stood on its own. I believe what's good for
7 the goose is good for the gander.

8 THE COURT: Well, y'all used pictures.

9 MS. WHITE: We used pictures from the actual case, Your
10 Honor. Not --

11 THE COURT: No. You had two, an artist drawing and a
12 picture of a normal eye. That's not -- that's different.

13 MS. WHITE: And those were provided to Mr. Wise in
14 discovery six months ago.

15 MR. WISE: The first one that she's got in her hand
16 now, we probably would need my expert here to determine
17 whether or not that comes in. That one I would agree is on
18 the edge. And when he comes in we can decide one way or the
19 other. We can live with it one way or the other.

20 MS. WHITE: Your Honor, I just think for him to have
21 retained this expert six months ago, obtained a continuance
22 based on --

23 THE COURT: All right. We don't have to deal with that
24 now. Let's move forward. That's more when he comes in. I
25 don't want to rule on that and -- if we go into it we're

1 making this jury wait --

2 MS. WHITE: Yes, sir.

3 THE COURT: -- and we've made them wait too long. So
4 I'm not -- I'm cutting you off, but it's not quite time for
5 me to hear that and call that.

6 MS. WHITE: Yes, sir.

7 THE COURT: Let's go. Bring them in.

8 (Whereupon, the jury entered the courtroom at 9:37
9 a.m.)

10 THE COURT: Welcome back this morning. We'll continue
11 on. The State call its next witness.

12 MR. BROWN: The State calls Dr. Troup.

13 DR. CHRISTOPHER TROUP, having been first
14 duly sworn, testified as follows:

15 DIRECT EXAMINATION

16 BY MR. BROWN:

17 Q Please state your full name.

18 A Earl Christopher Troup, MD.

19 Q And, Dr. Troup, where are you employed?

20 A Greenville Health System, the Children's Hospital.

21 Q And what are your current duties there?

22 A I'm the director of pediatric neurosurgery for the
23 Children's Hospital, and for the whole hospital system.

24 Q And, Dr. Troup, what's your educational background?

25 A Starting?

1 Q Starting with college.

2 A Okay. I got a B.S. in microbiology at the University
3 of Georgia. Got an M.D. from Mercer University School of
4 Medicine in Macon, Georgia. Did an internship in general
5 surgery at Carraway Methodist Medical Center in Birmingham,
6 Alabama. Did a five year neurosurgery residency at Umass
7 Medical Center, Worcester, Massachusetts. While there I
8 spent a year at Boston Children's. And then I did a
9 pediatric neurosurgery fellowship at the University of
10 Tennessee Le Bonheur Children's Medical Center and St.
11 Jude's Children Hospital in Memphis, Tennessee.

12 Q And how long have you been with Greenville Hospital
13 System?

14 A About eight and a half years. I was in Macon, Georgia
15 for 10 years before that.

16 MR. BROWN: We move Mr. -- Dr. Troup as an expert in
17 pediatric neurosurgery.

18 THE COURT: Any void dire of him?

19 MR. WISE: No objection.

20 THE COURT: All right. Likewise, like the other
21 experts, Dr. Troup is allowed to present opinions and
22 whatever facts he has. But he can present opinions in the
23 field of pediatric neurosurgery as a portion of his
24 testimony.

25 Q Dr. Troup, did you have occasion to see or treat minor

1 Ledford?

2 A Yes, sir.

3 Q And when did you first see Miss Ledford?

4 A I think it was -- she came in one evening, and I think
5 it was the -- I saw her films that night but saw her the
6 next morning.

7 Q December 17th, 2013?

8 A Yes, sir.

9 Q And, Dr. Troup, based on her film -- what films did you
10 see?

11 A There was a CAT scan that was done at Self the day that
12 she was transferred to Memorial -- to Greenville Memorial
13 Children's Hospital, and then we have MRIs that we got the
14 next day and periodically thereafter.

15 MR. WISE: No objection.

16 (Whereupon, State's Exhibit No. 17 and 18 were marked
17 for identification.)

18 Q Dr. Troup, I'm going to show you what's been marked
19 Exhibit -- State's Exhibit 17 and 18. Tell me what these
20 discs --

21 A State's Exhibit 17 is a disc from Greenville Health
22 Systems that's a copy of the CT on the 16th, which would
23 have been the one that came from Self. And then State's
24 Exhibit 18 is a disc from Greenville Health System that has
25 studies from 12/17 at GHS through 8/14/14 at GHS.

1 Q And have you had a chance to review these images?

2 A Yes.

3 Q And these are images from **minor**?

4 A Yes. I'm sorry. I didn't read the name on the disc.

5 But yes.

6 MR. BROWN: At this time the State moves Exhibit 17 and
7 18 into evidence.

8 THE COURT: Mr. Wise, without objection?

9 (Whereupon, State's Exhibit Nos. 17 and 18 were
10 admitted into evidence.)

11 Q Now, Dr. Troup, when treating **minor** in this case is it
12 important to have these images, the CT scans, MRIs?

13 A Yes, sir.

14 Q And what does the CT scan show -- or what could it
15 show?

16 A Wow, that's kind of a -- define the word and give three
17 examples kind of question. But it gives a picture of the
18 structures of the skull, around the skull and inside the
19 brain. The fluids spaces in the brain. So it could show
20 tumors, strokes, trauma, birth defects. It can show a lot
21 of things.

22 Q Bleeding?

23 A It can show bleeding. That was the trauma that I
24 mentioned, yes.

25 Q And when a CT scan is done how is -- what's the scan

1 actually do? How's the image -- how's the image -- how's
2 the image form?

3 A So a CAT scan uses x-rays similar to what you get for a
4 chest x-ray or anywhere else, but they do it in sequential
5 slices so that the computer makes a -- generates a picture
6 inside the head. And it's kind of like you took someone to
7 Bi-Lo and put them in the ham slicer and made a spiral ham
8 on their head and laid out one slice and then the next slice
9 and then the next slice, and you look at things sequentially
10 in very thin slice. But it has substance, like a slice of
11 ham. You're seeing that whole thickness, and then the next
12 thickness, and then the next thickness as you go up.

13 Q And, Dr. Troup, how is an MRI different?

14 A MRI is a little different in that it looks at the way
15 water molecules behave in a magnetic field. So if you've
16 ever played with magnets in school growing up, or your kids
17 have magnets, and the opposites attract each other and the
18 likes repel each other. So the -- if you've ever had an MRI
19 you heard all that banging around (demonstrating) of the MRI
20 banging. What that is are the magnetic fields switching
21 around you, and how long they leave the brain in the magnet
22 field, how long it lets the magnet field relax, and then how
23 long before it gives it the next pulse changes the way the
24 water and the context of blood, the heme molecules in the
25 blood, it makes them behave differently. So there are a lot

1 of different types of images you can look at in an MRI. And
2 also the computer can generate different planes. So you can
3 look at it like the CAT scan where the slices are like this
4 (indicating), but you can also look at it sliced from this
5 section, this section -- I mean, it's infinitely how they
6 can do it, but traditionally get you those three different
7 types of slices. The axonal slices. These are called the
8 sagittal slices where you're looking from one side to the
9 next, and the coronal where you're looking from the front to
10 the back.

11 Q And for Summer Ledford were CTs done?

12 A Yes, sir.

13 Q And were MRIs done?

14 A Yes, sir.

15 Q Dr. Troup, what did the CT show on 12/16/2013? Have
16 you had a chance to review those?

17 A Yes, sir. Yes, sir.

18 Q Yes, sir. Yes, sir. The -- there was -- on a CAT scan
19 blood will look different based on its age. So bone is snow
20 white, brain is a grey color, fluid is a darker color.

21 Fresh blood shows up as snow white. Not quite as white as
22 the bone. And as it gets older it becomes a little more
23 grey, almost the same color as the brain, and then becomes
24 darker than brain but not quite as dark as spinal fluid, and
25 then over time it becomes as dark as spinal fluid. So what

1 we saw was fresh white blood. You can see a little bit on
2 both sides, but most of it is on the right side of the
3 brain.

4 Q And another term for fresh white blood on a CT would be
5 acute?

6 A Acute blood. Yes, sir. And that kind of intermediate
7 greyish, it's called subacute, and the older dark blood is
8 called chronic blood.

9 Q And looking at the CT of **minor**, do you have a timing
10 on how fresh this blood was?

11 A It looks acute. So within minutes to hours, to up to a
12 few days at most.

13 Q Dr. Troup, I want to bring up the CT scan of **minor**
14 Ledford, December 16th, 2013. Would it be easier to be able
15 to manipulate the screen and for the actual CT if you step
16 down?

17 A Oh, absolutely. Yes, sir.

18 MR. BROWN: Permission for him to step down and --

19 THE COURT: You can step down.

20 (Whereupon, witness steps down from the witness stand.)

21 Q Dr. Troup, this is -- is this the CT scan of December
22 16th, 2013. The one that was taken at Self Regional on
23 12/16/13. Anything -- on this CT scan can you show where
24 the acute blood --

25 A Actually, I think, if you don't mind, I'm going to kind

1 of show them around what I was talking about a minute ago
2 and then I'll pull up the -

3 THE COURT: Just make sure you speak up loud enough for
4 my court report right here to hear you, Doctor.

5 A Okay. I'm going to do a couple of things first to kind
6 of get them oriented. This is just to give you an example
7 of how those -- how those slices stack up. So there's the
8 bottom slice, the next slice, the next slice. And you move
9 up higher in the body as you go. So we're starting down
10 low, below the level of the ears. Those are the ears right
11 there, the nose. We get up to the level of the eyeballs.
12 Also it shows you a little better from a -- you see it in
13 multiple views the white around the outside is the bone.
14 The grey is brain. And this kind of middle darkness is
15 fluid. And this really dark right in here is the air inside
16 the air sinuses. So now I'm going to go to a single picture
17 we use -- there we go. So I'm going to scroll up and I'm
18 going to look at the brain as we go up. So again, snow
19 white is bone. The dark is air. That dark inside the eyes
20 is fluid. That's normal spinal fluid spaces. Those are
21 normal spinal fluid spaces deep in the brain. We have three
22 layers of covering around our brain. The outer is the dura
23 mater, the root tough protective cover. The middle is
24 called the arachnoid, and it's what actually holds the
25 spinal fluid in. You see a little line right here with

1 darker fluid here and some brighter fluid here? This is
2 probably normal spinal fluid. It takes the MRI to see for
3 sure what that -- what's contained in that space. Then
4 there's the line of the arachnoid, and there's clearly blood
5 on the outside of that. As we move our way up you see the
6 bright blood here. You see there's a little bit of blood
7 that's not quite as bright, but there's definitely some
8 blood there. There's a membrane that separates the two
9 halves of the brain and that's brighter than it should be.
10 So there is some blood layered out on that membrane as well.
11 Again, you can see that membrane better than you should.
12 And there's also a little bit of fresh blood back in the
13 ear, and there's some bright blood there. There's better
14 spot. All of this is fresh blood with possibly some older
15 blood above that. But it's hard to tell that on the CAT
16 scan. But that's clearly fresh blood there and fresh blood
17 around the membrane is some fresher -- some fresh blood in
18 that space there as well.

19 Q Dr. Troup, the next day -- or actually the next day
20 from this, which was on 12/16/2013, on 12/17 she did have
21 further exams done, correct?

22 A Yes.

23 Q And on the 17th an MRI of the brain and also another CT
24 scan?

25 A Right.

1 Q This would be State's evidence 18.

2 A Are you looking for the 17?

3 Q Yes, sir, 17. What are we seeing on this first page?

4 A That actually is an MRI of her C Spine. And that's
5 just kind of a survey where you're seeing different planes.
6 So that's the sagittally where you're looking from one side
7 or the other. But there is kind of some highlighted images.

8 Q Dr. Troup, on the MRI are you able to see the acute
9 blood?

10 A Yes, sir. We can see it in several different
11 locations. This one is called the T2 star images. And I
12 would love to describe the physics of that but I have no
13 clue myself. I just know that it shows fresh blood as black
14 on this. So as we scroll down, actually the radiologist
15 gave us a positive radiology sign. We've got the arrows at
16 the blood products that are scattered on both sides of the
17 brain in more of the right than the left. There's blood
18 products on the both sides of the brain. So it's still --
19 it's showing that there's more blood products scattered
20 throughout. The next set of sequences it shows it pretty
21 well. It's something called flare images. So a couple of
22 things. You can see there's a white rim wrapping around
23 there. There's a white rim wrapping around there. This is
24 also a coronal image. So this is one where we're looking
25 this way. So the slices go through the head this way and

1 you're looking front to back basically. So normal fluid is
2 black, the brain the grey, and that white rim you can see
3 around the brain is not supposed to be there. That's blood.
4 So it's almost like you took cake icing and iced the brain
5 with blood incasing it all the way around. Also there's a
6 membrane right here and right here that separates the top
7 part of the brain from the bottom part of the brain. That
8 should not show up as white as it does. You can see it a
9 little better there. And then the entire cerebellum, the
10 back part of the brain, it's harder to see on CAT scan
11 because there's so much effect down there for a CAT scan.
12 But the MRI shows it a lot better and you can see there's a
13 rim of blood around the entire cerebellum as well.

14 Q Now, Dr. Troup, is there any swelling of [REDACTED]'s brain
15 that was noted on the MRI, or that you noted in your exam?

16 A I don't see any gross edema in the brain. The spaces
17 around the brain are relatively well preserved.

18 MR. WISE: Can you speak up a little bit, please?

19 A I don't see any gross edema in the brain on that. The
20 spaces around the brain seems to be relatively well
21 preserved. So I don't -- I don't see anything that I would
22 be worried this child needed intervention for swelling --
23 surgery, what have you.

24 Q Now, Dr. Troup, was there any other blood noted in the
25 brain or around her spinal column, or anything of that

1 nature?

2 A I don't remember that specifically. These project so
3 poorly on the laptop. I don't see anything obvious. If
4 there was something in the report -- there may have been
5 blood there. I will be glad to look back and see if --

6 MR. WISE: He's got his back to me.

7 A I said I don't see anything that specifically looks
8 like blood products, but it projects so poorly on the laptop
9 I could miss something subtle. So if the report said there
10 was or not I'd be glad to go back and look to see if I agree
11 or disagree with that. But looking at it on the laptop I
12 don't see anything that jumps out at me. And I don't
13 remember that specifically from my reading.

14 Q Dr. Troup, based on the MRI and the CT scan from the
15 16th and 17th, what you've gone over here in court, is that
16 what showed up on those images, the type of bleeding she
17 had?

18 A Right. Yes, sir.

19 Q Did she also have an MRI on the 24th or on the 30th of
20 December?

21 A She sure did.

22 Q And on the 30th was newer blood noted?

23 A So there is collections of blood around the brain. So
24 that darker area, the normal spinal fluid spaces under the
25 arachnoid like it's supposed to be, and then there are caps

1 of blood around the brain.

2 THE WITNESS: I'm trying to stand aside. Are you
3 hearing me?

4 MR. WISE: Yeah.

5 THE WITNESS: I'm trying.

6 A That have accumulated since that other study. And what
7 that kind of tells you is the veins that were torn to cause
8 the bleeding in the first place has kind of oozed over time
9 and that has expanded, which is not -- is not terribly
10 uncommon when you've had that wide a spread destruction of
11 the veins.

12 Q Dr. Troup, did she periodically get other MRIs? When
13 was her last MRI?

14 A I think it was last summer -- not this past summer but
15 -- yeah, 8/14.

16 Q And after the initial bleeding how long does it usually
17 take for the blood we've seen in the MRI and the CT, how
18 long does it take for it to clear up or the time?

19 A Weeks to months. So if I -- to go back to that same
20 image. It would essentially all resolve by 8/14. Sometimes
21 we actually have to put a drain in to drain that fluid, or
22 stick needles and drain the fluid. But a lot of times it'll
23 go away on its own. That's our hope is it'll go away by the
24 time.

25 Q Thank you, Dr. Troup.

1 (Whereupon, the witness returns to the witness stand.)

2 Q Dr. Troup, have you seen the bleeding on **minor**'s
3 brain. Based on your experience and expertise what type of
4 motion is needed to cause that bleeding?

5 A When we evaluate studies we look at the pattern of the
6 injuries, and the blood around both sides of the brain,
7 blood around the cerebellum. You don't see that from a --
8 an accidental mechanism. You don't see that from a linear
9 fall or a single impact. We have kids fall out of second
10 story windows that have devastating brain injuries, but they
11 don't have that pattern of blood on their -- on their scans.
12 Kids ejected from a car and land up against a tree, they
13 don't get this pattern. The most likely pattern by far for
14 these types of images is a repetitive
15 acceleration/deceleration injury. It takes a violent amount
16 of force to tear that many veins in that many places around
17 the brain for you to get -- to get that pattern of blood.

18 Q And to cause that pattern of blood what is going on in
19 the brain to create that bleeding?

20 A You have -- you have veins that go -- I showed you that
21 normal space around the brain on the MRI. So there are
22 veins that go -- that bridge that space. We all have veins
23 that are, you know, under some degree of stretch around the
24 brain. And it's a -- it takes a force where the brain is
25 being sloshed back and forth inside the head that it's

1 tearing -- just tearing one vein is not enough to cause that
2 kind of bleeding, especially not around both sides of the
3 brain. So that's the reason why it usually is not a single
4 linear force. It usually is a repetitive and violent amount
5 of force that can tear that many different veins in that
6 many different parts of the head to produce blood around the
7 brain in that many different places.

8 Q How would you describe what the brain is actually doing
9 -- if it was being accelerated/decelerated what's the brain
10 doing inside at that time?

11 A It's sloshing all throughout the -- like a peanut in a
12 cup. I mean, it's just being slung around all inside the
13 space that's there. Not quite as much space as you would
14 have around a peanut in a cup, but the same. Just it's
15 getting sloshed around inside the head.

16 Q Now, Dr. Troup, would choking on formula thickened by
17 rice cereal cause the bleeding on the brain like that?

18 A No. And I'm not sure what has been discussed already
19 or not, but we also had extensive retinal hemorrhages, and
20 that combination together especially could not occur from
21 just choking on formula.

22 Q Based on your exam coupled with the other doctor's
23 exam, you look kind of at the totality of the circumstances
24 of what's going on --

25 A Yes, sir.

1 Q -- to make an impression?

2 A But even in a vacuum choking on a formula wouldn't
3 cause that pattern of blood. But especially when you put
4 the other things together I don't think that's a valid
5 theory at all.

6 Q Miss Ledford was three and a half months old when this
7 occurred. Would birth trauma cause that type of bleeding in
8 the brain?

9 A No, because we have fresh blood, and that would have
10 completely resolved by three months. And as you saw, when
11 you have blood in that space and have some vein injury
12 you'll get expansion of that blood over not that long of a
13 period of time. So if we had had birth trauma you would
14 have seen more extensive or complete resolution by then.
15 You would not see fresh blood that was in -- that was
16 everywhere around the brain and in a focal spot. Now, if
17 you had told me this baby was a week old or four days old,
18 we see that pattern of blood from a difficult delivery all
19 the time. But very small smear of blood that has not
20 expanded over a three and a half month period and was fresh
21 would not be -- would not be seen three and a half months
22 later.

23 Q And the type of trauma you just explained of a child
24 that's four days or a week old, you see the multilayered
25 retinal hemorrhages in those children?

1 A No, you do not.

2 Q Now, Dr. Troup, is it odd that based on these -- the
3 MRI and the CT scan, is it a necessity it's -- a
4 acceleration/deceleration force, or non-accidental type of
5 trauma, is it necessary to have also neck injuries included?

6 A Because of the amount of force it takes to injure the
7 baby's brain and to cause the retinal hemorrhages, a baby's
8 neck is very vulnerable. So we screen for that, because
9 there is a fairly high incidents of cervical spine injuries
10 with these types of brain injuries, but they don't have to
11 happen together. You don't always have a C-spine injury.
12 It's suspicious enough we screen for it and make sure we
13 don't miss that, because that would be pretty bad if we miss
14 it. But I did not see a C-spine injury on that study.

15 Q If **minor** had some type of nerve problems with the
16 neck, would that necessarily show up on MRI or CT scan?

17 A I'm not really sure exactly what you're asking me. But
18 no, you can -- there are things that could be missed on an
19 MRI. No imaging study is 100 percent. But the things that
20 we would have looked for for life-altering or life-
21 threatening trauma was not seen on that MRI.

22 Q Now, could seizures --

23 A On MRI of the C-spine.

24 Q Could seizures cause this type of intracranial
25 bleeding?

1 A No. Seizures alone will not. Now, can that amount of
2 blood around the surface of the brain cause seizures, yes.
3 And that was the case here. We did -- the amount of blood
4 that was around the brain did provoke seizures that were
5 fairly hard to get under control initially. But it was not
6 the other way around. It was not a seizure disorder causing
7 the blood. And again, a seizure disorder -- we've had kids
8 -- seizures that happened one after another that can't be
9 stopped. It's called status epilepticus. And we've had
10 many kids in status for hours and they didn't have blood
11 around their brain and they didn't have retinal hemorrhages.
12 Specifically I've never seen multilayered retinal
13 hemorrhages from seizures.

14 Q But due to her injuries, the bleeding on the brain, she
15 did have seizures as a result of that?

16 A Yeah. Some pretty hard to control seizures to begin
17 with, over a few days and nights, if I remember correctly. I
18 don't have my chart in front of me. But I think that it
19 took several days to finally start to get ahead of those.

20 Q And what other -- could CPR cause this type of bleeding
21 on the brain and multilayered retina hemorrhage?

22 A CPR does not cause the bleeding around the brain. It
23 can cause some types of retinal hemorrhages. But those --
24 and again, if Dr. Johnson hasn't testified I'm sure he can
25 explain this a lot better than I can. But multilayer

1 retinal hemorrhages are not caused by compressive forces.
2 The reason you get retinal hemorrhages from compressive
3 forces, CPR, a crush injury is -- it causes so much venous
4 pressure in the chest that the venous blood can't get out of
5 the brain and you get very punctate hemorrhages in a certain
6 layer of the retina that are vulnerable to venous
7 hemorrhages. These are not that. Multilayered retinal
8 hemorrhages is where the vessels are going from one layer of
9 the retina to the next. And if you've ever been roller
10 skating and done the chain and the person on the front end
11 of the chain turns just a little bit but the person on the
12 far end of the chain gets whipped all over the skating rink,
13 the retina vessels are kind of like that person at the end
14 of the thing. The other way I like to describe the changes
15 of going from one layer to the next, any good Baptist has
16 been to a feed at the church, somebody has brought a Jell-O
17 mold that's got the fruit in it. And if they slammed on the
18 brakes too hard or turned a corner too fast the Jell-O broke
19 away from the fruit because they're different densities. So
20 as the retinal vessel goes through the retina, then through
21 a transition -- through the retina, through a transition, it
22 changes density. So kind of like the fruit interface with
23 the Jell-O. So as that vessel is getting whipped the
24 interface in the retina changes at different speeds, so it
25 tears off here, and here, and here, and here because of the

1 shaking forces. The shearing forces of that vessel going
2 through the different layers. Whereas with CPR, you just
3 get focal hemorrhages in one of those layers because it's
4 not a -- being torn off as it's going through one layer
5 after another.

6 Q And, Dr. Troup, we've already gone over a couple of the
7 multiple CTs and MRIs. What's the purpose again of multiple
8 -- having multiple MRIs done?

9 A Several things. One, if I hit you in the arm today it
10 may hurt today but the bruise may get bigger tomorrow. So
11 sometimes you don't see all of the injury on the first scan.
12 The second is a lot of the children that come in with these
13 types of injuries, especially a child that has seizures
14 early on, we're worried about something called an anoxic
15 injury, which means that after the injury they went a period
16 of time without breathing well enough to get oxygen to their
17 brain. So those changes show up later and over time. So
18 we're trying to prove that we are not having those type of
19 things. I don't -- I'd have to go back over them again, but
20 I don't remember there ever being an anoxic injury. But
21 that was one of the reasons why we were getting serial
22 scans. And then once we saw the evolution of the bloody
23 fluid around the brain we then need to track to make sure
24 that was resolving. That I didn't have to do anything
25 surgical to make that go away.

1 Q Now, Dr. Troup, based on a reasonable degree of medical
2 certainty, again, what is your diagnosis and cause of this
3 type of injury?

4 A This is clearly a non-accidental head injury of
5 childhood. It's a child abuse type injury. There's not --
6 no one has come up with any plausible accidental mechanism
7 for this. And I'm not sure I can -- anybody that can
8 propose a plausible mechanism should probably quit doing
9 this in Greenwood and start writing for CSI because it would
10 be a pretty phenomenal type story to come up with an
11 accidental injury for this.

12 Q And again, what type of motion?

13 A It's usually described as an acceler - a rapid acceler
14 - violent rapid multiple acceleration/deceleration injury.
15 So the old bobble injury, shaken baby syndrome, we try to
16 stay away from that, because most of the time it's been
17 proven that just a shake by itself does not cause all of the
18 damage. Most of the time it requires a repetitive
19 acceleration sudden deceleration like a slam on a pillow or
20 a bed or something like that. If this came from just a
21 shake by itself, the amount of force that it would take for
22 that type of shake is just incredible to imagine. So it
23 takes less -- it's still violent. But if you get the sudden
24 deceleration from a pillow or something like that, slamming
25 down on a pillow, it would -- it can happen with less force

1 and less repetition with just a shake. That would be a
2 pretty amazing amount of force.

3 Q Now, Dr. Troup, I might have touched on this. Based on
4 the color of the blood on the MRI and the CT can you put a
5 time on when you think that could occur?

6 A Within a few hours, or immediately, up to a few days.
7 When you start getting more than two and three days out the
8 blood on the CAT scan starts to fade and it's brightness.
9 So this was bright enough that I think it was acute blood.
10 So fairly short time period. It's not precise enough to say
11 four hours versus eight hours, but it's still -- you can get
12 with that it still was relatively fresh.

13 Q Dr. Troup, you're a pediatric neurosurgeon, correct?

14 A Yes, sir.

15 Q How many pediatric neurosurgeons are in South Carolina?

16 A As of recently there are now four of us. I'm in
17 Greenville. There's one in Columbia. They just added a
18 second in Charleston. There was a period for about six
19 months where I was the only one in the state. So we're a
20 fairly rare breed.

21 Q And, Doctor, have you been compensated to be here
22 today?

23 A Oh, absolutely not. I mean, would never take money to
24 help support an injured child.

25 MR. BROWN: Please answer anything Mr. Wise may have.

1 CROSS-EXAMINATION

2 BY MR. WISE:

3 Q I'm going to hand you a copy of the MRI report from the
4 17th.

5 A Yes, sir.

6 Q And look at it. You said you referred to it for the
7 spinal injury, I believe down toward the bottom right below
8 the highlighted portion.

9 A The MRI of the spine, yes.

10 Q Right.

11 A It says no spinal cord injury.

12 Q No spinal cord injury.

13 A And that's what I thought. I just --

14 Q Right.

15 A Yes, sir. Thank you.

16 Q You said it wasn't clear enough and you'd refer to the
17 --

18 A Yes, sir. Yes, sir.

19 Q I assume whoever looked at this looked at something
20 other than a laptop.

21 A Absolutely.

22 Q Better equipment. Also in that report they talk about
23 multiple subdural blood products.

24 A Right.

25 Q And what would that be?

1 A That's the blood that I was showing in the space
2 outside the arachnoid but below the dura. So subdural is
3 below the dura. And multiple -- that's why I was showing,
4 it's in a variety of places around the brain.

5 Q It's not -- multiple blood products is not multiple
6 types of blood products?

7 A In this case I think they were referring to the
8 locations. But there probably was some areas that could
9 have been some older blood as well.

10 Q You had mentioned that on one of them that you said
11 that definitely -- or possibly could be older blood?

12 A Yes, sir.

13 Q And older blood would mean there would have been an
14 injury earlier?

15 A Right. Somewhere -- somewhere over a few days
16 possibly.

17 Q And that older blood would probably kick it back to a
18 week or so?

19 A Possibly. Yes, sir.

20 Q And then if a person has a subdural injury, that can
21 re-bleed?

22 A It can. Yes, sir. As we saw on the 30th study.

23 Q Right. So if you had an older injury that for whatever
24 reason did not get medical attention -- and sometimes you
25 can have an injury in a child that clears itself up. Is it

1 like a child is born with a subdural hematoma, eventually it
2 will just absorb into the body and go away --

3 A Yes, sir.

4 Q -- correct? So it's possible to have an injury from
5 the older blood and then a re-bleed from that?

6 A It's possible. It usually looks different from this on
7 scan. And also you wouldn't see the smear -- just a smear
8 of that blood around both hemispheres and around the
9 cerebellum and along the tectorius. The pattern of re-
10 bleeding from those types of injuries is usually a very
11 different appearance.

12 Q Right. But also the re-bleeding can occur with a more
13 minor injury, a more minor shaking then would cause it if
14 there had been no prior problems?

15 A In an image that follows a pattern of re-bleeding then
16 yes, it takes less injury. But this image did not show the
17 characteristics of a -- of a re-bleeding type injury.

18 Q But it did show a characteristic of an injury there
19 before. I want to show you what's been marked as Defense
20 Exhibit 1, and I think you may be able to tell from that
21 that it is --

22 THE COURT: If you need to get up.

23 THE WITNESS: I may have to walk around, if you don't
24 mind.

25 THE COURT: If you want to walk out where he is or if

1 you want to walk to where the television screen is.

2 (Whereupon, the witness steps down from the witness
3 stand.)

4 Q That's Defense Exhibit 1 which is an MRI of **minor**
5 Ledford's head. This disappears in the screen, by the way,
6 so I'm going to use this. Right here we have a little spot.

7 A Yes, sir.

8 Q Do you know what that is?

9 A That looks like a acute blood.

10 Q Acute blood meaning - well...

11 A Because it matches a spot on the CAT scan that was also
12 bright.

13 Q So that's one little spot of acute blood that's not
14 flowing, because it's not -- that blood is not spreading
15 out?

16 A No. It seems to be a little focal collection of blood.

17 Q Do you know what caused a focal collection of blood?

18 A You have a question in there other than that, so ask
19 your other question.

20 Q A focal collection of blood doesn't necessarily have to
21 be a ruptured vein?

22 A Then where did it come from?

23 Q Well, my question to you is where would it come from.

24 A It didn't look like a focal contusion, so you can --
25 which would be a bruise. So an impact to that lobe -- it's

1 still blood coming from somewhere. It's coming from a vein
2 from somewhere. But if it's a focal contusion -- but the
3 brain did not look like a focal contusion.

4 Q Now, what's a focal contusion?

5 A A bruise.

6 Q A bruise.

7 A So an impact to that lobe you could get it without a
8 blow to the subdural vessels having bled. But there has to
9 be something in that space to cause the blood. So a
10 bridging subdural vein would be what would cause that blood.
11 So I'm still not sure I understand your question.

12 Q Let me see if I can be a little clearer. If that were
13 a bridging vein that was broken would you expect it to flow
14 more out into that area?

15 A It doesn't have to if it's kind of -- it if clotted
16 around that vein.

17 Q So that could be the clot, right?

18 A All of this is clot, because all blood clots.

19 Q Even in the head?

20 A Yeah.

21 Q So that clotted without flowing out?

22 A It did not spread out diffusely, at least that amount
23 of heme, but on the other images you do see it. This is --
24 this is looking -- the black spots, the reason why it
25 doesn't look as diffuse as it does on the other images, and

1 the reason why we don't look at anyone's image in a vacuum,
2 we look at the whole pattern of it, this set of images with
3 black spots are looking at the magnetic susceptibility of
4 the heme molecules itself. But if you look at the other
5 images there is blood that has flowed out the brain.

6 Q So right in there you're talking about if a blood -- in
7 that area right there is blood that's flowed out?

8 A Or multiple collections of just like that. It's just
9 collection -- enough collection of heme molecule that it
10 gives that little black stain.

11 Q Would the little black point right there alert you, or
12 should you have asked for an MRV on that to determine if
13 that's a vein blockage?

14 A No. And because on the other sets of images the sinus
15 -- okay. So for them to understand where you're trying to
16 take me. The way that venous blood gets out of the brain is
17 we have veins that feed up to a collection of channels
18 around the brain, in the lining around the brain called the
19 venous sinuses. So there are channels within the lining
20 around the brain. So the veins go to bigger and bigger and
21 bigger veins, and then they feed up into this venous sinus.
22 So it goes right between the two halves of the brain back to
23 here, and then from here around there's another channel of
24 venous sinuses, and then they feed into the big jugular
25 veins that you've probably heard of that come out of your

1 neck down to your heart. What he's saying is could all of
2 this be from something that some infants have called a dural
3 venous sinus occlusion. And her venous sinuses didn't -- on
4 the CAT scan nor on the MRI did any part of it show that
5 there was a signal that would make us suspect that there was
6 a venous sinus occlusion. The other thing is you don't just
7 get blood around the brain with a venous sinus occlusion.
8 You get signal changes within the brain to show that you're
9 rupturing the venous channels inside the brain, and none of
10 those were there.

