

4           though, didn't you?

5   A   Yes.

6   Q   What did you look for?

7   A   Looked for any clothing, any weapons, blood.

8   Q   Did you find any?

9   A   No.

10                 BY MR. GOSSETT: No other questions.

11  -----

12                 BY MR. LOCKWOOD: Nothing further.

13                 WITNESS EXCUSED.

14  -----

15                 BY MR. GOSSETT: The State would call

16                 Dr. Pless.

17  -----

18                 JOHN E. PLESS, called to the witness  
19                 stand as a witness on behalf of the  
20                 State of Indiana, and being first duly  
21                 sworn to testify the truth, the whole  
22                 truth and nothing but the truth re-  
23                 lating to said above-entitled cause,  
24                 testified as follows on EXAMINATION  
25                 IN CHIEF, such examination in chief

Direct Exam.  
John Pless

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4 Q State your name, please.  
5 A John E. Pless, P l e s s.  
6 Q What is your business or occupation?  
7 A I'm a forensic pathologist.  
8 Q Are you licensed to practice medicine in the State of  
9 Indiana?  
10 A Yes.  
11 Q What is your specialty?  
12 A My specialty is pathology with sub-specialty in forensic  
13 pathology.  
14 Q What is forensic pathology?  
15 A Well pathology is a study of disease. A pathologist is  
16 ordinarily a hospital based physician whose in charge of  
17 the hospital laboratory. He manages the technologist who  
18 do the tests on body fluids, to develop laboratory exami-  
19 nations for physicians. He also interprets those tests  
20 for physicians. He examines tissues removed from the  
21 body at surgery as well as perform post mortum examina-  
22 tions to determine the medical factors related to death.  
23 A forensic pathologist is further specialized in dealing  
24 with cause and manner of death often in sudden unexpected  
25 and violent deaths. He's also trained to evaluate injuries

4       scrutiny, develops opinions from them and takes them to  
5       the test of cross examination in the adversary manner.  
6       Q      What training and education have you had since high school  
7       to become a forensic pathologist?  
8       A      I'm a 1963 graduate of the Indiana University School of  
9       Medicine. From '63 through '64 I was a rotating intern  
10      at South Bend Memorial Hospital. From 1964 through 1966  
11      I was employed by the U. S. Army as a research investi-  
12      gator at the Army Chemical Center doing work in toxicology  
13      and clinical pharmacology. From 1966 through 1970 I was  
14      a resident in anatomic and clinical pathology at the  
15      South Bend Medical Foundation Laboratories in South Bend,  
16      Mishawaka and Elkhart. From 1970 through '71 I was a  
17      fellow in forensic pathology at the University of Oklahoma.  
18      From 1971 through 1983 I was employed at Bloomington  
19      Hospital in a group of pathologists and also an Assistant  
20      Professor of Pathology at the Indiana University School  
21      of Medicine in Bloomington. Since 1983 I have been  
22      Professor of Pathology and director of the Forensic  
23      Pathology Division within the Department of Pathology  
24      at the Indiana University Medical Center. And more  
25      recently I have become an associate chairman within that

Direct Exam.  
John Pless

4 pathology.

5 Q And what does it take to become board certified?

6 A A board certification is accomplished after formal train-

7 ing in anatomic and clinical pathology of four years and

8 in forensic pathology of one year and then for each

9 specialty you submit yourself to a day and a half exami-

10 nation.

11 Q What type of examination is that?

12 A It's an examination involving written questions as well

13 as gross and microscopic material which you have to

14 examine and then answer certain questions.

15 Q Do you teach pathology?

16 A Yes, I'm director of the sophomore pathology course for

17 medical students at the Indiana University Medical Center.

18 Q And do you train residents graduated from medical school?

19 A We train residents in pathology at the medical center and

20 in addition we have a fellowship in forensic pathology.

21 Q Do you belong to any professional societies?

22 A Yes.

23 Q And what are those?

24 A I'm a member of the Indiana State Medical Association, the

25 American Medical Association, the Indiana Association of

4       Society of Clinical Pathologists and the American  
5       Association for Automotive Medicine.

6       Q      And have you written any materials that have been  
7           published?

8       A      Yes, I have.

9       Q      Have you testified in this and other Courts?

10      A      Yes, I have.

11      Q      And in what jurisdictions?

12      A      I have testified in approximately sixty of the ninety-  
13       two counties in the State of Indiana. Two counties in  
14       the State of Illinois and one in the State of Kentucky  
15       as well as approximately five counties in the State of  
16       Oklahoma.

17      Q      Now on November the 18th, 1984, did you perform an autopsy  
18       on Peggy Sue Altes?

19      A      Yes.

20      Q      And was her body brought to you?

21      A      Yes, it was.

22      Q      And who identified that body to you?

23      A      Fred Counter, the Hancock County Coroner, as well as Bill  
24       Applegate from the Hancock County Sheriff's Department.

25      Q      Did you get a history from either of them?

4 A Other than the fact that the deceased, Peggy Altes, had  
5 - was last seen on the 12th of November and the body was  
6 discovered on the 17th.

7 Q And that's basically the history that you got?

8 A Yes.

9 Q As you proceeded on your autopsy, what was the first  
10 thing that you did?

11 A The first thing was to examine and photograph the body  
12 exactly as it was delivered to the morgue. Following  
13 initial examination, then the body was searched very  
14 carefully for extraneous material and then that material  
15 was removed and all of the evidence was turned over to  
16 Officer Jerry Warman of the Indianapolis Police Depart-  
17 ment, now employed by the Marion - Indianapolis Marion  
18 County Forensic Services Agency.

19 Q Okay. What items were turned over to Jerry Warman?

20 A There were specimens of liquid blood from the body, finger-  
21 nail scrapings, head and public hair scrapings as well as  
22 some fly eggs from the head. Hair that was found wrapped  
23 around the left middle finger. Hair found around the left  
24 index finger. Hair from the left upper shoulder and  
25 swabs of a material which we found that was florescent by

4       the vagina.  
5   Q   I'll hand you what is marked for identification - let me  
6       see if I can get 'em in some kind of order, I believe  
7       State's Exhibit 17 through 25, and have you had a chance  
8       to examine these?  
9   A   Yes.  
10   Q   And do they fairly and accurately portray the scene of  
11      your autopsy on November the 18th, 1984?  
12   A   Yes, they do.  
13   Q   And are those pictures taken of Peggy Sue Altes?  
14   A   Yes, they were.  
15   Q   Will they help you in your testimony in describing the  
16      condition of the body as an aid to the jury?  
17   A   Yes, they will.  
18   Q   Did you observe any injuries on the body?  
19   A   Yes.  
20   Q   What injuries did you observe?  
21   A   There were multiple stab wounds both deep and superficial  
22      of the left face, neck, shoulder and breasts of the body  
23      as well as very superficial wounds on the front of the  
24      left upper arm. The most significant of these wounds were  
25      located on the left side of the neck. There were somewhere

Direct Exam.  
John Pless

4       deeply into the neck severing both the superficial and  
5       deep jugular veins as well as the left carotid artery.  
6   Q   And how many jugular veins does a person have?  
7   A   Well there are two superficial and two deep ordinarily.  
8   Q   And are they on opposite sides of the neck?  
9   A   Yes.  
10   Q   How about the artery?  
11   A   Ordinarily there are two carotid arteries which serve as  
12       the main blood vessels extending from the heart to the  
13       brain.  
14   Q   And one of those was severed as well?  
15   A   Yes.  
16   Q   Did you observe any other injuries?  
17   A   There were some abrasions on the hands as well as what I  
18       interpreted to be a bite mark on the right breast. There  
19       was in addition a small laceration just a few millimeters  
20       in extent on the entrance of the vagina.  
21   Q   Were there any fractures?  
22   A   No.  
23   Q   Were any of the organs of the body such as the heart,  
24       pancreas or whatever abnormal?  
25   A   No.

—

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John Pless

4 around the tip of the thyroid cartilage in the neck  
5 and I interpreted those marks to be superficial finger-  
6 nail marks.

7 Q Is it possible, Doctor, to tell whether a wound was  
8 inflicted during life or after life?

9 A Yes, sometimes it is.

10 Q Would you tell us what you were able to determine about  
11 the wounds you observed on or about Peggy Sue Altes?

12 A All of the wounds that I have described to this point  
13 were wounds which I believe were inflicted in life.

14 Q Can you tell us why?

15 A Those wounds show evidence of reaction in the tissue of  
16 redness around the margins or evidence of hemorrhage  
17 associated with them. There were some wounds on the  
18 posterior portion of the body which showed no vital re-  
19 action but were merely parchment like abrasions which I  
20 interpreted as being postmortem or injuries inflicted on  
21 the body after death.

22 Q The fingernail marks, were you able to determine whether  
23 or not they had anything to do with the cause of death?

24 A They were not directly related to the cause of death.

25 Q Do you, Doctor, based upon your observations and based

3           dead.

4   A   Yes, I do.

5   Q   And what is that?

6   A   In my opinion based on a reasonable medical certainty

7       the cause of death of Peggy Sue Altes are multiple stab

8       wounds to the neck.

9   Q   And how does that cause death?

10   A   The mechanism of death from multiple stab wounds is

11       hemorrhage or exsanguination.

12   Q   Were you able to determine from your examination, Doctor,

13       as to how the wounds were inflicted, what type of instru-

14       ment?

15   A   Yes.

16   Q   And what was that?

17   A   In my opinion, the instrument used was a sharp object

18       very similar to a knife.

19   Q   Would it also be similar to a razor?

20   A   Uh - I cannot exclude a razor but in my opinion a razor

21       is unlikely.

22   Q   Were you able to tell, Doctor, from your examination

23       whether or not the wounds were self-inflicted?

24   A   Yes.

25   Q   And what was that determination?

4 of them or none of them?

5 A I believe the overall pattern of the injuries indicates  
6 that that was not the case, the location and the pattern  
7 of the injuries themselves.

8 Q Now why do you say this?

9 A Because there are literally so many wounds on the left  
10 side of the neck. Many of them very very deep. As soon  
11 as one of these major vessels was severed, the person  
12 would collapse and be unable to continue to be producing  
13 all the multiple wounds in the neck.

14 Q Hand you what is marked for identification as State's  
15 Exhibit 24 and ask you if you can tell us specifically  
16 what that is?

17 A State's Exhibit 24 is a photograph of the left side of  
18 the neck showing multiple stab wounds in that area.

19 Q And that, Doctor, is what you stated was the cause of  
20 death?

21 A Those wounds are what is seen superficially related to  
22 the deeper wounds and severance of the jugular veins and  
23 carotid artery.

24 Q Okay, does the deeper wounds show --

25 BY MR. LEWIS: -- just a minute, just

4 BY MR. SHUMACKER: I would offer

5 State's Exhibit 24.

6  
7 BY MR. LEWIS: And you've already  
8 displayed it to the jury.

9  
10 BY THE COURT: Do you have objection  
11 to 24?

12  
13 BY MR. LEWIS: Yes. Object because  
14 it inflames the jury. That's the  
15 only purpose for identifying. They  
16 have seen a number of pictures of  
17 the body already. Now they want to  
18 introduce one more. The Doctor has  
19 already testified what the cause of  
20 death was.

21  
22 BY THE COURT: Would counsel approach  
23 the bench.

24 (COUNSEL APPROACHES BENCH).

25 BY THE COURT: At this point the offer

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John Pless

... ESS

4 STATE'S EXHIBIT NO. 24, being a  
5 photograph of the left side of the  
6 neck showing multiple stab wounds,  
7 having been offered into evidence  
8 and the objection sustained, is  
9 reoffered and admitted on Page  
10 \_\_\_\_\_ of this Transcript of  
11 evidence.

12 Q What does State's Exhibit 24 show that would be of aid  
13 to the jury?

14 A It shows the multiple close spaced stab wounds of the  
15 left side of the neck as well as the fact that these  
16 wounds intermingle into one another. It also shows a  
17 sharp edge of these wounds which some instances extends  
18 down and in other instances off the right edge.

19 Q Would these wounds have been inflicted by one weapon or  
20 more than one weapon?

21 A In my opinion they are all of similar character and could  
22 be inflicted by one weapon.

23 Q And is there something in this picture that shows you  
24 that?

25 A Basically the similar character of the sharp edge of the

State's  
Exhibit  
No. 24

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John Pless

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4 BY MR. SHUMACKER: We'll reoffer

5 State's Exhibit 24.

6  
7 BY MR. LEWIS: I renew my objection,  
8 Judge, there are three or four pictures  
9 in evidence now that show the neck  
10 wounds and I am objecting to that, it  
11 tends to inflame the jury.

12 BY THE COURT: The objection to 24  
13 will be overruled. 24 will be ad-  
14 mitted.  
15

16 STATE'S EXHIBIT NO. 24, being a  
17 photograph of the left side of the  
18 neck showing multiple stab wounds,  
19 having previously been offered into  
20 evidence and sustained on Page 279,  
21 is now reoffered and admitted into  
22 evidence over objection, is attached  
23 to the following page.  
24

25  
Direct Exam.  
John Pless



State's  
Exhibit  
No. 24

Q24

4 Q What is that?

5 A State's Exhibit 21 shows the body of Peggy Sue Altes  
6 from the right side before the body has been cleaned  
7 off, showing the bite mark of the right nipple, stab  
8 wound in the right breast and the abrasions and con-  
9 tusion of the right shoulder.