11 Q But if you have an occlusion of a vein it can leak out
12 in some other places? If a vein gets blocked off?

13 A I mean, generically if any vein gets blocked it's going
14 to back fill and bleed. But now we're saying that she has
15 veins in every spot of her head that have spontaneously
16 occluded because there's bleed in this space and that space
17 and that space.

18 Q Block one place and leak out another place?

19 A Yeah. But we're kind of saying that we blocked this
20 route, so we ended up making down the street not work. I
21 mean, that's -- it just doesn't make sense.

22 Q So if you block the vein it's not going to leak
23 somewhere else?

24 A Well, the right subdural - the left subdural space is a
25 space that it's on. The left subdural - the right subdural

1 space is a space of their own, the space around the
2 cerebellum is different. So again, what I'm saying is yes.
3 If you have a venous bleeding for any reason at one spot on
4 the left side, could it spread out and bleed on the left
5 side, but it wouldn't cause bleeding on the right side in
6 the cerebellum and all that.

7 Q All right. Hold on. I'm showing you what's been
8 marked as -- this is for identification only. Here we have
9 a little circular area at the back of the head. On that MRI
10 does that appear to be acute blood?

11 A So what you're -- let me have your pointer.

12 Q Sure. Use the top one right here.

13 A So you're talking about this right here?

14 Q That's correct.

15 A Again, looking at it in one and only one sequence, but
16 it does look like there's some fresh blood back there.

17 Q So in Defendant's Exhibit 3 you would agree that it
18 looks like that's fresh blood in the back portion of the
19 head?

20 A Right. And there's -- there's newer blood up around
21 the top of the brain as well.

22 Q Well, let's hold on. Up around this area?

23 A Right.

24 Q So that's some new bleeding -- well, it wouldn't
25 necessarily be -- That is blood on the top of the head and

1 in the back?

2 A Right.

3 Q If you would --

4 MR. WISE: Can you hook it over to your other computer,
5 now? I want to get the slides up.

6 WITNESS: You want the MRI?

7 MR. WISE: Yeah, the MRI. Can you go to the -- I
8 believe it's the February 4th MRI.

9 WITNESS: I have a CAT scan on February 4th.

10 MR. WISE: All right. Let me have the CAT scan then.

11 Q Now, in that MRI you -- or that CAT scan you got the
12 top -- at the top of that picture --

13 A Here?

14 Q Yes, up in there. You've got a dark grey matter and a
15 little lighter grey matter?

16 A Correct. Top brain --

17 Q Well, no, no.

18 A Grey matter. White matter. But, so -- so this is
19 darker fluid is

20 Q On the left side.

21 A -- that right here is probably -- it's harder to tell
22 with a CAT scan than an MRI, is the -- subarachnoid space
23 which is just normal spinal fluid.

24 Q Right. You're talking about above the --

25 A Right. And up here is a little brighter than that,

1 which is a continuation of that same space that we showed
2 earlier, or you showed to the jury in the MRI.

3 Q And on the right side it's a little darker?

4 A Yes.

5 Q And what does that tell you?

6 A It tells me that this was always the side that had more
7 blood clotting. That just means that there's more density.
8 There's more protein or more blood in that space than there
9 is over here.

10 Q But that's more pronounced than it was on admission?
11 The spacing is greater in that than it was on admission?

12 A Yeah, but it's better than it was on 12/30.

13 Q Right.

14 A The MRI we had just shown.

15 Q And you never had a spinal -- excuse me, a brain shift
16 in this child?

17 A Brain shift? What do you mean a brain --

18 Q Well, moving -- where it was swelling on one side and
19 moving the brain to the other.

20 A A midline shift.

21 Q Right.

22 A We had some focal pressure here which concerned me some
23 clinically. But no, there -- if you draw a line down the
24 middle there was never a midline shift on one side or the
25 next.

1 Q Go to about the 9:00 position where you see the little
2 white dot.

3 A Uh-huh.

4 Q What is that?

5 A That's probably some fresher blood than is up in here.

6 Q And that would have been blood from -- acute blood
7 three days or less?

8 A Probably. It has -- and that's probably the reason why
9 this fluid looks a little darker than that.

10 Q Actually, that side looks a little whiter.

11 A I mean -- I mean, brighter.

12 Q Right.

13 A Denser is what I was meaning. It looks a little denser
14 than that because there is a little bit of fresher blood in
15 there that is not over there.

16 Q So that's on February the 4th of 2014.

17 A Right.

18 Q And you have new bleeding, correct?

19 A Right. So when you were talking about the re-bleeding
20 concept, this is more of a benign re-bleed because you
21 already have a dilated space. There are veins that are
22 terribly stretched across that space. And in those cases
23 very normal incidental activities can cause some small
24 bleeding in those spaces. So at this point I didn't go, oh,
25 we have a new major trauma. That is the pattern of re-

1 bleed. So when you go through the literature about re-
2 bleeding, they're talking about people that have really
3 large subarachnoid spaces. Their veins are stretched. In
4 those kids it does take incidental trauma. If we go back to
5 the original scans there was a normal amount of subarachnoid
6 space, so you're not talking about a re-bleed.

7 (Whereupon, the witness returns to the witness stand.)

8 Q Now, how much blood comes out of a bridging vein?

9 A That is variable, but depending on how quickly that
10 could clot. How much space there is. Each little vein is
11 probably -- if you've ever had a bloody nose and one drop
12 hits the toilet. I mean, it spreads out and is usually --
13 that's the reason why we -- the feeling is that it's not a
14 single bridging vein that causes this.

15 Q In fact, it's really impossible to tell whether or not,
16 in fact, a bridging vein broke in this, isn't it, as opposed
17 to another vein?

18 A Well, what other vein would be in that space that would
19 bleed?

20 Q Well, I'm --

21 A That's the reason why. I mean, that's what's in there
22 to bleed.

23 Q But you can't find on the MRI the actual bridging vein
24 that broke?

25 A No. No. There's no imagine study detailed enough to

1 show that.

2 Q Did you find that on the MRV?

3 A No. MRVs look at large vessels. They don't look at
4 the little bitty tiny vessels. I mean, you can see some
5 large enough bridging veins but not the one that bled.

6 Q Now, there have been studies that have shown subdural
7 hematomas and retinal hemorrhaging in newborn children?

8 A There are some studies that show that you can get birth
9 trauma that shows subdural - well, actually, I've wanted to
10 do a study that I'll never get past an RB where we do
11 imaging on 100 consecutive vaginal deliveries. I have a
12 feeling there is some injury, some blood on every single one
13 of them. You take something that big and put it through
14 something that big, something's got to give. But it doesn't
15 -- but it doesn't persist.

16 Q Probably 90 percent of them clear up on their own, or
17 maybe higher. Who knows.

18 A Yeah.

19 Q We have no base to determine.

20 A Right.

21 Q But we do know that occurs in birth?

22 A And retinal hemorrhages generically but not multiple
23 layer wide diffuse retinal hemorrhage. It is a different
24 pattern. And again, if Dr. Johnson hasn't spoke yet he can
25 address that better because that's his area of expertise.

1 But to my area of expertise it is a different pattern.

2 Q And you agree that shaking alone is not likely to cause
3 this?

4 A It can, but the amount of violent force it would take
5 is pretty extraordinary. It usually is a shake slam. But
6 again, unless we're in the livingroom when it happens I
7 can't tell you for sure.

8 Q But the shaking -- and I get the impression from your
9 answer, correct me if I'm wrong, that if shaking alone did
10 it you clearly would expect to see injury in the neck?

11 A We clearly would be worried about it, but it does
12 happen without it.

13 Q Yeah. You said a substantial number or --

14 A It's enough that we screen for it every time because
15 it's not an -- it's not like a one in a million kind of
16 thing. It does happen.

17 Q And you're looking for torn ligaments and blood in the
18 neck and so forth?

19 A Yes, sir.

20 Q Because that's the type of force necessary to cause any
21 injuries?

22 A Right.

23 Q Now, are you familiar with the -- and I'll mess the
24 name up, I'm sure. Neuropathology and Applied Neurobiology
25 Journal?

1 A That's not a mainstream one. No, sir. I'm not
2 familiar with that one.

3 Q Not familiar with that one, okay.

4 A Yeah. If it's got a particular point out of that one,
5 do you want me to read it and see if I think it's a valid
6 point I'm glad to do that. But no, that's -- that's not one
7 that crosses my desk on a regular basis.

8 Q I do. But if you're not familiar with it you wouldn't
9 be able to, you know, I don't think talk adequately about
10 it. You are familiar with, of course, American Pediatric
11 Association?

12 A Yes, sir. I don't -- I'm not a general pediatrician so
13 I don't routinely read their journals. So again, if you've
14 got a particular article you want me to look at I'll be glad
15 to.

16 Q Well, I do. And since you offered to read this one
17 I'll bring it up to you. They came out with a position
18 paper on shaken baby back in 2009, correct -- or you don't
19 know. Look at it and then I'll call your attention to
20 something.

21 A Okay.

22 Q In your studies do you agree or disagree with them when
23 they say, "However, for medical purposes, the American
24 Academy of Pediatrics recommends adoption of the term
25 Abusive Head Trauma as the diagnose used in medical chart to

1 describe the constellation of cerebral spinal and cranial
2 injuries that result from inflicted head injury to infants
3 and young children?

4 A I mean, I don't --

5 Q It would be easier for you to read, I'm sure.

6 A I mean, it's tomato, tomato. I say non-accidental head
7 injury of an infant and they say abusive head trauma. And
8 it is a constellation of injuries, but you don't have to
9 have a spinal injury but it is part of the -- part of --

10 Q But they've gone to that spinal injury recently,
11 haven't they? They did 10 years ago?

12 A For almost 20 as a neurosurgeon we've been screening
13 for it, so, you know.

14 Q When they talk about shaken baby or abusive head trauma
15 they've talked about the fact that you had a triad of
16 problems. You have the subdural hemorrhaging, you had the
17 retinal hemorrhaging, and you had swelling of the brain?

18 A You can have absolutely every one of those, but you do
19 not have to have all three for it to be a non-accidental
20 injury of --

21 Q In this case there's no swelling of the brain?

22 A There was no focal swelling, and that's the reason why
23 the child is doing as well as they are. And there also was
24 no anoxic injury, which they didn't put that in there, but
25 that's also frequently a part of it as well. It doesn't

1 eliminate it. We're just thankful we didn't have that.

2 Q Have you ever referred to the American Journal of
3 Forensic Medicine and Pathology?

4 A At some point during something like this I may have
5 actually looked at an article. But again, it's not one
6 that's -- that I frequently peruse.

7 Q If you refer to this article at all. If you did find
8 it, if you didn't?

9 A I didn't. But I'll be glad to talk about it. If you
10 want me to thumb through it, or if you don't want to take
11 the time for me to thumb through it, that's fine.

12 Q If you haven't read it then we'd probably have to take
13 a recess and let you read it.

14 A Okay.

15 Q The biomechanical people have pretty well agreed with
16 you that to get retinal hemorrhaging at this level would
17 require such great force to the neck that there would be
18 clearly a neck injury?

19 A No. Again, I've had children die of abusive head
20 injuries from a shaken slam mechanism where the person
21 admits exactly what they did and they had no spine injury.
22 Are we worried about it enough to look for it? Yes. But
23 one does not -- they are not mutually exclusive at all.

24 Q There have been tests done, particularly on animals,
25 about cerebral hemorrhaging, trying to create cerebral

1 hemorrhages in animals from shaking. And the biomechanical
2 people that do that have trouble replicating that, don't
3 they?

4 A In some instances, yes. Because, again, you're trying
5 to -- you're trying to replicate in the lab a mechanism that
6 is really difficult to replicate in a lab.

7 Q I understand. I mean, any time you get away from human
8 subjects you've got some problem matching them up exactly.

9 A Actually, if I were to give you an infant without you
10 being enraged enough to do it, I think you would have a hard
11 time replicating those injuries. I don't think as a
12 reasonable person just trying to replicate an injury you
13 could bring yourself to generate the forces necessary to
14 create those injuries.

15 Q Exactly when a child has a cerebral hemorrhage the
16 symptoms are not always immediately manifested?

17 A True.

18 Q You could have what they call a lucid interval?

19 A Uh-huh.

20 Q And it could be anywhere from a few minutes to a day or
21 two?

22 A Yes, sir.

23 Q And it's one of the reasons when doctors see a patient
24 in the emergency room who reports a head injury they tell
25 them to watch the child for 24 or 48 hours, I forgot how

1 many, and they give them a list of things to look for?

2 A Yeah.

3 Q Right?

4 A Yes, sir.

5 Q And, of course, a layperson I assume you'll agree is
6 not as trained as a doctor as to what exact signs to look
7 for, correct?

8 A True.

9 Q So this child could have had an injury a day or two
10 before the 16th and not shown signs that would alert a
11 layperson until it manifested in a seizure?

12 A True.

13 Q And that's why it's hard to pinpoint the exact time
14 something happened?

15 A True.

16 Q Because every little human body is a little different?

17 A Yes.

18 MR. WISE: Thank you.

19 MR. BROWN: No redirect.

20 THE COURT: Stay right where you are. Stay right here.
21 I want the jury to take a break. We've been going a little
22 while. So they can step in the jury room. Dr. Troupe, sit
23 right here for a second and let me get the jury.

24 THE WITNESS: That's fine.

25 (Whereupon, the jury exited the courtroom at 10:49

1 a.m.)

2 (Whereupon, the witness stepped down from the witness
3 stand.)

4 THE COURT: Go ahead, Mr. Brown.

5 MR. BROWN: Judge, right now we are getting ready to
6 call law enforcement officers that did take statement from
7 Mr. Ledford during the investigation of this case.
8 Yesterday we did -- we've gone over several different
9 redactions of the audio statement. One Mr. Wise heard
10 yesterday we've labeled Redacted Version 1. Mr. Wise did, I
11 think, make an exhibit of his notes, which he did make
12 objections to different parts being redacted. Last night I
13 did redact on one of his notes concerning the comment of the
14 eyes lighting up on the mechanical doll on the video.

15 THE COURT: The video that was viewed by the Defendant
16 some time prior.

17 MR. BROWN: Those specific times taken out of that were
18 3:54 to 4:01. I did go in and redact another issue or
19 another spot where Mr. Wise had an objection. One that Ms.
20 Christine Cothran talking about a three-month-old not being
21 able to pull herself up and doesn't have the stomach muscles
22 to do that. That was redacted from 6:18 mark to 6:56 mark
23 on the redacted version which is a Court's Exhibit. And
24 also at the 4:15 mark to 14:39 mark there is a comment
25 saying I think something happened prior to that. That was

1 one of the issues that Mr. Wise had. We did redact those
2 comments, but everything else that we did discuss yesterday
3 is still on that disc.

4 THE COURT: To the extent Mr. Wise made objections to
5 the comments in the questioning by the police which are
6 shown on his yellow paper that is an exhibit he marked, he
7 is protected on his objection to the extent that the Court
8 has allowed those over his objection. Fair enough?

9 THE COURT: We'll take about 10 minutes, a good 10
10 minutes, and come back in the top of the hour.)

11 (Whereupon, a recess was taken from 10:49 a.m. to 11:09
12 a.m.)

13 (Whereupon, the jury entered the courtroom at 11:09
14 a.m.)

15 THE COURT: All right. Call your witness.

16 MR. BROWN: The State calls Donchell Hill.

17 DONCHELL HILL, having been first duly
18 sworn, testified as follows:

19 DIRECT EXAMINATION

20 BY MR. BROWN:

21 Q Mr. Hill, please state your full name.

22 A Donchell Hill.

23 Q And, Mr. Hill, where do you work?

24 A I work at the Greenwood County Sheriff's Office.

25 Q How long have you been with the Sheriff's Office?

1 A Approximately 10 years.

2 Q And what are your current duties at the Sheriff's
3 Office?

4 A I'm assigned to the criminal investigations unit.

5 Q And back in December of 2013 were you in that same
6 position?

7 A Yes.

8 Q And back on December 16th, 2013 did you get called out
9 to the Self Memorial Hospital in regard to a child being
10 brought in?

11 A I did.

12 Q And who was that child?

13 A **minor**.

14 Q And once you were called out what did you begin doing?

15 A Once I arrived I spoke with the shift captain. He gave
16 me a briefing of what had taken place. I started talking to
17 **minor**'s grandparents and I was told that **minor**'s father
18 was the last person to be with her that night. At that time
19 I spoke with him. I asked him to -- would he come down to
20 the Sheriff's Department with me and speak with me about
21 what happened. What took place. His father -- we were in
22 separate cars. His father brought him down to speak with me
23 at the Sheriff's Department.

24 Q And when you met the grandparents at Self was **minor**
25 still there or had she already been transferred up to

1 Greenville?

2 A She had already been transferred to Greenville.

3 Q And what is -- or who is **mihor** 's father?

4 A David Ledford.

5 Q What's he go by? His middle name Zackery?

6 A Zackery.

7 Q And is he in the courtroom today?

8 A Yes.

9 Q And what kind of shirt is he wearing?

10 A He's wearing a red and blue plaid shirt with a black
11 tie.

12 MR. BROWN: Please let the record reflect he's
13 identified Mr. Ledford.

14 THE COURT: It will.

15 Q And you mentioned that after you gathered some initial
16 information you did speak with Zach?

17 A Yes.

18 Q And who -- where did you talk with him?

19 A We went back to the Sheriff's Department and I spoke
20 with him in the criminal investigations office.

21 Q And who brought him to the Sheriff's Office?

22 A His father.

23 Q And at this time was Zach under arrest?

24 A He was not under arrest at that time.

25 Q And who was all in the room during the conversation

1 with Zach?

2 A Zackery Ledford, his father, and myself.

3 Q And before you began speaking to Zach did you advise
4 him of his rights?

5 A He was advised of his rights.

6 Q And how did you go about advising him of those rights?
7 Did you read off of something or did you speak from memory?

8 A I read off my card that I keep in my pocket.

9 Q Do you have that card available with you today?

10 A Yes.

11 Q Could you read out what you read to Zach on that day?
12 On December 16th, 2013.

13 A "You have the right to remain silent. Anything you say
14 can and will be used against you in a court of law. You
15 have the right to talk to a lawyer and have them present
16 with you while you're being questioned. If you cannot
17 afford a lawyer one will be appointed to represent you
18 before any questioning if you wish. You can decide at any
19 time to exercise these rights and not answer any questions
20 or make any statements." Before then I just ask do you
21 understand each of these rights that I've explained to you.
22 Having these rights in mind do you wish to talk with us now.

23 Q And again, Zach -- what was his answer?

24 A He said he understood his rights and he agreed to speak
25 with me voluntarily.

1 Q And in speaking with Zach on December 16th, 2013 did
2 you get some information from him on what occurred that day?

3 A Yes.

4 Q Did Zach just verbal -- verbalize what happened or did
5 he write a statement?

6 A He wrote a statement.

7 Q I show you what's been marked State's Exhibit No. 1.
8 Can you tell me what that is?

9 A This is Zach's statement of what happened that night.

10 Q And what -- at the top of it what's the date?

11 A 12/16/2013.

12 Q And what time?

13 A It's 9:03 p.m.

14 Q And, again, place?

15 A Greenwood County Sheriff's Office.

16 Q What does the -- if you don't mind, is this the
17 original copy?

18 A Yes.

19 Q And is your signature on this copy?

20 A It is.

21 MR. BROWN: Judge, at this time State moves in State's
22 Exhibit 1 as Evidence 1.

23 THE COURT: That's without objection?

24 MR. WISE: No objection.

25 THE COURT: Very well.

1 (Whereupon, State's Exhibit No. 1 was admitted into
2 evidence.)

3 Q Mr. Hill, starting from the word "I" would you read how
4 that statement goes.

5 A "I, David Zachary Ledford," 16-years-of age. My date
6 of birth is 10/8/97. My present address is 11 Hampton
7 Avenue, Ware Shoals, South Carolina. I can read and write
8 and I completed the ninth grade in school. I'm giving this
9 statement to Investigator D. Hill who has identified himself
10 as an investigator."

11 Q And a lot of that top part, is that the standard
12 writing, and then the other words saying I'm 16 and the date
13 of birth, is that just filled in?

14 A Yes.

15 Q After that top part was filled in did Mr. Ledford give
16 a written statement?

17 A Yes.

18 Q And what did he write?

19 A You want me to read the whole --

20 Q Yes.

21 A "When Brianna's mom picked me up from my house,
22 Brianna, her mom and me and **minor** all went to their house,
23 and after they dropped me off with **minor** they went to the
24 doctor because Brianna was throwing up blood. So I stayed
25 at their house with **minor** and she was still sleeping in her

1 car seat. So I watched TV for a little, and she woke up and
2 fussed a little and her mom told me it was time for her to
3 eat when she was to wake up -- when she was to wake up. So
4 I gave her a pacifier and went and fixed her bottle, then
5 took her out, laid her beside me, and she was fussing until
6 I put the bottle in her mouth. I burped her when she was
7 done eating and she burped two times and she spit up both
8 times. After that I laid her back down beside me and we
9 watched TV for a while and then I got hungry and got up.
10 Left **minor** in the middle of the bed propped up on the
11 pillow with one next to her so she wouldn't roll off the
12 bed. So I left her in the room while I fixed some cereal
13 and went and sat beside her, ate it. And when I was done I
14 went to take the bowl in the kitchen about 10 feet away. As
15 soon as I walked out of the room I heard her pacifier fall
16 and she started fussing. And she does that a lot, so I
17 thought I'd just drop the bowl off and go back in there.
18 But before I could get to the kitchen I heard her cough and
19 gag, so I ran in and she was hunched over like sitting up
20 and I got her and patted her on the back. That worked when
21 she choked before. But she was still all crunched up, then
22 she stretched out and then she went limp and wasn't
23 breathing and I started crying. I called Brianna and told
24 her. So they rushed over and they took -- took eight
25 minutes and they were there. Brianna's mom had already

1 called 911. Her mom tried to blow air in [minor], pat her
2 back, pump her chest. Then a cop came and didn't know how
3 to do CPR, so we couldn't do anything until the ambulance
4 got there and they took [minor]." End of statement.

5 Q And next to the end of the statement are Zach's
6 initials there?

7 A Yes.

8 Q Did he sign the end of the statement?

9 A He did.

10 Q Investigator Hill, in any part of that statement does
11 Zach mention shaking [minor]?

12 A No.

13 Q Does he ever mention shaking her at your conversation
14 at the Sheriff's Office?

15 A No.

16 Q And again, his dad was there?

17 A His father was there, yes.

18 Q In that statement and your meeting with him on December
19 16th, 2013 what did he tell you was the cause of her going
20 limp?

21 A He believed she was choking.

22 Q And that was the extent of the reason why he gave what
23 he gave you that night?

24 A Yes.

25 Q How long did that meeting with Zach and his father last

1 that night?

2 A I'm going to say approximately 30 minutes.. Maybe a
3 little more.

4 Q And during that time he wrote this statement?

5 A Yes.

6 Q After he was done writing this statement did you arrest
7 him then?

8 A No.

9 Q Where did he go?

10 A He went back with his father.

11 Q He left?

12 A He left with his father, yes.

13 Q Of his own free will?

14 A Yes.

15 Q Now, Did you have an occasion to meet with Zach Ledford
16 again to speak about this case?

17 A Yes.

18 Q When did that meeting occur?

19 A It occurred on December the 20th, 2013.

20 Q I show you what's been marked as State's Exhibit No. 2.
21 What is that?

22 A This is advice of rights form.

23 Q And when was -- or where was this advice of rights form
24 given to Zach?

25 A Greenville Memorial Hospital.

1 Q And the date again?

2 A December the 20th, 2013.

3 Q And is your signature on this advice of rights form?

4 A Not on this one.

5 Q Who's signature is on that one?

6 A I believe this is Kenny Downing. Investigator Kenny
7 Downing.

8 Q Who actually read Zach his rights that day?

9 A I did.

10 Q Did you read this form?

11 A I did.

12 Q Did Zach sign the form?

13 A He did.

14 MR. BROWN: At this time State offers State's Exhibit
15 No. 2 as evidence.

16 THE COURT: Any objection to State's 2?

17 MR. WISE: What is it?

18 THE COURT: Waiver of rights form.

19 MR. WISE: Isn't that the --

20 THE COURT: Waiver.

21 MR. WISE: Waiver. Yeah, no objection to that.

22 (Whereupon, State's Exhibit No. 2 was admitted into
23 evidence.)

24 Q Now, Mr. Hill who all was in the room when you began
25 speaking with Zach on the 20th?

1 A At that time it was Investigator Kenny Downing with the
2 Greenwood County Sheriff's Office, Agent Christine Cauthen
3 with SLED and myself with the Greenwood County Sheriff's
4 Office.

5 Q Was Zach's dad with him that day?

6 A No.

7 Q Was Zach under arrest at this time?

8 A No.

9 Q How did the meeting begin, or how did the conversation
10 that you wanted to speak with Zach again come up?

11 A We were actually -- we were going to check on **minor**,
12 and when we arrived we met Agent Cauthen there, and just
13 happened that Zach was there. So we decided at that time to
14 go ahead and speak with him.

15 Q This was at Greenville Hospital?

16 A This was at Greenville Hospital.

17 Q Where did the meeting take place?

18 A I would describe it as a family waiting room.

19 Q And was Zach able to -- was he free to leave at any
20 time?

21 A Yes, he was.

22 Q He was not being restrained?

23 A No, he was not.

24 Q And before anything was said -- was this interview
25 recorded?

- 1 A It was.
- 2 Q And how was it recorded?
- 3 A A small recorder.
- 4 Q An audio recorder?
- 5 A Audio -- small audio recorder.
- 6 Q Not video?
- 7 A No, not video.
- 8 Q And before you actually got started yourself,
- 9 Investigator Downing, Investigator Cauthen, did you
- 10 Mirandize Zach again with the waiver of rights?
- 11 A Yes.
- 12 Q And what time of day did you advise Zach of his rights?
- 13 A It was 3:28 p.m.
- 14 Q And if you wouldn't mind, what does the advisement of
- 15 rights say?
- 16 A "Before we ask you any questions you must understand
- 17 your rights. You have the right to remain silent. Anything
- 18 you say can and will be used against you in a court of law.
- 19 You have the right to talk to a lawyer and have them present
- 20 with you while you're being questioned. If you cannot
- 21 afford a lawyer one will be appointed to represent you
- 22 before any questioning, if you wish. You can decide at any
- 23 time to exercise these rights and not answer any questions
- 24 or make any statements. Do you understand each of these
- 25 rights I've explained to you? Having these rights in mind,

1 do you wish to talk to us now?"

2 Q And next to those seven points that you just read did
3 Zach initial by each point?

4 A Yes.

5 Q Is there anything else on the advice of rights form
6 that you read to Zach?

7 A Yes. "I've read the statement of my rights and I
8 understand what my rights are and am willing to make a
9 statement and answer the questions. I do not want a lawyer
10 at this time. I understand and know what I am doing. No
11 promises or threats have been made to me and no pressure or
12 coercion of any kind has been used against me."

13 Q And was it signed?

14 A It was signed.

15 Q And who signed it?

16 A Signed by David Zachary Ledford, December the 20th,
17 2013.

18 Q And it was witnessed by?

19 A Kenny Downing, December 20th, 2013.

20 Q And who does Kenny Downing work for?

21 A Greenwood County Sheriff's Office.

22 Q Once you advised Zach of his rights, when you were
23 doing that did he have any kind of appearance that he didn't
24 understand what you were asking him?

25 A No.

1 Q Did he appear to be under the influence of any kind of
2 alcohol or drugs?

3 A No.

4 Q Did he look like he was -- have any kind of physical or
5 mental stress at that time where he might not understand
6 what you were asking?

7 A No.

8 Q Did you deprive him of any type of food, water,
9 restroom?

10 A No.

11 Q Did you threaten or coerce him in any manner?

12 A No.

13 Q Did you make any promises?

14 A No.

15 Q To the best of your knowledge being in that room, did
16 Zach freely and voluntarily give you a statement?

17 A Yes.

18 Q Was this statement brought about as you or Investigator
19 Downing or Investigator Cauthen asked a question and he
20 would respond? It was more of a conversation back and
21 forth?

22 A Yes.

23 Q I show you what's been marked as State's Exhibit 19.
24 Can you tell me what that is containing?

25 A This contains Zachary Ledford's statement.

1 Q And the date would have been December 20th?

2 A December the 20th, 2013.

3 Q And does that audio statement capture the advisement of
4 rights that were read to Zach?

5 A Yes.

6 Q And the conversation that you and the other officers
7 had with Zach during that time?

8 A Yes.

9 MR. BROWN: The State moves in State's Exhibit 19 as
10 State's Evidence 19.

11 MR. WISE: Subject to my previous position.

12 THE COURT: Subject to your previous objection, which
13 is republished herein and your objection is noted and you're
14 protected to the extent we've ruled on those issues.

15 Folks, we spent some time yesterday listening to this.
16 It was about an hour long. We cut out some of it. There
17 are parts of it -- there's three people and it's a
18 conversation like the witness and the attorney were talking.
19 There are parts in there -- just to give you a for instance,
20 there's one part where one of the investigators says, "Well,
21 you know, I knew this one case and this, this and this
22 happened and that, that and that happened and in that case
23 such and such." Well, that's not relevant the way she was
24 trying to explain or he was trying to explain some previous
25 events not related to this. So basically we tried to cut

1 out all of the conversation about unrelated events and just
2 give you the 40 minutes which were talking about what
3 happened with this incident. Okay? So if you hear gaps,
4 that's why it is, is we cut out the unnecessary or some --
5 I'm going to call it non-relevant portions. Okay?
6 Sufficient?

7 (Whereupon, State's Exhibit No. 19 was admitted into
8 evidence.)

9 MR. BROWN: Judge, we're trying to get it to play on
10 the TV. One program allows you to do it and the other
11 program doesn't.

12 THE COURT: Is that like they say on TV, we're
13 experiencing technical difficulties?

14 MR. BROWN: Exactly.

15 (Whereupon, State's Exhibit No. 19 was published for
16 the jury.)

17 THE COURT: That's where the interview ended, but the
18 recording went on for a few minutes after they stepped away?

19 MR. BROWN: About another minute.

20 THE COURT: No more questions were asked at that break?

21 MR. BROWN: No, sir.

22 THE COURT: Fair enough. Continue on with your
23 questioning.

24 Q Investigator Hill, investigating this case from the
25 16th through this time, the 20th, December 20th, did you

- 1 also speak with other members of the family?
- 2 A Yes.
- 3 Q And who did you speak with?
- 4 A I spoke with the grandmother a couple of times.
- 5 Q Was the mother also there --
- 6 A Yes.
- 7 Q -- in the conversations? And on December 16th when he
- 8 -- you spoke with him at the Sheriff's Office and he wrote a
- 9 statement did he say anything about shaking **minor** ?
- 10 A No.
- 11 Q And did he address that again in the audio on December
- 12 20th?
- 13 A That he shook her?
- 14 Q Yes.
- 15 A Yes.
- 16 Q And saying he wasn't truthful with you the first time?
- 17 A Yes.
- 18 Q At this time, December 20th was after CTs and MRIs were
- 19 already done and a report had gone to the family?
- 20 A Yes.
- 21 Q Again, during the interview on the 20th and on the 16th
- 22 was Zach promised anything to give a statement?
- 23 A No.
- 24 Q Was he coerced in any way to give a statement?
- 25 A No.

1 Q Was he threatened to give a statement?

2 A No.

3 Q You being there both times did Zach Ledford freely and
4 voluntarily give these statements to you?

5 A Yes.

6 Q Was he under arrest at these times?

7 A No.

8 Q When actually did Mr. Ledford - when did you arrest
9 him?

10 A It was approximately about a month later.

11 Q In January?

12 A In January, yes.

13 Q And does that audio recording capture the entire
14 conversation you had with Mr. Ledford?

15 A Yes.

16 Q At the hospital?

17 A Yes.

18 MR. BROWN: No further questions.

19 CROSS-EXAMINATION

20 BY MR. WISE:

21 Q Officer Hill, Zach talked about **minor** going stiff was
22 the phrase he used, wasn't it?

23 A Yes.

24 Q Going stiff in his arms?

25 A Yes.

1 Q After he heard her making this noise that he thought
2 was choking?

3 A Yes.

4 Q And he said that he thought it was choking because she
5 was making sounds that he had not heard before?

6 A Correct.

7 Q And he said when he picked her up she went stiff?

8 A Correct.

9 Q He never once said to you that he shook her before she
10 went stiff?

11 A No.

12 Q He was talking about after she went stiff he didn't --
13 and then went limp he didn't know what was happening and he
14 shook her. I think you described it at one point as up and
15 down?

16 A I don't recall describing it as up and down.

17 Q Maybe it was the other officer that talked about up and
18 down. Do you remember that line in there? You shook her up
19 and down?

20 A I don't recall describing it as up and down.

21 Q Now, he was there with his father the first time?

22 A Yes.

23 Q Roughly 30 minutes?

24 A Yes.

25 Q Answered any questions that you had?

- 1 A Yes.
- 2 Q Was cooperative with you?
- 3 A Yes.
- 4 Q And then you happened to run across him up in
5 Greenville?
- 6 A That's correct.
- 7 Q You didn't go there specifically to interview him?
- 8 A We were going to check on the child and he was there?
- 9 Q Right. And he happened to be there.
- 10 A Yes.
- 11 Q And his father was not there at that point?
- 12 A No.
- 13 Q And you asked him would he sit down and talk to you?
- 14 A That's correct.
- 15 Q And you and who else asked questions?
- 16 A Lieutenant Kenny Downing of the Greenwood County
17 Sheriff's Office and Agent Cauthen or SLED.
- 18 Q That was the woman on there?
- 19 A Yes.
- 20 Q Now, were there other people in there watching,
21 observing?
- 22 A It was just us.
- 23 Q So the three of you all were in the room with him?
- 24 A Yes.
- 25 Q And that full audio was about an hour long and we

1 eliminated some casual conversation, right?

2 A Yes.

3 Q And he again answered the questions you asked?

4 A Yes.

5 Q He was obviously upset about what happened to **minor**?

6 A Yes.

7 Q You could tell that?

8 A Yes.

9 Q And never once, never once said that he shook her
10 before she went stiff?

11 A That's correct.

12 Q And then he was talking about shaking her to try and
13 revive her or whatever, correct?

14 A Correct, yes.

15 MR. WISE: Thank you.

16 THE COURT: Very brief.

17 MR. BROWN: Very brief.

18 REDIRECT EXAMINATION

19 BY MR. BROWN:

20 Q On December 16th, 2013, before the CT scans and MRI
21 reports were released, did he ever say anything about
22 shaking **minor** at all?

23 A No.

24 MR. BROWN: No further questions.

25 RECROSS-EXAMINATION

1 BY MR. WISE:

2 Q You never mentioned the CT scan to Zach on that audio,
3 did you?

4 A Not that I can recall.

5 MR. WISE: Thank you.

6 THE COURT: You may step down.

7 (Whereupon, the witness stepped down from the witness
8 stand.)

9 THE COURT: All right, folks. Good time to take a
10 break. You all have been sitting a long time. 12:20. How
11 about 1:30? Be back in the jury room at 1:30. That'll give
12 you an hour and 10 minutes. Can't begin discussing the case
13 until I tell you to.

14 (Whereupon, the jury exited the courtroom at 12:20
15 p.m.)

16 THE COURT: Anything we need to put on the record
17 before we take a break?

18 MR. WISE: No, sir.

19 MS. WHITE: No, sir.

20 THE COURT: Now, for planning purposes, what else you
21 all got left?

22 MS. WHITE: One more officer.

23 THE COURT: Okay. See you all at 1:30.

24 (Whereupon, a recess was taken from 12:20 p.m. to 1:30
25 p.m.)

1 (Whereupon, the jury entered the courtroom at 1:34
2 p.m.)

3 THE COURT: Call your witness, please.

4 MS. WHITE: Thank you, Your Honor. State calls Kenny
5 Downing.

6 KENNY DOWNING, having been first duly
7 sworn, testified as follows:

8 DIRECT EXAMINATION

9 BY MS. WHITE:

10 Q Introduce yourself to the jury.

11 A Kenny Downing.

12 Q And how are you employed, Mr. Downing?

13 A I work for the Greenwood County Sheriff's Office.

14 Q How long have you been at the Sheriff's Office?

15 A This past August was 20 years.

16 Q And back in December of 2013 what were your duties with
17 the Sheriff's Office?

18 A I was a lieutenant in investigations.

19 Q Did you have an occasion to attend an interview with
20 Zach Ledford?

21 A I did.

22 Q Do you remember what date that was?

23 A The 20th of December, 2013.

24 Q Were you the lead investigator on the case?

25 A No, ma'am.

1 Q How did you come to be involved?

2 A I've worked a lot of stuff with children over the
3 years, and Investigator Hill asked me just to assist him on
4 the investigation.

5 Q So, I guess, did you all drive to Greenville together
6 that day?

7 A Yes, ma'am.

8 Q Who did you speak with in Greenville that day?

9 A We went up there to go check on the child. Check on
10 **minor**. And we met with the SLED agent, because we didn't
11 know as far as **minor**'s condition, what was going to happen.
12 And we talked to Brianna and the family and also Zach.

13 Q And we heard before lunch a recorded interview with
14 Zach. Were you present for that interview?

15 A Yes, ma'am.

16 Q And we heard -- and I think it was during some of your
17 questioning which is why I'm asking you. We heard some
18 shaking and kind of the description of what was happening.
19 Do you recall how Mr. Ledford said he shook **minor**?

20 A He said it was more of a -- his arms were not extended.
21 They were short. They were in. But he was demonstrating
22 more of an up and down motion than a back and forth motion.

23 Q And he also said he left her propped up against a
24 pillow? Do I recall him saying that?

25 A Yes, ma'am.

1 Q How did he describe how he left her sitting?

2 A She wasn't -- she wasn't completely sitting straight,
3 straight up. It was a little bit of a slouch. However, her
4 -- he described her -- he described her head as being -- her
5 chin kind of being in her chest just as that manner there
6 (demonstrating).

7 Q So kind of slumped over like this (demonstrating)?

8 A Yes, ma'am. He said he had propped her so she could
9 more or less watch TV.

10 MS. WHITE: Thank you, Investigator Downing.

11 THE WITNESS: Yes, ma'am.

12 CROSS-EXAMINATION

13 BY MR. WISE:

14 Q In that interview he talked about **minor** going stiff,
15 right?

16 A Yes, sir.

17 Q And he always said the time he shook her in the up and
18 down motion was after she went stiff?

19 A Yes, sir.

20 MR. WISE: Thank you.

21 THE COURT: You may step down.

22 (Whereupon, the witness stepped down from the witness
23 stand.)

24 MS. WHITE: Your Honor, at this time the State rests.

25 THE COURT: All right. Folks, the State's presented

1 it's witnesses in its case and chief. I've got to take up
2 some legal matters, since that's concluded, before we hear
3 from any witness for the Defense. So albeit a very short
4 come out and go back, you all have been in here now four
5 minutes, if you all could step in the jury room and let me
6 take up some matters. If anybody wants to step outside,
7 right now would be a good time. You can stay out until I
8 get done. I'm not sure how long this will take. It may
9 take 10 minutes, it may take 15, but I don't want you to
10 feel like you've got to stay in the jury room. You can stay
11 outside if you want. But you can't begin discussing the
12 case.

13 (Whereupon, the jury exited the courtroom at 1:38 p.m.)

14 MR. WISE: Your Honor, at this time I would move for a
15 directed verdict on behalf of David Zachary Ledford on the
16 grounds that taking the evidence in a light most favorable
17 to the State, they haven't provided this Court with
18 substantial circumstantial evidence by which a jury can come
19 back with a verdict of guilty. There is no admission by
20 Zach Ledford that he shook this child in such a manner that
21 caused these injuries, first of all.

22 Secondly, the State's testimony shows, particularly
23 from Dr. Troup who testified today, that these injuries
24 could have been inflicted anywhere from two to three days
25 before this child had a -- was seen in the hospital. That

1 means there are at least three or four other people who were
2 around that child during the time that these injuries could
3 have been inflicted, and until the State can eliminate
4 everybody, or eliminate three of them, everybody but Zach
5 Ledford, they haven't proven the case. So we have an injury
6 that could have occurred on Saturday, Sunday, or Monday up
7 to 3:30. And the only time he's with this child is from
8 roughly quarter to 4:00 to 5:00. That is not the only
9 time-frame within which these injuries had to have been
10 inflicted, and without evidence that that was the only
11 time-frame where they had to be inflicted, there's not
12 sufficient evidence to go to the jury.

13 THE COURT: Ms. White.

14 MS. WHITE: Your Honor, Dr. Troup's testimony, as I
15 recall in looking at the CT scan was that that was very
16 fresh blood. Within a couple of hours. Also, Dr.
17 Henderson, my recollection of her testimony, is that this
18 would have been very acute. Something that occurred in the
19 minutes leading up to **minor**'s decline rather than something
20 that had happened two to three days prior. Also, Dr. Brown,
21 as I recall his testimony, placed this as something that was
22 very acute. Not something that happened two to three days
23 prior.

24 MR. WISE: They had described the injuries as acute,
25 and all of them testified that acute could go back 24 hours

1 to a couple of days. That was all -- that's what an acute
2 reading means. Particularly Dr. Troup was very clear on
3 that, that --

4 THE COURT: It seems to me the first doctor said a day
5 or so and then it got to be two to three days progressively
6 from the other doctors.

7 MS. WHITE: Dr. Henderson specifically testified that
8 you have to look at the entire picture clinically. With her
9 decline and with what she was seeing on the CT she placed it
10 at within a few hours of when that CT was taken.

11 THE COURT: I think considering everything that was
12 testified to, the mother testified that the child was acting
13 normally that morning while the mother -- grandmother --
14 maternal grandmother testified the child was acting normally
15 in her care up until the time they went to the doctor and
16 left the child with the Defendant.

17 Mr. Wise, I know that substantial circumstantial
18 evidence is a case you are involved in.

19 Can I see that? I know you've got it.

20 MR. WISE: Well, it's -- actually it's a brief I've
21 got. The case was -- the case I had was reversed on appeal
22 by the South Carolina Supreme Court. That ruling is still
23 under consideration on a motion for reconsideration. But if
24 you look at Lollis there's one. If you look at a case out
25 of -- I can pull them up on my computer real quick.

1 THE COURT: Pull them up -- Robert is pulling them up.

2 MR. WISE: And another thing I want to point out to
3 you, Your Honor, is that Dr. Troup, and virtually every
4 other physician also testified to a layperson the child
5 could be asymptomatic. So the fact that the grandmother
6 testified that the child didn't show anything doesn't prove
7 anything. They're testimony was quite clear that to an
8 ordinary person the child could be asymptomatic.

9 THE COURT: Doesn't the substantial circumstantial
10 evidence rule and instructions say that all the
11 circumstances have to consistently point to the same result?

12 MR. WISE: Correct. If you look at --

13 THE COURT: I've got Lollis up now.

14 MR. WISE: State vs. Arnold. There's a case, State vs.
15 Hernandez, which is out of Edgefield County. It involved
16 marijuana but it was a really, I thought, pretty strong case
17 for the State. And State vs. Lollis which is 2001. I think
18 all those -- Hernandez involved a tractor-trailer load of
19 marijuana that somebody followed down a dirt road in
20 Edgefield County, and they said merely following down a dirt
21 road -- you know, I don't know if you can get any more
22 suspicious than that.

23 THE COURT: It was like a white Ford pickup truck or
24 something.

25 MR. WISE: And while our Supreme Court has not

1 consistently reviewed an appeal under the standard and
2 exclusion of every other reasonable hypothesis. They have
3 on occasion said that and either affirming or reversing
4 their conviction. And here the State has not excluded every
5 other reasonable hypothesis.

6 MS. WHITE: Your Honor, our doctors actually have
7 excluded every other reasonable hypothesis. All four of
8 them testified that this is an exclusionary diagnosis. That
9 they look at anything else that could possibly cause this
10 given the history, given the symptoms that they were looking
11 at.

12 The testimony regarding acute, to my recollection, was
13 over the terminology of acute. What does acute mean. What
14 does subacute mean. What does chronic mean. When asked
15 directly about the blood on the CT scans all of the doctors
16 testified that they felt it was very fresh blood.

17 THE COURT: I don't remember them saying that. I think
18 their testimony varied more than that, from my recollection.

19 I think there's enough circumstantial evidence
20 presented, including the maternal grandmother's testimony,
21 that the child was in good shape when she turned her over to
22 the Defendant herein. And then couple that with all the
23 medical findings of the doctors to get past the directed
24 verdict. So I respectfully deny that motion. But that --

25 MR. WISE: My witness is on the way. I need to talk to

1 Mr. Ledford and Zach for about five minutes.

2 THE COURT: Okay.

3 (Whereupon a brief recess was held.)

4 THE COURT: Mr. Wise, you're about ready to put up some
5 witnesses in the Defense case, but have you had a chance to
6 discuss with Mr. Ledford his decision whether or not to
7 testify or not?

8 MR. WISE: Yes, Your Honor, I have.

9 THE COURT: And, Mr. Ledford, let me ask you a couple
10 of questions so I understand. You sat through the entire
11 trial. You were sitting here. I observed you. You were
12 paying close attention. I am confident Mr. Wise has told
13 you, and I'm going to tell you, you do not have to testify.
14 You may remain silent through this part of the case. The
15 State couldn't call you. They're not allowed to. They're
16 not allowed to make a single comment about you exercising
17 your right to remain silent during any portion of the case,
18 including their closing arguments. They can't say, well, he
19 could've gotten up there and denied it and he didn't. They
20 can't say that. If you choose to not testify I'm going to
21 give the jury an instruction saying, all right, jury, you
22 can consider the evidence presented in making your decision
23 on guilt or innocence and whether the State proved it's case
24 beyond a reasonable doubt, but you may not even discuss Mr.
25 Ledford's not testifying in any manner whatsoever. You can

1 consider what's presented, not him exercising is
2 constitutional right. Do you understand that?

3 THE DEFENDANT: Yes, sir.

4 THE COURT: Now, if you need more time to discuss that
5 with Mr. Wise, and he kind of had an idea of my instruction
6 because he's heard it before, I believe, from me and other
7 judges. But you discuss with him and make a decision about
8 whether you want to testify. But those are your rights.
9 Okay?

10 THE DEFENDANT: Yes, sir.

11 MR. WISE: I mean, we've talked and made a decision.

12 THE COURT: You made a decision? Are you going to
13 testify?

14 THE DEFENDANT: No, sir.

15 THE COURT: Very well.

16 MR. WISE: I'd like the record to reflect, too, Your
17 Honor, that I met with Zach and his father not only today in
18 private, but also we met last Saturday and talked about it
19 at some length.

20 THE COURT: Okay. So I'm going to instruct my law
21 clerk to make certain to add that the Defendant's failure to
22 testify is not to be considered.

23 Are you all ready for your first witness?

24 MR. WISE: Yes.

25 THE COURT: Okay. Bring them in.

1 (Whereupon, the jury entered the courtroom at 1:57
2 p.m.)

3 THE COURT: All right. We're ready to continue. Mr.
4 Wise, call your witness.

5 MR. WISE: I call Mr. Ledford.

6 JOHNNY RAY LEDFORD, having been first
7 duly sworn, testified as follows:

8 DIRECT EXAMINATION

9 BY MR. WISE:

10 Q Please give us your full name.

11 A Johnny Ray Ledford.

12 Q Mr. Ledford, where do you live?

13 A 11 Hampton Avenue, Ware Shoals.

14 Q And how long have you been living there?

15 A Approximately eight years.

16 Q And where do you work?

17 A East Teak Fine Hardwoods in Donalds. I've been
18 employed there 29 and a half years.

19 Q And you are the father of Zach Ledford?

20 A Yes, sir.

21 Q I want to go back to when **minor** was born. All right?

22 A Yes, sir.

23 Q Tell us, if you would, what you noticed about Zach
24 after **minor** was born?

25 A Well, if you look at him before and then after it was a

1 real big change. I mean, he was happy. I mean, to having a
2 daughter and all that, and looking forward to going and
3 seeing her every day. I mean, that's all he talked about.
4 You didn't hear nothing else, anything else but [REDACTED],
5 [REDACTED], [REDACTED], I mean.

6 Q When [REDACTED] was born how much going back and forth was
7 there between your house and where [REDACTED] lived?

8 A I would say the first two months was every day. And
9 then it kind of -- me and Brianna's parents, the maternal
10 grandparents, kind of decided we needed to cut this back
11 because financially, you know, gas back and forth every day
12 was kind of putting a burden on us. So we kind of cut back
13 and said, you know, just like just four or five times a
14 week. You know, not every day.

15 Q Did you have to make him go see [REDACTED]?

16 A No, sir. He was -- he was ready. Brianna's mother
17 would pick up him up after school every day and I would go
18 and get him in the evening after he spent time with her.

19 Q And would you spend time at Brianna's house with [REDACTED]
20 and Zach?

21 A Yes, sir. Occasionally.

22 Q Weekend before this incident did you all have an
23 occasion to go to Atlanta?

24 A Yes, sir. First time that [REDACTED] had ever been away,
25 you know, from home. I mean, ever traveled anywhere. We

1 took her to Atlanta to pick up my oldest son from a plane
2 flight coming back from Colorado where his mother lives.
3 And we stayed in a motel room over night because it was real
4 late and we didn't feel like driving back that late at
5 night. And [minor] stayed the night -- it was the first time
6 she'd ever been in a Pack'N Play. She'd never been away
7 from home, so she's always been in a crib. She was
8 basically fussy all night long that night, but Zach and
9 Brianna both took turns getting up and seeing after her.
10 And we kind of interpreted it as being her never being away
11 from home and she was in an environment she'd never been in
12 before, you know, and had never been in that Pack'N Play.
13 So we just took it as --

14 Q How as Zach with [minor] on that trip?

15 A Oh, he was great. I mean, I think he stayed up most of
16 the night with her. Him and Brianna both did.

17 MR. WISE: Thank you very much. Answer any questions
18 the State may have.

19 THE WITNESS: Yes, sir.

20 CROSS-EXAMINATION

21 BY MS. WHITE:

22 Q You said that [minor] was fussy on that trip to Atlanta?

23 A Not on the trip to Atlanta. When we were in the motel
24 room.

25 Q In the actual motel room. She actually slept in the

1 car the entire way to Atlanta, didn't she?

2 A Most of the way, yes. Outside having to feed her,
3 yeah.

4 Q I mean, that's pretty typical of babies, isn't it, for
5 them to sleep once you get them in the car on a car ride?

6 A Yes, ma'am.

7 Q And you got her to Atlanta, and you said she was
8 sleeping in a Pack'N Play?

9 A Yes. Once we retrieved my son from the airport and
10 drove back to the motel room then we set up the Pack'N Play
11 for her. Yes.

12 Q Was that a Pack'N Play she had or was that one that the
13 hotel -- like a portacrib?

14 A That was the one that her parents got for her.

15 Q And you would agree with me -- obviously you had
16 children, Mr. Ledford?

17 A Yes.

18 Q And when you take them out of their normal environment,
19 especially for the first time ever, it can make them a
20 little bit fussy, can't it?

21 A Yes.

22 Q And she slept the entire way home the next day?

23 A Pretty much, yes.

24 Q And to your knowledge did she act normally the next
25 day?

1 A I only saw her the drive home, because we drove
2 straight to Brianna's house, because her parents was -- they
3 already had an appointment to make pictures that day.
4 Christmas pictures.

5 Q Are you talking about State's Exhibit 5? This picture?

6 A Yes, ma'am.

7 Q And she looks pretty normal in that picture, doesn't
8 she?

9 A Yes, ma'am.

10 MS. WHITE: Thank you, Mr. Ledford.

11 MR. WISE: Thank you. You may come down.

12 (Whereupon, the witness stepped down from the witness
13 stand.)

14 MR. WISE: We have one more witness who will be here
15 shortly.

16 THE COURT: I saw somebody walk in. I figured it had
17 to be him.

18 MR. WISE: There's one matter we probably need to
19 discuss before he testifies.

20 THE COURT: All right. Folks, you can step in the jury
21 room. I got one legal matter to take care of. Can't begin
22 discussing the case.

23 (Whereupon, the jury exited the courtroom at 2:03 p.m.)

24 MR. WISE: These are -- I've given them copies of
25 powerpoints. Dr. Galaznik intends on using them. I think

1 they had some serious objections to one of them that Your
2 Honor may have to say okay. But the others are simply where
3 he's incorporated this, something we need to stipulate, too.
4 In the discovery I was given a copy of what was introduced
5 as State's exhibits. The MRIs and the CT scans. He has
6 incorporated some of those into his PowerPoint presentation.
7 And I'm assuming that the State will agree that what they
8 gave me is a copy of that.

9 MS. WHITE: I have no reason to doubt Mr. Wise, but I
10 don't know -- I can't personally -- obviously I don't know
11 what I'm looking at. And the pictures that are in the
12 presentations are not labeled, so I have no way of knowing
13 that it's the -- what was provided in discovery. I would
14 suggest -- the actual scans are in evidence. I don't see
15 why instead of relying on this the expert can't testify
16 directly from the computer like Dr. Troup.

17 MR. WISE: He can. It's just going to be longer,
18 because he has to go find them. You know, each scan has got
19 layers and you got to go find the right layer. He will
20 testify that he took those off of the discovery that was
21 given --

22 MS. WHITE: And if he can lay a foundation for it then
23 --

24 THE COURT: If you retrieved it from the discovery,
25 from the images taken at the hospital, I think that's free

1 game if he duplicated it, because we've utilized some of
2 those already on other exhibits.

3 MS. WHITE: If that's -- if he can lay the foundation
4 of those pictures then I don't have a problem with that.
5 The problems that I have -- this might be the better way to
6 go about it rather than having Mr. Wise summarizing my
7 position.

8 As I said earlier, I served a reciprocal Rule 5 in
9 April, 2014. This doctor was retained, to my knowledge,
10 probably April of 2015. February to April, 2015. We were
11 provided at the first -- this case was scheduled to go to
12 trial back in May. There was a continuance because Dr.
13 Galaznik was not available. Judge Addy continued that. He
14 did order that Mr. Wise provide me with a preliminary report
15 that Dr. Galaznik had provided to him.

16 I asked Mr. Wise specifically Monday morning are there
17 any additional reports, because this was obviously very
18 preliminary. There are places -- data missing, sentencing
19 that trail off. I was not provided anything. Mr. Wise said
20 in Chambers, other than a two and a half hour conversation -
21 - and this was with Judge Addy before we picked the jury.
22 Other than a two and a half hour conversation there's been
23 no other written reports.

24 THE COURT: Well, reports can't come in.

25 MR. WISE: Excuse me?

1 THE COURT: Reports can't come in.

2 MR. WISE: Right.

3 MS. WHITE: But, Your Honor, these PowerPoints are
4 functioning as reports, because he has hypothesis in these
5 PowerPoints. He has questions posed in these PowerPoints.
6 If the PowerPoints themselves are going to be presented to
7 the jury --

8 THE COURT: Mr. Wise said early on they were not.

9 MS. WHITE: The PowerPoints are not --

10 THE COURT: He said not. He said they're not being --
11 their demonstrative. They're not --

12 MR. WISE: They're demonstrative, but they're not being
13 introduced as an exhibit, no.

14 MS. WHITE: But the jury is going to see them.

15 MR. WISE: Right.

16 MS. WHITE: Then, Your Honor, I would ask that -- and
17 I'm specifically looking -- let me find the right one.

18 MR. WISE: It's the one with the pictures.

19 MS. WHITE: Well, I'll get to that one. I'm talking
20 about the ones that are not as objectionable first. I
21 believe it's the one that begins "David Ledford, father,
22 accused. Infant 10-weeks old."

23 There are questions posed in the PowerPoint. I think
24 the questions can be asked, but I don't think that it's
25 appropriate for the expert to be allowed to put -- here it

1 is. He asks questions like "What is going on in the
2 posterior fossa? Is that a clotted vein?" I think that
3 question can be posed to him, but I don't think it's
4 appropriate to have it in the actual PowerPoint itself.

5 THE COURT: I mean, why not? Him asking it versus the
6 jury reading it. It's kind of like me reading the jury
7 instructions and sending a copy back. I mean, what's the
8 difference?

9 MS. WHITE: Well, Your Honor, first and foremost he has
10 to ask it. I mean, to have it -- I'm not allowed to pose a
11 series of questions written out on the Elmo and say, "All
12 right, Dr. Troup. Answer these 10 questions for me."

13 THE COURT: I've never seen it done that way, but I
14 don't say you're not allowed to. I've never seen a
15 prosecutor do it either, but I really -- I don't know that
16 you'd not be allowed to.

17 MS. WHITE: I don't think the court reporter can
18 transcribe -- What the jury is considering and what any
19 appellate court is hearing is everything that's in this
20 room. And questions and opinions that are on PowerPoint,
21 things that are written on a PowerPoint are not appearing in
22 this record.

23 MR. WISE: We can introduce a copy as a Court's
24 exhibit. That's not a big deal. And that's probably
25 proper.

1 MS. WHITE: But it's not proper for the jury to consider
2 it if it's not --

3 THE COURT: They can consider any opinion of any expert
4 so qualified. But why is it that if his answers are, in my
5 opinion, A, B, C, any different than having them up there
6 and him repeating it? He's got to testify.

7 MS. WHITE: Well, Your Honor, I go back to it's
8 cumulative. Dr. Johnson's testimony. He testified about
9 the way the eye moved. We weren't allowed --

10 THE COURT: I think we're wasting time. It doesn't
11 sound cumulative to me. It doesn't sound prejudicial to me.
12 It sounds just how they decided to present testimony of the
13 expert visually and audio. I mean, it's just a different
14 way of presenting the evidence.

15 MS. WHITE: Well, moving on to the same analysis as
16 with Dr. Johnson. I'm looking at what's called rotational
17 acceleration/decelerations, abusive shaking versus human
18 activity. There are a number of pictures in here. I don't
19 know where those came from. There's no site. There's no
20 anything. They look to be very old. These were not
21 provided to me in discovery.

22 THE COURT: I might agree with you on those.

23 MR. WISE: Yeah, that's the one --

24 THE COURT: I might agree with you on those.

25 MS. WHITE: So I would ask that this entire PowerPoint

1 be stricken.

2 MR. WISE: There'll be some testimony about it, but --

3 THE COURT: Yeah, he can testify all he likes.

4 MR. WISE: No problem.

5 THE COURT: And he can demonstrate however through
6 questions and answers -- I mean, the officers have done that
7 and the doctors have done that. He's allowed to do that
8 also. But I don't think that pictures of someone else
9 uninvolved are --

10 MR. WISE: Do you have them on a thumb drive? He's got
11 them on a thumb drive and we can just -- and it's probably
12 going to be easy like we did with Dr. Troup for him to be at
13 the podium. He'll testify about it and operate the thumb
14 drive.

15 THE COURT: Okay.

16 MR. WISE: And it won't come at the first of his
17 testimony either.

18 THE COURT: So the photographs of the person who's --
19 we'll call it an actor, are not going to be allowed?
20 They're not going to be used?

21 MR. WISE: Right.

22 THE COURT: Okay.

23 MR. WISE: Thank you.

24 MS. WHITE: And, Your Honor, any -- just out of an
25 abundance of caution. That includes any of the slides from

1 the rotational accelerations/decelerations. The pictures --

2 MR. WISE: Right. That's the one we'll -

3 THE COURT: He can testify to that --

4 MR. WISE: Yeah..

5 THE COURT: -- but not with benefit of the slides.

6 MR. WISE: Not with the slides on that one. Okay. Can
7 he take a minute to go ahead and set up?

8 THE COURT: Sure.

9 (Whereupon, a short break was taken.)

10 THE COURT: All right. Bring them in.

11 (Whereupon, the jury entered the courtroom at 2:14
12 p.m.)

13 THE COURT: Mr. Wise, call your witness.

14 MR. WISE: The Defense calls Dr. John Galaznik.

15 THE COURT: Doctor, come forward and be sworn.

16 DR. JOHN GALAZNIK, having been first
17 duly sworn, testified as follows:

18 DIRECT EXAMINATION

19 BY MR. WISE:

20 Q Could you give us your full name?

21 A John Gilbert Galaznik, G-a-l-a-z-n-I-k.

22 Q And where do you live, Dr. Galaznik?

23 A In Northport, Alabama. Just outside of Tuscaloosa.

24 Q How long have you lived down there?

25 A Thirty-five years.

1 Q Can you give us something about your educational
2 background starting with college?

3 A Yes, sir. I graduated from the University of Texas in
4 Austin in 1970 with a degree in zoology. I then attended
5 medical school at the University of Texas Medical Branch in
6 Galveston from 1970 through 1974. The last year of my
7 medical school was entirely pediatrics. I did a three year
8 pediatric residency, all pediatrics, at the University of
9 Utah in Salt Lake City. And on completion of that, in order
10 to be board certified at that time you had to practice for
11 two years before taking the second part of your board exam.
12 So I volunteered for service in the U.S. Air Force, and from
13 1977 through 1980 I was one of the two base pediatricians at
14 Ramstein Air Force Base in Germany. In 1979 I took the
15 second part of the pediatric board certification exam and I
16 am board certified in pediatrics.

17 Q And are you still board certified today?

18 A Yes, sir.

19 Q Are you a member of the American Academy of Pediatrics?

20 A Yes, sir.

21 Q Have you testified as an expert in the area of
22 pediatrics, and more particularly in alleged abuse in
23 pediatrics?

24 A I've testified in the area of pediatrics and the area
25 of issues surrounding physical injury of infants and small

1 children, yes.

2 Q And how many times would you say you have testified in
3 courts in the United States?

4 A Probably about 70 or 80.

5 Q And what states have you been qualified in?

6 A I have been -- I've given expert testimony in 27
7 states, including South Carolina previously. I've also -- I
8 review a number of cases for the U.S. military, and I've
9 testified at court martial proceedings in Stuttgart,
10 Germany, Kaiserslautern, Germany, Fort Hood, Texas and Fort
11 Lewis, Washington. I've also testified once in Canada.

12 MR. WISE: I would like to offer Dr. Galaznik as an
13 expert in the field of pediatrics.

14 THE COURT: Any voir dire?

15 MS. WHITE: Very briefly, Your Honor.

16 VOIR DIRE

17 BY MS. WHITE:

18 Q Dr. Galaznik, the last time you treated a child under
19 the age of two was in 1980?

20 A Correct. My clinical career has been in the area of
21 college students' health. I'm one of the student health
22 centers doctors at the University of Alabama where I was
23 full-time there up until 2001. I became interested in the
24 area of physical injury of infants and small children when I
25 had jury duty on a case involving the death of a child.

1 Q I'm sorry to cut you off, Dr. Galaznik.

2 A Okay.

3 Q So the last time you treated a child under the age of
4 two was in 1980?

5 A Correct.

6 Q And you said you worked in the student health center of
7 the University of Alabama?

8 A Yes.

9 Q So you're treating patients ages 18 to 22?

10 A Predominantly, yes. They're considered high end
11 pediatrics.

12 MS. WHITE: No further questions.

13 THE COURT: Based on his experience he's qualified an
14 expert, and he's board certified in pediatrics, a member of
15 the American Academy of Pediatrics, he's qualified to offer
16 expert opinions in pediatrics.

17 MR. WISE: Thank you.

18 Q Dr. Galaznik, since 1999 have you done any study in the
19 area of abuse of children?

20 A Yes, sir. In 2001 I had 25 years of credible service
21 from University which allowed me to retire from full-time
22 employment, and I still work there now part-time. But
23 starting in 2001 I started devoting at least more than half
24 my time and all of my professional interest in learning
25 about the area and issues surrounding allegations of

1 physical injury of infants and small children. I did this
2 by attending meetings, reading as much as I can. I
3 gradually got -- developed contact with a network of
4 specialists from around the world in everything from
5 neuroradiology to neuropathology to biomechanics, and
6 gradually got into consulting on these kind of cases. In
7 the process I have -- I'm author or co-author of, I guess,
8 three peer reviewed articles in this area. I have a number
9 of published -- what are called post-publication peer review
10 type of -- type of published occasions. And I've also been
11 served as an invited peer reviewer for the Journal of
12 Forensic Biomechanics in the area of retinal hemorrhaging
13 and by the -- in the area of fractures in the Journal of
14 Pediatric Endocrinology Metabolism.

15 Q In your capacity of the work you've done for the last
16 20 some years, 15 or so years, have -- do you constantly --
17 do you review medical records?

18 A Oh, yes. I have probably reviewed more than 300 cases.
19 I've only testified about 70 times or so. I don't testify
20 in most of the cases I review.

21 Q So you're constantly in the process of reviewing
22 medical records?

23 A Oh, yes.

24 Q If you would, tell us a little bit about the
25 development or the history of so-called shaken baby

1 syndrome.