10 Q Does this fairly and accurately depict the body as you  
11 saw it prior to your autopsy?

12 A Yes.

13 BY MR. SHUMACKER: We would offer  
14 State's Exhibit 21.

15  
16 BY MR. LEWIS: We'll object again,  
17 your honor, State's 21 is similar to  
18 State's 11, 16 in an attempt to in-  
19 flame the jury.

20  
21 BY THE COURT: Any response to the  
22 objection. Alright, the objection  
23 will be overruled. State's Exhibit  
24 21 is admitted.

25

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John Pless

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4 side before the body was cleaned  
5 off, showing the bite mark of the  
6 right nipple, stab wound in the  
7 right breast and the abrasions and  
8 contusion of the right shoulder,  
9 having been offered into evidence  
10 and admitted over objection, said  
11 exhibit is attached to the following  
12 page.

13

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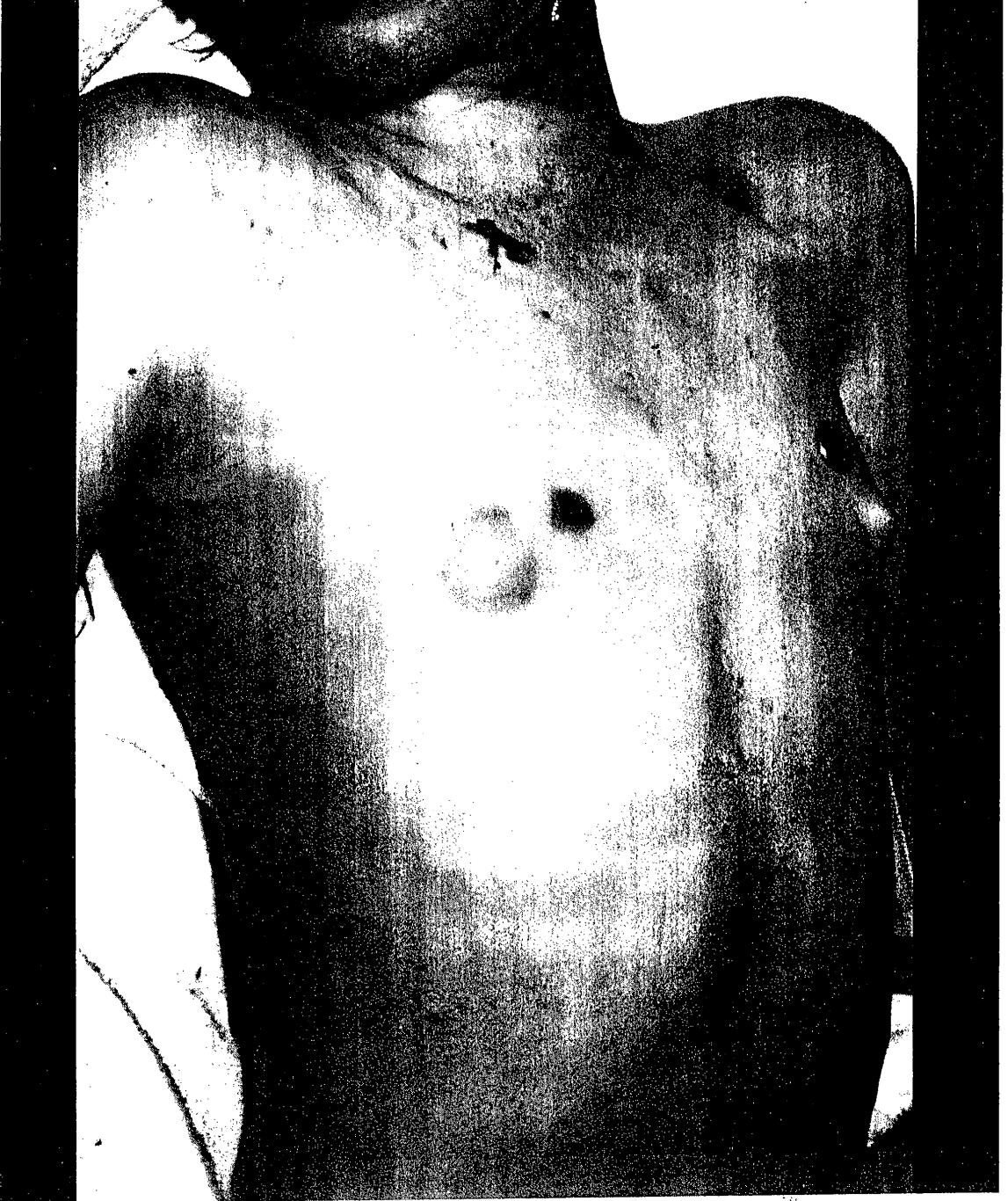
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25

Direct Exam.  
John Pless

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State's  
Exhibit  
No. 21

Ex. 939

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4 Q And why do you use that?

5 A It's used so that some sort of well known dimension  
6 can be taken out of the photograph. It's very similar  
7 to using a ruler in the photograph.

8 Q I'll hand you what is marked for identification as  
9 State's Exhibit No. 25 and ask you if you can identify  
10 that?

11 A Yes.

12 Q What is that?

13 A This is a overall view of the body of Peggy Sue Altes  
14 from the left showing the multiple stab wounds in the  
15 neck, the stab wound to the left nipple and the super-  
16 ficial incised wounds of the front part of the left  
17 upper arm.

18 Q And how do you feel that this photograph will aid the  
19 jury?

20 A It aids the jury in showing the well localized, well  
21 placed stab wounds in the neck and then the broadly  
22 distributed superficial incised wounds of the nipple  
23 and left arm away from this particular central wound.

24 Q Does that fairly and accurately depict the scene as you  
25 saw it?

4  
5 BY MR. LOCKWOOD: Ask leave of Court  
6 to ask a preliminary question.  
7

8 BY THE COURT: Sure, go ahead.  
9

10 BY MR. LOCKWOOD: Doctor Pless, State's  
11 Exhibit 25, you indicated that among  
12 other things I suppose that was a view  
13 of the wounds to the neck?

14 A Yes.

15 BY MR. LOCKWOOD: Is that photograph  
16 any more helpful to the jury in show-  
17 ing those wounds than State's Exhibit  
18 24 which has already been introduced  
19 into evidence?

20 A It - it's helpful in that it shows the wounds in relation-  
21 ship to the other wounds of the arm which are really  
22 defense wounds.

23 BY MR. LOCKWOOD: And those other  
24 wounds you have testified to that appear  
25 in State's Exhibit 25, those were not

4 with the cause of death.

5 A Yes, I believe they are associated with the wounds which  
6 caused death.

7 BY MR. LOCKWOOD: I'm sorry that was  
8 a bad question, I mean, your opinion  
9 is that they may have been inflicted  
10 at or about the same time?

11 A Yes.

12 BY MR. LOCKWOOD: But those in no way  
13 contributed to the death of Peggy Altes?

14 A No.

15 BY MR. LOCKWOOD: And would that include  
16 also the wound that the State has men-  
17 tioned in State's Exhibit 25 to the left  
18 breast of the decedent?

19 A Yes.

20 BY MR. LOCKWOOD: That did not contri-  
21 bute to the death either?

22 A No.

23 BY MR. LOCKWOOD: Thank you. Your  
24 honor, on that basis we would offer an  
25 objection to State's Exhibit 25. The

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John Pless

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4 Doctor indicates did not contribute to  
5 Peggy Altes's death. And I should add  
6 to that objection that therefore the  
7 evidentiary value of State's Exhibit  
8 25 is far outweighed by its tendency  
9 to inflame and impassion the jury.

10 Thank you.

11  
12 BY THE COURT: Any response to the  
13 objection?

14  
15 BY MR. SHUMACKER: He also testified  
16 that in his opinion they were defense  
17 wounds and its the only photograph that  
18 we have that shows that. And I believe  
19 it is the only one that shows the wound  
20 on the left side of the chest.

21  
22 BY THE COURT: Do I have all the photo-  
23 graphs up here?

24  
25 BY MR. SHUMACKER: All that have been

4  
5                   on the bench.

6  
7                   BY THE COURT: Okay, I'll admit 25  
8                   over objection.

9  
10                  STATE'S EXHIBIT NO. 25, being a photo-  
11                  graph of Peggy Sue Altes showing an  
12                  overall view of the body from the left  
13                  showing the multiple stab wounds in the  
14                  neck, the stab wound to the left nipple  
15                  and the superficial incised wounds of  
16                  the front part of the left upper arm,  
17                  having been offered into evidence and  
18                  admitted over objection, is attached  
19                  to the following page.

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22

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24

25

Direct Exam.  
John Pless

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State's  
Exhibit  
No. 25

L. 800

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4 A Yes.  
5 Q What is that?  
6 A This is a photograph of the right hand of Peggy Sue Altes  
7 showing blood and abrasions on the inside or palm surface  
8 of the hand.  
9 Q Is there wounds on the palm?  
10 A Yes.  
11 Q And you observed those wounds during your autopsy?  
12 A Yes.  
13 Q What do the wounds on the inside of the palm indicate  
14 if you have an opinion?  
15 A I really have no opinion.  
16 Q Does this fairly and accurately portray the wounds that  
17 you saw?  
18 A Yes.

19 BY MR. SHUMACKER: We would offer  
20 State's Exhibit No. 23.

21  
22 BY MR. LEWIS: Just one preliminary  
23 question. Dr. Pless, you're saying  
24 that on State's 23 which shows this  
25 right hand that you have no opinion

4 no idea how they were inflicted.

5 BY MR. LEWIS: I have no objections  
6 to 23.

7

8 BY THE COURT: Exhibit 23 is admitted.

9

10 STATE'S EXHIBIT NO. 23, being a photo-  
11 graph of the right hand of Peggy Sue  
12 Altes showing blood and abrasions on  
13 the inside palm surface of the hand,  
14 having been offered and admitted into  
15 evidence without objection, is attached  
16 to the following page. -----

17

18

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ate's  
hibit

25. Go ahead.  
(STATE'S EXHIBITS NO. 21, 23, 24 and  
25 exhibited to the jury).

Q Have you seen State's Exhibit 10 before?

9 A Yes.

10 Q And where did you see that?

11 A I was shown it just before taking the stand at the break.

12 Q Okay. And is there anything about State's Exhibit 10 is

12 of aid to the jury?

14 A There is a photograph showing the left hand clutching  
15 some object.

16 Q. And how do you believe this of significance to the jury?

17 A It's of significance if the object that is in the hand is  
18 fixed to the ground in that location.

10 Q And what significance would it have?

20 A In my opinion it would indicate that in all likelihood  
21 death occurred at that site.

o Does the hand clutch something after death?

23 A Well the hand ordinarily rigors or stiffens in the posi-  
24 tion that it's left in at the time of death. The hand  
25 does not ordinarily move unless someone else moves the

Direct Exam.  
John Pless

4 Q What type of a wound was that?  
5 A It's a tear or a stretching wound or laceration of the  
6 mucosa of the wall or the entrance of the vagina.  
7 Q And based on your training and experience to a reasonable  
8 medical certainty, do you have an opinion on how that was  
9 inflicted?  
10 A Yes.  
11 Q And what would that be?  
12 A In my opinion that wound was inflicted by some object  
13 which was forceably inserted into the vagina enlarging  
14 the opening and putting pressure on the posterior wall  
15 of the vagina.  
16 Q Was that wound inflicted before or after death in your  
17 opinion?  
18 A In my opinion it was inflicted in life.  
19 Q And how do you reach that opinion?  
20 A That opinion is reached based on the hemorrhage that's  
21 found in the wound.  
22 Q And do you have any opinion, Doctor, based on your train-  
23 ing and experience as to what type of object caused that  
24 wound?  
25 A Yes.

4 enough force and weight behind it to dislodge  
5 the opening.

6 Q Would you need - would any other information be of help  
7 to you in determining what type of object might have  
8 caused this injury?

9 A Yes.

10 Q What type of information would you be looking for?

11 A Uh - analysis of the material which was found within  
12 the vagina.

13 Q And did you submit some of that?

14 A Yes, I did.

15 Q And what would you be looking for to narrow down your  
16 choice of what type of instrument?

17 A Any evidence of seminal material which would include  
18 prostatic acid phosphatase, a chemical substance elaborated  
19 by the male prostate or seminal fluid containing sperma-  
20 tazoa or sperm. Any indication of those things would  
21 indicate that the object was a penis.

22 Q Are you able to come to an opinion, Doctor, as to when  
23 that wound was inflicted?

24 A Yes.

25 Q And how do you do that?

4 A It's reached primarily by the reaction in the tissues  
5 seen grossly at the time of the autopsy.

6 Q Now you performed your autopsy on November the 18th,  
7 1984?

8 A Yes.

9 Q Do you have an opinion, Doctor, based on your training  
10 and experience and based on your observations as to what  
11 the time of death might have been?

12 A Yes.

13 Q And what is that opinion?

14 A In my opinion the time of death was at least twenty-four  
15 to forty-eight hours prior to the autopsy and as long as  
16 five to six days.

17 Q And what do you base that opinion - or is that opinion to  
18 a reasonable medical certainty?

19 A Yes.

20 Q And would you tell the jury how you reached that conclusion,  
21 what happens to a body that makes a pathologist able to  
22 determine these things?