2 A The shaken baby syndrome originally had it's kind of
3 foundations out of the work of Omya (phonetic) who set out
4 to induce unconsciousness without the head hitting anything.
5 Just by the spinning of the head in space. And this is the
6 mechanism of concussion. When a football player gets
7 concussed or a boxer gets knocked out it is the spin of the
8 head which causes the loss of consciousness and the damage.
9 The pediatricians, Caffey, just seized on that idea and
10 thought it explained a group of infants that he was seeing.
11 And so, the idea found it's way into the pediatric concept
12 of shaken baby syndrome. The idea that you would grab a
13 small infant by the chest and violently shake back and
14 forth. Now, it's not the going from point A to point B that
15 is the issue. It is the issue of the head having to flip
16 and rotate in the process of going from the front of the
17 body to the back of the body. The idea was then asserted
18 that when this happened that the brain would be moving and
19 deforming on itself causing tearing within the brain tissue
20 itself. And the term for that was diffuse axonal injury.
21 Diffuse means widespread. The axons, if you have a nerve
22 cell sitting here in your head, it has a long arm this way
23 and has a long arm this way like the roots and branches of a
24 tree. And if a brain is being twirled around like that it
25 would be pruning the branches, or pruning the roots. That's

1 called diffuse axon injury, or traumatic axon injury, which
2 was hypothesized to be the mechanism that abusive shaking
3 would injure the brain. The second part of the hypothesis
4 that as the head -- brain was rotating and starting and
5 stopping at a different rate inside the skull that the
6 bridging veins would be possibly torn and bleed. Now, the
7 blood supply to the brain comes in from the bottom and the
8 arteries spread out and feed the brain, and then all this
9 blood gets collected. And most of it from the upper part of
10 the brain feeds from the brain surface itself over a network
11 of veins lacing over the surface to a series of about 16 to
12 20 what's called bridging veins which then bridge the gap
13 from the vein and across the subarachnoid space through the
14 arachnoid through the dura into a big river of blood called
15 the superior sagittal sinus which run from the middle of the
16 forehead, across the top of the head to the back of the head
17 where it then bifurcates and feeds blood to the jugular vein
18 back to the heart. So the idea was that in abusive shaking
19 that the bridging veins would be torn and you would have
20 bleeding into a potential space. There's usually nothing
21 there between the dura and the membrane called the
22 arachnoid, and that would be the source of subdural bleeding
23 in these cases. And the third leg of that idea was that the
24 clear jelly inside one's eye would be starting and stopping
25 in this rotational motion at a different rate than the

1 retina, which would be ripping and tearing the retina
2 causing retinal hemorrhaging. That is the classic
3 formulation of the abusive shaking hypothesis.

4 Q That's the theory?

5 A Hypothesis is not proven. Theory means proven.

6 Q All right. My apologies. Obviously you don't go test
7 on children, as such?

8 A You're right. You don't -- you don't -- there's some
9 exception to that. But, you know, you don't grab babies and
10 do this (demonstrating) for the fun of it.

11 Q There has been collisions and so forth that can give
12 you some ideas, but you can't really do an actual test?

13 A Right. There's human data that I would like to get
14 into later. But the answer to your question is basically
15 no, we don't wind up and shake babies for the fun of it.

16 Q Now, how did this then develop over the years?

17 A Well, it was -- it seemed to make sense, and it became
18 widely accepted. But starting in the mid -- late '80s, 87,
19 a neurosurgeon by the name of Duhaime, working with
20 Thibeault, a protégé of Omya, actually started to test this
21 hypothesis to see if it were valid. To see if the abusive
22 shaking of an infant would be predicted to produce enough of
23 this rotational acceleration/deceleration to cause diffuse
24 axonal injury of the brain, tearing of the retina, retinal
25 hemorrhaging, and subdural bleeding. And in those studies

1 they found -- their results were that they were not
2 producing anywhere near enough of these rotational
3 accelerations to actually be predicted to cause any primary
4 brain injury by this tearing hypothesis.

5 Q How were they doing these studies?

6 A Well, Omya worked with monkeys and he was able to make
7 them go unconscious just by putting them on a chair without
8 their head supported and suddenly accelerating that chair so
9 that the head quickly rotated back. There was ideas of the
10 threshold how much of this rotational acceleration would be
11 necessary to get into the area where you might expect at
12 least some brain symptoms at all. What Thibeault and
13 Duhaime did was they created a model. They just made a 10
14 pound model of a baby, not terribly sophisticated, wired it
15 up to these elaborate biomechanical experiments -- which is
16 what biomechanics is is the investigation of potential for
17 injury to human tissue. All of the car industry and sports
18 industry is founded on biomechanics. And then they had big
19 strong people shake these things and found that they were
20 only producing up to about 1,200 radiance per second
21 squared. Now, before you go bleary eyed on me let me
22 explain a little bit about that. Can I?

23 Q Sure.

24 A That is the unit in which this potential damaging
25 acceleration is measured. And that's what the physicists

1 use. That's what the biomechanics engineers use. That's
2 what the auto industry uses. But you and me, when I first
3 got into this, if it was not a concept you had any concept
4 of. You know about the tachometer on your car. It tells
5 you RPMs. Rotations per minute. Well, if you start with
6 RPMs and multiply it by 6.28 and divide it by 60 you
7 suddenly convert RPMs, rotations per minute, to radians per
8 second. So it's like centimeters and inches. There's a
9 direct conversion there. And then acceleration is the
10 change in the speed that something is spinning over a period
11 of time like a second. So radians per second per second, or
12 radians per second squared, is the unit in which this
13 damaging acceleration is measured. Now, I don't expect that
14 to sink in too deep, except just accept that as the unit of
15 measure. Just like you may not remember what a watt in a
16 lightbulb is, but you certainly know a 15 watt lightbulb is
17 not as bright as a 150 watt lightbulb. So if you understood
18 the definition there, great. If you didn't, just let's talk
19 in numbers at this point in time. So that the abusive
20 shaking --

21 MS. WHITE: Your Honor, I'm sorry to interrupt at this
22 point but I think we're being very narrative. There -- he's
23 not really responding to the question being asked by Mr.
24 Wise.

25 MR. WISE: All right. We'll get back to the question.

1 Q So they did tests to determine the rads per second
2 square?

3 A Right.

4 Q And how were they able to determine what number they
5 were looking for, so to speak in --

6 A Well, by standing down from the -- from the animal data
7 and brain size they were predicting subdural bleeding at
8 about four to 5,000 radians per second square and they were
9 only producing about 1,200 radians per second square.

10 Q They were anticipating they would need about three to
11 four times what they were getting in order to cause bridging
12 the veins?

13 A Yes.

14 Q Now, of course, that's comparing an animal to a human?

15 A Scaling from animal size.

16 Q Now, when you say scaling, exactly what do you mean by
17 that?

18 A Well, because with this kind of injury with rotational
19 shearing -- it's like if you take a bowl of Jell-O and then
20 you start doing this to it (demonstrating) you can -- you
21 can make tears in that bowl of Jell-O. But the bigger the
22 bowl gets the more traumatic the same amount of starting and
23 stopping gets. So as the human brain being bigger than the
24 monkey brain, then they start doing some kind of scaling
25 effort there. But a baby's brain is smaller than an adult's

1 brain. That's where they get the scaling idea applied.

2 Q So to produce any injury in the human brain based upon
3 scaling from an animal brain you were talking about rads of
4 how much?

5 A They were such -- up to 4,000. Actually newer studies
6 suggest it's much higher than that.

7 Q Now, what did they do next?

8 A Well, they then took this model and just slammed the
9 head or dropped it and instantly they got numbers that would
10 be predicted to be injurious. Not from three stories or 100
11 feet, but simply like three foot drops or just slamming the
12 head against the table, so that the idea that impact could
13 definitely be brain injuring their studies were saying yes.
14 The idea that abusive shaking without -- without real impact
15 to the head on a hard surface would reach the levels
16 necessary was -- they were saying it just didn't happen.

17 Q Did they ever -- or any other researchers later find
18 out a relationship about the human neck and shaking at 4,000
19 rads per second?

20 A Yes, as it progressed. So at that point in time,
21 '87, the idea was is that we can't -- have no evidence that
22 shaking by itself does this but impact does. So the idea
23 was hatched of shaken impact syndrome. The flaw with that
24 is, if shaking can do it, if impact can do it and shaking
25 can't, then why do we even talk about shaking.

1 Now, I would like to say right up front, you know, I'm
2 not saying shaking is benign. I think I could kill a baby
3 by shaking it. I think -- I don't want to. But someone
4 could kill a baby by shaking it. But the injury pattern
5 that you see would not look like what was traditionally
6 attributed to the shaking hypothesis. But this tugged along
7 with the biomechanic engineers saying that it was not valid,
8 and the pediatricians trying to assist that it was just
9 because they had believed it. And so, up in 2003 Prange and
10 Duhaime set out to make a model.

11 Q And Duhaime is the one you were talking about --

12 A Yes. She's a neurosurgeon. Set out to make a model to
13 actually not try to be even realistic with it, but a 10
14 pound model. To make it to get the highest numbers that
15 they could possibly get by shaking it. And if they -- if
16 they couldn't get into the energy threshold with that model
17 then their conclusion is you can make better models forever,
18 but you're never going to get to the threshold that you need
19 to cause these injuries. So they created a model. They had
20 a single hinged neck so that the head literally bounced off
21 the chest and bounced off the back. They made it harder so
22 you got much more of an impact to the head on the chest and
23 the back.

24 Q Would it be correct to say that the neck on that model
25 was probably -- what's the word I want to use? Less stiff

1 than the human baby neck?

2 A Yes. And it was a single hinge from down low to get
3 the maximum impact. They weren't trying to be precise. But
4 they -- but they got up to 2,600 radians per second squared
5 with those experiments. But then the answer was, well, if
6 we made a better neck, a better model, we should get --
7 maybe we'd get higher numbers. So then Carol Jenny set out
8 to make the Aprica models. And these are not Walmart dolls.
9 These are, you know, 50, \$100,000 measuring devices.

10 Q These are serious --

11 A Serious stuff, yes. And put a pretty good neck on it
12 with a realistic range of motion. And when it was shaken a
13 less than eight pound model produced only 1,436 radians per
14 second square.

15 Q That's still below the 4,000 --

16 A Way below. And as the model got bigger, when they
17 shook a 17 pound model, they only got 560 radians per second
18 squared.

19 Q So the more the weight the less the --

20 A And if you actually attempted to try to hold a 20 pound
21 object, or 15 pound object in front of you and then shake
22 it, it is difficult. And then the biomechanic Wolfson did
23 computer modeling and said anything you do to make even
24 those necks more biophadelic (phonetic) or realistic will
25 get you lower numbers. So that's the numbers that's set out

1 there. That's why we say that shaking -- pure shaking has
2 not been demonstrated or be predicted to be a valid cause of
3 any primary axon tearing brain injury or any primary
4 subdural bleeding or any primary retinal hemorrhaging. Off
5 shot of this is that out of the Jenny data, as the head is
6 coming forward and having to be stopped by the neck, she was
7 reporting up to 10 Gs of linear acceleration.

8 Q What's linear acceleration?

9 A That's how fast you go from point A to point B. Now,
10 we've been talking rotational. When you have your car up on
11 blocks and pop the clutch and make the wheels start spinning
12 and the car's not going anywhere. But going from point A to
13 point B is measured in Gs. If you have a sports car -- I
14 don't. But if you do and it can go from zero to 60 in four
15 seconds, then you would be accelerating at a certain number
16 of Gs. There are 15 miles per hour for a second for four
17 seconds to get yourself up there. But force, by just high
18 school physics, force is mass times acceleration. Don't
19 remember that either, but that's what it is. And so, if you
20 take Jenny's number of 10 for an eight pound model and say
21 the head weighs two pounds, and to stop a head weight two
22 pounds takes 20 pounds of force. And this is at the center
23 of gravity of the head. So if the head is flying backwards,
24 it has to be stopped by the neck. By the ligaments of the
25 neck. Just like a claw hammer pulling a nail out of a

1 board. If you have a claw hammer and you hook on the nail
2 you're trying to lift down here and you've got -- and you
3 pull with 20 pounds of force, you're lifting on that nail at
4 80 to 100 pounds of force depending on the lever action that
5 you have.

6 Q That's how you get the nail out?

7 A How you get the nail out. Otherwise you could just
8 grab it and pull up on it. So that -- so that by Jenny's
9 data you would predict neck injury in an abusive shaking
10 that were to occur. The auto industry also predicts neck
11 injury before head injury. And that's why infants are
12 placed in rear facing car seats, because in the even of a
13 severe head-on collision you want the head supported, not
14 allowed to do whiplash like we adults do. And remember, the
15 baby's neck is very weak and the baby's head is about 20 to
16 25 percent of it's body weight. So if I put about a 40, 50
17 pound head on one of you and you were involved in a fender-
18 bender, you would probably expect a potential for
19 significant neck injury. So that then focus turned to the
20 neck, and do you see neck injury in cases of alleged abusive
21 shaking. And a second thread coming into this evolution of
22 the hypothesis was that in 2001 a Dr. Geddes, a
23 neuropathologist in England, commented that when we look at
24 the brains of infants who have died of what we were
25 presuming was abusive shaking, all we were finding was

1 evidence of injury from lack of oxygen. Not evidence of
2 this shearing that was hypothesized in the shaking
3 hypothesis. Now, if you subject animals to these kind of
4 stresses you can document this diffuse axonal injury. But
5 on babies who were dying and getting autopsy, all they were
6 finding was injury from lack of oxygen.

7 Q They were not finding the --

8 A The whole axonal type of thing. At least not in a
9 traumatic pattern. And so, since the last three or four
10 years a -- I call it the new hypothesis has emerged that
11 what abusive shaking, as alleged by some to do, is to injure
12 the spinal cord and the brain stem such that the spinal cord
13 is damaged. The baby ceases to be able to breath and the
14 brain dies of lack of oxygen. But that's all starting with
15 the idea of a neck injury leading to brain injury from lack
16 of oxygen. Not from traumatic forces. And once you have
17 brain injury from lack of oxygen, if the baby is
18 resuscitated and ventilated, the brain would swell, pressure
19 could go up, coagulation studies could go abnormal, retinal
20 hemorrhages could occur from increased pressure. It's
21 another way of saying maybe our hypothesis through the years
22 has been wrong to try to get to these findings in a given
23 case.

24 Q The findings were correct but the method was wrong?

25 A Well, they were trying to explain the findings that

1 they had traditionally asserted as a result of shaking by
2 some other pathway of getting there. And that -- this
3 hypothesis is still on -- is a hypothesis. It's not been
4 proven.

5 Q And all of this is generalized. There are people who
6 disagree with this?

7 A Yes. As of 2009 in the position paper from the
8 American Academy of Pediatrics, the Christian Block, it
9 acknowledges that the only -- the only science we have, the
10 only thing we have to support that abusive shaking as we've
11 traditionally defined it is the idea that some people have
12 confessed to shaking associated with these events. But all
13 the biomechanical studies have not been able to confirm it.
14 And that the controversy -- the area is now controversial.

15 Q Before 2009 there was a concept that a lot of people
16 testified to called a triad.

17 A Correct.

18 Q And what was that?

19 A The triad, I think, I view it as being presented as
20 subtle science in 2001, a position paper from the Academy.
21 And in 2001 they were not questioning the shaking concept at
22 that point in time. But the idea there was that in the
23 presence of retinal hemorrhaging of any degree, not defined
24 as severe, just a few retinal hemorrhages, any subdural
25 bleeding and any kind of brain injury presentation, the

1 combination of those three things, the pediatrician in the
2 field was being invited by his academy to make a presumption
3 that this is an injury by abusive shaking and that is a
4 positive diagnosis to be made without having to rule
5 anything else out.

6 Q Now, when you say his Academy you're talking about the
7 American Academy of Pediatrics?

8 A Yes. And these position statements are trying to
9 coalesce the thought of the times and they're put out to
10 some people who are not getting with it on a regular basis
11 to go to and seek guidance.

12 Q Could every pediatrician -- that's a leading question.
13 How much does a pediatrician who is involved in the day-to-
14 day work of treating children really read about some of
15 these nuances on this, or do you know?

16 A I can't speak for many pediatricians. But I can tell
17 you that the average 24/7 middle of the night answering
18 pediatrician who meets you in the emergency room with your
19 ear infections can go and have a long career and never have
20 one of these cases at all. He has no driving energy to have
21 to pursue this. And actually, the kind of these cases are
22 estimated to be about 1,000 to 1,200 per year. So that they
23 actually comprise less than one percent of what a full-time
24 child abuse doctor would actually be trying to deal with.

25 Q So we have this triad theory for a while put out by the

1 American Academy of Pediatrics.

2 A Right.

3 Q Then what happened to that theory?

4 A Well, also in that statement it made a very bold
5 assertion that the constellation of these findings does not
6 occur in short fall impacts. Now, the problem with that, it
7 was an absolute statement that something does not happen,
8 and the ink was scarcely dried on the page when Plunkett's
9 article reported a videotaped short distance fall, about 42
10 inches, that resulted in lucid interval, death, subdural
11 bleeding with retinal hemorrhaging.

12 Q Did you have an opportunity to actually see that video?

13 A Oh, yes. It's shown at meetings. It's not -- but yes.

14 Q But it's something you've not only read about, you've
15 seen?

16 A And subsequently there have been other videotaped short
17 falls that have resulted in death with exactly those
18 findings. So the position taken by the Academy in 2001 was
19 an absolute position asserting the concept as subtle science
20 and was then contradicted by irrefutable evidence.

21 Q Then what did the Academy do?

22 A Well, by 2007, the 2007 position statement said that
23 rarely is a pattern of injury pathognomonic for anything,
24 which is kind of a back off of the triad idea, and that most
25 of the recent advances had come in the recognition of

1 mimics. Things which can look like it but were not.

2 Remember in 2001 it was a positive diagnosis to be made. It
3 was no longer a diagnosis excluding anything. By 2007 they
4 were acknowledging that things had to be excluded before you
5 made a presumption, and they had to recognize that short
6 fall impact could certainly do it.

7 Q So what position did they come up with in 2009?

8 A Well, in 2009, faced with all of this challenge to this
9 bio -- from the biomechanical community and from animal
10 research, particularly in the area of eyes and retinal
11 hemorrhaging, they came out with the 2009 position
12 statement. And this is interesting because on close reading
13 what it says is shaking can possibly cause neurological
14 injury, but it didn't define neurological injury. Impact
15 does cause -- or impact by shaking does cause neurological
16 injury, but they haven't defined injury. In 2001 it was
17 very clear what they were talking about. By 2009 they are
18 not clearly defining injury. I believe you could -- a baby
19 could be killed by shaking. I believe that if you broke the
20 neck the baby would stop breathing and never breath again
21 you could injure the brain from lack of oxygen. But the --
22 but they had backed off of that thing a little bit.

23 Furthermore, in 2009 they then recognized that the only
24 scientific support they had was that shaking had been
25 associated -- a, quote, confession of shaking, had been

1 associated with some of these cases. Now, the problem with
2 that is, is that they couldn't define a shake. You know, is
3 this a shake, is this a shake (demonstrating). When does a
4 jostle become a shake. And back in the '70s, when I was
5 going to medical school, cardiac resuscitation was shake and
6 shout. You find that somebody is --

7 Q Shake and shout?

8 A Shake and shout. Shake -- you know, see if they're --
9 you know, are you awake (demonstrating), and then shout for
10 help to come before you start pumping on the chest. With
11 the advent of the shaken baby syndrome the admonition became
12 check for responsiveness and then call for help. But the
13 problem with that is, if you're faced with an infant who has
14 passed out in your hands, how do you check for
15 responsiveness, you know. So the idea of the difference,
16 how do you define the difference between a resuscitative
17 shake and an alleged abusive shake, and it could not be
18 defined. So I don't -- I don't find -- personally find that
19 body of research persuasive for the concept. Furthermore,
20 they do recognize in 2009 that it is controversial. And in
21 another position paper from another section, that it is an
22 area in which even experienced experts can disagree. And
23 the last thing they did in 2009 was they recommended
24 dropping the term shaken baby syndrome from all medical
25 records because it had become a distraction and it implied a

1 single mechanized injury, i.e., abusive shaking. And they
2 recommended adoption of the term abusive head trauma
3 specifically chosen to be nonspecific. In other words, I'm
4 not saying was it shaking or impact or suffocation or
5 strangulation. I'm just saying that we just think it's some
6 kind of abusive injury that produces this. And then they
7 redefined the constellation. So it used to be retinal
8 hemorrhage, subdural bleeding and some kind of brain injury,
9 to cerebral injury, brain injury, cranial injury, like
10 subdural, and spine injury. In other words, they didn't
11 include retinal hemorrhaging in the constellation as defined
12 in 2009. And by 2010 the position paper on eyes suggested
13 that although retinal hemorrhaging has long been taken as a
14 cardinal sign, or highly associated with abusive injury,
15 retinal hemorrhages can have many causes.

16 Q What can cause retinal hemorrhaging?

17 A If you get the textbook out, everything from bleeding
18 problems, to lack of oxygen, to severe anemia, to going to
19 high altitude. Weight lifters can get retinal hemorrhages
20 just by straining to lift the weight. Just (demonstrating)
21 type of thing. Pregnant women during labor contractions can
22 have retinal hemorrhaging. Childbirth. Probably about 40
23 percent of all -- 40 percent of all newborn infants have
24 retinal hemorrhaging just from getting born and it resolves
25 and goes away. Just because you have hemorrhaging does not

1 necessarily mean that nerves have been damaged.

2 Q Just about medicine in general. Is medicine in general
3 an exact science?

4 A No.

5 Q Is each human body the same?

6 A No. But not only that is our understanding is
7 constantly evolving. If you get cancer and you don't want
8 to be treated by 1999 standards. You want the standards of
9 today. And these position statements I keep referring to
10 are supposed to be rewritten every five years. Either
11 expire -- either reaffirmed, revised or retracted after five
12 years just to acknowledge the fact that things are
13 constantly changing in our concept. That's just the nature
14 of the field.

15 Q Does retinal hemorrhaging come -- let me back up a
16 second. Does subdural hematomas come from trauma?

17 A Yes. Impact trauma definitely causes subdural
18 bleeding. Infection can have subdural bleeding. The newer
19 research out of Cohen and Schaumburg and Squire and Mack are
20 documenting retinal hemorrhage -- subdural hemorrhaging,
21 small amounts, from a lack of oxygen, so that even subdural
22 bleeding can have many causes. In fact, in the childbirth
23 analogy, in 2008 Rooks, at the Army Hospital in Hawaii,
24 demonstrated that 46 percent of all normal newborns have
25 demonstrable subdural bleeding on MRI. So that, and again,

1 it resolves, and most of the time it's resolved and no one
2 is any the wiser. These are asymptomatic babies. Your
3 children, my children, your eye at that point in our lives
4 probably had subdural bleeding and retinal hemorrhaging.

5 Q Can infants have subdural hematoma and not show any
6 signs?

7 A Yes. That's well recognized. There's been studies on
8 that. But it was officially found its way into position
9 statements from the Academy I think as early as 2007, but
10 certainly by 2009 and 2014. The position statement from the
11 Academy are pointing out that infants can have significant
12 intracranial pathology and appear normal even to medical
13 personnel. Now, the hooker on this is a couple of things.
14 One is -- this is going to sound a little bit condescending,
15 or don't take it wrong, but it doesn't take much to be a
16 good baby. They're not talking to you. They're not
17 understanding you. Even that smile that makes your heart
18 just glow is probably almost a reflex smile up until they
19 can really start recognizing faces and deal with it. So as
20 long as a baby can suck on its bottle, move it's arms
21 simultaneously, sleep good and cry when it's wet it is
22 meeting a lot of the criteria of being a normal baby.

23 Q That would be an alert and oriented baby?

24 A Or a sleeping baby. How do you know a sleeping baby is
25 not in comma, or how do you know a sleeping baby is not

1 having seizures. It is well recognized that -- and one of
2 the big things we worry about in these cases, and in this
3 case particular, was is -- was that the child can have
4 what's called subclinical seizures. You think of seizures
5 as jerking and doing this (demonstrating). But a baby can
6 be looking like he's asleep and his brain can be going
7 bonkers with seizures. And the problem with that is
8 uncontrolled seizures damages the brain. If you don't stop
9 seizures, called status epilepticus, or, you know, status
10 seizures, is a term, which actually appeared in your records
11 here, that the brain will be damaged by uncontrolled
12 seizures. And kind of a analogy to this is a great sprinter
13 may be able to run 100 yards in nine seconds, but if you
14 tell it I want you to keep that pace up for two miles he
15 will quickly collapse because of the buildup of toxins in
16 his muscle, the lactic acid will build up and he'll cramp up
17 and the next day he will be sore. So the idea that a brain
18 can be seizing, not able to stop, first of all it's oxygen
19 requirement would go up and it can't -- it can't deal with
20 that.. So seizures have the potential to damage the brain.
21 And you cannot trust your eyes. That's why in these
22 hospitals they will hook the child up to EEG leads and put a
23 video camera on them. And some seizures the video camera
24 will see, others only the electrodes on the head are picking
25 up. Otherwise the baby looks like he's quietly sleeping.

1 Q So is it possible for a child to have a fall, an event
2 of some type, appear normal and then later collapse?

3 A Yes. One of the videotapes of short distance falls we
4 have is a 21-month-old, I think, who rolled off a -- in a
5 mall play area. It was a piano keyboard. Looked about 30
6 inches off the ground. He didn't stand and fall. He rolled
7 off. He hit his head on a rubber floor mat. The mother saw
8 the fall. Rushed over, scooped him up, and then was going
9 to take him to the emergency room. He threw up once in the
10 car. Got to the emergency room looking so good, running
11 around, that they sent him home without doing a scan and he
12 later deteriorated and died on the father.

13 Q In a situation like that, I assume doctors were being
14 more aware of possible injury than a layperson?

15 A Yes. But if the child is running around and, you know,
16 looking good --

17 Q Even a doctor can miss it?

18 A Well, in that case they sent him home. And again, he
19 can look awfully good.

20 Q Now, is that the premise behind the warning they tell
21 people in hospitals that come in with a head injury?

22 A Yes. But it's even greatly magnified for infants and
23 children like --

24 Q What do you mean magnified?

25 A Well, I think that if -- if a 10-year-old or 15-year-

1 old comes in with a head injury, he looks pretty good, they
2 might just check him out and give him a head sheet that
3 says, you know, if you get vomiting or lethargy in the next
4 24 hours, come back immediately. In the small infant child
5 they say if you just have a history, even if the child looks
6 pretty good, you probably ought to get a scan just to make
7 sure, because you can't trust your exam.

8 Q At least the policy now?

9 A What?

10 Q At least the policy now?

11 A Yeah. Yeah.

12 Q Has that evolved over the years also?

13 A That's in the position statements now that impact
14 injury can -- and you cannot trust your exam.

15 Q And, in fact, is there a movement in the American
16 Academy of Pediatrics of encouraging more CAT scans than
17 they have in the past?

18 A What they -- there's certainly in the 2009 and 2014
19 position statement they're pointing out that infants can
20 have occult intracranial injury.

21 Q What's an occult intracranial injury?

22 A Occult means you don't know it's there. And have --
23 and have a normal exam. And by the Frickensure study of
24 2010, that's not an official position statement, but they
25 actually looked at some of these infants and were saying

1 that could include skull fracture, subdural bleeding, even
2 subarachnoid bleeding, even some brain contusion and the
3 baby could look -- look amazingly good.

4 Q It mentioned in this trial about an article by Carol
5 Jenny concerning misdiagnosis of a subdural hematoma --

6 A Right.

7 Q -- by medical people.

8 A Right.

9 Q Not by the family, but by medical people.

10 A Right.

11 Q What can you tell us about that --

12 A I have not read that one closely. But that -- articles
13 like that are the ones which feed into, got incorporated
14 into, the position statement from the Academy that when you
15 take infants and they look fine and you study them and you
16 find things wrong inside their head.

17 Q We adequately covered the history of shaken baby and
18 where it's evolved to?

19 A Yes. Well --

20 Q Are we leaving out anything?

21 A I'd like to talk about the animal data and the human
22 data if we can --

23 Q Okay.

24 A -- if we can get to that.

25 THE WITNESS: Can I have some water?

1 THE COURT: Can we take a short break? We've been
2 going about an hour and I'm about due for a break now that
3 we're changing gears.

4 MR. WISE: Okay.

5 THE WITNESS: Can I have some water, please?

6 THE COURT: Let the jury step in the jury room. We'll
7 have a short break. And I'm going to step into chambers and
8 have me a short break. But don't begin discussing the case.

9 (Whereupon, the jury exited the courtroom at 3:03 p.m.)

10 THE COURT: We'll stand at ease for about 12 minutes
11 until 3:15.

12 (Whereupon, a recess was held from 3:03 p.m. to 3:16
13 p.m.)

14 (Whereupon, the jury entered the courtroom at 3:16
15 p.m.)

16 Q Dr. Galaznik, we were going to talk about some animal
17 studies that had been done in this matter.

18 A Yes. The -- in the area of retinal hemorrhaging the
19 idea was is that as the head was rotating that the clear
20 jelly called vitreous inside the eye would be ripping and
21 tearing the retina causing retinal hemorrhages. That was
22 called a vitreous traction hypothesis. To test this what
23 they did was -- Coates and Benebaugh (PHONETIC) had been
24 involved out of Pennsylvania, selected what they felt was
25 an appropriate animal model, which was little piglets, and

1 what they wanted was an eyeball about the same size as a
2 baby eyeball with a vitreous and a retina in an animal that
3 they could test this with. And what they did to these
4 little piglets was -- they didn't want to hit the head.
5 They wanted -- so they put in a bite plate in the mouth and
6 then strapped the snout to it and basically put this up to a
7 jackhammer so that the head would be rotated to 110 degrees,
8 much like an infant's head might in an abusive shaking. And
9 they first had to accelerate the head in a rotational manner
10 and then stop the acceleration. The rotation acceleration.
11 They did this all in less than 15,000th of a second and they
12 reached accelerations of greater than 50,000 radians per
13 second square followed by decelerations greater than 100,000
14 radians per second square and were unable to produce any
15 grossly visible retinal findings. So that's almost 70 times
16 more than might be generated in an abusive shaking and they
17 did not produce visible retinal hemorrhages that an
18 ophthalmologist could see when he looked in the eye. They
19 did microscopically find microscopic hemorrhaging in the
20 ciliary body which is kind of just the backside of the
21 colored part of your eye up there. But that is not an area
22 where retinal hemorrhaging is reported in cases of alleged
23 shaken baby syndrome. So the -- you know, my question there
24 was did the centrifugal force alone cause bleeding in the
25 wrong place. But even that was microscopic. The proponents

1 of the shaking hypothesis then said, well, maybe, maybe what
2 it really takes is repetitive, over and over again to get
3 the retinal hemorrhages that we think are so important. So
4 Fimmie, F-I--m-I-e, did a series of lambs in 2010 and
5 another series in 2016, 16 lambs total. These lambs weighed
6 between 10 and 22 pounds. And each lamb was grabbed by the
7 chest -- it didn't measure the rotation acceleration. But
8 grabbed by the chest, and they shook each lamb for 10 30
9 second sessions. That's five total minutes of shaking.
10 Then they waited and sacrificed the animals and examined the
11 retina, and they produced no microscopic findings that could
12 be seen that -- they did have some microscopic hemorrhage in
13 two of the 16 lambs, but they didn't say where it was. Just
14 somewhere in the eye. So that -- so that if -- and my
15 position is that if 50,000 radians per second square
16 followed by 100,000 did not produce grossly visual retinal
17 hemorrhaging. And five total minutes of abusive shaking did
18 not produce primary retinal hemorrhaging, then I have to say
19 that I know of no experimental evidence that confirms the
20 acceleration/deceleration of an abusive shaking as a valid
21 cause of retinal hemorrhaging.

22 Q Well, we have retinal hemorrhaging?

23 A Yes. But let me caveat about that. But if, for
24 example, a sudden increase in pressure inside the head is a
25 recognized cause of retinal hemorrhaging, if you injure the

1 neck, if the brain was injured from lack of oxygen, if the
2 brain became swollen and rapidly pressure went up, you know,
3 I could get -- you could get from an abusive shaking to
4 retinal hemorrhage provided you had everything in between.
5 But at the same token if a baby has a vascular malformation
6 that pops and the pressure suddenly goes up, you could get
7 there by a medical reason. That's called secondary. But
8 then to rely on retinal hemorrhaging as a -- as a proof, a
9 lynch pin, a feature that establishes abuse, in my opinion
10 there is no animal experimental data, coupled with the
11 biomechanical data, that would suggest that that is valid.

12 Q In this case there's no reported increased cranial
13 pressure.

14 A They did not -- all they had to go by was the soft
15 spot. You know, on a baby they have the soft spot. Some
16 babies have great big soft spots. Some babies have little
17 small soft spots. If the soft spot is big enough, if it's
18 bulging you can tell if there's pressure. If there's not
19 bulging you can say there's probably not pressure. As it
20 gets smaller and smaller it becomes less reliable. Once the
21 soft spot is too small there's no way to tell without
22 putting a monitor through the skull. In this case the
23 initial ER notes did not document a bulging fontanel. And
24 for about two days the baby had a big turban on its head so
25 no one could feel the soft spot. But there was no

1 documented increase in pressure in this child's head.