23 A The usual stiffening of the muscles of the body had begun  
24 to go away and that ordinarily occurs between twenty-four  
25 and forty-eight hours at standard temperature of seventy

4 which the temperatures, the high temperatures  
5 days ranged between forty - the low forties, forty-four  
6 to sixty-two.  
7 Q Anything else that you observed about this body or learned  
8 about it that would cause you to have that opinion?  
9 A Except the character of the tissues as a habit the  
10 pathologist ordinarily pays close attention to the quality  
11 of the tissues. There is some softening and early what  
12 are called autolytic changes that occur in tissues after  
13 the first twenty-four hours and some of those features  
14 were present in this body.  
15 Q And what features are you referring to?  
16 A The softening and early color changes in the tissues.  
17 Q Now, Doctor, you stated that the vaginal wound was in-  
18 flicted at about the same time or shortly prior to the  
19 other wounds and what did you observe that gives you  
20 that?  
21 A Again the reaction in the tissues and the recent hemor-  
22 rhage.  
23 Q Was it in some way similar to the other hemorrhaging?  
24 A Yes.  
25 Q In what way?

4 Q Now just one or two more questions, Doctor, how large  
5 was Peggy Sue Altes as you examined her?  
6 A I measured her body at sixty inches in length and I  
7 estimated her weight at seventy pounds.  
8 Q And she was a human being?  
9 A Yes.

10 BY MR. SHUMACKER: You may cross examine.  
11 -----

12 The said witness testified further on  
13 CROSS EXAMINATION in response to ques-  
14 tions propounded by Mr. Lockwood,  
15 Attorney for Defendant.

16 Q Now, Dr. Pless, I think you testified on direct examina-  
17 tion that in your opinion death occurred twenty-four to  
18 forty-eight hours prior to the time you did the autopsy,  
19 is that right, sir?

20 A Somewhere between the time of twenty-four to forty-eight  
21 to five to six days.

22 Q I meant to say at least.

23 A Yes.

24 Q But the point I'm trying to make is that that time is  
25 measured from the time you do the autopsy and not from

Cross  
John  
Pless

4 A This was done at 8:00 A.M. on the 18th of November.  
5 Q And that would have been something less than a day after  
6 the body was found?  
7 A I believe so.  
8 Q Approximately noon on the 17th?  
9 A I believe so.  
10 Q Okay. You testified also on direct examination that there  
11 are a number of factors including the stiffening of the  
12 body and the break-up of that stiffening, that's called  
13 rigor mortis, is it, Doctor?  
14 A Yes.  
15 Q And you would normally expect to see rigor onset - what  
16 eight to ten hours after death?  
17 A Well rigor ordinarily comes on in three to four hours  
18 after death depending on the environmental conditions.  
19 Q And then I take it that it starts to break up after that?  
20 A Yes.  
21 Q And there was some present in this body but I believe in  
22 your autopsy report you said that it was easily broken up  
23 during the autopsy?  
24 A Yes.  
25 Q Is that effected by weather?

4 Q And would it be a correct statement to say that the  
5 cooler the temperature of the body the longer the rigor  
6 will tend to last?  
7 A That's right.  
8 Q And the temperature in the area where this body was found  
9 ranged you said I think from approximately forty-four  
10 degrees to sixty-two degrees?  
11 A Yes.  
12 Q And do you know, sir, whether there were some other days  
13 in there where the temperature dropped below that?  
14 A No, all I was given were the high temperatures.  
15 Q You were just given the high temperatures?  
16 A Yes.  
17 Q I see. Okay. So no one gave you the low temperature?  
18 A That's correct.  
19 Q Your experience - let me strike that and ask you this.  
20 Would you from the medical standpoint think that it would  
21 be safe to assume that the temperatures in that environ-  
22 ment would have been lower at part of the time?  
23 A Yes, I think that's safe to assume.  
24 Q Common experience that the temperature tends to go down  
25 in the evenings and overnight and what have you?

4           been subjected to temperatures generally less than 100 degrees  
5           eight degrees on the average?

6       A   Yes.

7       Q   In your opinion. And could that - strike that. Would  
8           that likely have inhibited some of these things that you  
9           saw, some of these processes that you've described?

10      A   Well the cold tends to preserve the signs of death such  
11           as rigor mortis, yes.

12      Q   Were there any other signs of death that you saw that  
13           you thought might have been preserved or could have been  
14           preserved by the cold weather?

15      A   Well the destruction of the body which we refer to as  
16           decomposition largely done by putrefaction which is the  
17           multiplication of bacteria. That is inhibited to a great  
18           extent by cold. Most bodies that we examine are pre-  
19           served for several days to weeks in a refrigerator which  
20           is kept at about forty degrees so the signs of death would  
21           include decomposition which begins to be apparent after  
22           thirty-six hours. There was very little of that. The  
23           cold certainly could have preserved the body during that  
24           period.

25      Q   Then you wouldn't feel at all comfortable saying that

Cross Exam.  
John Pless

4  
5 BY MR. LOCKWOOD: Well I think he said  
6 twenty-four to forty-eight hours from  
7 the time he did the autopsy. Let me  
8 back up and say then - I'll withdraw  
9 that question, if I may, your honor.  
10

11 Q You would not feel at all comfortable, Doctor, with the  
12 proposition that Peggy's death would have occurred at  
13 any time after the 16th of November?  
14

A No.

15 Q And you would feel comfortable that the death would have  
16 occurred between the 12th and the 15th then?  
17

A Certainly between the 12th and the 16th.

18 Q Okay, including the 15th of November?

19 A Yes.

20 Q Alright. From your observations and based on your train-  
21 ing and your expertise in this area and given your exami-  
22 nation of this body, do you believe that it is any more  
23 likely that Peggy's death occurred on the 15th than it is  
24 that her death occurred on the 12th from what you were  
25 able to observe?

Cross Exam.  
John Pless

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4       the 12th as it would be that she died on the 15th?

5   A   Yes.

6   Q   Doctor, you testified that you - I believe these were

7       your words on direct examination that you searched the

8       body very carefully for extraneous evidence. What kinds

9       of evidence were you looking for?

10   A   Primarily looking for hairs and fibers.

11   Q   Why were you searching for hairs?

12   A   Occasionally hairs or fibers upon the clothing of per-

13       petrator of a crime may be left on the body.

14   Q   Are you familiar with what kinds of things can be deter-

15       mined from hair examination, for example?

16   A   Well sometimes sex and race can be determined from hair

17       examination.

18   Q   Whether its human hair or animal hair?

19   A   Yes.

20   Q   Whether the hair has been clipped or plucked?

21   A   That's correct.

22   Q   And whether the hairs have been dyed or processed?

23   A   That's right.

24   Q   And what can you tell from fiber?

25   A   Fibers are very characteristic from one cloth to another

4 Q I believe your testimony  
5 three hairs from Peggy's body?  
6 A Yes.  
7 Q Extraneous hairs, that is, one I believe from her left  
8 middle finger, is that correct?  
9 A Yes.  
10 Q One from her left index finger?  
11 A Yes.  
12 Q And one that you found on her right shoulder?  
13 A Yes.  
14 Q What did you do with those hairs?  
15 A Those hairs were turned over to Officer Jerry Warman of  
16 the Indiana Police Department Crime Lab.  
17 Q And did you ever see them after that?  
18 A No.  
19 Q Did you take fingernail scrapings?  
20 A Yes.  
21 Q Why?  
22 A As really part of the routine. It's unusual to find any  
23 foreign material under the nails especially if they are  
24 very short but we try to do it to make certain that we've  
25 covered as many features of the death as possible.

Cross Exam.  
John Pless

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4 A Well theoretically it is possible to examine skin under  
5 the microscope and tell whether its the skin of a male  
6 or female. It's very difficult to type skin in terms  
7 of blood type or other characteristics.

8 Q But if you were to find skin under fingernails and compare  
9 it to someone who had sustained wounds that looked like  
10 they'd been inflicted by fingernails, would that be help-  
11 ful in your investigation?

12 A Yes.

13 Q Doctor, in connection with this case or at least the  
14 evidence that you were able to take and turn over to the  
15 Hancock County Sheriff from another autopsy that you did,  
16 is that correct?

17 A Yes.

18 Q What autopsy is that?

19 A That was the autopsy of Frank Altes.

20 Q And do you recall when you did that autopsy, sir?

21 A I believe that autopsy was done on the same day that the  
22 autopsy was performed on Peggy Sue Altes.

23 Q Could it possibly have been done the next day on the 19th?

24 A It could, yes.

25 Q Were you present or did you conduct that autopsy?

Cross Exam.  
John Pless

4 A I remember seeing the body of Frank Altes but I'm not  
5 sure whether I was actually present when he did the  
6 autopsy.

7 Q Did you bring a copy of the autopsy protocol from the  
8 autopsy with you today?

9 A No, I don't have a copy of that with me.

10 Q Do you know, sir, what if any relation Frank Altes was  
11 to Peggy Altes?

12 A My - my memory tells me that he was a distant cousin.

13 Q And were you notified that the findings of your autopsy  
14 were to be reported to the Hancock County Sheriff's  
15 Department with regard to Frank Altes?

16 A I believe so.

17 Q Did you know why they asked for that?

18 A I suppose it would relate to the fact that a person --

19 BY MR. GOSSETT: -- your honor, I  
20 object to the question. It's obvious  
21 from the answer the doctor is going  
22 to give that it's a supposition or  
23 guess and that he doesn't know the  
24 reason.

25

Cross Exam.  
John Pless

4 BY MR. GOSSETT: He started the answer  
5 I suppose.

6  
7 BY THE COURT: I'll sustain the ob-  
8 jection.

9 Q What connection is there, Doctor, between the Peggy Altes  
10 death and Frank Altes death, if you know?

11 A As far as I know the only connection is that they occurred  
12 - at least the autopsies occurred at a similar time.

13 Q And that the two of them were related?

14 A I'm not aware that they were related.

15 Q You didn't know that. Okay. What was the cause of death  
16 of Frank Altes?

17 A I'm sorry, I don't remember.

18 Q Would it be of any assistance to you, sir, if I showed you  
19 what purports to be a copy of part of that autopsy proto-  
20 col, would that help you to refresh your recollection?

21 A Yes.

22 Q First of all let me lay a little foundation, do you custo-  
23 marily take notes at an autopsy?

24 A Yes.

25 Q And is that called a protocol?

4 Q And do you sometimes also make written notes as to  
5 your observations?  
6 A Yes.  
7 Q Let me show you three documents and ask you to just look  
8 at them to see if they are helpful in refreshing your  
9 recollection concerning the autopsy of Frank Altes?  
10 A Well there are some facts here that I did not remember.  
11 Q Is there anything there that would help your recollection  
12 with regard to cause of death of Mr. Altes?  
13 A Yes.  
14 Q Do you now recall what that cause of death was?  
15 A Yes.  
16 Q What was it?  
17 A It was carbon monoxide intoxication.  
18 Q In other words, it was a suicide?  
19 A I believe so, yes.  
20 Q Did you or your colleague note any fingernail scrapes or  
21 marks on the body of Frank Altes?  
22 A There were some patterned bruises on the left breast and  
23 some what were described as fingernail marks on the left  
24 arm.  
25 Q And how about any abrasions or contusions of the body,

4 Altes and by trace evidence I mean hair or blood or any-  
5 thing of that nature?

6 A There was head hair, pubic hair and oral swabs as well  
7 as blood for toxicology.

8 Q I'm sorry?

9 A I said there was head hair, pubic hair and oral or mouth  
10 swabs as well as blood for toxicology.

11 Q Blood for toxicology?

12 A Yes.

13 Q How about blood for typing, can you tell whether or not  
14 a blood sample was taken?

15 A Yes, there was blood for typing.

16 Q Doctor, when we talk about blood for typing, when we  
17 talk about typing blood, what does that mean?

18 A Well blood can be typed for the basic blood types, ABO  
19 and Rh factors. It can also be typed for certain enzyme  
20 patterns found within it and in addition we can now do  
21 white cell antigen typing or HLA antigen typing.

22 Q HLA antigen typing; is something you do with the white  
23 blood cells?

24 A Yes.

25 Q And is that different then what you do with the red blood

4 A No.  
5 Q Doctor, what does the term secretor mean to you in  
6 connection with blood typing in general?  
7 A Well approximately eighty percent of the population  
8 secretes their blood types into all of the secretions  
9 so that if fluids come from the body which are secretory  
10 fluids such as saliva they should contain the blood type  
11 of that person in the individual secretion and that's  
12 in about roughly eighty percent.  
13 Q Eighty percent of all people?  
14 A Yes.  
15 Q Would show their blood type through their own bodily  
16 fluid?  
17 A Yes.  
18 Q And you mentioned saliva and how about seminal fluid,  
19 Doctor?  
20 A Seminal fluid as well can show blood type.  
21 Q And would it be as likely to find - be able to type  
22 blood from a sample of semen as it would from a sample  
23 of saliva?  
24 A Yes.  
25 Q A secretor is a secretor, isn't that true, sir?

Cross Exam.  
John Pless

Q 916

4       secretions of the testis which includes the spermatozoa  
5       or the sperm from the seminal vesicles which has lubri-  
6       cating secretions as well as from the prostate. There  
7       are some enzymes in this material but largely its heavy  
8       with both carbohydrate and protein and serves as a  
9       vehicle and lubricant for ejaculation and impregnation  
10      of sperm.

11     Q   Would it be a fair statement to say that where sperm is  
12      found, seminal fluid also has to have been present?

13     A   Yes.

14     Q   You talked about - did you say ABO blood typing?

15     A   Yes.

16     Q   Could you tell us a little more about that and specifically  
17      what does it mean to say that a person is a A type or an  
18      O type or B type blood?

19     A   Well blood types are a feature of individualization of a  
20      human being. They are reflection of the genetic makeup  
21      or the inheritance of that person. The red blood cells  
22      have certain factors which are inherited from parents,  
23      combination of the factors of the parents are inherited  
24      in the child. There are various systems of factors based  
25      largely on the medical history of the determination of

4 such as the proteins and enzymes but as far as the ABO  
5 substances are concerned they are on the surface of the  
6 red cell. Most people in the population are Type AA,  
7 smaller number Type B, smaller number Type AB with a  
8 fairly large group in between Type O having neither A  
9 or B substance on the red cells.

10 Q You don't know what percentage of population --

11 A -- I don't remember.

12 Q Have you ever heard of an H factor describing blood?

13 A Yes.

14 Q What does that mean?

15 A H factor is a precursor substance which is the basic  
16 building material for the other factors. When a person  
17 has an O blood type, he will likely have more H substance  
18 since the A and B factors are not expressed. He will have  
19 more H substance than a person with Type A or Type B blood  
20 and certainly a person with AB blood will have very little  
21 H substance.

22 Q So as I understand it the H substance is not nearly as  
23 profound or pronounced in a person that has say Type B  
24 blood or Type A blood?

25 A That's correct.

4 A No, I do not.  
5 Q But you did take a sample of her blood?  
6 A Yes, I did.  
7 Q And that was collected by somebody and perhaps tested?  
8 A Yes.  
9 Q But you haven't seen any of those reports and you didn't  
10 do the testing?  
11 A Well as a matter of fact today for the first time I did  
12 see a report from the Indianapolis Police Department  
13 Crime Laboratory. I do not believe that it indicates  
14 the type blood of Peggy Sue Altes.  
15 Q Who showed you this report at this late date?  
16 A Mr. Gossett.  
17 Q Is that the first time you had seen the results of any  
18 lab tests?  
19 A Yes, it is.  
20 Q And you mentioned earlier that you saw a picture today,  
21 I believe you said that it was a photograph of Peggy  
22 apparently clutching something?  
23 A That's correct.  
24 Q Doctor, had you ever seen that photograph before today?  
25 A No, I hadn't.

---

Cross Exam.  
John Pless

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4 Q Is that important to you? Can it be, perhaps, a  
5 question and more fair question.  
6 A Yes, it could be.  
7 Q Is it helpful in what you have to do to know everything  
8 you can know about the scene?  
9 A Yes, it is.  
10 Q Where the body was found. And I would guess, sir, that  
11 you cannot go to every scene of every death that is  
12 reported to you?  
13 A No, I cannot.  
14 Q So photographs have and often are helpful to you in de-  
15 termining what you have to determine?  
16 A Yes.  
17 Q And you're not in any position to tell this Court or  
18 Jury how it may have helped you in this case because you  
19 weren't shown any, were you?  
20 A That's right.  
21 Q Doctor, I think you said that bacteria would proliferate  
22 - strike that. I don't want to misquote you. Was it  
23 your testimony on direct examination that you would not  
24 expect a great deal of bacterial proliferation if the  
25 average temperature and environment of a body remained

4           Well, sir.  
5   A   Yes.  
6   Q   A lot of it around. Would you expect to find bacteria  
7       in a living body that you examine?  
8   A   Yes.  
9   Q   Also in a deceased body?  
10   A   That's correct.  
11   Q   Have you ever had an experience where bacteria would  
12       mimic a blood type, sir?  
13   A   Well bacteria might interfere with the ability to detect  
14       a blood type if it were present in the blood.  
15   Q   Well but would it mimic, would it show a false positive  
16       for a blood type?  
17   A   If bacteria were present in the blood it might cause the  
18       red blood cells to clump together in an agglutination  
19       reaction where if the bacteria weren't present they might  
20       not clump together.  
21   Q   Doctor, what would you do in order to find out whether  
22       bacteria was interfering with the determination of a  
23       blood type. What test would you run and what would you  
24       do, if anything?  
25   A   Well one of the things that can be done is to culture

4 Q -- I'm sorry, I didn't catch that.  
5 A To do a back typing.  
6 Q A back typing?  
7 A Yes.  
8 To take the serum and expose it to cells that were not  
9 contaminated with bacteria.  
10 Q Now what is serum, Doctor?  
11 A Serum is the liquid portion of the blood.  
12 Q And you would take that serum and you would do what  
13 with it, sir?  
14 A Well this is an alternate way of testing for the group  
15 substances to see if the various antibodies to those  
16 particular factors were present in the serum of the  
17 person and so you take known A cells and B cells and  
18 test those for the existence of the antibody to those  
19 cells in the person. Let's say if they were Type O  
20 they would have both antibodies A and B cells.  
21 Q And that's called back typing?  
22 A That's called back typing.  
23 Q How does that help you to distinguish whether or not  
24 bacteria is preventing you from determining blood type?  
25 A Well that ought to confirm the presence of the antibody

Cross Exam.  
John Pless

Q22

4 luxury of having a blood sample of the substance that  
5 we want to test. Let's say that its a sample of - well  
6 let's just say for the sake of argument that its a blood  
7 sample taken off of a swab, one of the swabs that you  
8 use to take samples in this autopsy of Peggy Altes. Can  
9 you still do the back typing procedure?

10 A Well in those instances you can use the swab as an  
11 an antigen and test with test cells on the swab taking  
12 various fibers of the swab to see if there are protein  
13 substances which react with those cells.

14 Q And that would tell you whether or not you have say Type  
15 B blood or whether you have bacteria?

16 A It is possible to determine the antibodies present in  
17 the protein on those swabs with that technique.

18 Q Are those techniques and the facilities for those techni-  
19 ques generally available say at the IU Medical Center?

20 A Yes.

21 Q And are the techniques generally available for use, I  
22 mean, this isn't something secretive that you've invented,  
23 is it?

24 A No.

25 Q Where would you find out about this kind of thing, how to

4 Department Laboratory.

5 Q And those folks would know how to do all this?

6 A Yes.

7 Q Now, Doctor, I'd like to ask you a hypothetical question  
8 if I may and I will advise the Court that I don't believe  
9 this testimony is yet in evidence but anticipate that it  
10 will be in evidence and I don't want to have to call  
11 Dr. Pless back as our witness after the evidence comes  
12 so I should ask permission of the Court and permission of  
13 the Prosecuting Attorney to use a hypothetical based on  
14 the facts that I feel are going to be introduced later  
15 and promise the Court that it will be tied up.

16 BY MR. GOSSETT: Can we approach the  
17 bench.

18 (COUNSEL APPROACHES THE BENCH).

19 BY THE COURT: Do you have much more  
20 cross to go?

21 BY MR. LOCKWOOD: We have a few moments,  
22 yes.

23 BY THE COURT: Take a short break.  
24

Cross Exam.  
John Pless

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4       in an autopsy and in running tests on that substance  
5       to determine blood type, it were determined that B blood  
6       type was apparent or showed up, what if anything, would  
7       that tell you about the donor of that seminal fluid?

8       A   Well it would suggest that Type B substance was present  
9       in the fluid of the donor or in the secretions of the  
10      deceased.

11      Q   Doctor, if I am a Type O blood and I am a secretor, is  
12       it possible for me to leave trace evidence showing blood  
13       type B if my seminal fluid is examined or my saliva is  
14       examined correctly and appropriately?

15      A   Not ordinarily.

16      Q   In other words, I can't be more than one blood type, can  
17       I?

18      A   Well there are rare instances where and specifically in  
19       Type D where a Type B individual would actually type out  
20       as an O.

21      Q   Okay, how about the other way around where an O type would  
22       type out as a B?

23      A   I - I don't remember. I'm not sure whether that's possible  
24       or not.

25      Q   And how rare would that be that someone of one blood type

4 me lay the foundation for this, Doctor, let me withdraw  
5 that last question and ask you do you have any super-  
6 visory duties as being a pathologists out at I.U.?  
7 A Not at - well my supervisory duties are directly re-  
8 lated to forensic pathology in the performance of  
9 autopsies.  
10 Q And do you have people that support you in your work  
11 like laboratory people?  
12 A Yes.  
13 Q Do they make reports to you in the general course of  
14 business concerning what they found in blood analysis  
15 et cetera?  
16 A Yes.  
17 Q If you received a report that said that seminal fluid  
18 had been examined scientifically and that the - it was  
19 checked for blood type and the blood type showed was  
20 Type B and if you knew who the donor was, would you be  
21 prepared to testify in a Court of Law that within a  
22 reasonable degree of medical certainty, the donor was  
23 a Type B from the specimen that was examined scientific-  
24 cally?  
25 A If I had direct knowledge of how the tests were performed

Cross Exam.  
John Pless

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32

4 A I can't always assume that. If I don't have all  
5 control over that laboratory.  
6 Q Well do you rely on the technicians that do supply you  
7 with that type of evidence?  
8 A Yes.  
9 Q Why do you rely on them?  
10 A I rely upon them if I have knowledge of either their  
11 capacity or their work or the people that are in charge  
12 of their specific laboratory.  
13 Q Okay. Do you know a Carol Kohlmann?  
14 A I have met her.  
15 Q Does she work at I.U.?  
16 A No.  
17 Q And have you ever had occasion to review or examine any  
18 of her work?  
19 A No.  
20 Q You would not feel safe in relying on her work if she  
21 didn't work with you and you hadn't seen any work pre-  
22 viously?  
23 A Well let me explain. This has nothing to do with dis-  
24 crediting the laboratory or anybody that works under it  
25 but its common practice when a patient is transferred

Cross Exam.  
John Pless

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4       they know and do the tests and that's not to say that  
5       mistakes are common because they aren't but its just a  
6       matter of confidence so I cannot tell you about the  
7       adequacy or the competence of any technician in a labora-  
8       tory over which I have no control.

9       Q     Okay, but to get back to my original question. If you  
10      had a donor that you knew was a donor but you didn't know  
11      the blood type and a sample of that donor's semen was  
12      tested and it tested B for blood type, could you then  
13      testify within a reasonable degree of certainty that that  
14      donor was a Type B blood if you had confidence in the  
15      laboratory work that was done?

16      A     Yes, I believe so.

17      Q     Within a reasonable degree of medical certainty?

18      A     Yes.

19      Q     Doctor, do you know what absorption elution analysis is?

20      A     Yes.

21      Q     What is it, please?

22      A     It's a test in which antibodies are absorbed onto test  
23      cells and then eluded from the serum of specimens and  
24      then analyzed separately from the blood.

25      Q     What's the purpose of doing an absorption elution analysis?

4 Q What are you trying to find out when you conduct that  
5 kind of a test?  
6 A Trying to find out the presence of antibodies in the  
7 specimen to various antigens or blood substances.  
8 Q Antigens from which blood types can be determined?  
9 A Yes.  
10 Q And what about an absorption inhibition analysis, what  
11 is that?  
12 A It's very similar but I'm not absolutely certain how  
13 those two vary.  
14 Q Is the general purpose of the absorption inhibition analysis  
15 similar to that of the absorption elution?  
16 A Yes.  
17 Q And that again, sir, would be to discovery whether there  
18 were antibodies in the specimen being examined?  
19 A Yes.  
20 Q From which the blood type could be determined?  
21 A Yes.  
22 Q Now this absorption elution and absorption inhibition  
23 tests, is that the same kind of tests as back typing?  
24 A No.  
25 Q So if you were going to try to determine whether you

4 inhibition, would you?  
5 A Well it depends on what the specimen is. There are  
6 some specimens that are - it is more minimal to do a  
7 back typing and other specimens that are more complicated  
8 specimens that absorption elution or absorption inhibi-  
9 tion tests are more suitable so it might be wise to do  
10 them all.

11 Q How about swabs that you took during the autopsy of  
12 Peggy Altes, would those - could those be amenable to  
13 this back typing test that you've talked about?

14 A Yes.

15 Q And also amenable to absorption elution and absorption  
16 inhibition?

17 A Yes.

18 Q Now, Doctor, if you had a question in your mind as to  
19 whether you were getting a false reading for a blood  
20 type, would you at least try to conduct all three tests?

21 A Well once again it would depend on the condition of the  
22 specimen and the amount of material available. Obviously  
23 it would be easy to do all three tests if there was ample  
24 material.

25 Q Okay, you would do all three tests if there was ample

4 mortem wounds inflicted on Peggy Altos.

5 A Yes.

6 Q Were these marked consistent with wounds inflicted by  
7 her assailant or were they more consistent with wounds  
8 which might have been associated with the area in which  
9 her body was found?

10 A There more consistent with injury from the terrain and  
11 plants in the area where the body was found.

12 Q I believe you indicated on direct examination that or  
13 someone said, maybe one of the attorneys, that you notice  
14 some trailing marks from the wounds. What are those, sir?

15 A Those are superficial incised wounds which are seen at  
16 the edges of stab wounds indicating the direction of  
17 travel of the weapon.

18 Q Were you able to determine anything about the direction  
19 of travel traveled from the trailing marks that you ob-  
20 served associated with the wounds of Peggy Altos?