2 Q Or no documented substantial increase in pressure?

3 A That occurred at the hospital that anyone was aware of.

4 Q Now, you've gone through the medical records of this
5 case and looked at the -- excuse me.

6 A Looked at hard human data?

7 Q Yeah, excuse me. I didn't hear what you said. Human
8 data.

9 A Over the next five years we now have human data. The
10 assertion was you can't shake a baby, so how do we know that
11 this doesn't happen. And I believe you could severely
12 injure if not kill a baby by shaking. I'm not saying that.
13 But can you really cause primary brain injury, primary
14 retinal hemorrhage by the abusive shaking mechanism as
15 traditionally espoused. And this human data came from
16 several areas. Starting from the top down, a concussion is
17 a big deal in football and soccer and sports. All you have
18 to do is watch the news and you'd know that. And concussion
19 is the injury that is induced by a rapid spin of the head.
20 A boxer hit in the jaw his head spins. If you see two
21 football players colliding on the field, one guy coming in
22 like a ram, the other guy hit on the side, this guy's head
23 spins, this guy's doesn't. This guy's going to play the
24 next play. This guy is flat on the turf. And so,
25 biomechanical engineering companies came out with

1 accelerometers that they placed in helmets so that -- like
2 Virginia Tech is the published data I'm aware of was done
3 where they put these helmets on these players out there and
4 someone on the sidelines sitting over there and says that
5 right tackle just took 11,000 radians per square. Get him
6 over here. Let's see if he's got a concussion. So that's
7 data that's published. And what they found was is that with
8 impact spins of greater than 9,000 radians per second square
9 there's only a 10 percent chance of a minimal concussion.
10 Everybody who had 9,000 or more got looked at. Only 10
11 percent of those even had the dazed look. They were carried
12 off the field.

13 Q So to digress a moment --

14 A Yes.

15 Q So what you're saying is the helmet really does not
16 serve much of a purpose in protecting against a concussion?

17 A That's right. That's the big deal right now is helmets
18 protect against bruising and scalp lacerations and skull
19 fractures. But all the faith we put in helmets as a
20 preventer of concussion is not -- has not been justified.

21 Q We could have the most perfect helmet in the world and
22 if your head spins you're going to get a concussion?

23 A Right. And helmet design is they're trying to do
24 something better, but it is not doing a very good job of
25 protecting from concussion. It actually creates a false

1 sense of security where you're more brave because you've got
2 -- you know, so it might be almost even making matters
3 worse. But following the progression forward from there.
4 They even put these helmets on peewee football players.
5 Six-year-olds.

6 Q These helmets with a gadget in them?

7 A Yeah, a gadget in them. And monitored that data. This
8 is Daniel's 2012 data. And what they found was that the
9 average peewee football player was routinely experiencing
10 1,000 to 2,200 radians per second squared at just practice.

11 Q Let's back up one second on radians per second squared.
12 1,000 to what?

13 A To 2,200.

14 Q And what was the number that we determined earlier
15 about ---

16 A For eight pound model Carol Jenny reported 1,400, and
17 for her -- for her 17 pound model she was reporting 560.
18 And Abraham Margolis (PHONETIC) out of Pennsylvania, shaking
19 a 25 pound model was reporting only -- 24 pound model
20 reporting only 408. In this case this infant weighed a
21 little over 13 pounds. So just approximating, you know, you
22 might be able to generate 1,000, 1,200 radians per second
23 squared. But those data points, eight, 17 and 24 are the
24 numbers I have that are published. Now, getting down to --
25 back to the peewee football. One of the kids with an impact

1 up to 7,000 radians per second squared and had no signs of
2 concussion. He just felt fine. Which means that that's
3 much in line with the data.

4 The next piece of human data we have is Bussone, B-u-s-
5 s-o-n-e, 2009. And what Bussone did was he took these
6 accelerometers and just strapped them on kids' heads during
7 recess in elementary school and found that a child jumping
8 rope with his -- you know, rotating up and stopping and
9 bouncing, is generating up to 1,600 radians per second
10 squared just jumping rope with no concussion. And I presume
11 no retinal hemorrhage or brain injury. At least they jump
12 rope for hours and come back in and resume school.

13 So then we get to the one piece of infant data we have,
14 and Dr. Lloyd had a seven-month-old, 22 pound son who loved
15 his Jumperoo, which is like a bungee cord hanging in a door,
16 just gleefully jumping up and down and head bobbling all
17 over the place screaming with ecstasy for minutes at a time
18 --

19 Q This is a doctor's child?

20 A Doctor's child, yes.

21 Q Who was interested in this area?

22 A Yes.

23 Q Well, it's very simple. He just had the equipment and
24 put the accelerometer on his son's head. His son was going
25 to do the activity anyway. Might as well see what the child

1 is generating, just like the peewee football players. And
2 his son was bouncing away at 960 radians per second squared
3 as an infant. So that -- so that I look at the human data
4 that we have, coupled with the animal data and the
5 biomechanical data. The assertion that the rotational
6 acceleration/deceleration that might be generated in abusive
7 shaking would be a devastating primary cause of primary
8 brain injury, primary retinal hemorrhage and subdural
9 bleeding in a previously normal child has not been
10 validated. That's why this whole area has become now
11 controversial. And the shift now is to look to the neck.
12 The 2009 position paper is putting spinal injury -- replaced
13 retinal hemorrhaging with spinal injury in the
14 constellation, and now on many of these charts what we're
15 seeing is MRIs of the neck, CT of the neck. If the child
16 dies, autopsy of the neck, looking for evidence of real neck
17 injury. But the biomechanical engineers say that they would
18 predict actual structural failure of the neck. Not subtle
19 microscopic things like a sprained ankle, truly giving away
20 of the ligaments. We know that we have some good data on
21 the strength of an infant neck. Not to gross you out --
22 Q I don't think you have to go into details the tests
23 that resulted in how much weight it requires to injure a
24 neck.

25 A But the 2006, I forgot their hands. I think that -- I

1 think this is out of Duke. Actually got their hands on
2 necks of some infants who had passed and were able to
3 dissect out the vertebral ligament structure and then test
4 it just like an engineer would test a beam and determine
5 that the neck is not that strong and would be predicted to
6 the ligament, then they break.

7 Q If the ligaments in the neck broke what would you see
8 on the MRI?

9 A I would expect bleeding just like you might on a
10 sprained ankle and possibly laxity like a joint being no
11 longer stable.

12 Q Spacing not proper?

13 A Right. And then once you got to that, you know, to
14 have real spinal cord injury would seem quite logical.

15 Q You've looked at the records in this case?

16 A Yes, I have.

17 Q And you looked at the CT scans, MRIs and so forth?

18 A Yes, sir.

19 Q And I believe you put together a little presentation of
20 all in which you observed?

21 A Yes.

22 Q Would you come down and deal with that.

23 MS. WHITE: Your Honor, I'm going to object to any sort
24 of presentation. Mr. Wise can ask questions. The doctor
25 can answer them. But for him to stand here like a professor

1 lecturing the jury I think is outside the scope of --

2 THE COURT: He's going to ask questions.

3 MR. WISE: It'll be question and answer.

4 THE COURT: He'll have to ask questions. So I'm going
5 to sustain the objection.

6 MR. WISE: Come on down.

7 (Whereupon, the witness stepped down from the witness
8 stand.)

9 Q Now, first of all, you had access to the records from
10 Self Memorial Hospital?

11 A Yes.

12 Q Self Regional Hospital.

13 A Yes, I did.

14 Q The Greenville Hospital System?

15 A Yes.

16 Q And you were given copies of the MRIs and the CAT scans
17 of Summer; is that correct?

18 A Yes.

19 MS. WHITE: Your Honor, I'm letting him get away with
20 this some, but I'm also going to object to leading.

21 THE COURT: Well, the other witnesses were led a lot.

22 Q The pictures that you put in this PowerPoint, where
23 were they taken from?

24 A From the CDs I was sent.

25 Q Go ahead. And you've got to speak up a little bit.

1 THE COURT: Hang on one second. She's going to move her
2 mic.

3 A I would like to start with what I call the SCBT brief
4 PowerPoint because it has anatomy in it.

5 Q This is part of the anatomy lesson?

6 A Yeah, the anatomy lesson. I think a lot of words fly
7 around.

8 Q You're going to have to speak up a little bit more.

9 A I think a lot of words fly around; subdural and
10 subarachnoid. So I would like to -- I have built into this
11 slide some plates from the Netters Textbook of Human
12 Anatomy. This is standard in medical schools across the
13 country, and everywhere else who's -- he just has the best
14 pictures of everybody. And this picture is -- I have a
15 pointer, but I bet it just goes right through that screen.

16 Q Your pointer will disappear in the --

17 A I thought it would do that. This on the left is a
18 reconstruction of an infant's skull. You see the sutures
19 that separate the boney plates. And the picture on the
20 right just shows you the boney plates of an infant's skull.
21 That allows the head to deform as it passes through the
22 birth canal, and then growth takes place along the edges.

23 Q When you say the one on the right shows the boney
24 plates, are those the ones that are in different colors?

25 A Yeah. The green, the blue, the purple. The green is

1 the parietal. The blue is the frontal. The purple is the
2 occipital. And the -- I guess red is the temporal bone.
3 And growth occurs along those plates because the baby's
4 brain probably doubles in size probably the first year or so
5 of life.

6 The next image is of the -- obviously they've taken
7 some picture and kind of cut down between the ears. And I
8 guess I can't point to, but if you go up to the -- about 11
9 o'clock on that guy's head, what you will see is the scalp,
10 and then -- the pointer's not very good, but I've got a
11 little x thing that will show up. You've got the scalp.
12 And then you've got the skull underneath it. Now, an
13 infant's skull is less than one millimeter or 1/25th of an
14 inch thick. And right inside the skull, if you squint, you
15 can see kind of a double layer membrane. That is the dura.
16 When they talk about subdural, epidural, intradural, they're
17 referring to something in relationship to the dura.

18 Q And that's -- what exactly -- where is that located
19 again?

20 A It is attached to the skull and it is nourishing the
21 growing skull. It is -- it is skull -- near the skull
22 structure. Not near the brain.

23 Q Is the dura touching the brain?

24 A No. Right underneath the dura you have another
25 membrane, which you'll see better in the next slide

1 possibly, called the arachnoid, which has no blood supply.

2 The dura has a great blood supply. The arachnoid does not
3 have a blood supply. And you see all those thousands and
4 thousands of little threads running between the arachnoid
5 and the surface of the brain what they call --

6 Q The little spider --

7 A Yeah.

8 Q -- spider web looking things?

9 A They're called arachnoid trabeculae, and that's why
10 it's called an arachnoid spider type of stuff, so that the
11 brain is almost like suspended in a web of these little
12 fibers. And between the arachnoid and the brain is the
13 cerebral spinal fluid, which looks like water. It is
14 produced in the ventricles. That kind of bat wing
15 structured chambers in the middle of the head. It exits and
16 invades the brain all the way down to the base of the spinal
17 cord, all the way back to the back of these eyeballs. As I
18 mentioned previously, the blood comes in from the bottom,
19 nourishes the brain, and then gets collected over the
20 surface in what we call the cortical veins. See those blue
21 tube like structures. Like up there at one o'clock you see
22 one coming over. And then they dump into that superior
23 sagittal sinus. That triangular blue structure there going
24 from the front of the head over the top. So that is -- the
25 next slide kind of blows up a little bit. Go back up to the

1 top image and you see scalp. You see skull. You see the
2 grey membrane here, the dura. Here you see a white space
3 between the arachnoid, the pink membrane, and the grey
4 membrane, the dura. That -- in real life that space does
5 not exist. The dura -- the arachnoid is loosely attached to
6 the dura. But anything that is subdural fluid, subdural
7 bleeding, subdural fluid collection, is an abnormal
8 collection between the dura and the arachnoid, still outside
9 the brain.

10 Q So a subdural hematoma is located where in relation to
11 the brain?

12 A It's between the dura and the arachnoid and not
13 necessarily touching the brain. It can get so big it pushes
14 on the brain, but it's not necessarily in direct contact
15 with the brain.

16 Q And that creates some other problems?

17 A Yeah. They can create the other problems. Now --

18 Q Now, we'll get ahead of ourselves a little bit. Did
19 pushing on the brain occur in this case?

20 A No.

21 Q Go ahead.

22 A Now, but you're a little ahead of yourself. In this
23 case there was evidence of fluid -- water like fluid,
24 chronic subdural fluid hygroma between the dura and the
25 arachnoid and it should not have been there. And that was

1 not acute blood. It was consistent with being some older,
2 probably possibly going back to birth.

3 A Now, between the pink membrane and the green membrane,
4 remember that subarachnoid space. It's called subarachnoid
5 bleeding. And in your case there's a little bit of
6 subarachnoid bleeding back in the right posterior occipital
7 area. But coming down there you see the surface of the
8 brain below it and you see all those veins going over the
9 surface collecting the blood off the brain, and it goes up
10 to those -- if you squint and look right up there where
11 they've lifted the dura up you can see the bleeding veins
12 crossing the gap to dump the blood into that big superior
13 sagittal sinus. And the human brain has a tremendous blood
14 supply. It gets about to ounces of blood flow for every
15 four ounces of brain per minute. So -- and there's about 16
16 to 20 of these bridging veins across the top. Each one
17 should be carrying about five to 10 cc's or one to two
18 teaspoons of blood per minute.

19 Q Is that why a head injury bleeds so much?

20 A If you tear a bridging brain you can expect a fair
21 amount of bleeding.

22 Q I'm talking about if you just get cut in the head they
23 tend to bleed.

24 A A scalp --

25 Q That's another --

1 A Totally off base. Now, the next slide there's not --
2 this patient -- this is from an autopsy where they just took
3 the edge of the soft spot, cut along it, and lifted it up to
4 show you what a bridging vein looks like. Notice it
5 stretched a fair amount.

6 And the next picture is from the New England Journal of
7 Medicine showing about -- the venous structures you see
8 there start with -- I'm sorry. The front in the middle of
9 the forehead, the sagittal sinus goes across the top. It
10 bifurcates in the back and sends off down to the jugular
11 veins taking this stuff back to the heart. Now, the brain
12 can be injured from lack of arterial blood flow, but the
13 brain can also be compromised by block of the venous
14 drainage because it needs a brisk oxygen delivery. So this
15 article I included because, you know, I'm not a radiologist,
16 but it is an issue that is on the table. If you clot veins
17 coming off the brain preventing the area of the brain from
18 draining, that portion of the brain can be traumatized,
19 stretched or injured depending on how severe the blockage
20 was. In this case it was obviously terrible. And that's
21 what an infarction or a stroke looks like on autopsy. And
22 that's from, like I said, the New England Journal of
23 Medicine. And skip over this. Oh, no, don't skip over
24 this.

25 The next image is from a infant with an acute subdural

1 from a ruptured bridging vein confirmed at surgery. The
2 injury in this case from a short fall impact, but the
3 abusive shaking hypothesis is asserting a similar rupture --

4 MS. WHITE: Your Honor, I'm sorry to interrupt again.
5 But I haven't heard any questions about any of this. And I
6 think Mr. Wise needs to ask the questions. Dr. Galaznik can
7 respond to the questions.

8 Q That was about the operation of the acute subdural
9 hematoma from a bridging vein.

10 A This infant fell off a changing table, hit the floor,
11 was rushed immediately to the emergency room. Had a CT scan
12 documented an acute subdural. Was rushed immediately to
13 neurosurgery. And I include it to -- as an example of what
14 a CT should look like on an infant with an acute subdural
15 from a documented rupture of a bridging vein.

16 Q So this is not this case?

17 A No, not this case.

18 Q So what you see on this is what?

19 A What you see on this is this is CT technology which
20 means bone is white. That big circle out there is the bone.
21 The skull. It's not that thick. It just makes it look
22 thick. The brain, of course, looks like the grey structure.
23 Water is black, so that -- that butterfly type of looking
24 chambers filled with water is black. And if you go out here
25 between two o'clock and three o'clock you see the acute

1 blood. It's white in brain, but not as white as skull,
2 pushing the brain over. And that all occurred in less than
3 about an hour or so after the short distance fall.

4 Q Is there a concept called a midline shift in that
5 picture?

6 A Yes.

7 Q What is that exactly?

8 A What that means is that -- you've got the midline drawn
9 from the front to the back. And notice how far the brain
10 was shifted to one side by just that mass of blood.

11 Q Do you have any idea about how much blood there is in
12 there?

13 A I would be guessing, but -- so maybe I shouldn't guess.

14 Q I mean, is it --

15 A It's a fair amount.

16 Q How does that compare to a normal subdural hematoma?

17 A Well, that would be an acute subdural hematoma.

18 Q Now, acute meaning what?

19 A Acute -- acute CT technology, which is where the blood
20 is whiter than brain. By published criteria it could be one
21 to seven to 10 days old. That's as good as CT technology
22 can do in dating extra axonal blood, or blood around the --
23 in the subdural space.

24 The next slide is --

25 Q Now, this tells you when it was obtained?

1 A Yes.

2 Q And that's when we know exactly when it happened?

3 A Well, the CT we know in that case because they were
4 changing the diaper. The baby fell. They scooped it up and
5 rushed to the emergency room. It could be a fall the day
6 before. I don't know that. But the history came forward
7 that --

8 Q Right.

9 A -- that's how it proceeded. These are the published
10 criteria. As I mentioned, acute, this line right here, two
11 hours to seven to 10 days old, whiter than brain. And
12 that's from the published criteria.

13 Q There's a concept called hyperacute.

14 A Yes. In the first few hours before blood can actually
15 clot it can be the same color as brain, which can confuse
16 the issue.

17 Q Go ahead.

18 A An MRI is far more complicated, but the best test we
19 have for aging bleeding around the brain. It's the best
20 test we have for documenting injury to the brain. And by
21 MRI criteria you can go down to hyperacute is less than 24,
22 acute is one to three days, chronic fluid, the very bottom
23 one down there is a few weeks to months to years old, and
24 then --

25 Q Back up a second. You can have fluid in the brain for

1 up to years --

2 A Yes.

3 Q -- from a subdural hematoma?

4 A Yes.

5 Q It doesn't absorb back into the body?

6 A Not necessarily, no. We see -- we see it persisting
7 for months and months in some of these children. In your
8 case it's clearly there two, three months later bigger than
9 ever. And a chronic subdural collection is a -- it's like a
10 living breathing thing. You can't stick a needle and suck
11 it out and it's gone. If you do, the next day it will be
12 right back again. It is always producing new fluid and
13 absorbing new fluid.

14 Q So how does it -- we're getting a little ahead. But
15 how does it ever go away?

16 A As the body tries to resolve it, what's called a
17 neomembrane will form surrounding the space, which is a
18 capillary rich structure that easily bleeds lining this
19 thing. And then as the babies, as the brain grows it gets
20 smaller and smaller and ultimately it disappears, like it
21 did in this case. And so, that's your anatomy lesson.

22 And there is an entity called cortical vein thrombosis
23 in infants where one of the veins clot, or several veins
24 clot, which can compromise the brain. And it causes
25 symptoms, presents with seizures as an infant. And in this

1 case -- I'm not a radiologist. I'm not saying she had that.

2 I'm just saying there were suggestions of it.

3 Q And we'll get to those later on.

4 A The next slide I think just talks about the symptoms of
5 this entity in children and infants. The presentation is
6 even less specific in infants with decreased level of
7 consciousness and seizures being the most common presented
8 symptoms. These focal hemorrhages, clots within brains,
9 should look like focal -- focal little areas of new
10 hemorrhage. Not spread out. So when I see a CT report that
11 talks about focal blood it makes you start wondering about
12 the thinking.

13 Q Does the CT report that talks about focal blood
14 established that there was, in fact, some sort of blockage
15 in the vein?

16 A No, there's not.

17 Q What does it suggest?

18 A It suggests -- the report used the word focal. And on
19 my review of it I'm seeing areas that look like smaller
20 collections of clot within -- between the brain and the
21 skull which would cue one to think that they maybe ought to
22 do a more definitive test to perceive this as a potential
23 explanation for what's going on.

24 Q We'll get to that in a minute, too. Go ahead.

25 A These focal hemorrhages can be misinterpreted as

1 traumatic parenchymal contusion. Parenchymal is a big
2 doctor word for brain tissue itself. Contusion, of course,
3 is a bruise, like you bruise anywhere. Especially a extra-
4 axial hemorrhage was reported instead of CVT thus leading to
5 a misdiagnosis of trauma as a cause of the biproduct. An
6 MRI or MRV is a more definitive study. That's where you --

7 Q Between the MRI and the MRV which one would be more
8 definitive for vein problems?

9 A Well, MRV. What an MRV does is they can put a dye in
10 your blood and do the MRI and they can see the veins and see
11 if they're blocked. See if they're draining properly.
12 Without that you can see suggestions of it, but you can't --
13 it's not actually demonstrated.

14 Q You can't get a definitive answer?

15 A You can't get a definitive answer. Unless it's just so
16 classic it just knocks you off your chair. It's important
17 to recognize that a significant number of patients in these
18 reported cases presented with delayed symptoms, signs and
19 symptoms, as long as two weeks after some traumatic event.
20 Blood flow -- article that I'm quoting here, up to zero to
21 28 days before the onset of symptoms. And published a
22 series looking at things which might predispose to this kind
23 of condition. Everyone thinks of clotting problems as
24 bleeding too easily. Hemophilia, you bleed too easily. But
25 almost everything in medicine occur and there are a number

1 of people who have what we call a pro-thrombotic. They clot
2 too easily, and they're prone to getting strokes on birth
3 control pills. Sitting on a plane too long you're getting
4 an embolus in your leg. They clot too easily. So this is
5 just a battery of tests that is done to rule whether there's
6 a genetic predisposition to clotting too easily. In
7 patients with these risk factors even minor or unnoticed
8 trauma may increase the likelihood of developing CVT. Other
9 causes in infants of dehydration or infection anywhere in
10 the body can predispose to this kind of problem. "In
11 conclusion, radiologists must keep CVT within the
12 deferential from a blood clot that's identified on the head
13 CT. The importance of distinguish hemorrhage from
14 thrombosis is paramount because delay in the appropriate
15 management can be devastating." And I'm citing the
16 Krasnokutsky - I'll spell that for -- because I can't
17 especially say it. K-r-a-s-n-o-k-u-t-s-k-y, report of 2011.

18 Q And that was published in?

19 A The American Journal of Radiology.

20 Q And is that a peer reviewed publication?

21 A Yes, it is.

22 Q And again, what are we talking about when we talk about
23 a peer reviewed publication?

24 A Peer review means that somebody writes an article. He
25 submits it to the Journal. It doesn't automatically get

1 published or accepted. They will then select people who
2 have a reason to have some interest in the area. Send the
3 article out to them to be critiqued. Criticized. Say this
4 is trash. Don't publish it. Say it's pretty good but
5 change -- you need to do something here or there. That then
6 comes back to the editors. The editors then send it to the
7 authors. The authors -- this battles back and forth until
8 finally the editor agrees this article is ready to be
9 published. Once it's published does not make it God's law
10 either. As soon as it hits print then the general medical
11 community has the right to read an article, critique an
12 article, approve of or laud an article. And this plays out
13 in the medical literature.

14 Q And there have been publications where letters -- three
15 or four letters have gone back and forth?

16 A Right. In an area of controversy, like, you know,
17 abusive head trauma, abusive injury to the head of an
18 infant, it is a raising controversy, I think. It's
19 published, gets responded to and everything from -- it's
20 active.

21 This is just a repeat of the other slides you've seen
22 already, so we can shut that one down.

23 The next one I was going to --

24 Q I was looking for the one where we've got the MRIs and
25 the CAT scans.

- 1 A Actual images?
- 2 Q Right.
- 3 A And this is --
- 4 Q These are pictures involving this case?
- 5 A Yes.
- 6 Q And these pictures, again, were taken from where?
- 7 A From the CDs that I received from you.
- 8 Q That had **minor** and --
- 9 A Yes.
- 10 Q Go ahead.
- 11 A On the first page it says, "10-week-old. Accusation of
- 12 abusive shaking. Immediately less than one hour before
- 13 presentation. Prior to that the infant was in the care of
- 14 the mother and the grandmother. Apparent chronic subdural
- 15 collections of watery fluid with areas of new bleeding."
- 16 Q Where did you get the information of chronic --
- 17 A In the original report from Self. The radiologist
- 18 raised the question of chronic subdural collections. And
- 19 the --
- 20 Q I believe his line was chronic subdural could mimic
- 21 this or look -- or feel like this is something?
- 22 A Right. And I'm going to show you what -- you've seen
- 23 the timing criteria. And this is CT technology.
- 24 Q And what do we have there?
- 25 A This is -- this is -- this infant. This is from 6:04

1 on the 16th. This is CT technology. Upper left image.
2 This image six of 24. Sort of covered up the number on the
3 bottom left, but the bottom right is 1824. What is a CT
4 does is slices through the head like a bologna splicer just
5 taking slices so you can see it. And this is going from up
6 from the head like in that fashion. This is CT technology.
7 So the bone is white. Water is black. You can look at the
8 clear jelly inside the eyeballs up there and know that's
9 water-like. And then you come down to this lower left
10 image. And if you go out towards nine o'clock you see the
11 skull and you see a layer of white stuff laying along in a
12 layer of darkness where you get to the brain. The layer of
13 darkness is a arachnoid space, and that whiteness is acute
14 blood in the subdural space or compartment that should not
15 be there. And it's white in the brain, so it is consistent
16 with being, by the published criteria, up to one to seven to
17 ten days old. If you go to the image on the lower right,
18 what you see here is you have extra space between the brain
19 and the skull that is not full of white stuff. It is -- but
20 also if you come over here like eleven o'clock you get the
21 impression of some darkness right next to the brain before
22 you get into a -- kind of a greyer area that's not white
23 before you get to the skull. That is very suggestive of the
24 subarachnoid space but with an abnormal collection of fluid
25 between the arachnoid and the dura. That's suggestive of a

1 chronic or subdural collection of fluid preexisting in this
2 child's head.

3 Q Now, when you say chronic, meaning --

4 A Well, I should say it could not be dated. It is not
5 blood. If it were blood it would be white up to about, you
6 know, two, three weeks old. It's clearly not white.
7 Whether it started out as blood or whether it started out as
8 fluid, if you stick a needle in and drain it most of the
9 time it's kind of a yellowy proteinaceous kind of fluid.

10 Q Let me ask you this. Injure a head and you have a
11 subdural hematoma and not -- are all subdural hematomas
12 disabling?

13 A Oh, no.

14 Q So if you have somebody that's functioning normally,
15 does that always look like blood, or exactly what does the
16 body do to that substance, that blood that's in the brain?

17 A Well, an acute subdural, what actually starts out as
18 all blood, the body has maybe a better chance of kind of
19 resolving it. It's just kind of like getting a bruise
20 anywhere. There's no reason to think that something inside
21 the head around the brain can't heal. God wouldn't design
22 us without the potential to heal. But if it becomes
23 established as a longstanding fluid collection, as I said,
24 it will usually start to follow membrane, as far as
25 producing new fluid in it and absorbing fluid out of it, and

1 it forms what's called a neomembrane which can always have a
2 potential to introduce new blood into it. Not a lot, but a
3 little new blood. This is well recognized. And it can
4 persist for months and months and months. We see cases, you
5 know, a year later it's still there.

6 But the subdural - chronic subdural itself does not
7 necessarily enter brain. It's not -- it is there if there's
8 plenty of space for it. It's there. And that's well
9 recognized, you know, chronic subdurals do not necessarily
10 have brain injury. And on this CT scan, the readers of the
11 CT scan did not call any primary brain injury.

12 Q And did you see any primary brain injury in that CT
13 scan either?

14 A I did not.

15 Q Now, what about the midline shift? Is that present or
16 not?

17 A No, there's no midline shift here. That would mean
18 that first of all the -- any subdural blood was not enough
19 to push the brain from one side to the other or that there
20 were this extra space to start with that the fluid you
21 shifted around.

22 Q So how does the blood in that picture compare with the
23 blood in the one we showed earlier where the child fell off
24 the table where there was a midline shift?

25 A Well, the one you saw previously, the subarachnoid

1 space had been obliterated because of the pressure on it and
2 the brain had been shifted. In this case you have the acute
3 blood between the arachnoid and dura, but you don't have a
4 subarachnoid space underneath it means that the brain hadn't
5 been pushed anywhere or that would have been collapsed. And
6 there was enough room inside the head to accommodate any new
7 bleeding without necessarily pushing the brain around.

8 This is the second CT scan from Greenville. Again,
9 **minor** images, image 8, 14 and 15 slicing up the head. And
10 here between the upper and lower parts of the brain you have
11 a structure called a tectorius. So some of the blood has
12 settled down on it created kind of a -- that whiteness over
13 the -- well, in this one here. But back in the back you see
14 some blood collecting back there. Some acute --

15 Q That little V-shaped area; is that correct?

16 A Yes. This image down here, again, if you go up front
17 at eleven o'clock you don't see as much of that acute blood
18 as you saw previously. But in the chronic subdural
19 collection it can just sit on the back like river sediment.
20 Just kind of go down to the bottom there.

21 Q But that would be caused by what?

22 A Just as the child was laying down but a chronic
23 subdural and a little new bleeding into it that blood can
24 just settle to the bottom. But I don't know if you can see
25 it. You can squint real close. Up here at about ten

- 1 o'clock you again see that little white layer line
2 separating what appears to be the subarachnoid space from
3 the abnormal space between the skull and that line which
4 would be water-like fluid in the subdural compartment.
5 Should not be there, consistent with being weeks to months
6 old. Could have started as blood. Could have started as
7 fluid. But it's not normal. And the next image is a higher
8 -- again, you see the same kind of findings. You go all the
9 way here to the back and you see the little bit of whiteness
10 here. That's acute blood that has kind of settled down.
11 But also in treating you see that whiteness kind of goes
12 into some of the cracks in the brain. That confirms that
13 there's a small amount of subarachnoid blood which is
14 touching the surface of the brain, which would be very
15 seizure inducing.
- 16 Q Can be what?
- 17 A What?
- 18 Q The arachnoid blood touching the brain would be what?
- 19 A Very irritating to the brain and potentially setting
20 off seizures.
- 21 Q So seizures could be set off by things that irritate
22 the brain?
- 23 A That's right. As long as there's no pressure. The
24 subdural stuff doesn't necessarily irritate the brain.
- 25 The next is images 19, 20, 21, 22. What caught my eye

1 on this was if you go to the middle image at one o'clock
2 with my little pointer, if you can even see the pointer, you
3 see a whiter than brain small focus of acute blood. It
4 could be one to seven to 10 days old. But it is -- it is
5 contained. It didn't spread out like the broken bridging
6 vein. It looks like it almost was bleeding within some kind
7 of structure. Could it be somehow part of the chronic
8 subdural? I guess. Or could it be a particle vein. I am
9 in no position to say, except to say that when I see that
10 I'm supposed to think did they do an MRV to evaluate the
11 venous vein.

12 Q And today -- would there be any way you can run a test
13 today to determine what that was?

14 A No, not today. Now, you've got to have the bottom --
15 they've continued to slice up. And so, this is image 22.
16 It's just in back of the -- in back of the soft spot,
17 because you can see the posterior -- where the back of the
18 soft spot you see another focal little collection of clotted
19 blood. And if I come down here to 630, again you see
20 another little area of increased density. That's just
21 suspicious for possibly clotting within some kind of
22 structure.

23 Now, this is the MRI from 21 hours out. And MRI is
24 totally different from CT. You get black and white
25 pictures. But CT is x-ray beams going through your head. I

1 don't quite know the full extent, but on MRI they put you in
2 a big magnet which lines up all your electrons out of
3 randomness and they turn the magnaphone off and energy is
4 given off and this miracle of modern medicine picks this up
5 and massages the data 15 or 20 different ways and spits out
6 different sequences to try to tell you different things.
7 And so, this is the MRI criteria in an aging subdural
8 collections of fluid, bleeding around the brain or bleeding
9 in the brain. This -- you look for T1 sequences and T2
10 sequences. For other things like clot you look for
11 different sequences, and for brain compromise you look for
12 different sequences. But in terms of aging you're looking
13 at the T1 versus T2. And the question, of course, is going
14 back up to the acute line. You know, acute, one to three
15 days on both T1 and T2. New blood would be darker than
16 brain. And in the chronic stage down at the very bottom, on
17 T1 it's darker than brain, but on T2 it's whiter than brain.
18 Very confusing. But that's how the doctors get some -- you
19 know, the aging of the chronic collections and stuff about
20 the brain. And also the one just above the last one. It
21 says if you have blood that has layered against. And then
22 it breaks down over several weeks. Blood product is
23 deposited on that membrane which is going to be darker than
24 brain. T2 --
25 Q So blood product is different from blood?

1 A No. The body starts breaking down the red blood cells,
2 just like it does in a bruise. You know, you get a bruise,
3 you know, it starts turning colors and it gradually just
4 kind of fads away. The body is breaking down the blood
5 cells. It is degrading the hemoglobin to different products
6 and giving you the color change before the body is then
7 reabsorbing those back into the system.