21 A Yes.

22 Q What were you able to determine?

23 A Most of the trailing edges were down or to the right.

24 Q And does that have any particular meaning to you, sir?  
25 What does that tell you about her assailant, if anything?

4 Q Does it tell you anything about whether her assailant  
5 was right-handed or left-handed?  
6 A I have no idea whether the wounds were inflicted from  
7 behind or in front.  
8 Q Alright, but if you had been shown photographs of the  
9 scene and if you had seen State's Exhibit 10 prior to  
10 today, would that have helped you to determine whether  
11 or not the wounds were inflicted from the front or the  
12 back?  
13 A Well although I may not have seen State's Exhibit 10  
14 which I assume is the photograph showing something  
15 clutched in the hand of the deceased, I saw photographs  
16 of the body at the scene. I suppose based on that exhibit  
17 my opinion would be that it's more likely she was stabbed  
18 while lying on her back.  
19 Q And does that tell you anything about whether her assail-  
20 ant would be left-handed or right-handed?  
21 A Its - not really.  
22 Q So you just can't tell from the evidence?  
23 A No.  
24 Q Doctor, let me show you what I have marked as Defendant's  
25 Exhibit A. Would you examine that, please. Is there

Cross Exam.  
John Pless

4 to the question. Defendant's Exhibit  
5 A is not admitted into evidence. It  
6 was offered a long time ago without  
7 any sufficient basis. There is noth-  
8 ing to even tie that to this case in  
9 any way whatsoever at this time and  
10 I would object to any questions being  
11 asked about it until it is properly  
12 put in evidence.

13  
14 BY MR. LOCKWOOD: May I respond, your  
15 honor?

16  
17 BY THE COURT: Yes.

18  
19 BY MR. LOCKWOOD: Briefly. It's the  
20 State's part of the case. It's not  
21 our turn to call witnesses. I believe  
22 that the foundation for the introduction  
23 of this photograph would be relatively  
24 simple and I would submit to the Court  
25 that the way to do it is for me to call

Cross Exam.  
John Pless

933

4                   that they thought he did because of  
5                   what they say, the type of film  
6                   he used and I expect that Sheriff  
7                   Gulling will in fact identify this  
8                   photograph and that he will in fact  
9                   say that's it fairly and accurately  
10                  portrays what he photographed. I  
11                  can call Dr. Pless as our own witness  
12                  in our case but I'm asking that Dr.  
13                  Pless be allowed to answer this ques-  
14                  tion now with the promise that we'll  
15                  tie up the evidence at a later time.

16  
17                  BY MR. GOSSETT: Well, your honor, I  
18                  don't think that he can tie that evidence  
19                  to anything to do with this crime period,  
20                  now, ever or in the future and I would  
21                  object to it. There is no basis for it  
22                  at all and he can't just offer it to  
23                  the jury now and allege at some point  
24                  and time that he'll be able to do that  
25                  because I don't believe that he can.

a mile off --

BY MR. SHUMACKER: -- we don't know  
that --

BY THE COURT: -- the evidence does not show that. I'll sustain the objection with respect to this exhibit.

14

BY MR. LOCKWOOD: With respect to my question to Dr. Pless concerning it?

17

BY THE COURT: Yes.

19

BY MR. LOCKWOOD: Thank you. No further questions of the witness.

23

The said witness testified further  
on REDIRECT EXAMINATION in response

Cross Exam.  
John Pless

935

33

5 Q Dr. Pless, just a few questions. You said when you  
6 examined the body you found fly eggs, where did you  
7 find those?

8 A From the head in the hair.

9 Q And how would they get there?

10 A When flies become active and that is normally when the  
11 temperature is above 40% they deposit the eggs especially  
12 in an area where there might be blood or other secretions.

13 Q Do you attach any significance to these eggs?

14 A It just is another indicator that the deceased had been  
15 dead long enough for flies to be active and deposit them  
16 there so it happened - flies have to deposit their eggs  
17 during the daytime so there had to have been a daytime  
18 period in which flies would deposit their eggs.

19 Q Did you find any fibers in the wounds you examined?

20 A In the wounds?

21 Q In the wounds?

22 A I don't - I don't believe so.

23 Q Now when you mix the seminal fluid of a non-secretor and  
24 the secretor, what do you get?

25 A You get the - essentially examination which would indicate

4 A You get the same blood type.  
5 Q All people have seminal fluids?  
6 A All males have seminal fluid.  
7 Q Some females?  
8 A There are some fractions of the fluid which are common  
9 to vaginal fluid but there is usually enough to differen-  
10 tiate them chemically.  
11 Q Did you find any evidence of bacterial activity of Peggy  
12 Sue Altes?  
13 A Well there is always bacterial activity in all human  
14 beings. On the specimens that I personally examined  
15 from her vagina, I made no notation that there was any  
16 excessive bacterial activity.  
17 Q And how about other fluids, did you have any tests run on  
18 them?  
19 A No.  
20 Q Did you have tests run on her blood?  
21 A Only toxicology run by the State Department of Toxicology.  
22 Q Did you rely on that?  
23 A Yes.  
24 Q What did that show?  
25 A These materials were described as being fresh and in good

4 A That there was a small amount of ethyl alcohol in the  
5 blood.  
6 Q What is ethyl alcohol?  
7 A Ethyl alcohol is the alcohol commonly known as drinking  
8 alcohol.  
9 Q Do you have a medical opinion on how that ethyl alcohol  
10 got into the body of Peggy Sue Altes?  
11 A It can get in one of two ways. It can be ingested and  
12 be absorbed through the stomach or it can be generated  
13 in the blood by bacteria. This particular level of 20  
14 milligrams or point 0 2 is consistent with what we see  
15 in bodies that have been dead in excess of 48 hours.  
16 Q And I believe you testified on cross examination that  
17 the death would have occurred more likely between the  
18 12th and the 15th of November?  
19 A Yes.  
20 Q No later than that?  
21 A Yes.  
22 Q Now have you seen the photographs of the scene?  
23 A Yes, I have seen photographs of the scene.  
24 Q You had not seen Exhibit 10?  
25 A That's correct.

ReDirect Exam.  
John Pless

4 Q And when did you see that?  
5 A Sometime after the autopsy, I can't tell you exactly  
6 when, I believe it was several weeks after the autopsy.  
7 Q Did you see other pictures at that time?  
8 A Yes.  
9 Q Now you testified that it was possible to leave a B  
10 trace, AB can type out O and you weren't sure about the  
11 other way around?  
12 A That's right.  
13 Q What were we talking about there? I'm not sure I under-  
14 stood it.  
15 A Well there is a rare blood type called the Bombay type  
16 in which it may actually Type O when in fact it is B  
17 or at least the type Bombay and I don't remember the  
18 specifics with regard to that. I would have to go back  
19 to the textbooks and look it up. That is one instance  
20 where one purported type of blood can type out as another  
21 type at a different time under different circumstances.  
22 Q Is this why hospitals do their lab work over and over  
23 again?  
24 A That's right.  
25 Q And if you was a physician sitting in your office and

ReCross  
John  
Pless

4 depending upon why you were examining the blood. They  
5 would be different in the hospital laboratory than they  
6 would be in a forensic laboratory.

7 BY MR. SHUMACKER: That's all I have.

8 -----  
9 The said witness testified further  
10 on RE-CROSS EXAMINATION in response  
11 to questions propounded by Mr.  
12 Lockwood, Attorney for Defendant.

13 Q Doctor, I don't want to belabor this but I hope you can  
14 appreciate that this could be very important in this case.

15 Are you saying, sir, that there is no standardization  
16 among the various people in the State who are doing lab  
17 work for the purpose of presenting evidence in Court?

18 A Well that's a very difficult question for me to answer.  
19 There are - I have no trouble answering that for hospital  
20 laboratories but the standards within forensic labora-  
21 tories are really not the same as they are in hospital  
22 laboratories.

23 Q What would your answer be as to hospital laboratory?

24 A I would say, yes.

25 Q How about police forensic laboratory?

4 police and other forensic laboratories in this State?

5 A It is possible for forensic laboratories to exist in

6 this State without any standards, that's correct.

7 Q And there is not one single governing body or one single

8 person who is in charge of seeing that whatever tests

9 are conducted in police laboratories are conducted

10 correctly?

11 A That's correct.

12 Q There is no one in a position of authority to see that

13 tests run in police laboratories in the State are run

14 thoroughly?

15 A That's correct.

16 Q Doctor, I thought you said on redirect you made no

17 notation of excessive bacterial activity with regard to

18 Peggy Altes?

19 A On the specimens that I examined from her vagina, that's

20 correct.

21 Q Now just for the benefit of the jury and I, would you

22 have made a notation had you observed excessive material

23 activity in Peggy?

24 A In the vaginal material, yes.

25 Q And can we take it then by the fact that you made no such

4 Q And when we say excessive bacterial activity, what standard  
5 are we using, what does that mean?  
6 A Well it's a very equivocal thing. We're looking at a  
7 specimen which has bacteria in it already. If the thing  
8 were completely overgrown with bacteria, there would have  
9 been a mention made in the report.  
10 Q So we're talking about bacterial activity in an area that  
11 you would normally expect to find?  
12 A That's correct.  
13 Q Now with regard to blood alcohol, Doctor, isn't it true  
14 that the natural processes of decomposition create ethyl  
15 alcohol?  
16 A That's right.  
17 Q And even in the most decomposed of bodies, you would not  
18 expect to find more than .04 percent blood alcohol  
19 due to decomposition?  
20 A It could be a little higher than that.  
21 Q How much higher?  
22 A It could be .5, possibly .6.  
23 Q Now are we talking about .05 and .06?  
24 A That's correct, .05.  
25 Q And I think you said earlier that refers to what twenty

4 A That's correct.  
5 Q And that does not indicate to you, does it, that there  
6 was excessive or unusual bacteria activity with regard  
7 to Peggy Altes?  
8 A Well understand that the examination made by Dr. Forney  
9 in the Toxicology Laboratory is done many days after the  
10 autopsy and it is possible for bacteria to generate in  
11 that specimen during that period.  
12 Q Okay, so if I understand you correctly, you're saying  
13 that at the time you took the specimen it wouldn't be  
14 any higher then .02 at the time you took it?  
15 A That's correct.  
16 Q So while we was waiting on Dr. Forney to run his tests  
17 it could have proliferated somewhat?  
18 A That is correct.  
19 Q And so that's no indication to you that at the time you  
20 took the sample, there was excessive bacterial activity  
21 present?  
22 A Well quite frankly I would expect there to be some  
23 bacterial activity present.  
24 Q But I'm talking about excessive or unusually high?  
25 A Well its all a matter of what you mean by excessive.

4 Q Didn't alarm you or even cause you to make a notation  
5 about it?  
6 A That's correct.  
7 Q This Bombay blood type, it sounds like - that's pretty  
8 rare and you say you have heard or know of it maybe to  
9 cause a B person to type O. A person with B blood when  
10 their blood is taken and tested they will show an O  
11 type?  
12 A Yes.  
13 Q In all of your experience and your studies, have you  
14 ever known anyone who was an O Type blood to test B?  
15 A I don't remember.  
16 Q Now Mr. Shumacker asked you about mixing fluids of  
17 different people with regard to blood type. Would it  
18 be possible to determine Peggy Altes blood type from  
19 examining the samples that you gave to the technicians?  
20 A It should be, yes.  
21 Q So you wouldn't be surprised if a technician examining  
22 that sample came up with a type of blood that we know  
23 Peggy Altes was?  
24 A No.  
25 Q If that fluid of Peggy Altes were mixed with the fluid

4 Q You would not. This H factor you're talking about, is  
5 that a precursor to Type A blood also?  
6 A Yes.  
7 Q And it's a precursor to Type B but not in as great an  
8 extent, is that right?  
9 A That's correct.

10 BY MR. LOCKWOOD: No further questions.  
11 Thank you.

12 -----  
13 WITNESS EXCUSED.  
14 -----

15 BY THE COURT: We have at this point  
16 somewhat of a change in the trial  
17 schedule that I indicated to you  
18 earlier. It has come to our attention  
19 that Mr. Lockwood's wife is going to  
20 need to have some back surgery, I  
21 think its this Thursday so we will  
22 not be meeting on Thursday but rather  
23 at the close of tomorrow we'll be con-  
24 tinuing the case over until the follow-  
25 ing Monday so you might want to make

4 Q As far as the exhibits which were admitted  
5 today that you identified, did you bring those with you  
6 today?

7 A Uh - no, Carol Kohlmann brought them.

8 BY MR. GOSSETT: Thank you.

9 -----  
10 BY THE COURT: How do you spell your  
11 last name?

12 A W a r m a n .

13 WITNESS EXCUSED.

14 -----  
15 CAROL KOHLMANN, called to the witness  
16 stand as a witness on behalf of the  
17 State of Indiana, and being first duly  
18 sworn to testify the truth, the whole  
19 truth and nothing but the truth relat-  
20 ing to said above entitled cause,  
21 testified as follows on EXAMINATION  
22 IN CHIEF, such examination in chief  
23 being conducted by Mr. Gossett, Prose-  
24 cutting Attorney, 18th Judicial Circuit,  
25 State of Indiana.

RE-DIRECT EXAM  
JERRY WHRMAN

981

4 A I'm a forensic serologist for the Indianapolis Marion  
5 County Forensic Services Agency.  
6 Q And what is a forensic serologist?  
7 A A forensic serologist is one who specializes in the  
8 study and identification of blood and biological fluids.  
9 Q And do you need some specialized training for being able  
10 to do that?  
11 A Yes sir.  
12 Q And what training is that?  
13 A I have a Bachelor of Arts Degree in Chemistry from the  
14 Indiana University and I have received specialized train-  
15 ing in forensic serology from the Michigan State Police  
16 Department, the Northwest Crime Laboratory, the Serological  
17 Research Institute in California and I have six hours of  
18 graduate credit in forensic serology from the F.B.I.  
19 Academy in conjunction with the University of Virginia.  
20 Q How long have you been acting as a forensic serologist?  
21 A Little over eleven years.  
22 Q During that period of time approximately how many exami-  
23 nations have you made?  
24 A Examinations, I have no idea, sir, and the records. They  
25 would be - number in the thousands. I have testified

Direct Exam.  
Carol Kohlmann

Q61

3  
4 Q Where do you have your laboratory or your place of work?

5 A Our laboratory is located in Marion County, 40 South  
6 Alabama Street.

7 Q Do you investigate all cases or are you requested to  
8 investigate certain specific cases?

9 A No sir. We are requested by the detective assigned to a  
10 particular case. At the time the detective is investi-  
11 gating the case he will make out request cards for the  
12 laboratory and state to us at that time specific items  
13 which he would like examined and what particular exami-  
14 nations he would like us to check for.

15 Q Did you receive a request with regard to the case involv-  
16 ing one Peggy Altes?

17 A Yes sir, I did.

18 Q And did you make an examination pursuant to that request?

19 A Yes sir, I did.

20 Q What are your normal procedures on making an examination  
21 of items requested by the Police Department?

22 A Once our laboratory has received an analysis request card  
23 from the detective, one of the forensic serologists will  
24 be assigned to that particular case. If it's evidence  
25 from an Indianapolis case or a Marion County case we will

3 A I returned them back to the crime laboratory. At that  
4 time there were swabs removed from the envelope. I  
5 checked them to be sure that they were air-dry at that  
6 particular time. They were then sealed in plastic and  
7 frozen. The liquid blood sample was maintained in our  
8 refrigerator for analysis for blood typing purposes and  
9 the dried - there was a dried vaginal smear that was  
10 maintained in the laboratory and later subjected to  
11 microscopic analysis after processing.

12 Q Now were these tests that you chose to run on the items  
13 or how did you determine what tests you were going to  
14 run?

15 A I was asked by Detective Sergeant Lou Christ to examine  
16 the deep vaginal swab, the deep vaginal slide, I stand  
17 corrected, the swabs which were submitted from the autopsy  
18 of Peggy Altes and also the liquid blood sample. The  
19 liquid blood sample was run for blood typing procedures.  
20 It was run for Lewis Blood Typing to determine the victim  
21 secretor status and it was run for the presence of blood  
22 proteins or enzymes. The swabs and the slide I was asked  
23 to identify and analyze and determine if there was a  
24 presence of seminal fluid constituents on those items  
25 submitted.

Direct Exam.  
Carol Kohlmann

987

4 Q And on State's Exhibit No. 27, it says Lab Item No. 1?  
5 A That's correct.  
6 Q In what condition did you receive that envelope when you  
7 picked it up at the property room?  
8 A The envelope was sealed when I received it.  
9 Q When you opened it, what did you find?  
10 A Inside there was a glass slide and the glass slide was  
11 marked deep vagina, ML 49-84 and that slide I put into  
12 a cardboard slide holder to preserve it and to keep it  
13 from being broken.  
14 Q Did you make an examination of that item that was con-  
15 tained in the evidence envelope?  
16 A Yes sir, I did.  
17 Q And what was the result of your examination of that item?  
18 A After staining of the slide and that's in order to use a  
19 biological differential stain to differentiate the sperma-  
20 tazoa and different segments of the spermatazoa. The  
21 slide was microscopically analyzed and spermatazoa were  
22 identified.  
23 Q And do you have a name for the procedures you used there  
24 or the staining technique?  
25 A The staining technique was what's called a Christmas Tree

Direct Exam.  
Carol Kohlmann

968

4 Q And what about that stain makes the presence of sperm  
5 obvious?  
6 A The staining is good for forensic purposes because it  
7 will take spermatazoa are composed of a sperm head and  
8 a very long tail with a neck or mid-piece segment. The  
9 staining procedures uses two different colorations, a  
10 green and a red coloration. To the top portion of the  
11 sperm head which is called an acrosome cap, it will stain  
12 it like pink. The back portion of the sperm head will be  
13 stained a dark red. The neck or mid-piece section in  
14 the tail will be stained green. It is very important  
15 for us to have this staining procedure because it would  
16 be possible if you are examining a sperm head only which  
17 is sometimes found in rape cases or in cases of sexual  
18 assault to not misidentify spermatazoa and sperm would  
19 be sometimes - the sperm head would be the same size as  
20 say yeast cells and in order to differentiate you use  
21 a biological differential staining and by identifying the  
22 acrosome cap and the different pieces of the sperm, you  
23 are able to identify the spermatazoa.  
24 Q And this is done with some microscopic examination of  
25 the slide?

Direct Exam.  
Carol Kohlmann

969

4 A Yes sir, I did.

5 Q If I can find your Lab Item No. 2, State's Exhibit No. -  
6 first of all back on Lab Item No. 1, did you perform any  
7 other examinations of this item?

8 A No sir, I did not.

9 Q With regard to State's Exhibit No. 30 marked your Lab  
10 Item No. 2, what condition was this when you received  
11 it from the property room?

12 A The envelope was sealed when I received it from the  
13 Indianapolis Police Department property room.

14 Q And just so I keep things in order, I apologize, but  
15 once you were through with this item, what did you do  
16 with it, going back for the record. Item No. 27, your  
17 Lab Item No. 1, when you were completed or you had com-  
18 pleted your examination of it, what did you do with it?

19 A I placed the slide in what's called a cardboard slide  
20 holder, just will keep the slide from being broken during  
21 transport, placed it back into the original envelope in  
22 which I had received it, sealed up the envelope, placed  
23 my evidence sticker on it and dated it and initialed it  
24 and submitted it back to the Indianapolis Police Depart-  
25 ment property room.

Direct Exam.  
Carol Kohlmann

Q71

365

4 A I removed that item from the Indianapolis Police Department  
5 property room this morning at approximately 7:15.  
6 Q And you wouldn't give it to me until I signed it out, is  
7 that correct?  
8 A That's correct.  
9 Q With regard to State's Exhibit No. 30, you say you re-  
10 ceived that in a sealed condition?  
11 A That's correct, sir.  
12 Q And what was contained in that after you opened it?  
13 A Inside there are two what we call cotton tip applicator  
14 envelopes and inside each envelope, those envelopes are  
15 marked with the Case Number 163426-F IUML 49-84, one of  
16 the envelopes is marked deep vagina with the date Novem-  
17 ber 18th, 1984, J. Warman, Wishard Memorial Hospital and  
18 it contained two cotton tip swabs. The other envelope  
19 inside again is the cotton tip applicator envelope, it's  
20 marked with the Case Number 163426-F IUML 49-84, JEP,  
21 J. Warman, vagina, November 18th, 1984, Wishard Memorial  
22 Hospital and it also contained two cotton swabs.  
23 Q After you opened the envelope and found these swabs,  
24 what if any examinations did you perform on them?  
25 A I was asked by Detective Sergeant Lou Christ to check

Direct Exam.  
Carol Kohlmann

Q7

JEP

4 Q -- strike that question. What test did you perform on  
5 those swabs and how was the test performed?  
6 A Okay. A number of very different tests were performed  
7 on the cotton swabs. The tests were to identify the  
8 presence of seminal fluid. They were also to identify  
9 the presence of blood group substances. The first test  
10 performed was what is called an Acid Phosphatase test.  
11 Acid Phosphatase is a protein or an enzyme. It's found  
12 in very high concentrations in seminal fluid. It is  
13 also found in very low concentrations in other body flu.  
14 It can be a preliminary seminal fluid identification pr.  
15 cess. It can indicate the presence of seminal fluid.  
16 It's a colorimetric test which we run. It's run agains.  
17 known positive and negative controls. This test was run  
18 on the particular swab itself. It was run directly in a  
19 swab and it was also run in an extract of the swab. The  
20 second test that was run was what's called a prostate ai  
21 P30 test. It's a test for a protein called the prostate  
22 antigen or P30 for short which is a human seminal fluid  
23 protein excreted by the prostate gland during ejaculatio  
24 It also would be another form of identifying seminal fl.  
25 The third test that was run were from the extracts of e.

4 different tests which I am describing now. From the  
5 sediment that was spun and removed from the bottom of  
6 the extract, a slide was prepared by myself in the lab-  
7 oratory. The slide was air dried. It was heat fixed  
8 and then subjected to the same type of differential  
9 staining which we use in the laboratory for seminal  
10 fluid, the Christmas Tree stain. After that the slide  
11 was microscopically examined for the presence of sperma-  
12 tazoa. The fourth test that was run was a test to indi-  
13 cate the presence of amylase. Amylase is an enzyme. It  
14 is found in saliva. It's also found in other body fluids  
15 but it is found in saliva in much higher concentrations  
16 fifty to a hundred times that of other body fluids.  
17 What we attempt to establish on analysis of swabs for  
18 amylase is whether or not we might find levels which are  
19 high enough to be consistent with the presence of saliva.  
20 The next test that was run we run preliminary and on some  
21 of the swabs confirmatory tests were run for the presence  
22 of blood staining. Upon visual examination, the swabs  
23 appeared light reddish brown. Some of them had a darker  
24 reddish brown coloration to them which can indicate  
25 possible blood staining. The initial blood staining or.

---

Direct Exam.  
Carol Kohlmann

978

4 capacity of the molecule. That initial test is a pre  
5 liminary test. You can get a positive from other things  
6 besides blood. On some of these swabs where there appear  
7 to be enough staining present. We also did a confirma-  
8 tory test for blood which is a crystal test in which we  
9 actually take the hemoglobin from the molecule and make  
10 a crystal out of it and identify that crystal microscopi-  
11 cally. That is a confirmatory test for blood because  
12 nothing else will cause this hemochromogen crystal to  
13 form except for blood. Further testing was run in order  
14 to try and determine once seminal fluid had been estab-  
15 lished on some of the swabs whether or not we could get  
16 any means of identifying the seminal fluid donor and  
17 approximately eighty percent of the population, the in-  
18 dividuals are called secretors and this is determined  
19 sometimes by their blood, sometimes by their saliva and  
20 with the eighty percent that are secretors in their blood  
21 they are one of four major blood types, Type A, Type B,  
22 Type AB or Type O. If an individual is a secretor in  
23 his body fluids, that is his perspiration, in the seminal  
24 fluid, puts a woman in her vaginal fluids and their  
25 saliva, we would expect to pick up what's called a blood

Direct Exam.  
Carol Kohlmann

CKM

4 up A blood group substance activity in their body fluids  
5 and possibly also what we call H substance because H is  
6 like a precursor to the formation of the A substance.  
7 There was testing run by two different methods to see  
8 if we could pick up any of this blood group substance  
9 activity. The one type of test was called Absorption  
10 Inhibition. It is sensitive test. It will determine  
11 the presence of blood group substance activity from  
12 secretor individuals. The second test that was run was  
13 what's called Absorption Elution. It is a much more  
14 sensitive test. It can sometimes pick up blood group  
15 substance activity which is in much lower concentrations  
16 in non-secretor individuals. After we had run those  
17 particular type of tests against known positive and  
18 negative controls, the swabs since they did appear to be  
19 slightly bloody, we did subject them to what we call  
20 electrophoresis analysis. Electrophoresis analysis is  
21 a means of separating blood into various blood proteins  
22 which can be found in blood, some of them are found in  
23 seminal fluid. Some of them are found in vaginal fluid.  
24 And we were looking for various types of these. We can  
25 determine Peggy Altes blood from - we could determine her

4 semen donor in the case and that was performed by  
5 electrophoresis analysis and that was the only major  
6 testing that was performed on all the swabs which I was  
7 submitted.

8 Q Now you had received a blood item from Peggy Altes, is  
9 that correct?

10 A That's correct.

11 Q And you ran an examination on that, I believe, State's  
12 Exhibit No. 31 contained the blood, was this the one  
13 you ran a test on?

14 A Yes sir, that's correct. There was contained within the  
15 envelope a liquid tube of blood and the liquid tube of  
16 blood was labeled Peggy Altes, IUML, 49-84, 11-18 Heart,  
17 blood, 163426-F County Coroner.

18 Q And did you make an examination of that blood?

19 A Yes sir, I did.

20 Q What sort of test did you run?

21 A On the liquid blood sample we subjected it to two different  
22 types of test to determine her major ABO blood type. A  
23 person is Type A, they are Type B, they are Type AB, they  
24 are Type O, one of the four basic blood groups. Forward  
25 and reverse typing were performed to determine the presence

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4 was determined to be Blood Type A. After that time we  
5 subjected the liquid blood sample to what's called Lewis  
6 Blood Typing. Lewis Blood Typing is our means of deter-  
7 mining a person secretor status.

8 Q Let me stop you for just a second. What is a secretor?

9 A A secretor is one who of about eighty percent of the  
10 population who in their body fluids would secrete a blood  
11 group like substance which we can determine by Absorption  
12 Inhibition testing.