8 The next is -- what I've done here is I'm incorporated
9 almost all of the series of T2 on the left and T2 star on
10 the right. Now remember, T2 is water is white, flowing
11 blood is black, clot between one and seven days old is
12 black, and old blood breakdown product can be dark. On T2
13 start tells you nothing about aging, but blood clot looks
14 dark. So that's a way of trying to tell flowing blood from
15 clotting blood. Coming on up, slicing through in the 17 to
16 24, a little higher. 18 to 24 -- or 16 to 24 you see -- go
17 to the image on your right, and down about seven, eight
18 o'clock you see some blood clotting material that you don't
19 see on the T2 -- T2 over there. So that looks like kind of
20 a focal confined area of clotting in that area. If you also
21 go over to the very back, six o'clock, you see some --
22 almost some darkness there that you are not quite matching
23 on the T2.

24 Q You're talking about the darkness -- come back to the
25 previous one. The darkness kind of looked like little dots

1 in a triangle?

2 A Yeah, little dots in a triangle. I'm just pointing out
3 the things I'm watching it. I'm mainly focused on seven,
4 eight o'clock. The next slide is -- again, if you go out to
5 seven o'clock and you really kind of squint -- I don't know
6 if I can blow it up for you. Probably not. I'm focused on
7 those three dots. They're darker than brain.

8 Q Now, is that the one on the left or right?

9 A On the right at eight o'clock. I don't know if those
10 are clotted veins, but they sure look about the right size
11 for a vein. They are black, and that's what I was
12 questioning.

13 Q On the image on the right there are three -- it looks
14 like on the edge of the black three dots kind of in a line.
15 Very small dots.

16 A Right at the surface of the brain. Not in the brain
17 but the surface of the brain. And you don't really see the
18 -- into the left it doesn't show. And into the left, if you
19 go down to six o'clock, that big black circle down at the
20 very bottom, that is blood flowing through the superior
21 sagittal sinus. That big river of blood we talked about
22 going back to back. On GRE - on T2 star you notice that
23 area is white. So it didn't light up. I need to shrink
24 this down.

25 Now, image 13 of 24. Here what I'm curious about, if

1 you go up to like between ten o'clock and eleven o'clock up
2 there on the image on the left you can see a little -- looks
3 like a little line -- a dark line separating some white
4 stuff before you get to the brain. It looks like there's
5 some white stuff before it gets to the skull.

6 Q Is that kind of below where the writing is?

7 A Yes. In fact, it's right over it. I forgot to point
8 out. That big white circle is fat. That's scalp fat. A
9 bone on MRI is black. So if you get real close, that little
10 layer of blackness, inside that big white outer circle.
11 That's the skull before you get to the subdural surface.

12 This is 12 of 24. I'm slicing on down. Don't see much
13 exciting. You can still see -- if you go to the image on
14 the left up at the top you can follow that to ten o'clock
15 and you see what looks like a membrane. A little dark line
16 going all the way across. You see it on the other side at
17 one, two o'clock on the other side. And that's a -- the
18 subarachnoid membrane separating subarachnoid space from the
19 abnormal subdural fluid collection.

20 Q Again, there's no midline shift in any of this?

21 A No midline shift. The brain has not been moved around
22 by any volume of significance. Going -- just moving on up.

23 Oh, you'll find this interesting. Go to the image on
24 eleven o'clock you actually catch one of those veins coming
25 across and going all the way up. It almost looks like it

1 gets to the skull. That is a bridging vein that is intact.
2 You don't see it on the lower one to the right, because it's
3 not clotting. Come up a little higher. A little higher. A
4 little higher. A little higher. Now I'm going to start
5 worrying about here. You're starting at about eleven
6 o'clock. On the right between about nine o'clock and eleven
7 o'clock you're seeing some blood clot come up later, and
8 that's consistent with being from the neomembrane for
9 chronic subdural. Going up. Here it's interesting, because
10 if you go down to 6:30 down at the back, just to the -- your
11 left of that big black dot, you see another little dot which
12 is black. If I go over to the imagine on the right which is
13 showing me clotted blood, I still see that dark dot. That
14 again raises a suspicion is that a clotted vein or not. I
15 don't know. I just know that I'm supposed to be concerned
16 that that looked like.

17 If you go up to one o'clock you see that -- again, a
18 dark glob. Clot on T2. It's going to be darker than brain.
19 But that looks like a focal clot.

20 Q Now, can you definitively say that is a focal clot?

21 A I can definitively say that is not all over the place.
22 It looks like a round ball of something.

23 Q Right.

24 A And it's in the T2 star sequence. It's showing me
25 clotted blood clot. Where it is, what caused it, how old it

1 is I can't say.

2 Q Normally what would you expect to see with blood in
3 that area with the subdural hematoma?

4 A Well, if this child had a large volume of acute blood,
5 like the child who fell off the changing table, between one
6 and what you would see would be the whole area would be
7 black, or dark. But it's contained. I'm just raising a
8 concern.

9 Q Right. What would you do to -- go back to the one
10 before that. What would you do to eliminate your concern
11 about that that dot is?

12 A The best test is a contrast enhanced MRV. They put
13 some kind of contrast agent in the blood and they do another
14 MRI and they can trace the flow in all the veins where they
15 have blood -- just like have blood flow or not. Just like
16 if you have heart attack and they put the cath in and they
17 try to find your clot. They can do it for arteries to the
18 brain. They can also do it for veins leaving the brain.

19 The next image is -- the next image is going back to
20 the CT scan at Greenville, showing at one o'clock. I see
21 that clot. And coming down a little further I see the
22 second little clot looks focused in that area. Again, I'm
23 just raising my concerns.

24 Q You're not able to positively identify what that is?

25 A No.

1 Q Just an area of concern?

2 A Yeah. Infants with that condition would present with
3 seizures. And they could have subarachnoid bleeding which
4 could be very seizure genic, seizure causing. And there's a
5 diagnosis which I think should have been considered.

6 The next image is -- now it goes up. You see the far
7 end of that -- of that structure off there. You come up --
8 you've seen that. Okay. Coming on in, getting towards the
9 top. You still see some stuff -- a lot of stuff down there
10 at eight o'clock, seven o'clock. And then you see the
11 second little black spot will appear there. That would be
12 in a similar location to the dot in the right lower corner.
13 And then you just go up the top.

14 Q What do we have here on this one?

15 A This is the T1 sagittal, images six and seven.
16 Obviously they sliced and went to the back. On T1, between
17 one and three days of age blood is going to be darker than
18 brain. And this just shows you the extra space up in front
19 of -- in front of this child's brain between the brain and
20 the skull and it's full of darker than brain stuff, which
21 would be fluid -- protein rich fluid, not -- not acute
22 blood. It's been there a long time. It's been there a
23 while.

24 The next image we can gloss over. Gloss over. I was
25 going to focus in on that, but I wouldn't comment much.

1 Again, this is from sagittal images just showing you that
2 stuff.

3 Q Now, just to clarify one thing. On the bottom of the
4 head where you've got the little indentation, that's just
5 skin -- is that skin on the infant?

6 A Are you talking about the stuff way down on there?

7 Q Right.

8 A That's fat rolls.

9 Q Okay. Go ahead.

10 A Little chubby fat can be cute. The next image is -- I
11 was curious about those two little white dots.

12 Q Yeah. And for the purposes of doing -- give us the
13 image numbers.

14 A This is going from left to right. It's image 13, 12
15 and 11. Leading off of image 12 is right in the midline.
16 That's the structure right nearest the big -- what's called
17 the straight sinus. Here comes the superior sagittal sinus
18 down in the back where it splits and goes down towards the
19 jugular veins. But this is off center. And are those
20 normal veins or are they -- I don't know. I think it ought
21 to have been evaluated.

22 Now, this is two weeks later.

23 Q This is the 30th?

24 A Thirty, yeah. And what you see are sagittal images.

25 Notice how --

1 Q We've got images what numbers?

2 A Imagines nine, 11, 13 and 16. And what you see is that
3 the size of the chronic collections have dramatically
4 increased.

5 Q Now, let's go pick out the size of the chronic -- well,
6 actually go to the picture on the left and we see a very,
7 very dark area right where the corner is.

8 A You see on the left, this is brain.

9 Q And right where the dark -- up where the dark area.
10 What is that?

11 A Going up between -- about ten o'clock you see a
12 subarachnoid space.

13 Q And then above that is what?

14 A All that grey stuff is fluid in the subdural space now
15 which wasn't there previously.

16 Q The fluid collection has gotten worse?

17 A A lot bigger.

18 Q You can't say this is blood?

19 A No not blood. I mean, blood would be white. But if
20 you really squint, these dark lines between that subdural
21 collection and that white scalp that has the thickness of
22 the skull. The other thing you see here is this bright
23 white which is appeared down in the back.

24 Q Correct.

25 A Which is consistent with being acute blood that is

1 greater than three days old.

2 Q I want to hand you Defendant's Exhibit 2 for
3 identification.

4 A Yes, sir.

5 Q And ask you if that is what we see on the screen.

6 A Yes.

7 MR. WISE: I'd like to move -- introduce this into
8 evidence.

9 MS. WHITE: No objection.

10 THE COURT: It's part of the imaging survey that was
11 done that's already in evidence that was extracted off the
12 CDs?

13 MR. WISE: Right.

14 THE COURT: It's in.

15 MR. WISE: No one before could identify it.

16 (Whereupon, Defendant's Exhibit No. 2 was admitted into
17 evidence.)

18 Q Now, that little crescent moon down there is acute
19 blood?

20 A Acute blood.

21 Q Meaning it's how old?

22 A It's going to be greater -- actually technically it
23 would be classified as subacute more than three days old.

24 Q And if it were 10 days old it would be what color?

25 A It would start -- you would expect it to start fading

1 some. The other thing --

2 Q Now, was that present on the one we saw?

3 A I did not see it. Whether it was there --

4 Q On the 17th?

5 A -- it was not so obvious to me.

6 Q Now, **minor** is in the hospital when that picture was
7 taken?

8 A This is -- this is two weeks -- on the 30th. This is
9 two weeks later.

10 Q All right. Go ahead.

11 A Now, this image is interesting because this is image
12 15, 18 and 19 and here I'm seeing -- I go up to -- right at
13 this vertex I'm seeing again a very confined white area.

14 Q Which picture are you looking at?

15 A The one in the middle.

16 Q The one in the middle. And you're talking about about
17 midway?

18 A Right.

19 Q Towards the top?

20 A Again, I'm seeing -- I'm seeing a blob. Upper left,
21 number 15, I'm seeing a white blob. That would be
22 consistent with a focal area of clot. Down here it's
23 consistent with a focal area of clot. And off the side I
24 just --

25 Q Go to the middle one where you've got that focal area

1 --

2 A Sure.

3 Q -- clot. Is that in the brain or above the brain?

4 A It's not part of the brain but it's in -- it looks like
5 to me it's in the subarachnoid space.

6 Q But it's -- kind of looks like it's in the brain, but
7 that's not correct?

8 A No. And again, remember the cortical veins that I'm
9 worried about start in the brain, cross the subarachnoid
10 space, have to cross the subdural compartment to get up to
11 the big sagittal sinus.

12 Q And that was -- was that visible in the other one on
13 the 17th?

14 A Unless that's one of those blots I was seeing over
15 there. This is from February.

16 Q February the 4th of 2014?

17 A Yes. This is eight weeks -- eight weeks later.

18 Q And images what numbers?

19 A Thirty-three to 35. And this is about the CT
20 technology. Not MRI. CT. And what you've got here is
21 skull is white and water is black, brain is grey, and acute
22 blood, one to seven to 10 days old, is whiter than brain.
23 So I look at this image, the one on the left. I go there --
24 I go there at nine o'clock. And you see some acute blood,
25 that's new blood, occur --

1 Q Which image are you looking at?

2 A The image on the left. Number 33. You see acute
3 blood, a small amount over there. You go to the image on
4 the right it's even whiter, a little larger.

5 Q Now, could that be a re-bleed from a prior --

6 A It is new bleeding, yeah. It is new bleeding. The
7 other thing you see here is that the subdural collections
8 are now huge two months later. They're bigger than they
9 were originally. But the one on the -- your left, it's
10 actually the patient's right, and is whiter than the one on
11 your right but the patient's left. That means there's been
12 some new bleeding into it which has kind of disbursed
13 throughout making it whiter than the other slide. Again,
14 torn bridging vein? I wouldn't think so. Oozing from the
15 neomembrane we've been talking about would have -- would
16 have that on there.

17 The next one --

18 Q Now, if you've got a neomembrane it could have been
19 there how long?

20 A That could have been there for a month.

21 Q Month?

22 A This baby is only --

23 Q Right, three and a half. Well, older than that at this
24 point.

25 A Yeah, getting older. The next image is then moving up

1 the skull. This is image 44 higher up.

2 Q And 44 was taken again, for the record, on what date?

3 A On February 4th. Eight weeks later. And you see a
4 very small focus of acute blood. Looks about like the size
5 of a vein to me, up there about eleven o'clock. Coming off
6 the surface of the brain going up.

7 Q Acute blood, again, being --

8 A Well, on CT technology it's one to seven to 10 days
9 old.

10 Q So that would have been some time -- would start at
11 being earlier sometime in January?

12 A After -- yes. Long after the child was initially
13 presented. And this is eight months later. This is MRI
14 technology. This is T1 sequence. But notice all that acute
15 blood back in the back is gone.

16 Q There we go.

17 A I was going to the next slide. I guess I could go back
18 to the previous one here. All the acute blood is now gone.
19 Notice how the brain is now close to the skull, and all the
20 empty space is gone. And you down to this T2 image. You
21 remember how much --

22 Q And that's image 12 and 21 --

23 A Twelve and 21.

24 Q -- at 8/14/14?

25 A Right. And I'm looking at image 12. And remember, the

1 normal watery stuff between the brain and the skull, you go
2 to eleven o'clock and you see a normal amount of fluid. So
3 I would interpret this as the -- as the chronic subdural
4 collection of the subdural fluid collection of watery stuff
5 has resolved.

6 Q So that's her brain as of August the 14th?

7 A Yes.

8 Q And we don't have the big collection of fluids in front
9 of the -- in the front?

10 A It's resolved.

11 Q Totally?

12 A And medically we have no knowledge -- we have no idea
13 how many two to four-month-old infants have chronic
14 subdurals that don't have symptoms, never come to medical
15 attention and never get diagnosed and symptoms resolve.

16 Q Because it resolved, is that one reason that she's
17 doing well?

18 A Yeah, I think so.

19 Q Okay. Go ahead.

20 THE COURT: Let's take a break. We've been going about
21 an hour and 15 minutes and my court reporter and I need a
22 break. The jury might, too. You all go to the jury room,
23 use the restroom. We'll get you back in here and try to get
24 Dr. Galaznik's testimony finished.

25 (Whereupon, the jury exited the courtroom at 4:30 p.m.)

1 THE COURT: All right. Take a couple of minutes.

2 (Whereupon, a break was taken from 4:30 p.m. to 4:45
3 p.m.)

4 (Whereupon, the jury entered the courtroom at 4:45
5 p.m.)

6 Q Dr. Galaznik, I believe this is the last image that we
7 have.

8 A Unless you want to show the seizure corpus callosum
9 issue.

10 Q Excuse me?

11 A Unless you want to show the corpus callosum issue.

12 Q I still didn't catch you.

13 A Unless you want to show the seizure corpus callosum
14 issue.

15 Q Yes. But we're going to run through it a little
16 quicker. This is the report from the MRI by the radiologist
17 who read it.

18 A Right.

19 Q And he basically says what?

20 A This is from the -- the top portion is the line from
21 the --

22 Q This is on December 30th of 2013.

23 A The bottom is the 30th. The top is from the 17th. And
24 by Dr. Roland, in reading the imaging, stated "Conversion
25 recovery images show a normally developed deep grey and

1 white matter with normal mild sensation milestones."

2 Q And what does that mean to us?

3 A What that means is that on neither of the first two CT
4 scans, nor on the initial MRI, did any of the radiologists
5 call any real brain injury. The call was findings around
6 the brain until the child was having seizures. But in terms
7 of evidence of bruising of the brain, tearing of the brain,
8 as if it had been ripped -- a shaking type of thing, or
9 bleeding within the brain tissue itself, there was no call
10 of any of that even through the MRI of 21 hours after
11 presentation.

12 Q What does that tell you about the mechanism of subdural
13 hematoma?

14 A Well, what it tells me is that with real mechanical
15 trauma to the brain you would expect to see something on the
16 MRI.

17 Q Now, when we're talking about real mechanical trauma to
18 the brain you're talking about what?

19 A Bruising, tearing --

20 Q No, no. Mechanical meaning how is it --

21 A Oh, like some kind of mechanical force is acting on the
22 brain, as if in a shaking or impact, you would expect to see
23 -- you know, if a boxer gets hit in the face you would
24 expect to see bruising. And through 21 hours, and the MRI
25 is the best test we have to look for evidence of mechanical

1 injury to the brain, or injury to the brain of any kind, and
2 it did not document anything.

3 Q What does that tell you about impact?

4 A Well, there was no evidence of impact. There was no
5 history of impact. There was not evidence of impact. And
6 the brain did not show any contusion to suggest one.

7 Q Go ahead.

8 A Now, by the time of the MRI of the 30th, if you go back
9 to the records, when you intubate anybody you've got to
10 heavily sedate them.

11 Q When you do what to anybody?

12 A Put a tube down them. If you're alert you will not
13 tolerate that. You basically have to almost paralyze the
14 person with heavy sedation in order for the it to be able to
15 work. That's what's standard. So on the 18th -- on the
16 18th they decreased the dose of Ativan, a sedative, to allow
17 the child to neurologically wake up so they could extubate
18 and take the tube out. And when they did that the child
19 immediately went into seizures, and they had a great deal of
20 difficulty bringing the seizures under control. And the
21 seizures were both clinical and subclinical.

22 Q Now, you said clinical and shook your hands? What does
23 that mean?

24 A It means they actually saw evidence of seizure by
25 looking.

1 Q So clinical means what someone saw with their eyes?

2 A Yes.

3 Q And subclinical would be?

4 A Well, picked up by the EEG. And, of course, if you can
5 see with your eyes you can see on EEG. But if you can see
6 it on EEG and you don't see it with your eyes then that's
7 subclinical. And they loaded with four or five anti-seizure
8 medicines to bring the seizures under control. So history
9 would suggest the child actually had active seizures
10 possibly even before they realized it because the child was
11 sedated on the tube. The EEG was started, I think, at 1444
12 about 2:00 or 3:00 in the afternoon on the 18th. And, of
13 course, the child had presented on the 16th. Now, on the
14 30th they did another MRI. And this is read by Dr. Stephen
15 Rainarz, R-a-I--a-r-z. And in his report he stated on T2
16 star, that's the one that shows you blood clot -- blood
17 breakdown clot type of stuff. I do not see any definite
18 perinatal blood products. That is two weeks later he's not
19 seeing any residual evidence that there was any bleeding
20 into this infant's actual brain tissue. Around the brain,
21 but not in the brain. In the interval between the first MRI
22 and the second, the patient has developed signal abnormality
23 in the splenium of the corpus callosum most conspicuous on
24 diffusion weighted images.

25 Q What does that mean?

1 A It means that there has been some changes. He is now
2 seeing areas where the brain is actually compromised. Not
3 by blood. Not by bleeding. But evidence that the brain is
4 stressed and compromised in a certain area of the brain.
5 And his impression was worsened bilateral supratentorial
6 subdural hematomas. As you saw, they were much bigger in
7 the watery filled areas. Interval development of signal
8 abnormality in the splenium of the corpus callosum. This is
9 non-specific. The finding is -- or has been reported in
10 cases of seizures. So seizures alone can result in this
11 finding. And we know that the child was a set up for
12 seizures. We know the child is heavily sedated and when
13 they lightened up on sedation on the 18th the child started
14 seizing like mad and they gave lots of -- there was
15 Phenobarbital. There was Keppra. There was Phenobarbital.
16 Just loading up with all kinds of seizure medicines to bring
17 this seizing under control.

18 Q It obviously worked?

19 A They got it under control by about the 19th or so.

20 Q All right. Go ahead.

21 A Now, so back to the reading. This finding has been
22 reported in cases of seizure hypoxic-ischemic injury into
23 the brain from lack of oxygen and subdural myelitis,
24 anything that inflames the brain, and other etiologies. In
25 some settings it is even reversible.

1 Now, the next image. This is the MRI of the 17th. And
2 this is not T1. It's not T2. It is not T2 star. What this
3 is is the SD-1000 versus the ADC. It means nothing to you
4 much except to say that stressed brain on the SD-1000 turns
5 whiter than brain and on the ADC it turns darker than brain,
6 and that indicates compromised brain. It's struggling. And
7 so, this is two weeks later -- so if you go down to this --
8 shoot, it's giving me all kinds of trouble.

9 Q It's not cooperating.

10 A It's not cooperating. If I go over here, you see that
11 kind of butterfly batwing structures? The corpus callosum
12 is the structure right in back of those water filled
13 ventricle structures. And what's happening there is
14 branches from one side of the brain are reaching over with
15 the axons to touch the other side of the brain and visa
16 versa. It's kind of communication between two halves of the
17 brain. Now, you go to the subsequent image and now you see
18 how that area is lit up and is dark. So it has been
19 compromised. But it's finding that you see --

20 Q That's the picture on the left?

21 A Left, yeah.

22 Q And the SD-1000 number 10?

23 A It's number 10. And it's whiter. That's what he was
24 referring to there. And it's consistent with significant
25 seizure activity, which we know the child had.

1 Q And that was not there on the 17th?

2 A It was not there on the 17th.

3 Q Do we know what caused that?

4 A Seizure activity is a prime cause. And if you look at
5 the child's record he had a great deal of seizures that were
6 discovered on the 18th. But the child was -- should be
7 paralyzed and sedated.

8 Q Right.

9 A I think that's all I got.

10 Q Now you can go back and sit down.

11 (Whereupon, the witness returns to the witness stand.)

12 Q Do you have an opinion as to what happened in this
13 case?

14 A I have an opinion of factors leading into what happened
15 in this case.

16 Q Okay. What is that?

17 A The child, I think, had clear evidence of chronic fluid
18 collections in the subdural compartment before the 16th.

19 Chronic subdural collections, by the textbook, or if they --
20 if they cause symptoms -- they can resolve without causing
21 symptoms. But if they cause symptoms they are recognized by
22 the Rook study to potentially have developed from birth.

23 They do not have to be post-birth mechanical trauma. It can
24 happen after birth, or as a product to the birth process.

25 But if they cause symptoms that classically present to

1 medical attention between 10 and six months of age as one --
2 as one way of presenting. Seizures in at least 16 percent.
3 More than half will have retinal hemorrhaging at the time of
4 presentation. And not all, only about 40 percent, will
5 actually have a big head. Back before the days of CT and
6 MRI the neurosurgeons in the '60s and '50s and whatever, if
7 they saw a child presenting findings would look at the
8 retina. And if they saw hemorrhages they would take that
9 finding as almost pathoneumotic or indicative enough of
10 chronic subdural collection, so they would just start
11 sticking needles in the child's head to see if they could
12 suck off chronic fluid. So retinal hemorrhage was taken as
13 a finding to be expected in infants with chronic subdurals.
14 Now, what happened to the infant whether the events of the
15 16th were a primary seizure. And again, by our imaging, we
16 can't say whether that blood was, you know, several days old
17 at that time or whether it was new bleeding around that
18 time. But that was a primary seizure that set in motion
19 this whole event. Whether the child might have choked on
20 formula, got hypoxic, spasms and seized and set in motion
21 the whole series of events.

22 Q Would acid reflux tend to cause a child to become more
23 likely to --

24 A Vomiting and reflux --

25 Q -- cough up?

1 A Yes. Food can cause trouble with if it goes down. It
2 can cause trouble if you belch it up or aspirate it up with
3 acid reflux. And the anatomy of the larynx, the airway, is
4 a very critical structure. Every time you swallow, every
5 time -- it has to slap shut to protect the lungs. So food
6 goes down your stomach and open up so you can breath. In
7 the backside of that epiglottis is the second fastest reflex
8 in the body behind the eye blink. That is how critical that
9 area is. But if -- in infants who do have an episode of
10 reflux can get stiff like a seizure, they can get hypoxic
11 and they could have a seizure. They could have a seizure
12 and vomit and aspirate in the process. I don't see how a
13 caregiver, or even a doctor looking at the event could have
14 been able to distinguish the difference. Now, seizure
15 activity will lead -- can leave them out of it for a while,
16 not breathing right for a while, pupils not right for a
17 while and then for a period of -- until it's over. And then
18 breathing and stuff can resume. In reading the records of
19 the EMS, the family was struggling, but by the time the EMS
20 got there the baby started to scream. In my mind that says
21 if the baby can cry and scream, I have no evidence of injury
22 to the neck, no clinical evidence of injury to the neck.
23 There's no way to graph it, but no clinical evidence. That
24 means the brain is communicating with the lungs. So we have
25 no evidence of any kind of spinal cord injury in this case

1 to suggest abusive shaking. And once they got to the
2 hospital certainly the child was irritable. Whether it was
3 continuing to seize subclinical, got intubated and
4 everything flows from there.

5 Q A subdural hematoma does not have to cause a seizure?

6 A I'm sorry?

7 Q A subdural hematoma does not have to cause a seizure?

8 A Oh, correct. Remember 46 percent of all normal
9 newborns have subdural with no brain injury and no seizures.
10 They just -- your kids and my kids, take them home from the
11 hospital and suck on the bottle.

12 Q Can it cause a seizure?

13 A Yes, it can.

14 Q What do you expect to see when it does cause a seizure?

15 A Well, a seizure is kind of acute -- it can just be kind
16 of an acute out of the blue event. Just boom. You can look
17 normal going into it and have a seizure. And with post-
18 traumatic seizures, or some kind of trauma, the textbook
19 divides them into three categories. One is immediate.
20 Let's say you just get -- you can have a seizure just the
21 instant of some kind of trauma. But the next group is
22 called early post-traumatic. And that's a seizure that the
23 first seizure occurs within a week or so after whatever set
24 it off. And it's usually thought to be attributed to blood
25 irritation of the brain. Late which comes weeks or months

1 later is thought to be probably by some kind of scar on the
2 brain surface itself. So it, you know, could this child
3 have looked normal up until the event. Could be irritable
4 the night before. Maybe it was a different location. Maybe
5 different bed. Maybe it was something going on. I don't see
6 how any doctor is in a position to make that distinction.
7 But the first two CT scans and the first MRI did not
8 document any radiographic evidence of any primary injury to
9 this child's brain. And the finding that was found on the
10 30th was consistent with significant seizure activity which
11 we know this child had, certainly documented on the 18th,
12 possibly starting on the 17th and not stopped until the
13 19th.

14 Q If there had been a traumatic event in this child's
15 life sometime on the 16th or before to the extent that that
16 traumatic event would cause the hemorrhaging and the retinal
17 -- the retinal hemorrhaging and the subdural hematoma, would
18 you have expected to see at least some sort of injury to the
19 brain?

20 A I would expect -- I'm not a radiologist. But I would
21 expect an MRI 24 hours after real mechanical trauma to the
22 brain, or even severe injury to the brain from lack of
23 oxygen, I would expect that the MRI would have indicated
24 something.

25 Q And if you have a minor trauma would you expect to see

1 something?

2 A Well, if the minor trauma simply set off new bleeding
3 without injuring the brain and then the bleeding accumulated
4 or ultimately irritated the brain to set off a seizure,
5 remember the minor trauma hasn't merely injured the brain,
6 the minor trauma would have just caused -- it was
7 irritating.

8 Q It there any way to definitely say when this subdural
9 hematoma occurred and the retinal hemorrhaging occurred?

10 A No. Retinal hemorrhages cannot be dated.

11 Q But they can to some extent?

12 A Retinal hemorrhages?

13 Q Excuse me. Not retinal hemorrhages. Subdural
14 hematomas.

15 A Subdural hematoma, by those criteria I've showed you,
16 there's CT, the best you can do is one to seven to 10 days
17 for acute. On MRI, you saw that big complicated chart. But
18 with the -- with the larger areas of water density stuff
19 that's older and cannot be dated, and the areas of new
20 bleeding were dark on T1 and dark on T2 which could be one
21 to three days old by standard criteria.

22 Q Was there any evidence that you saw of a prior subdural
23 hematoma some weeks or more before the 16th of December?

24 A Yes. In my opinion it was chronic subdural collections
25 that were fluid intensity. Not -- it would include -- it

1 would be indicative of a process that had been in place for
2 some time.

3 Q Any way of determining the cause of the chronic
4 subdural hematoma?

5 A No. If a finding in the subdural space is chronic at
6 the time it's diagnosed, there is no test and no study which
7 is going to tell you when it was or what caused it. It
8 could be weeks to months old, or in adult -- you know, years
9 old if the child is that old. You could clearly see in this
10 case, but two months later that collection was bigger,
11 looking much like what it -- looked like what it did
12 originally accept it was bigger.

13 Q Even though the child was improving two weeks later?

14 A Correctly. He was not seizing. Two months later.

15 Q From the medical records were there any objective signs
16 from the appearance of the child physically, not the CT
17 scans or the MRIs, were there any signs that the increasing
18 fluid in the brain was affecting the child's recovery any?

19 A Not that I saw.

20 MR. WISE: Thank it. Ask any questions the State has.

21 THE COURT: You all want to stop for the day and come
22 back at 9:30? Try to get the witness done and start back
23 tomorrow at 9:30.

24 JUROR: What about 9:00.

25 THE COURT: I like y'all's thinking.

1 JUROR: We voted.

2 THE COURT: I like starting early myself. All right.
3 We'll try to start at 9:00. But some of my people didn't
4 show up on time, it wasn't me. Some of my people. But
5 we'll start at 9:00 in the morning if that suits you all.
6 And Ms. White will have an opportunity to finish his cross-
7 examination, and I believe that may be most of the
8 witnesses. So we ought to be able to get it wrapped up
9 tomorrow. So can't discuss the case. You all be back in
10 the jury room first thing in the morning. I'll see you all
11 and start promptly at 9:00.

12 (Whereupon, the jury exited the courtroom at 5:08 p.m.)

13 THE COURT: We'll be at ease until 9:00 in the morning.

14 Day 4: November 5, 2015

15 THE COURT: Tell you what happened. Just so you all
16 know. I have a 16-and-a-half year old son and he has an
17 individual education plan, an IEP. My wife's a school
18 principal and she's a lawyer. But she's a school principal
19 and she takes care of all that stuff. Anyway, we had an IEP
20 meeting, we meet every year, is what we are doing for him,
21 is that working? Generally, it is. Anyway, they review it
22 every year and they review it every three years and make
23 sure the big picture is working. We had a meeting scheduled
24 two weeks ago. First thing that morning about quarter till
25 eight we get a call from the school psychologist for the

1 district, she says, I didn't know anything about the
2 meeting, which she basically runs the meeting, so we need to
3 cancel. So I said fair enough. I went on to court where I
4 was supposed to go. My wife went on to her school to
5 continue her long day. Principal at the high school had the
6 meeting without us. Well, to say that my wife was tickled
7 about that is not accurate. We got a call by the district
8 office, she's a district employee, meeting cancelled.
9 Principal defended himself by saying, oh no that's fair.
10 Y'all called the meeting and y'all didn't show up. Things
11 went downhill from there. Anyway, the meeting got
12 rescheduled to this morning at eight o'clock. I found out
13 this morning at seven-thirty. I went to the meeting and not
14 a wrinkle in the fabric. Everything is ironed out. So it's
15 all good for my son, but that's why I could not miss that
16 one because when they call them off they have them anyway.
17 This doesn't sound exactly fair. Everybody needs an
18 opportunity to be heard. That's why we do things by the
19 rules. Which is why I appreciate y'all's patience.
20 Alright, Dr. Galaznik, you're still under on the witness
21 stand. I remind you that you're still under oath. Ms.
22 White you may begin your opportunity to ask him your
23 questions.

24 MS. WHITE: May it please the court?

25 THE COURT: Hang on one second, please.

1 DIRECT EXAMINATION

2 BY MS. WHITE:

3 Q. Good morning, Dr. Galaznik.

4 A. Good morning.

5 Q. You're being compensated for your time and being here
6 aren't you?

7 A. Yes.

8 Q. And I think I've got a copy of your fee schedule. The
9 one I have may be outdated. So I'd like to ask you some
10 questions about that. You pay -- you are paid a thousand
11 dollars for your initial consultation? Is that accurate?

12 A. No. That's not correct.

13 Q. Ok.

14 A. I request three thousand dollars for review and
15 consultation on cases regardless of whether it goes to
16 trial. If -- in many cases I look at do not end up in court
17 and that's regardless of my opinion. I then request a
18 thousand dollars for compensation for time away from home.
19 Not for testifying, but for the time I am away. In this
20 case I am away three days, from home and office. That's my
21 fee schedule. And I like my travel expenses met.

22 Q. Are your travel expenses being met in this case?

23 A. Yes, and the hotel is very nice, across the street.

24 Q. You're at The Inn on the Square?

25 A. Food's great.

1 Q. You're lucky they just opened that, I guess, about a
2 month ago. I am glad to hear that it's nice. And you've
3 been there two nights?

4 A. Yes.

5 Q. You came in on Tuesday and you're leaving today,
6 whenever you're done?

7 A. Hopefully.

8 Q. Do you also charge if you write a written report?

9 A. No.

10 Q. You used to back in 2011?

11 A. That's included in the three thousand. That's review,
12 consultation, talking to attorneys, meetings, all of those
13 kinds of issues.

14 Q. You said you have consulted, I think you said
15 yesterday, reviewed roughly three hundred cases, probably
16 more than that?

17 A. Yes, but I didn't charge initially and I see many cases
18 where I never get compensated. I get records I review, I
19 send off an initial report and it goes blank, never hear
20 again.

21 Q. You testified roughly seventy times?

22 A. About seventy times.

23 Q. So you're compensated for however long those cases
24 lasted and however long you were there, a thousand dollars a
25 day?

1 A. No. Not a day. Just for time away from home.

2 Q. Just for the time away from home? So a thousand dollars
3 covers all three days you were here?

4 A. Yes.

5 THE COURT: Move onto something else.

6 Q. Now, you did your initial training, your medical school
7 back in, I guess it was, 1970 to 1974?

8 A. Correct.

9 Q. That was before MRI became a standard diagnostic tool,
10 wasn't it?

11 A. We didn't use it that much at that point. Now, we had
12 CTs and stuff in my neonatology residency, neonatology
13 rotation had stuff like that.

14 Q. But the first MRIs weren't commercially available until
15 the eighty's?

16 A. Probably not and I didn't start encountering them until
17 after my military time.

18 Q. And I think you testified yesterday, the last time you
19 actually treated a child under two was when you were in the
20 military? In Germany?

21 A. Yes. I was the primary treating responsible,
22 twenty-four-seven, diaper changing, ear infection,
23 pediatrician was in 1980.

24 Q. Ok. And that would have been thirty-five years ago?

25 A. Correct.

1 Q. And since then you've worked primarily with eighteen to
2 twenty-two year olds?

3 A. At the University of Alabama Student Health Center.

4 Q. And the student health center is that, just for lack of
5 a better word, the doctor's office for the students at
6 Alabama?

7 A. Correct. I am not a professor. I don't teach medical
8 students. We just see the sprained ankles, the runny noses,
9 the flu, ear infections, urinary tract infections, the
10 fractures that come through the door of the active college
11 kids.

12 Q. And in your work at the student medical center, you're
13 still doing that part-time, correct?

14 A. Correct. I worked all last week and I work again this
15 weekend.

16 Q. How many patients would you say you see in any given
17 week?

18 A. Well, when you are full-time you are probably averaging
19 twenty, twenty-five a day. On part-time the week doesn't --
20 if I work only Sunday, I may only see twelve or fifteen if
21 the game is in town. If the game is not in town, it's
22 Saturday and Sunday. It's hard to give you a number.

23 Q. And I guess it depends if something is going around
24 campus you may see more?

25 A. Absolutely, it's a very flu driven, party driven

1 crowds.

2 Q. If there was a big party you may see, you may need some
3 more aspirin? And you haven't treated any children
4 suffering from head trauma, since your time in the military,
5 correct?

6 A. Correct and I would comment that most pediatricians, of
7 the active ones, are not treating that. These problems
8 would go to the emergency room or go off to the big
9 hospital. So being a active, engaged, private pediatrician
10 in town is, does not familiarize one with the research and
11 the issues that come up frequently in these cases.

12 Q. Well a pediatrician does follow the child once they've
13 been released from the hospital don't they?

14 A. Correct.

15 Q. And I think in minor's case, her pediatrician here in
16 town is continuing to follow her, correct?

17 A. I would assume so, yes. There were some follow-up,
18 certainly a lot of follow-up with neurosurgery, neurology
19 and ophthalmology and private pediatrics.

20 Q. And all of those follow-up consults, you've reviewed
21 her file, didn't you?

22 A. I reviewed -- I don't think I got too many of the
23 follow-up records. I was requesting them but never really
24 got them. And the follow-up is, I am more concerned about
25 going into the events and the initial unfolding, than the

1 follow-up.

2 Q. But those would have been copied to her pediatrician,
3 to be included in her chart?

4 A. Absolutely, yes. Frequently you find some of the
5 important notes, when I so get follow-up notes, the
6 discharge summaries from the hospitals can be in the private
7 pediatrician's office records.

8 Q. Now Dr. Galaznik, you are not certified in the area of
9 child abuse, not board certified?

10 A. Correct. In 2009 they developed a subspecialty in
11 child abuse pediatrics. I was not interested in becoming
12 board certified in that because, as I said previously, I'm
13 only interested in one little small area of the entire
14 field. These kinds of cases comprise less than one percent
15 of what a full-time child abuse specialist engages in. It's
16 more sexual abuse, neglect issues than these kinds of things
17 and at my age I didn't think I was ready to go back for
18 specialty training.

19 Q. But that's something that was available to you if you
20 wanted to?

21 A. Yes.

22 Q. And you're also, you're not a radiologist?

23 A. Correct.

24 Q. And you're not a neurologist?

25 A. Correct.

- 1 Q. Not a pediatric neurologist?
- 2 A. Correct.
- 3 Q. You're not neurosurgeon?
- 4 A. No.
- 5 Q. You're not a pediatric neurosurgeon?
- 6 A. Correct.
- 7 Q. You're not an ophthalmologist?
- 8 A. Correct.
- 9 Q. Not a pediatric ophthalmologist?
- 10 A. Correct.
- 11 Q. And it's important to distinguish between those
- 12 specialties because it is different treating children and
- 13 adults isn't it?
- 14 A. It can be in some of these areas. But remember the role
- 15 of the pediatrician in a case like this, is that those
- 16 people are the consultants and they write their reports and
- 17 send them to the treating which is the pediatrician. So
- 18 when I look at a record, I try to look at it from the
- 19 perspective of the treating pediatrician. In the hospital
- 20 the ophthalmologist doesn't write orders, radiologist
- 21 doesn't write orders, the neurosurgeon doesn't write orders.
- 22 It is the treating pediatrician. So when functioning or
- 23 looking at a record from the perspective of the pediatric,
- 24 treating pediatrician's point of view, it is his job to try
- 25 to be familiar enough with the reports and their meanings so

1 they can try to relay what the neurosurgeon is saying with
2 what the neurologist is saying. It's his job to be the
3 center of the wheel. I'm not functioning in that role, but
4 in the last 15 years looking at cases and reviewing cases,
5 that is the role I come to them with. The radiologist
6 doesn't write his report for himself. He writes it for the
7 pediatrician. The medical examiner doesn't write the report
8 for himself. He writes it to communicate with the court and
9 other people. So to look at these you have to be familiar
10 with what they are saying and the implications of what they
11 are saying..

12 Q. But the radiologist -- the treating pediatrician does
13 not go back and second guess the radiologist in many cases.

14 A. I would absolutely disagree with you on that.

15 Q. Well, in this case that didn't happen; did it?

16 A. I don't know if it happened or not. But in most cases
17 the standard is that I look at all the films I ever order.
18 Actually, radiology wouldn't look at them until I gave an
19 initial opinion. In the records, the pediatrician at the
20 hospital almost always sit down with the radiologist and
21 interchange between the two. The radiologist cannot go
22 ahead and do more studies, like in this case I was
23 suggesting that an MRV might have been indicated. The
24 radiologist can't order that. He has to tell the
25 pediatrician and the pediatrician has to be convinced. The

1 pediatrician has to write the order to give permission for
2 the radiologist to do the test. So there should be a very
3 close interaction, and actually when a -- that is expected
4 to happen.

5 Q And that is actually what happened in this case,
6 correct?

7 A I don't know how much interaction there was between --
8 but I --

9 Q Well, I thought you said you reviewed her medical
10 records?

11 THE COURT: Wait a minute. Wait a minute. Don't pit
12 the witnesses. The witnesses were sequestered, and so he
13 didn't have the benefit of hearing their testimony. So
14 that's really --

15 MS. WHITE: I'm asking about --

16 THE COURT: Don't pit the witnesses like that. It's
17 not fair.

18 MS. WHITE: I'm asking about his review of the records.
19 What he saw in his review of the records.

20 THE COURT: No, you didn't. And then you interrupted
21 him. Let him finish answering. You're asking these
22 questions.

23 A I did not look at these records specifically to see if
24 Dr. Henderson sat down with Dr. Rhinars or whether they all
25 sat down with Dr. Cowley and had a big round table

1 discussion. I can say the standard of care is it usually
2 happens, and in other cases you will see notes where they
3 say, you know, reviewed all imaging. I don't know if that
4 did specifically happen in this case or did not specifically
5 happen in this case.

6 Q You don't recall from your review of the records?

7 A No.

8 Q And going back to the differences in pediatric
9 neurosurgery versus neurosurgery. An infant's brain is very
10 different from an adult's brain, isn't it?

11 A It is. It has less myelinization, and, of course, it's
12 rapidly growing. It has the ability to be plastic, and that
13 means that one area can take over from another area. If I
14 get a stroke and it knocks out this side of my brain then
15 nothing good is going to happen after that from there. In
16 little babies you can -- we see cases where almost half the
17 brain gets destroyed and six months later both arms are
18 moving again. So there is a difference there.

19 Q And children are remarkably resilient as compared to
20 adults, aren't they?

21 A They can be, yes.

22 Q And I think I touched on this a minute ago. But when
23 you were in your residency and you were going through your
24 training, CT was coming along?

25 A Yes, but not very much.

1 Q And MRI was not used as a diagnostic --

2 A I don't remember MRI in my training.

3 Q And in both of those is it fair to say have advanced
4 enormously over the past 20 years?

5 A Stunningly.

6 Q And so, you received no training -- no formal training
7 in reading either of those --

8 A Correct.

9 Q -- in medical school?

10 A Just reviewing all the imaging in every case I look at.
11 And then I have access to colleagues who are pediatric
12 radiologists, and I learn from them, go to their meetings,
13 read their articles, ask them questions. That's kind of an
14 on-the-job learning -- learning experience.

15 Q So mainly things that other people -- let me withdraw
16 that question. Dr. Galaznik, when you see patients in the
17 medical center they actually come in, don't they?

18 A Oh, yes. We are -- we are an outpatient facility. We
19 send -- have a big emergency room across the street. If
20 something comes in, you know, life-threatening we don't want
21 anybody in our clinic. We will get them quickly across the
22 street.

23 Q And they don't call in and say I have this symptom,
24 this symptom and this symptom, what's wrong with me? You
25 actually have to physically put your hands on them and see

1 them in person, correct?

2 A Yes, correct. In my functioning I sit in my office and
3 patients -- patients come through me, and we don't have --
4 there's health educators in the building. I'm sure they're
5 getting those kind of outreach calls. But what I see is the
6 patient has come in requesting to be seen.

7 Q You talked a lot about various studies yesterday.

8 Would it be fair, Dr. Galaznik to say that for every study
9 saying X in this field there's a study saying Y?

10 A That's very fair, particularly in an area as
11 controversial as this. There are -- and since nothing in
12 medicine -- medical knowledge is always evolving, there is
13 one set of ideas, and if it's ever going to change you have
14 to have the challenging set. And so, one is always looking
15 at literature to see the support behind it, the experimental
16 efforts or clinical efforts to validate a concept, and it's
17 not absolute. Never has been.

18 Q And that's the way a lot of these tests have evolved in
19 this area to be done? Like a Von Willebrand test that's
20 commonly done now in a case of suspected abusive head
21 trauma?

22 A Correct.

23 Q It actually arose in a legal setting?

24 A I don't know if it did in a legal setting or not. I
25 just know it's a test to screen for bleeding disorders. It

1 has become standard of care, and in these cases there's a
2 whole panel and there's a whole position statement written
3 on appropriate ones to order.

4 Q Since you're bringing up position statements, you
5 talked yesterday about the position statement from the
6 American Academy of Pediatrics.

7 A Which one?

8 Q The one from 2009, I believe.

9 A Yes.

10 Q Christian and Bach?

11 A Yes.

12 Q You're familiar with that?

13 A Yes.

14 Q So I guess you're familiar that it says, "Shaking was
15 the most common --

16 THE COURT: No. You've got to give him a copy of it.
17 If it's from a treatise he gets a copy of it.

18 MS. WHITE: May I stand up here with him?

19 THE COURT: Oh, yeah, yeah. Yeah, that's fine.

20 MR. WISE: I've got an extra copy, if you want it.

21 MS. WHITE: Let me hand him his copy so I'll have my
22 notes.

23 MR. WISE: Let's make sure we've got the same ones.

24 THE WITNESS: They better be the same, or the Academy's
25 got problems.

1 Q Is this the most recent position statement?

2 A The position statement comes out -- come out focusing
3 on different issues. The 2001 was Shaken Baby Syndrome,
4 report. The 2007 was evaluation of physical injury. This
5 one is titled Abusive Head Trauma in Infants and Children.
6 2010 was -- there's one from '09 about radiology, '10 about
7 ophthalmology, '13 about bleeding disorders, '14 about
8 fractures, '15 is a redo of '07 of working things up. So
9 your question is --

10 Q Is this the most recent in this area?

11 A This area was -- this was reaffirmed in 2013.

12 Q And the position statement states -- and I'm looking in
13 the history. On my copy it's down towards the bottom. I
14 think you have a different copy.

15 A Yes.

16 Q "Shaking was the most commonly reported mechanism of
17 injury describing a series of AHT, abusive head trauma,
18 cases in which perpetrators admitted abuse. Shaking alone
19 was described in 32 cases, and only four of the victims
20 showed evidence of impact injury." That's in the official
21 position statement of the American Academy?

22 A That's reporting research that they chose to cite, yes.

23 Q And it also says, "In severe and fatal cases, cervical
24 spine injury can sometimes be a factor."

25 A Correct. I didn't follow your wording but I'm sure it

1 says that. Where are you reading that from? If you can
2 point to me.

3 Q It's a few sentences down.

4 A Because I don't think mine's underlined like yours is.

5 Q It begins, "In severe and fatal cases, cervical spine
6 injury can sometimes be found."

7 A I'm sure it says that but I don't quite see it yet.
8 Can you point it to me for me? It would be faster.

9 Q Just a few lines down where I was reading a second ago.

10 A I'm a slow reader.

11 Q Here we are.

12 A "In severe and fatal cases, concomitant cervical spine
13 injury can sometimes be found," citing article -- reference
14 to 12, yes.

15 Q And that's in the policy statement from the American
16 Academy of Pediatrics?

17 A That's the statement they make. That is -- that is an
18 article they chose to cite in pulling -- a position
19 statement is not new research. It is a compilation of
20 research that's out there that the Committee on Child Abuse
21 and Neglect chose to pull together. And it's always
22 changing, and they made the selection so that -- and just
23 above it they talk about the biomechanical research which
24 both supported and not supported. And so, yes, it's trying
25 to just bring things together.

1 Q And some of that biomechanical research there's been a
2 lot of criticism of the models that were used in the
3 biomechanical research. Isn't that true?

4 A There's criticism of that. But again, the auto
5 industry, all the crash testing, all the car seat data, the
6 football injury data is built on this kind of testing. You
7 can always be critical of it, but -- yeah, but it is what we
8 have in that area.

9 Q Well, Duhaime in her study, she was using models that
10 weighed I think it was 10 pounds?

11 A Ten pounds, yes.

12 Q And they had one of three different kind of necks,
13 didn't they?

14 A Correct.

15 Q They were not anatomically correct?

16 A Absolutely not.

17 Q There was a metal-hinged neck; is that correct?

18 A And a rubber hose neck, I believe, and a softer rubber
19 hose neck.

20 Q Kind of a moderate resistance --

21 A Right.

22 Q -- and a low resistance rubber neck? Are you aware --

23 A But the Jenny efforts tried to get a really good neck.
24 And then beyond that, Wolfson did computer modeling tweaking
25 the neck. So you have one joint or two joints or four

1 joints would you expect to get higher or lower numbers. And
2 so -- and so the Wolfson biomechanical modeling out of 2005
3 concluded that you can make a model -- any improvements you
4 make is going to give you lower numbers was the conclusion.

5 Q But not all of the studies have shown that, have they?

6 A I don't know which ones you're referring to.

7 Q Well, I was referring to the story by Cory and Jones.

8 A Cory and Jones is interesting, because what they state
9 is, is Cory did shaking like this (indicating), and didn't
10 really do much better. And then he introduced what he
11 called a gravity assisted shake where he started up here
12 (indicating) going down towards the floor and jerked up and
13 managed to get some higher numbers, and concluded that it
14 cannot yet be said that shaking cannot cause. He didn't
15 make an absolute ascertain that it can. So the Cory results
16 out of 2003, I think, are kind of equivocal. When I
17 participated in shaking research with the models, to do that
18 gravity assisted shake almost pulls you off your feet,
19 unless the infant is very small. I was very surprised. It
20 was very difficult to actually do.

21 Q And Duhaime's study it was also a single acceleration
22 and deceleration, right?

23 A In Duhaime's study she was simply measuring
24 acceleration, whether it was single or repetitive. She was
25 just seeing what the maximum could be done. But the Duhaime

1 study is '87. The Prang -- she was on the Prang study.
2 Prang, Duhaime 2003. I don't know which one you're looking
3 at there. That's where they actually tried to get the
4 highest numbers possible and came up with the 2,600. Again,
5 that was again repetitive shaking.

6 Q Are you aware, Dr. Galaznik that Dr. Duhaime later
7 publically apologized for that study?

8 A Which study?

9 Q Twenty years after the first study. I believe it was
10 the '87. Are you aware that she publically apologized?

11 A No. What I'm aware of, in 2004, in response to a
12 challenge from Dr. Uscinski, Duhaime and her authors said
13 that that is true, that there is no evidence to support that
14 shaking can do this, and we would recommend that the term or
15 any term referring to the shaking mechanism be dropped.
16 That was a 2004 response.

17 Q So you're not aware that she apologized for inaccurate
18 citings of her study?

19 A Inaccurate citings would imply that she might apologize
20 that people had misapplied her efforts in the citing of her
21 efforts. It doesn't mean that she's apologizing for her
22 research or positions that she has taken.

23 Q That's what I'm asking.

24 A I didn't quite -- I want to make sure, because it was a
25 little --

1 Q Sometimes I don't make a lot of sense. If I ask
2 something, just ask me to clarify it. Now, there have been
3 a lot of clinical studies done in this area, too, haven't
4 there?

5 A Yes. The trouble clinical studies are is that they are
6 subjective in that you can take 100 people and presume they
7 had a problem and look at their symptoms, and then if your
8 presumption is right about what caused their symptoms, your
9 research is valid. I have trouble with the clinical studies
10 in this area --

11 Q Well, and I'm sorry to stop you.

12 A Okay. I'm sorry.

13 Q I just want to clarify what we're talking about on
14 clinical studies. We're talking about a case where they
15 look at 100 cases of confessed shaken baby, or abusive head
16 trauma, and then they go back and look and see what symptoms
17 those children had. Is that your understanding --

18 A Yes. And going with that point, the problem with that
19 is, is that they cannot define a shake. So if you ask a
20 parent did you shake the child and they say yes, I did this
21 (indicating), well, is that an abusive shake or non-abusive
22 shake. The people writing those, all they say is it must
23 have been so abusive to cause these injuries that anyone
24 would recognize that it was abusive. But they're not basing
25 that on any science.

1 Q Well, isn't it true that they hand the perpetrators a
2 model and say show us what you did?

3 A The efforts where they have done that, they hand the
4 perpetrator -- or the alleged perpetrator like two and three
5 pound models, and then they have led them to talk about
6 shaking. I have yet to encounter a case with a
7 spontaneously offered confession of abusive shaking. What
8 you find, I see in records, are read technique
9 interrogations where it is suggested no other explanation is
10 accepted and -- and/or it's part of plea deal bargaining
11 that if you say -- if you say you did it, we will do this.
12 So I don't think that the confession literature is a valid
13 demonstration to confirm the proof of science. I would also
14 say -- go ahead. I'm sorry.

15 Q Well, no. Go on and --

16 A You know, I am not saying that shaking is benign. I
17 think you could certainly kill a child by shaking. But --
18 and at one point I made about this article is that they have
19 not defined injury. In 2001 injury was retinal hemorrhages,
20 subdural bleeding and brain injury. By 2009 this has simply
21 said injury, not defined it any further. Yes, I think you
22 could -- you could truly injure a child by abusive shaking,
23 but what it would look like clinically, you know, would be
24 so predictable, whether it would cause retinal hemorrhaging,
25 subdural bleeding and brain injury without anything else, I

1 don't see that this has validated that.

2 Q But you do agree that you can violently injure a child
3 by shaking them?

4 A I don't -- yes. I think you could snap his neck. And
5 I think, in my experience in the lab, the amount of force in
6 my hands I think I would crush ribs in the process.

7 Q And your experience is from the lab, correct?

8 A Yes. I've had the opportunity to go into professional
9 grade biomechanical laboratory and participate in shaking
10 experiments, and it was really remarkable how difficult it
11 became as the model approached higher weights. You get up
12 to 15, 18 pounds and you're shaking about as much as the
13 model you're trying to shake.

14 Q So even to do this (demonstrating) for 30 seconds is to
15 be difficult?

16 A Oh, you know, we were using a -- I think the model was
17 like 20 pounds. But five or 10 seconds and you are --
18 you're having difficulty even holding it in front of you to
19 do that shaking.

20 Q So what you would classify even as a resuscitative
21 shake for 30 seconds --

22 A You know, you can do this (demonstrating) because you
23 can hold the thing near you. That's -- you've got some
24 support. You try to hold 15 --

25 Q Right here (demonstrating)?

1 A -- 15 pounds in front of you, and you're going up and
2 down, up and down is not the action. It's forward and back
3 is the action.

4 Q Well, I'm asking -- in this case the Defendant
5 indicated this (demonstrating) for 30 seconds. This would
6 be difficult for 30 seconds, correct?

7 A You know, it's difficult at 13 pounds. Whether he
8 could do it -- and how accurate the 30 seconds is I don't
9 know.

10 Q You were retained in this case back in -- I'm not
11 exactly certain, February to April of --

12 A I have to go back to my records. I don't know. It's
13 in my records, but I don't have my records to tell you the
14 answer to that.

15 Q Sometime back in the spring?

16 A I would presume so. But I've got cases that I was
17 retained four years ago on that are still sitting on my
18 desk.

19 Q Well, I guess, are you aware that this case had been
20 rescheduled from May --

21 A I believe so, yes. Yes.

22 Q And you prepared what was shared with me back in May.
23 Kind of a preliminary report?

24 A I believe so, yes.

25 Q And it looks like it's a very rough draft; is that

1 correct?

2 A I can't see it from here, but I -- yes. As I go
3 through and I make notes and I submit notes and I remodify
4 and I find typos forever that I'm always trying to clear up.

5 Q And then your preliminary report you didn't really
6 mention the possibility of seizures as having caused any of
7 this, did you?

8 A I was requesting the -- I don't remember if I did or
9 didn't, frankly. I did not receive -- I did not receive, to
10 my knowledge, the report of the second MRI until recently
11 and -- which talked about the changes in the splenium corpus
12 callosum area being, you know, with seizures. I did not
13 receive actually the full record from Greenville until
14 recently, so I was recently just going back through and
15 seeing the difficulty they had with the emergents of
16 seizures on the 18th. So I was unaware of that kind of
17 history back then. In the early -- in the earlier reports I
18 would say missing this data, missing this data, missing
19 things.

20 Q And there was nothing in your earlier report about
21 venous thrombosis?

22 A I don't recall.

23 Q And you were just talking about the MRI that showed
24 what could be related to the seizure activity. Wasn't there
25 a little bit of blood actually touching the brain?

1 A Yes, back there. It was on the right posterior, a
2 small amount of subarachnoid blood in that area, which we
3 talked about previously would be very irritating to the
4 brain.

5 Q And then that can cause the seizures?

6 A Set off seizures.

7 Q And the first time that shows up is on a subsequent MR
8 -- or not on a --

9 A No, no, no. I think that's on the -- that's on the CT
10 scan that we showed yesterday of the -- of the Greenville CT
11 scan.

12 Q So it's not the 16th or the 17th? It's --

13 A It is the 17th.

14 Q The CT is from the 17th?

15 A I believe. I mean, yes, I think so. I think I pointed
16 to it yesterday on a slide. It's in my PowerPoint.

17 Q So you issued your preliminary report back when you
18 were first retained in this case; is that correct, or you
19 provided him -- Mr. Wise, with some notes of your thoughts
20 and what else you needed to get?

21 A Correct, preliminary notes. And if you look -- you
22 have the PDF of it. But, you know, it will be edit two,
23 edit five, edit seven. Sometimes I'm up to edit 11 or 12
24 before something gets to trial.

25 Q And then you didn't provide him with anything else

1 written until you came into Greenwood Tuesday, correct?

2 A I do not recall.

3 Q Or a written may be a wrong term. You provided him
4 with, I guess, four different PowerPoints Tuesday night?

5 A Correct. I sent some preliminary-ish versions of those
6 previously, I believe. Like I said, every time I go through
7 a case I'm modifying things, and whether I send it off then
8 or not. I don't know how much I provided to him before this
9 case was originally scheduled back in May.

10 Q Would you agree with me, Doctor, that it's important
11 when you're assessing a patient not to make any assumptions
12 on the front end?

13 A I think it is -- it's probably good to not make too
14 many assumptions on the front end. You've got to look at a
15 case, and I'm coming always at a case from hindsight. It's
16 hard to really second guess the doctor looking at it forward
17 as opposed to I can look at a case and say, oh, you ended up
18 with this, and then go back and match.

19 Q But you as a treating physician, if someone comes in
20 with a certain set of symptoms you would never assume before
21 you ever saw them what was causing those symptoms?

22 A You try not to. You try to keep an open mind. In the
23 middle of flu season it's kind of hard to keep an open mind.

24 Q But you want to make your diagnosis fit your symptoms,
25 not your symptoms fit your diagnosis; is that correct?

1 A Diagnosis fit the -- yes. And you want to -- right. I
2 agree with that.

3 Q And I noticed yesterday when you pulled up your
4 PowerPoints for the jury you first came up with -- this
5 cortical vein thrombosis one was first created in 2011?

6 A The educational one, yes.

7 Q And then I noticed, and we kind of skipped past it real
8 quickly, you had a slide to insert the specifics of the
9 current case?

10 A Yes. In my -- doing these kind of cases there are
11 basic problems that recur over and over again. So that is
12 an educational PowerPoint that I put together both to
13 educate lawyers -- you know, I get a case. I want to be
14 able to show them something so I can try to tell them what
15 were being looked for. And in that I had a slot that I
16 could -- I could insert the images from a specific case, if
17 necessary. I think it's far cleaner to totally separate or
18 to try to build it into one PowerPoint.

19 Q So you can make a current case fit your PowerPoint?

20 A No. I can make -- I can insert appropriate images to
21 go along with the PowerPoint. I have one for chronic
22 subdural. I have one for human infant shaking data.
23 Because I need to educate. You can't -- you can't make a
24 decision if you don't have some kind of background.

25 Q Let me ask you about that, Doctor. Your -- your

1 opinion yesterday was that this was chronic subdural.

2 Where's that PowerPoint?

3 A I chose not to show it to you. I'll be glad to show
4 it. I've got it on my computer.

5 Q Or was this the diagnosis until yesterday morning and
6 then it changed yesterday afternoon?

7 A That's not correct. I have been talking --

8 Q Continue, Doctor.

9 A I've been talking chronic subdural from the word go. I
10 believe I did submit a educational PowerPoint on chronic
11 subdural to Mr. Wise. Whether we chose to show it today or
12 whether we felt that it was not necessary is based on the
13 Rook's article, which we did cite yesterday repeatedly.

14 Q So you felt that your -- your actual opinion, it was
15 not necessary to educate this jury on?

16 A No. It was my educational -- I chose to -- you know,
17 I've got -- I've got a retinal hemorrhaging PowerPoint.
18 I've got a shaking PowerPoint. I've got a PowerPoint --
19 I've got about 10 or 12, 15 educational PowerPoints. I've
20 got a PowerPoint on the evolution of the American Academy of
21 Pediatric's position statements which I've lectured on. So
22 it's just how much time you want to spend in front of the
23 jury with me trying to educate them.

24 Q Your next slide on this, insert imaging and autopsy
25 photos of the current case. You are aware this child lived,

1 aren't you?

2 A I'm aware this child lived. I think that was
3 originally put together about an project case out of Montana
4 in which the child did not live.

5 Q But this is actually not your opinion of what happened
6 in this case, is it?

7 A My opinion in this case is that the imaging findings
8 from the presentation would suggest that the appropriate
9 workup of an enhanced MRV should have been done, and that
10 was a diagnosis which fit the clinical presentation and was
11 almost -- there were suggestions of it on the imaging and
12 that it should have been ruled out.

13 Q But your actual opinion yesterday was that she had
14 chronic subdural hematomas which led to a seizure activity;
15 is that correct?

16 A My opinion yesterday was, is that I think this child
17 had chronic subdural. I think that's undeniable. I think
18 chronic subdurals can present 60 percent of the time with
19 seizures, so that if this child's initial symptoms were a
20 seizure, a chronic subdural could account for it. I've not
21 said that actually was the cause of whatever happened on the
22 16th. The chart indicated there was a history almost like
23 gagging, choking shortly after feeding. Infants can reflux
24 up, choke and aspirate and it could be indistinguishable
25 from a seizure. And I have no way -- no way whatsoever of

1 trying to distinguish those two things as the -- as the
2 primary event, we call it, to get this train rolling.
3 Either one of those could apply. Either one of those could
4 have been a primary seizure. A choking event could have led
5 to hypoxia which could then have quickly turned into a
6 seizure all in a matter of minutes. I can't distinguish
7 that. I can say that this child -- the imaging looks to me
8 pretty clear that the child had older subdural collections.
9 Could be weeks or months old. And that those are recognized
10 to re-bleed so that -- so that does the new bleeding prove
11 trauma on the 16th. And my answer to that it does not prove
12 that because you have re-bleeding in February with no
13 trauma. So chronic subdural - you can't just look at the
14 re-bleeding, or the new bleeding, and say, aha, this proves
15 trauma on the 16th. And the aging of the newer blood that
16 was on the CT scans was consistent with being, you know, one
17 to three, four days old, so you don't know that it happened
18 on the 16th. What you know is the first recognized symptom
19 was on the father's watch on the 16th.

20 Q Well, the radiology report from the 16th on the CT
21 scan, the radiologist felt that it was the fluid collections
22 were likely related to prominent subdural spaces, didn't it?

23 A Read that again? Are you --

24 THE COURT: Show it to him, now.

25 A Is that quoting?

1 Q This is the radiology report from the 16th, and I'm
2 looking at the bottom paragraph.

3 A Impression. "A subdural hematoma is adjacent to the
4 right temporal lobe and posterior to the right parietal
5 lobe." Okay. That's the white stuff you see. That's acute
6 -- white is acute. Acute can be one to three -- one to
7 seven to 10 days old. Then prominent bilateral anterior
8 subdural C-S-F, that's water density collections, are --
9 that's the other stuff all up front, are nonspecific, but
10 likely related to prominent subdural spaces. And I pointed
11 out how it was dark next to the brain and a different color
12 close to the skull implying that it's not all subarachnoid.
13 Less likely is a cystic hygroma, but chronic subdural -
14 chronic subdurals could appear similar. So, yeah, that's --

15 Q So he thought it was less likely to be a chronic
16 subdural, although it could be appear similar? Is that a --

17 A This -- the white stuff back here, that's acute blood.
18 The second half of that he's talking about these large
19 collections up here that are in the subdural - it looks like
20 it's in the subdural space. And the nomenclature between
21 subdural hematoma and subdural hygroma I've yet to hear
22 great -- a great definition of that. Hygroma means water
23 filled. Chronic subdurals become water filled. It becomes
24 confusing. I think the MRI imaging, you know, confirms
25 chronic process up there.

1 Q Now, she had no symptoms -- minor had no symptoms
2 relating to a chronic subdural hematoma, correct?

3 A Correct. Because remember a chronic subdural does not
4 necessarily injure the brain, and it does not necessarily
5 require any kind of injury to have arisen. So that almost
6 by definition a child or an infant who is discovered to have
7 a chronic subdural collection hematoma, effusion, hygroma,
8 whatever term you want to apply to it, would almost by
9 definition had to have been asymptomatic for weeks or it
10 would have possibly recognized. If it caused symptoms, it
11 should have been recognized.