13 Q Is that a water soluble substance?

14 A Yes, it is. It's basically a water soluble substance.

15 Q And what is the substance composed of, what material is  
16 it?

17 A It's glycoprotein.

18 Q It's a protein of some kind?

19 A Uh huh, yes sir.

20 Q So you made a determination of Peggy's blood, about whether  
21 she was a secretor or not?

22 A Right, that's correct, sir.

23 Q And what was the result of the test?

24 A Peggy Altes was determined to be a Lewis Blood Type A,  
25 A negative, Lewis Blood Type B positive and --

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4 body fluids I would expect to - in her body fluids I  
5 would expect to pick up a Blood Group A and possibly H  
6 substance activity.

7 Q Did you also run an analysis on the blood from Jerry  
8 Watkins?

9 A Yes sir, I did.

10 Q When did you perform that test?

11 A That test was performed on November 28th, 1984 and I was  
12 submitted from Detective William C. Applegate on November  
13 27th, 1984 at 3:15 in the afternoon a sealed Hancock  
14 Memorial Hospital envelope which was marked Hancock  
15 Memorial Hospital, P. O. Box 827, Greenfield, Indiana,  
16 46140, IPD 163426-F, 11-27-84, 2:10 P.M., HCG - HCSD, I  
17 stand corrected, 30-84-0848, Jerry Watkins one vial of  
18 blood from Jerry E. Watkins, Patricia Meyer, William C.  
19 Applegate, HCSG - HCSD, GEW, PEM.

20 Q And you performed a test on that blood?

21 A Yes sir, the same type of testing was performed on the  
22 blood of Jerry Watkins as was performed on Peggy Altes.

23 Q And what were the results of that test?

24 A Jerry Watkins was determined to be major ABO Blood Type  
25 O. In his Lewis Blood Type he was Lewis A negative,

4 Q Now you say you would expect to pick up H Blood Group  
5 substance activity, what does that mean?  
6 A In --  
7 Q -- first of all, what is an H Blood Group substance?  
8 A In the fluid of secretor individuals, there is a glyco-  
9 protein which is water soluble. It acts like an O Blood  
10 Group substance and from our testing we can pick this up.  
11 It is characteristic of his blood type. Any individual  
12 of Type O would secrete what's called an H Blood Group  
13 substance in their body fluids and it can be determined  
14 by Absorption Inhibition analysis.  
15 Q Would any other blood types also indicate like that H  
16 type substance?  
17 A It's possible that the H type substance can be seen in  
18 people of Blood Type A and Blood Type B and the reason  
19 being is that H substance seems to act they think now as  
20 a precursor to the formation of the Major A and the Major  
21 B Blood Group substance activities.  
22 Q What's a precursor?  
23 A It's formed prior to the actual formation of the A and  
24 the actual formation of the B Blood Group substance so  
25 it is possible to have some there that has not been

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Q&A

4 A That's correct. It could be understood that way.  
5 Q Did you determine anything else going back to Peggy's  
6 blood, did you determine anything else or run any other  
7 test upon her blood and if so what were the tests and  
8 what were the results?  
9 A Yes sir. The blood was subjected to the electrophoresis  
10 analysis which I described earlier in order to determine  
11 various protein types. These protein types - well they're  
12 all associated with the red blood cells. Some of them  
13 are also associated with vaginal fluids and seminal fluids.  
14 We were trying to establish a profile of Peggy Altes to  
15 know what to expect in analysis of the vaginal swab to  
16 see if we could find anything other than hers.  
17 Q And what characteristics of her blood did you determine  
18 and note in your report?  
19 A Okay, there were six enzymes or proteins that were checked  
20 for. The first one is what's called Esterase D and in that  
21 there are actually three different types available. Peggy  
22 Altes was determined to be a Type 2-1. The second enzyme  
23 that was checked for was Phosphoglucomutase. Peggy Altes  
24 was determined to be Type 1. The third one was Glyoxalase  
25 1, a test to determine Peggy Altes type were inconclusive.

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Q&A

4 Adenosine Deaminase was the next one. Peggy Altes was  
5 determined to be Type 1 and the last one was Adenylate  
6 Kinase and Peggy Altes was determined to be Type 1.

7 Q Did you also make a similar determination of the blood  
8 of Jerry Watkins?

9 A Yes sir, I did. Jerry Watkins blood sample was subjected  
10 to the same type of Electrophoresis analysis as was the  
11 blood of Peggy Altes. His blood protein groupings --

12 Q -- let me back up a second, you used some terms that I'm  
13 not real familiar with and maybe the jury is not either  
14 but what is Electrophoresis?

15 A Electrophoresis analysis is a means of subjecting a blood  
16 sample or vaginal swab to an electric current in a medium.  
17 In this case its either auger or agar and starch mixture  
18 which is a support medium and under an electric current  
19 the various proteins will separate out based on their  
20 charge, based on the mobility and the differences in the  
21 different types.

22 Q Okay, now I know this may sound extremely basic to some-  
23 one with your knowledge but what is agar?

24 A Agar is a support medium, it acts a little bit like a  
25 jelly to hold --

4       proteins based on the electrical current that's later  
5       applied. It's actually a means of creating a substance  
6       or a solid, semi-solid state that we can put the actual  
7       piece of blood stain in or the piece of the swab into  
8       and it also helps to separate the proteins.

9       Q     Okay. As the proteins are separated on this plate, how  
10      do you determine that they have in fact separated and how  
11      do you identify them?

12      A     The - we run them with basic laboratory procedures which  
13      are accepted among the scientific and research community.  
14      Once there are specific time limits which are involved  
15      and we know that the proteins will separate. In the first  
16      system that's used, they are separated in a time of about  
17      three hours and fifteen minutes at a voltage of 300 volts.  
18      The second system that's used takes much longer. It takes  
19      a lot lower current and it takes a time of approximately  
20      sixteen hours and based on the standards that have been  
21      set the proteins will have separated and migrated in that  
22      particular period of time, then are later developed.

23      Q     Okay. You talk about migrated, you mean they actually  
24      move --

25      A     -- yes --

4 Q And do different proteins move at different -  
5 A -- yes, they do --  
6 Q -- or how do they separate?  
7 A They move on different speeds based on their chemical  
8 compositions and based on their charges and their dif-  
9 fferences in the electric field.  
10 Q Now you ran these tests on Jerry Watkin's blood?  
11 A That's correct.  
12 Q What were the results of your tests as far as the - what  
13 the test showed?  
14 A Jerry Watkins was determined to be on the first protein  
15 that was analyzed an Esterase D, Type 2-1. He was deter-  
16 mined to be a Phosphoglucomutase, Type 1, a Glyoxalase  
17 1, Type of 2-1. Erythorocyte Acid Phosphatase test, pro-  
18 tein BA. Adenosine Deaminase Type 1 and Adenylate Kinase  
19 Type 1.  
20 Q Okay. You said one of them was a BA, what are those  
21 factors or what does BA mean in that context?  
22 A An Erythorocyte Acid Phosphatase, the designation that has  
23 been given in scientific communities of the various dif-  
24 ferent types is letter designation rather than numbers  
25 and the difference of the proteins is indicated by a letter

4 A That's correct.

5 Q Now with regard to Lab Item No. 2 going back to that.

6 Were there any other tests run other than the ones that  
7 you've described so far on that item?

8 A No sir.

9 Q Which I think you said earlier were two packages of swabs?

10 A That's correct, sir.

11 Q With regard to - did you reach any conclusions with regard  
12 to Lab Item No. 2 other than the results of those tests  
13 which you previously testified about?

14 A I believe I testified as to the actual type of testing  
15 but not to the results.

16 Q Okay, what were the results of your test?

17 A There were four swabs submitted within the envelope, the  
18 sealed envelope which I received. Swab No. 2-1. From  
19 that swab and analysis of that swab we found a Negative  
20 Acid Phosphatase Test. Negative Prostate Antigen test  
21 for the presence of seminal fluid. We found upon micro-  
22 scopic examination no Spermatazoa. Amylase testing to  
23 see if we could indicate the presence of saliva did not  
24 indicate an elevated level for us to conclude that saliva  
25 may be present. Blood had been identified on the swab

4 showed the presence of blood group A, B or O.  
5 activity. Protein Grouping to determine these different  
6 proteins on the swab was determined to be Esterase D,  
7 Type 2-1, PGM or Phosphoglucomutase Type was inconclusive  
8 and the Glyoxalase I was also inconclusive.

9 Q When you say inconclusive, what does that mean?

10 A Sometime the band patterns, they're smearing and there's  
11 other conditions involved on the plate which don't allow  
12 us to make a definitive call as to the type and therefore  
13 we report amount as inconclusive.

14 Q What factors can effect whether or not you could get a  
15 definitive result in a test like that?

16 A At this particular time these samples will run - we were  
17 having some trouble with our initial plates in that we  
18 had what's called an ionic front on the plate and it  
19 caused problems in reading some of the bands. Normally  
20 some things which might effect the band pattern is the  
21 amount of sample that we've used. We can sometimes use  
22 too much sample. Sometimes the age of the sample if its  
23 very old we'll see a lot of build up and a lot of streak-  
24 ing on the plate.

25 Q Do you prepare your own plates or are they purchased from

4 A -- yes sir, everything.  
5 Q Once you determined you were having a problem with this  
6 - you called it an ionic front?  
7 A An ionic front, uh huh.  
8 Q Once you determined you had this problem, what did you  
9 do?  
10 A We investigate - excuse me, the problem for approximately  
11 a year and a half before we found a solution.  
12 Q Does it have any impact on your being able to run defini-  
13 tive tests on these items?  
14 A No sir, everything that was called that was conclusive  
15 we report it out.  
16 Q I'll hand you the next item which is State's Exhibit No.  
17 32 which is your Lab Item No. 3 and I'll ask you how you  
18 received that item?  
19 A Did you want me to report on those swabs?  
20 Q Excuse me, did I not ask you about all the rest of the --  
21 A -- I believe I did have some more to include, yes sir.  
22 Q In Item No. 2, I'm sorry. Did you run any other tests  
23 on the items that came from your Lab Item No. 2?  
24 A Yes sir, there were three more swabs which were run under  
25 Lab Item No. 2 which I have not testified.

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4 A That's correct.  
5 Q What did you do with the second swab?  
6 A Swab ID No. 2-2. That swab was subjected to the same  
7 type of analysis. From that we also received a Negative  
8 Acid Phosphatase test. A Negative Prostate Antigen (P30)  
9 test for seminal fluid. Microscopic examination showed  
10 no spermatazoa present. We did not detect an elevated  
11 level of amylase which could possibly indicate the presence  
12 of saliva. Preliminary testing was run for the presence  
13 of blood and it was positive. Absorption-Elution analysis  
14 showed the presence of blood group A substance activity.  
15 Absorption-Inhibition analysis showed the presence of  
16 blood group A and H substance activity. Cuttings from the  
17 swab were again subjected to Protein Analysis by electro-  
18 phoresis. Esterase D, we found no activity on. It  
19 probably had already decomposed or been destroyed by the  
20 time that we did the analysis. Phosphoglucomutase, we  
21 determined it to be Type 1. Glyoxalase I we determined  
22 that there was no activity on that swab for that particular  
23 protein.  
24 Q Now did you perform another test on - to a third swab that  
25 was in - that you found in your Lab Exhibit No. 2?

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4 Microscopic examination showed that there were spermata-  
5 zoa present. We did not detect an elevated level of  
6 amylase present. There was a positive preliminary chemi-  
7 cal test for the presence of blood staining on the swab.  
8 Absorption Elution analysis showed the presence of blood  
9 group A and blood group B substance activity. Absorp-  
10 tion Inhibition analysis showed the presence of blood  
11 group A, group B and blood group H substance activity.  
12 Protein grouping analysis by electrophoresis showed the  
13 Esterase D type was 2-1. The Phosphoglucomutase type  
14 was 1 and Glyoxalase, we saw that there was no activity  
15 on the swab.

16 Q Did you perform an examination of the fourth swab that  
17 you found in your Lab Item No. 2?

18 A Yes sir, I did.

19 Q What were the results of those examinations?

20 A That swab was labeled Item No. 2-4 and the results of the  
21 analysis were Negative Acid Phosphatase test. A Negative  
22 Prostate Antigen (P30) test for seminal fluid. Spermata-  
23 zoa were identified by microscopic examination. We did  
24 not detect an elevated level of amylase on the swab.

25 Blood was identified on the swab by confirmatory testing

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4       B and H substance activity. Protein Grouping analysis  
5       was again conducted by electrophoresis. From that they  
6       determined the Esterase D type was inconclusive. The  
7       Phosphoglucomutase tape was Type 1 and Glyoxalase we  
8       found no activity on.

9       Q     Okay, when you say we, did someone assist you?

10      A     No sir, I actually performed them by myself.

11      Q     I just wondered.

12      A     Terminology.

13      Q     Sort of a collective we or something like that.

14      A     Uh huh.

15      Q     I'll hand you - first of all going back to Exhibit 2,  
16        that entails everything that you examined in Exhibit 2?

17      A     That's correct.

18      Q     And you had a positive examination for spermatazoa or  
19        sperm on two of the samples?

20      A     That's correct.

21      Q     How did you test swabs, I think you identified them as  
22        2-3 and 2-4, how did you test those swabs to identify  
23        spermatazoa?