12 Q Well, usually the way these things are recognized is an
13 infant who has a head growing larger than it should be?

14 A That is one way it's recognized. But if you look at
15 the Tealdata out of 1968 before CT and MRI only 40 percent
16 of the cases that he was -- a neurosurgeon was diagnosing
17 actually had a big head. So the -- I think if you see a
18 rapidly growing head or a disproportionately large head it
19 is a presentation. But in the absence of a big head, or a
20 large head, if you then have a presentation that gets you to
21 a CT scan and an MRI that documents the process you can't
22 say that it hadn't been there for a long time before.

23 Q But minor was not vomiting?

24 A No. She had a history of reflux, but how violent --
25 and a lot of babies are spitters. It's what you call a

1 spitter versus a reflux or vomiter. That's a hard -- that's
2 a hard spectrum to dissect.

3 Q And she was acting normally by all accounts?

4 A I had no knowledge that she was inappropriate before
5 this presentation.

6 Q And no seizures had been reported before this?

7 A No.

8 Q And she actually had a smaller than normal head, didn't
9 she?

10 A That's my -- yes, which is surprising. But then you do
11 the studies and you see the finding.

12 Q And after this injury her head size actually dropped
13 off the growth chart?

14 A And then I don't know that I ever got, you know,
15 subsequently. Certainly by the CT of the February, those
16 collections were huge. Oh, they were probably taken up --
17 you know, if you actually do the approximation of math,
18 probably, you know, 30 percent of the volume inside her
19 skull was just water.

20 Q Her skull was actually measuring much smaller than it
21 should have been?

22 A And still, you know. I mean, her brain was really
23 small. But we all don't have the same size brain.

24 Q And there was concern at the time that her brain was
25 not growing the way it should?

1 A Should be, yes.

2 Q Can you see the TV from where you're sitting?

3 A No, I really can't, I don't believe.

4 MS. WHITE: Can I have him step down, please?

5 THE COURT: Sure. I may step down, too. I did
6 yesterday because it's --

7 THE WITNESS: I better get some glasses that might let
8 me see, too.

9 THE COURT: These few feet make a difference.

10 MS. WHITE: I know there's an angle here that makes it
11 hard to see.

12 (Whereupon, the witness steps down from the witness
13 stand.)

14 Q I'm going to show you what's been marked as State's
15 Exhibit 12. You would agree with me, Doctor, that these
16 show retinal hemorrhages?

17 A Yes.

18 Q And multilayered retinal hemorrhages?

19 A Yes.

20 Q And they're extending out into the periphery?

21 A I'm not sure I can see that.

22 Q And there's too many to count, aren't there?

23 A That's what you said, yes.

24 Q And I'll show you also State's Exhibit 10. There's too
25 many hemorrhages to count?

1 A There's a lot of hemorrhages there, yes, but I've seen
2 more.

3 Q Doctor, can you speak up a little bit.

4 A Oh, yes.

5 Q I think that Ms. Scott is having trouble.

6 A Those are retinal hemorrhages and there are too many to
7 count. I've seen far worse in pictures, but those are
8 retinal hemorrhages.

9 Q You've also seen far better?

10 A Yes.

11 Q And this type of bilateral multilayered retinal
12 hemorrhages is not caused by seizure, is it?

13 A I don't know of any report that says it's caused by
14 seizures.

15 Q And it's not caused by a chronic subdural hematoma, is
16 it?

17 A I can't say that. I can't answer that in the
18 affirmative. I can say that chronic subdurals 50 percent
19 have retinal hemorrhaging. The question is --

20 Q Well, will they have retinal hemorrhaging to this
21 extent?

22 A I don't know of anyone who accepts that, because up
23 until 2010 everyone who's had these kind of retinal
24 hemorrhages there was a presumption, a presumption made that
25 only shaking could cause that. Since 2010 we have the human

1 data with the animal data which would suggest we have no
2 valid evidence to confirm that abusive shaking can cause any
3 grossly visible retinal hemorrhages. So what that calls
4 into question is for the last 30 years when everyone has
5 seen these retinal hemorrhages and made a presumption that
6 only shaking can do this, given the human data that we now
7 have and the piglet and the sheep data that we now have, we
8 have no proof that the assertion of the last 30 years was
9 valid. It has not been confirmed. It could have been an
10 invalid statement made in courts across this country for the
11 last 30 years, that could be false.

12 Q Dr. Galaznik, in the clinical studies of children who
13 have been ejected from automobiles, they don't have that
14 pattern of injury, do they?

15 A I don't know about what study you're talking about. I
16 know that impact injury can cause extensive retinal
17 hemorrhaging.

18 MS. WHITE: You can have a seat.

19 (Whereupon, the witness returns to the witness stand.)

20 Q You mentioned yesterday a study from Benenbaum and
21 Coats?

22 A Correct.

23 Q And in that study they -- there was a single shake in
24 one of three directions, right?

25 A There was a massive acceleration followed by a massive

1 deceleration, so I would say it was two -- two events, all
2 within less than 15,000th of a second.

3 Q And this is the piglet study?

4 A Yes.

5 Q And 73 percent of the piglets were found to have
6 retinal hemorrhages after a single
7 acceleration/deceleration, didn't they?

8 A That's not correct. You misstated that, to my
9 knowledge. What they found was, and I've talked to these
10 folks in person, they found hemorrhage in -- microscopic
11 hemorrhage in the ciliary body. Now, if this is an eyeball,
12 a round eyeball, and this is the nerve coming out, and this
13 is the retina like the film over the back of the eyeball,
14 and this is the vitreous, and up front you have the cornea,
15 and then you have the colored part of your eye with the
16 pupil. Immediately behind the colored part of the eye is
17 what's called the ciliary body and it is excreting a watery
18 like fluid which then comes out through your pupil, fills up
19 behind the cornea and then drains out some little canals at
20 the corner of the eye. And what they found was microscopic
21 hemorrhaging in the ciliary body in 70 percent. They also
22 found hemorrhaging between the cornea and the iris called a
23 hyphema, or anterior chamber, in about 11 percent, and they
24 also found some hemorrhaging right at the very junction
25 between the anterior edge of the retina and the ciliary body

1 which would be an area not visible easily, but it was
2 microscopic. When they actually looked in, like an
3 ophthalmologist would do, they did not document any retinal
4 hemorrhage. Now, the flaw of that, or my challenge to them
5 was specifically, face to face, was that the blood supply to
6 the retina is different from the blood supply to the ciliary
7 body. And my question to them specifically was that you
8 spun these heads at 247 radians per second of rotational
9 velocity, and I asked them did you bother to calculate the
10 hydraulic pressure at the end of a 4.5 centimeter fluid
11 filled tube, which is how far the center of gravity was from
12 the -- from the axis of rotation, because I asked Dr.
13 Margalis, if you calculate the pressure that would be
14 exerted at the distal end of a fluid column, given the
15 levels of rotation -- of angular velocity that you were
16 subjecting these piglets to, I got a blank stare. But when
17 I did the calculations and went to my physics people they
18 said you would get a surge of pressure of up to 400
19 millimeters of mercury in that kind of move. So my question
20 was, given the violence of what you've done to these piglets
21 and the fact that you produced bleeding not where it's
22 reported in these cases but in the ciliary body, how do you
23 know that the bleeding that you saw which was microscopic
24 was not a produce of the violence of the angular
25 acceleration and velocity you subjected these piglets to,

1 and I did not get an answer from them.

2 Q Piglets aren't human children, are they?

3 A No. But they've got the 16 millimeter eyeball and a
4 baby has an 18 millimeter eyeball because I asked Dr.
5 Margalis that directly. And they selected the animal as an
6 appropriate animal model and obtained funding for their
7 research based on it being an appropriate model.

8 Q And again, Doctor, you've never laid eyes on **minor**
9 **minor** have you?

10 A No, I have not. When I come to these cases I
11 specifically am coming to them as a reviewer of record,
12 because, you know, I don't -- at this point, to lay eyes on
13 her would not tell me much about what happened before. I
14 would also go a little further with that, even though you've
15 not asked it. I don't come at records trying to pour
16 through interrogations of witnesses and this kind of thing
17 because it's not my job to come to an ultimate conclusion of
18 whether this is or is not abuse. It's my job to look at the
19 record and try my best to see what is -- as a doctor looking
20 at this from medical tests and medical records, what might
21 he say or not say.

22 Q And to use the football analogy you've used before, I
23 mean, you're sort of Monday morning quarterbacking?

24 A Absolutely. I've got the wisdom of hindsight.

25 Q And you would agree with me, Doctor, from your review

1 of the records, **minor** is doing phenomenally well?

2 A Yes. They said her vision was fine, or at least the
3 last report, and there was no retinal damage at all. You
4 know, the vitreous traction hypothesis of ripping and
5 tearing the retina causing bleeding you would -- you know,
6 you would wonder if that was valid, how would the retina not
7 show scarring and atrophy after such an event. So my
8 understanding is she's doing well.

9 Q And you would agree with me that the doctors treating
10 her obviously did a phenomenal job --

11 A She did well.

12 Q -- in getting her to the point that she's at?

13 A Right. Right.

14 Q And she does have atrophy in her right eye, doesn't
15 she?

16 A I didn't see that in the final report. I thought I saw
17 it somewhere, but her vision was improving. She also had
18 some loss of brain volume back in the back. And whether
19 that -- if this is a case of atrophy, you know, is that
20 because of loss of some neurons back here as opposed to
21 trauma up front. I can't answer that. I thought I read that
22 somewhere and I didn't find it the second time I was
23 reading. And I think the records are almost 3,000 pages,
24 so...

25 Q I don't have my notebook, but it's voluminous.

1 A You see it once and it's gone if you don't write it
2 down and make a note.

3 MS. WHITE: Thank you, Doctor.

4 REDIRECT EXAMINATION

5 BY MR. WISE:

6 Q Just a couple questions. Dr. Galaznik, we have nanny
7 cams today?

8 A Yes, we do.

9 Q Has anyone ever presented to you a nanny cam of a baby
10 being shaken and seriously injured?

11 A. No. Nanny cam videos will surface and create
12 great anxiety. But to my knowledge, every one of those
13 that's ever emerged the infant has been uninjured. The
14 problem with the nanny cam videos are that they're
15 frequently taking images at like four per second as opposed
16 to 16 per second. So suddenly what you can have is a smooth
17 motion of someone just playing with a baby and it makes it
18 look very violent. There was one out of Florida where the -
19 - you didn't even see the baby but you saw the caregiver's
20 arm and it looked like she was doing this (demonstrating).
21 Well, you can do this (demonstrating) all you want and the
22 head of the baby stay perfectly still. You know, just --
23 you know, but it looked violent on the -- now, some nanny
24 cams catch babies, you know, being thrown and this kind of
25 thing. I'm not saying it doesn't happen. But no, there's

1 never been, to my knowledge, a nanny cam captured shaking
2 that had produced any injury.

3 MR. WISE: Thank you.

4 THE COURT: You may step down.

5 MR. WISE: And Defense rests, Your Honor.

6 THE COURT: Anything on rebuttal?

7 MS. WHITE: No, sir.

8 THE COURT: Let's take a couple minutes break. You
9 can't begin to discuss the case, but the lawyers seem to
10 agree that they've presented what they're going to present
11 to you. I need to discuss with them closing arguments, how
12 long I think they should go, my instructions as to what you
13 all are decide, lunch and trying to -- because it's 11:00
14 and I want to kind of get a timeline out. And I may send a
15 question back to you, you know, do you want to do this now,
16 that later. Go to lunch and come to rest later. So you all
17 step in the jury room and have a break. You can't discuss
18 the case quite yet.

19 (Whereupon, the jury exited the courtroom at 11:09
20 a.m.)

21 THE COURT: Let's take a couple minutes break.

22 (Whereupon, a recess was held from 11:09 a.m. to 11:53
23 a.m.)

24 (Whereupon, the jury was released for lunch at 11:53
25 a.m.)

1 THE COURT: We had a brief charge conference in closing
2 arguments. The State is going to open on the law. The
3 Defense has made a request they open in full. You all open
4 on the law or in full. I'd rather you open in full, but you
5 all's call. Mr. Wise, will then close and you'll get a
6 chance to rebut the facts he said in closing argument.

7 We've discussed some of the statute which we agree is
8 very short. I intend -- for the record, is there any
9 request from either side to charge anything lesser included,
10 first of all?

11 MR. WISE: I've not discussed with my client really. I
12 think there has been some degree of a fact issue concerning
13 whether or not there was great bodily injury inflicted by
14 him and you could argue that there was unlawful conduct
15 toward the child.

16 THE COURT: What you all got?

17 MS. WHITE: Your Honor, as to the great bodily injury,
18 I think that the testimony that's in the record is that she
19 had stopped breathing, had to be in intensive care for three
20 weeks. I don't see how that's not a great bodily injury, or
21 something that could have caused -- I mean, she stopped
22 breathing. That could have caused death or serious
23 consequences. I think that's uncontroverted that she
24 stopped breathing.

25 MR. WISE: I think the question is -- I'm not disputing

1 that fact, but whether or not, based upon the medical
2 testimony, whether he did anything to cause that. They
3 could believe -- you know.

4 THE COURT: I mean, is it?

5 MS. WHITE: I guess the question is, is there a factual
6 theory that they could find that he just neglected her as
7 opposed to injured her.

8 THE COURT: Unlawful conduct is conduct, right? I'm
9 not talking about neglect. But is unlawful conduct toward
10 the child would be arguable factually. Not unlawful
11 neglecting.

12 MS. WHITE: I'm trying to mentally work through the --
13 that factual has several -- I think somebody's pulling up,
14 several different elements. I mean, I just don't think
15 there's any testimony that he deprived of her food, left her
16 alone for any length of time.

17 MR. WISE: Unlawful conduct doesn't have to be bad.
18 The unlawful conduct could be, you know, treating the child
19 roughly or improperly. It doesn't have to cause injury. It
20 would be rough treatment without injury.

21 THE COURT: Sub-part -- sub-part two, "Do or cause to
22 be done unlawfully or maliciously any bodily harm to the
23 child so that life or health is endangered."

24 MS. WHITE: And, I guess, if there is a factual
25 argument over the extent of injury then that would be an

1 appropriate charge.

2 THE COURT: I'm kind of inclined to charge that, to be
3 honest with you. In my defense, my law clerk will verify,
4 we started discussing it two days ago, so I didn't bring
5 that up just a moment ago. I've been listening and debating
6 that issue for several days. I think it fits. To factually
7 to be argued, the jury is going to make the decision. But I
8 think unlawful conduct would be an appropriate lesser
9 included considering the testimony and expert testimony
10 facts of this case for the jury to consider. And for that
11 reason I'd probably use a verdict form rather than the
12 indictment.

13 MS. WHITE: And on that would you just be charging the
14 statute, Your Honor?

15 THE COURT: Yes. I mean, part three would not be
16 appropriate. It would be eight and two.

17 MS. WHITE: Your Honor, I think arguably one could
18 apply.

19 THE COURT: If you all want it I'll put it in there. I
20 just -- I try to simplify things, but -- and I say that
21 right there because I don't want to charge anything
22 unnecessary.

23 MR. BROWN: Judge, and I agree with three.

24 THE COURT: So eight, one and two and abandon three,
25 and B, of course, that's the sentencing provisions. Any

1 problem with that, Mr. Wise?

2 MR. WISE: I haven't brought the statute up yet. What
3 is this?

4 THE COURT: Eight is unlawful person charged as
5 accessory or his parent be responsible under the code
6 section two. Number one, placed the child in a reasonable
7 risk of harm affecting his life, physical and mental health
8 or safety. Two, do or cause to be done unlawfully or
9 maliciously any bodily harm to the child such that the life
10 or health of the child is in danger or likely to be in
11 danger. That's one and two.

12 MR. WISE: Okay.

13 THE COURT: We'll do one and two.

14 MR. WISE: I would like to put on the record that I
15 move for a directed verdict.

16 THE COURT: Yes, sir. You can do that.

17 MR. WISE: And it's kind of two-fold and there's a
18 subtle difference between the two. First of all, I don't
19 think the State has proven any substantial circumstantial
20 evidence by which the jury can reasonably conclude, as I
21 mentioned earlier, that Zach Ledford was the only person
22 with the child at the time any injuries were inflicted. The
23 testimony is very clear, not only from my expert but theirs,
24 that the -- in going back, the acute blood, according to Dr.
25 Graham, was 12 to 24 hours old. According to Dr. Troup it's

1 three days old. Dr. Troup was very clear that you can have
2 lucid intervals, have an injury and the injury could have
3 been two to three days old. Dr. Henderson basically agreed
4 with that, but simply said because the report showed the
5 child was not showing symptoms she thinks it happened later,
6 but that doesn't -- even her testimony does not exclude it
7 happening earlier and there being no symptoms. And unless
8 the state can show that Zach Ledford was the only person who
9 could have inflicted this injury, there's simply no evidence
10 for the jury to decide upon.

11 THE COURT: Isn't the direct testimony that he admitted
12 through his statement to the police that he shook the child
13 to some degree?

14 MR. WISE: After the child collapsed, yes.

15 THE COURT: Okay. I mean, that's factual. But that's
16 not going to get by a directed verdict, so...

17 MR. WISE: I don't think that's going to get past
18 because he --

19 THE COURT: I mean, and everything else.

20 MR. WISE: The injury occurred before he shook the
21 child. She went stiff and collapsed and then he shook her.

22 THE COURT: That's under your version of the facts.
23 The State's version is -

24 MR. WISE: No. That's my version of his statement,
25 which is what it was. Secondly, secondly, I move for

1 directed verdict on the grounds that any verdict of guilty
2 would be against the greater weight or preponderance of the
3 evidence considering the Defense testimony also, which is a
4 little different, but I think it's a ground I need to make.

5 THE COURT: I understand both your motions, but I think
6 there's sufficient facts presented, both circumstantially
7 and directly for the case to be presented to the jury. So I
8 understand both grounds, and your record is protected.

9 Does the State have any particular request to charge
10 they want to put on the record?

11 MR. BROWN: Judge, we do have -- I know Mr. Wise has
12 presented -- or passed forward Defendant's requested charge.
13 And, Judge, before I get to that. The State requests, based
14 off of statute 16-3-95, the infliction allowing of great
15 bodily injury upon a child, part A simply says it, "Is
16 unlawful to inflict bodily injury upon a child." End of the
17 statute. And it says, "For purposes of this section great
18 bodily injury means bodily injury which creates a
19 substantial risk of death or which causes serious or
20 permanent disfigurement or protracted loss or impairment of
21 the function of any bodily limb or organ."

22 Judge, citing State vs. Taylor, 323 S.C. 162, and also
23 State vs. Ferguson, 302 S.C. 269. In State vs. Taylor says
24 that, "Our Supreme Court has held the State must show the
25 Defendant was at least criminally negligent if a statute is

1 silent concerning mental state." Here it is out contention
2 that the statute 16-3-95 is silent with regard to concerning
3 the mental state. As it says, "It is unlawful to inflict
4 great bodily injury upon a child." It doesn't go to the
5 mental state of that. And citing State vs. Ferguson it
6 says, "An offense is a common law, and under statutes, which
7 do not disclose a contrary legislative purpose to constitute
8 a crime. The act must be accompanied by a criminal intent
9 or by such negligence or indifferenced duty or the
10 consequences as is regarded by the law as equivalent to a
11 criminal intent."

12 Judge, it would be our proposal to add that last
13 portion of that sentence, "The act must be accompanied by a
14 criminal intent, or by such negligence or indifference to
15 duty, or to consequences as regarded by law as equivalent to
16 a criminal intent," be added to the jury charge to
17 adequately reflect the legislative intent for this, per se,
18 strict liability crime that they provide in the statute.
19 This crime is in the section below, the specific intent
20 crime, would be the homicide by child abuse statute which
21 say, "willfully, unlawfully" but has to have a specific
22 intent that they intended to do that to that child. But I
23 believe this statute is more in line with what Ferguson and
24 Taylor are referring to as more of a strict liability crime
25 where you can't add in such negligence or indifference, or

1 disregard to that child.

2 So, Judge, that would be our request to add in as part
3 of the jury charge.

4 MR. WISE: I have submitted Defense request to charge
5 number one that defines the word willfully which is based
6 upon the fact that he was indicted for willfully and
7 unlawful. And I would point out in Morissette vs. United
8 States, a U.S. Supreme Court decision, and also Staples vs.
9 U.S. They point out very specifically that particularly
10 when you're charged with a serious felony that you have a
11 higher degree of mens rea, and the State has alleged the
12 highest degree of mens rea and willful. And I think they
13 basically elected to prove to the jury he did it willfully,
14 and I think the willful charge that I submitted would be the
15 appropriate charge.

16 MR. BROWN: And, Judge, if you were inclined to add the
17 Defense's requested charge, the State would simply ask to
18 leave out the last two sentences. The first of those
19 sentences, "It is not sufficient that the State prove that
20 he acted negligently, gross neglect or reckless in his
21 action," and also, "Such actions are not willful as alleged
22 in the indictment." I request to have both of those taken
23 out if the Court's inclined to add the rest of the jury
24 charge.

25 THE COURT: My understanding of the requested charge

1 that Mr. Wise has provided, I'm going to add that to my
2 standard charge. I'm going to read the statutes. As I
3 discussed this is going to be the whole section 95, which
4 would be A, B, C, but not D and E. Those are factually
5 appropriate for this case. I would also read my standard
6 criminal intent which we reviewed in chambers, which I've
7 done numerous times and I think all the lawyers are familiar
8 with it. As well as all of Mr. Wise's requested charge
9 except for the last sentence. That's why my -- that's what
10 I believe would be appropriate in this case and that's how
11 I'm going to instruct the jury. Anything else?

12 MR. WISE: Nothing further from the Defense.

13 THE COURT: I'll work on the verdict form. But the
14 likely thing is direct bodily injury statute, guilty or not
15 guilty, the lesser included unlawful conduct, guilty or not
16 guilty, signature line. That's my intent. That would be my
17 image in my mind's eye right now as to what I'll put
18 together for you. And we'll show that to you.

19 I generally like, if I could have it printed out, if
20 you all want it in your hands during closing arguments you
21 ought to be able to have it.

22 Now, I did that one time in a civil case and the lawyer
23 wrote on it. He wrote zero. And the other started writing
24 other numbers, and that's not appropriate. You all don't
25 write on it. You just show this is the form you all have

1 back in the jury -- you all want that, you all got it, but
2 don't write on it. I didn't like that. And the lawyers
3 started showing how the verdict form should be filled out
4 and I had to print up a second copy of it. Anything else?

5 MS. WHITE: No, sir.

6 THE COURT: Did you all pick up that requested charge
7 Mr. Wise handed to me? He had three copies of it. Somebody
8 picked up my copy of it and I've been digging for it.

9 MR. WISE: I've got an extra one.

10 THE COURT: Okay. I've been referring to it. I read
11 it back there in detail and somehow it got away from me.

12 We'll see you all back here in 52 minutes.

13 (Whereupon, a recess was taken from 12:08 p.m. to 1:00
14 p.m.)

15 MR. BROWN: Judge, before we broke for lunch I was
16 going over what we were discussing, the requested charge.
17 Specifically Mr. Wise's requested charge. In addition to
18 the statute which says "It is unlawful to inflict great
19 bodily injury upon a child," Mr. Wise also wanted to
20 include, "To violate the statute the State is required to
21 prove that Zach Ledford acted willfully." And then further,
22 "To act willfully, the State is required to prove that Mr.
23 Ledford knew his act would inflict great bodily injury upon
24 a child." It further states, "It is not sufficient that the
25 State prove that he acted negligently, grossly negligent or

1 reckless in his action."

2 Judge, based on our reading, our understanding of the
3 statute, again, the statute in this case that he's been
4 indicted on and that we presented and gone forward on this
5 trial on says "It is unlawful to inflict great bodily injury
6 upon a child," and endpoint. That's the only thing it says.
7 And going back to cite two cases, South Carolina cases on
8 point here, State vs. Ferguson, 302 S.C. 269 states, of
9 course, "The Legislature, if it so chooses, may make an act
10 or admission a crime regardless of fault. These crimes are
11 referred to calmly as strict liability offenses." Further
12 down the page say, "We held, in State vs. American
13 Agriculture Chemical Company, 118 S.C. 333, An offense at
14 common law and under statutes which do not disclose a
15 contrary legislative purpose constitute a crime. The act
16 must be accompanied but a criminal intent, or by such
17 negligence, or indifference to duty, or to consequences as
18 is regarded by the law as equivalent to a criminal intent."

19 Judge, with -- also point to State vs. Taylor, 323 S.C.
20 162, our Supreme Court has held, "The State must show the
21 Defendant was at least criminally negligent if a statute is
22 silent concerning mental state."

23 Judge, with the proposed instruction, Defendant's
24 request for charge, that request is absolutely against the
25 case law that I've been citing that say -- that states in

1 the proposed request by the Defense, it is not sufficient
2 that the State prove that he acted negligently, grossly
3 negligent or reckless in his action. And, Judge, with that,
4 we believe that it would basically direct the jury to find
5 him not guilty with this charge and it does not -- the
6 charge does not reflect the statute that he's charged with,
7 and what the State has to prove in this case.

8 MR. WISE: In response, and supplementing my previous
9 argument, again I point out that he was indicted for willful
10 violation. They could have left the word willful out and
11 they didn't. The Grand Jury indicted him for willful
12 violation. I go to trial based upon a willful violation.
13 The U.S. Supreme Court in U.S. vs. Cheeks, I will get you
14 that cite in a second, has said, "We describe the term
15 willful as connoting a voluntary intentional violation of a
16 known legal duty," and what that charge gives is a -- it
17 tells the jury it has to be in violation of a known legal
18 duty, and that's the exact quote -- that's the exact what
19 the Court has done and said in U.S. vs. Cheeks. And the
20 cite for that is 498 U.S. 192 and it's a 1990 case by the
21 U.S. Supreme Court. So when they elect to allege willful,
22 I'm entitled to charge the jury on what willful means.

23 MR. BROWN: And, Judge, as it's stated usually at the
24 beginning of trial about the indictment, the indictment is
25 not evidence. It's just a charging document to get it to

1 Court. It does have the elements of it's unlawful to
2 inflict great bodily injury to the child. And technically
3 that -- it has that language in there, and it also has
4 statutory number. And I don't believe adding language to
5 that would make this case any different than what the
6 statute really calls for is the specific intent is not
7 required of this as it says in Taylor. It's more of a
8 strict liability case. And with that, revert to the charge
9 that was found in Ferguson as it is citing State v. America
10 -- or American.

11 Judge, one thing that looking at the proposed request
12 by the Defense, as we've already said, the second to the
13 last sentence, "It's not sufficient for the State -- it's
14 not sufficient that the State prove that he acted
15 negligently," so on and so forth. But also the third
16 sentence, "To act willfully the State is required to prove
17 that Mr. Ledford knew his act would inflict great bodily
18 injury to the child." Judge, that statute does not say
19 that. The statute does not require that. The statute
20 simply says it's unlawful to inflict great bodily injury on
21 a child, or to cause great bodily injury on a child..

22 THE COURT: You're reading it one way but, you know, it
23 could be considered ambiguous. You put willful. The State
24 put willful in the indictment. I'm going to charge it not
25 the way you're requesting. I understand your argument, but

1 I'm just not going to do that.

2 MS. WHITE: Your Honor, that being said, having
3 discussed this with Solicitor Stumbo over lunch, the State
4 is looking at S.C. Code 14-3-330 dealing with interlocutory
5 appeals. The State believes that this affects a substantial
6 right that that language essentially does direct a verdict
7 and we will not be able to take an appeal once this jury has
8 reached a verdict. And so, the State is -- it's our
9 intention to appeal that decision and get some guidance on
10 what the charge should be. As much as I hate to do it at
11 this point.

12 THE COURT: I have never been offended by somebody
13 appealing me ever. I was offended when I got appealed and
14 got reversed and they didn't use it in the second trial.
15 That offended me. Why did you go to the trouble of getting
16 me reversed. Show me I'm wrong and then choose not to use
17 it.

18 All right. So where does that leave us?

19 MS. WHITE: I've never done this before.

20 THE COURT: Mr. Wise has. He can tell us how to do it.

21 THE COURT: They're ready to stop and take this up on
22 appeal.

23 MR. WISE: They have to file a notice of intent to
24 appeal before it happens.

25 THE COURT: Get on it, folks. Is there any other

1 finding that I have to make, because I'm not giving the
2 charge technically. We've had a charge conference.

3 MR. WISE: I don't -- I had to come up a while back in
4 a pretrial motion. And no, I don't think there's anything
5 else. It's all on the record. I mean, everything we said
6 in chambers is out here.

7 THE COURT: We have put what we had in chambers. We
8 got that on the record.

9 MR. BROWN: Judge, if we could, just to make sure
10 everything is correct on what the charge would be
11 potentially, if we could have a copy of that, I guess, and
12 put that as an exhibit, just so it's in writing on what
13 would be charged with all that language in there that --
14 that plus what you already intended on charging. Yes, sir.
15 But I think I've covered that with what I've said orally,
16 but I don't know if it would be easier if it was in writing.

17 THE COURT: My concern there is if my instructions as I
18 read them, I don't read them verbatim. I instruct them and
19 I'll look up and talk. And so, I'll give you a copy of what
20 I was going to go by, but it's not --

21 MR. BROWN: Yes, sir.

22 THE COURT: I can't tell you -- I'll tell you this. I
23 do not read it verbatim. I never have. It's just not my
24 style. I come close, but I change words. I have pauses
25 where things are. I add things in. I comment to. So it

1 would not be -- you're more than welcome to a copy of the
2 criminal intent charge.

3 MR. BROWN: Yes, sir.

4 THE COURT: You can have that.

5 MR. WISE: I think just a copy of the whole charge
6 would be fine.

7 MR. BROWN: Yes, sir.

8 MR. WISE: I'm not going to quibble over that. The
9 only thing I would request is that the jury, of course, not
10 be dismissed. They simply be in recess. I will file
11 appropriate response so we can get back here in the next
12 week to 10 days.

13 THE COURT: So we keep the jury maintained per this
14 list.

15 MR. WISE: Yes, sir.

16 THE COURT: Get contact information. Re-summon them
17 upon --

18 MR. WISE: Further instructions from the Court.

19 THE COURT: I've got no problem with that. I'm coming
20 back to Greenwood in two weeks, and then again a number of
21 weeks after --

22 MR. BROWN: And then I guess at that time proceed with
23 closing arguments.

24 THE COURT: Would it be appropriate for me to bring in
25 the jury in and tell them that I've reached a point that I

1 need to get their phone numbers --

2 MR. WISE: Okay.

3 THE COURT: -- contact information. For them to recess
4 until a call back by the Clerk of Court.

5 MR. BROWN: Yes, sir. And I guess how we normally do
6 is making sure nobody -- don't discuss it, and if anybody
7 should contact --

8 THE COURT: And I'm going to tell them --

9 MR. BROWN: Yes, sir.

10 THE COURT: -- upon resuming they're going to be
11 questioned about that.

12 MR. BROWN: Yes, sir.

13 THE COURT: Now, we need to wait on Ms. White to get
14 that notice of intent to file. I think she'll be able to do
15 it fairly quickly.

16 MR. WISE: I think we do, yes.

17 THE COURT: You think we need to wait?

18 MR. WISE: Yes.

19 THE COURT: Okay, we'll wait.

20 MR. WISE: I'm not going to have the jury dismissed
21 until something's been filed with the Court.

22 THE COURT: Fair enough. We're off the record.

23 (Whereupon, a recess was held until 1:41 p.m.)

24 (Whereupon, the jury entered the courtroom at 1:41
25 p.m.)

1 THE COURT: We've been discussing, the lawyers and I,
2 my instructions about the law that's applicable to this case
3 and there's -- the instructions, as I understand it, should
4 be A, B, C, D, but there's some semantical difference in the
5 way I want to charge it and the way the lawyers want me to
6 charge it. They want to get a correct ruling left or right
7 on my charge. For your all's purpose I'll just tell you I
8 think I'm right. And then when we get it done I'm going to
9 tell you I was right either way. But the law gets handed
10 down from Columbia. The only chance for both of these
11 parties to appeal with a verdict is to do it right now, and
12 that's what they want to do. They know what I'm going to
13 say. They want to go ask Columbia, all right, which way,
14 left or right, get a ruling, and that's what you all get.

15 So what we're about to do is adjourn indefinitely.
16 That's why I've got your phone number. We're going to come
17 back when we get a ruling from Columbia.

18 JUROR: You're kidding me?

19 THE COURT: No, sir.

20 JUROR: Suppose we're on vacation or something like
21 that? So, I mean, if you can't reach us something -

22 THE COURT: No. I'm going to be calling -- I'm going
23 to do my best to try and work around the 14 of you all.

24 Now, I hadn't thought about that. But if somebody gets
25 sick and can't come that's why I've got alternates. They'll