24      A     Okay, a portion of the swab was cut and it was extracted  
25        in a very weak salt water solution. That solution then

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4 microscopically for spermatazoa and what we do is we'll  
5 take a small portion of that sediment, smear it onto a  
6 glass slide, allow that slide to air dry and then subject  
7 it to heat which will permanently fix the sample to the  
8 slide. After that the sample is then on the slide is  
9 then subjected to the differential biological staining,  
10 the Christmas Tree stain and that's to stain the different  
11 parts of the spermatazoa, the different colors. After  
12 that it's examined microscopically and we're looking for  
13 the presence of the sperm.

14 Q And you found it?

15 A That's correct.

16 Q And those were swabs that were taken from the vaginal area  
17 of Peggy Altes as indicated by your envelope?

18 A That's correct.

19 Q I'll hand you what's been marked for purposes of identifi-  
20 cation for this case as State's Exhibit No. 32 which is  
21 actually your Lab Item No. 3 and I'll ask you if you recog-  
22 nize that envelope?

23 A Yes sir.

24 Q And what condition was it in when you received it?

25 A It was sealed when I received it.

4       in the morning and took it back - took it back to the  
5       Crime Laboratory for analysis.  
6       Q      And when you took it back to a laboratory, what did you  
7       do?  
8       A      The envelope was opened and inside the envelope was  
9       found one cotton tip applicator envelope and it was  
10      marked Fluorescent areas L shoulder and cheek, J Warman,  
11      November 18, 1984, Wishard Memorial Hospital, 163426-F  
12      and it contained two cotton tip swabs.

13      Q      And did you perform certain tests on those swabs?  
14      A      Yes sir, the same tests were performed on swabs labeled  
15      Lab Item No. 3 as were performed on Lab Item No. 2 swabs  
16      from the vagina.

17      Q      And what were the results of those tests?  
18      A      We identified no seminal fluid staining and we did not  
19      detect an elevated level of amylase on the swabs to indi-  
20      cate the possible presence of saliva.

21      Q      Anything else with regard to your Lab Item No. 3?

22      A      No sir.

23      Q      I'll hand you what's been marked for this trial as State's  
24      Exhibit No. 26 and admitted into evidence and it has your  
25      Lab Item No. 4 on it and I'll ask you in what condition

4 morning.  
5 Q And what did you do with the envelope?  
6 A The envelope was taken back to the Crime Laboratory.  
7 It was opened and found to contain one cotton tip appli-  
8 cator envelope which was marked Typing 163426-F, IUML,  
9 49-84, November 19 - November 18th - excuse me, 1984,  
10 Wishard Memorial Hospital, mouth, J Warman, and it  
11 contained two cotton swabs.  
12 Q And did you perform certain tests on those swabs?  
13 A Yes sir, the same tests were performed on all the swabs  
14 submitted.  
15 Q And what were the results of those tests?  
16 A Swab 4-1 identified to me as an oral swab. We determined  
17 no seminal fluid staining was detected. An elevated level  
18 of amylase was detected which may indicate the presence  
19 of saliva on the swabs. Blood was identified as being  
20 present on the swab by means of crystal testing. Absorp-  
21 tion Elution analysis showed the presence of Blood Group  
22 A, B and H substance activity. Absorption Inhibition  
23 analysis showed the presence of Blood Group A and H sub-  
24 stance activity. The swabs were then subjected to  
25 electrophoresis analysis to determine the protein types.

4       4-2, there was no seminal fluid staining detected. An  
5       elevated level of amylase was detected to indicate the  
6       possible presence of saliva on the swab. There was a  
7       positive preliminary chemical test for the presence of  
8       blood staining. Absorption Elution analysis showed the  
9       presence of Blood Group A and H substance activity.  
10      Absorption Inhibition analysis shows the presence of  
11      Blood Group A, B and H substance activity. Protein  
12      Grouping analysis by electrophoresis showed the presence  
13      of Esterase D, Type 2-1. Phosphoglucomutase Type 1 and  
14      Glyoxalase 1, Type 2-1.

15     Q   The procedures that you followed in your testing, ma'am,  
16     what sort of controls do you have to insure the integrity  
17     of your test?

18     A   With the blood banking procedures we receive known  
19     standardized cells to type the serum of the individual.  
20     Those cells have been typed by the blood bank in Indiana-  
21     polis. Those cells are received routinely. Now at this  
22     particular time we are receiving commercially prepared  
23     cells which are also pre-typed. With the seminal fluid  
24     identification, depending on the particular type of test  
25     known controls are always run. Acid Phosphatase we have

4 also against just reagents alone to prove that the re-  
5 agents are not causing the contamination or any false  
6 positives in the test. There are always known positive  
7 and negative controls run with the Acid Phosphatase test  
8 with the Prostate Antigen (P30) test. With the amylase  
9 test we use liquid saliva. With the Absorption Elution  
10 and the Absorption Inhibition we have known standards  
11 received from the Serological Research Institute in  
12 California. From individuals who are secretors and known  
13 non-secretors and then for the blood protein grouping  
14 analysis we have individuals of known blood types within  
15 the laboratory. We use our own bloods as standards. They  
16 have been pre-typed and also confirmed by other labora-  
17 tories and other forensic serologists. We use these known  
18 types on every plate to determine the blood types of the  
19 different items which we are examining as far as the blood  
20 protein groups.

21 Q Now you used these standards - it's part of your procedure,  
22 is it not, to run these tests or run these standards along  
23 with the testing that you're doing to insure the integrity  
24 of your test?

25 A That's correct, with every test they are always run.

4 several of the results indicated A substance activity.  
5 What does that mean?  
6 A Since - we're talking about autopsy swabs from Peggy  
7 Altes. Peggy Altes had been determined by her blood  
8 to be a Blood Type A. By her Lewis Blood Typing she was  
9 determined to be a secretor. From her body fluids I  
10 would expect to pick up what's called a Blood Group A  
11 substance activity from her own body fluids.

12 Q And did you in fact find those?

13 A Yes sir, on the swabs.

14 Q There was a statement that you made that there were H  
15 Type substance activity?

16 A H substance activity was found on some of the swabs. H  
17 can possibly be a precursor to the formation of Blood  
18 Group A substance and we have seen part of that from the  
19 precursor action or it could also be coming from an O  
20 secretor semen donor.

21 Q And why would you say it could be coming from O secretor  
22 semen donor?

23 A An O secretor semen donor would secrete in his seminal  
24 fluid, in his perspiration and in his saliva, H Blood  
25 Group substance activity. Since we are seeing a mixed

4       swabs that there are spermatazoa present which indicates  
5       that there is seminal fluid present. We have a mixture  
6       of two body fluids and we have the H substance activity  
7       there. We cannot determine if its coming from Peggy  
8       Altes vaginal fluids or if its coming from the seminal  
9       fluid from the semen donor.

10      Q Now there also was a statement in your testimony that  
11       there were the presence of Blood Group B, what does that  
12       indicate?

13      A On some of the swabs we were seeing a Blood Group B sub-  
14       stance activity. The activity itself was acting in a  
15       very spurious and erratic nature. It was found on some  
16       of the swabs and not others and very inconsistent. It  
17       could be coming from a number of possible sources. You  
18       are dealing with a dead body in which you have decompo-  
19       sition and sometimes bacteria will acquire a B Blood  
20       Group substance activity which could possibly be causing  
21       it. It could also be coming from a B Blood Group semen  
22       donor or an AB Blood Group semen donor.

23      Q Now with regard to your testing, did you see anything  
24       that in your experience indicated to you you might have  
25       a bacteriological cause for that B activity?

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4       is a very good characteristic of bacterial influence.  
5       Also we were seeing the activity on oral swabs where  
6       there was no identification of any seminal fluid present  
7       and it could possibly be coming from bacteria.

8       Q   Would that be unusual to find in a body that had been  
9           dead for a period of time?

10      A   I believe it could be possible and it has been documented  
11           in literature that this type of activity can be found.

12      Q   And do I understand you correctly in three of the items  
13           that you examined you found sperm present, the slide that  
14           you received and two of the swabs that you received?

15      A   That's correct. Swab 2-3 and Swab 2-4.

16      Q   Based upon your experience in the examinations which you  
17           conducted what, if anything, can you tell us about the  
18           possible semen donor or the source of the semen sperm  
19           that would have been found in Peggy?

20      A   Based on Peggy Altes blood type and based on the findings  
21           that we're seeing on Absorption Inhibition and Absorption  
22           Elution analysis and the fact that we have this B activity  
23           which is kind of unexplained, we really can't determine  
24           where it's coming from. We couldn't really eliminate a  
25           blood type of any particular type for the semen donor and

4       that can be determined in blood. It's also found in  
5       vaginal fluids and it's also found in seminal fluids.  
6       The swabs which were subjected to electrophoresis  
7       analysis to determine this, we were picking up Phospho-  
8       glucuronidase Type 1. Peggy Altes is a PGM or Phosphoglu-  
9       comutase Type 1. Since it is the same type as her you  
10      can make no conclusion as to the PGM type of semen donor.  
11      We did subject this to some further analysis to try and  
12      further separate out this PGM type into more types and  
13      that analysis was not conclusive as to reporting that  
14      out.

15     Q   Now you were talking about trying to separate the PGM  
16      analysis out further. What do you mean by that?

17     A   PGM falls into one of three types, basic types. Type 1,  
18      Type 2-1 and Type 2 and that can be further broken down  
19      into ten various types.

20     Q   And did you not - why couldn't you break it down any  
21      further if that's a proper question?

22     A   we did. We ran the particular testing and again we were  
23      having problems with ionic fronts on our plate and due to  
24      the migration of the band pattern, we were not able to  
25      call definitive types.

---

4 see if we could find anything foreign to the victim.  
5 that we could attribute as coming from the semen donor.  
6 Q And the results of your test showed she was - that Peggy  
7 Altes was a Phosphoglucomutase Type 1?  
8 A Right and what we were finding on the swabs was PGM or  
9 Phosphoglucomutase Type 1 also.  
10 Q And your testing of the sample of Jerry Watkins showed  
11 that he was Phosphoglucomutase Type 1 as well?  
12 A That's correct.  
13 Q Is there anything from your results that would allow you  
14 to exclude the possibility of Jerry Watkins being the  
15 semen donor?  
16 A No sir.  
17 Q Is it fair to say, ma'am, that the only type of person  
18 you could exclude would be females?  
19 A That's correct, they shouldn't have seminal fluid.

20 BY MR. GOSSETT: I have no other  
21 questions.  
-----

22 The said witness testified further  
23 on CROSS EXAMINATION in response to  
24 questions propounded by Mr. Lockwood,  
25

Direct Exam.  
Carol Kohlmann

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4 Q Mrs. Kohlmann. My name is Jeff Lockwood. I want to  
5 ask you several questions and I don't know much about  
6 what you do and I'm assuming maybe the jury doesn't  
7 either. Will you help me make it simple?

8 A Surely.

9 Q You know if we find it necessary, maybe we could pull  
10 this blackboard over and maybe you can illustrate some  
11 things.

12 A Okay.

13 BY MR. LOCKWOOD: Do you mind, your  
14 honor?

15

16 BY THE COURT: No.

17 Q I'm not sure how we ought to do this so that everybody  
18 can see but let's try it kinda this way where you have  
19 access to it. Can all the jury see. Mrs. Kohlmann, are  
20 you a doctor?

21 A No sir, I'm not.

22 Q Can private parties use your lab or just police agencies?

23 A No sir, it has to be a police case made of the investiga-  
24 tion.

25 Q So a defense attorney couldn't ask you to run tests?

Cross Exam.  
Carol Kohlmann

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4 A That's correct.  
5 Q And what organization outside your lab monitors your  
6 activities?  
7 A Uh - we have run various proficiency type testing and  
8 basically all the training we have received has been from  
9 recognized individuals in the forensic serology community  
10 and also training by the FBI Academy.  
11 Q Well I guess my question is, there is no outside agency  
12 that monitors your lab?  
13 A Per se, no sir, huh uh.  
14 Q Now you indicated that you were looking for certain things  
15 when you ran your tests and we're not very familiar with  
16 the scientific names of those.  
17 A Uh huh.  
18 Q So I'd like to try to make it simple for us to understand  
19 and if I misspeak, please correct me, okay?  
20 A Uh huh.  
21 Q Now as I understand it there are four major blood groups.  
22 Is that right?  
23 A That's correct.  
24 Q And those blood groups are A, B, AB and O?  
25 A That's correct.

Cross Exam.  
Carol Kohlmann

4        correct?  
5    A    That's correct.  
6    Q    You talked then about a sub-blood group called the Lewis  
7        Blood type?  
8    A    It's not a sub-blood group. It is another blood grouping  
9        system that's used to further identify the blood sample.  
10      It's called the Lewis system.  
11      Q    The Lewis System?  
12      A    Right.  
13      Q    And when you're talking about the Lewis System, you indi-  
14       cated that you get an A positive, B negative --  
15      A    -- the two factors --  
16      Q    -- okay, that's not B's, A's and B's?  
17      A    No, it's a completely different system. The two factors  
18       are designated Lewis and it's a small (a) and Lewis and  
19       a small (b) and they are designated either positive or  
20       negative as to whether we find the factor or don't find  
21       the factor. It is a completely separate system to the  
22       A B O Blood Typing system.  
23      Q    Okay. So as far as - and that test is to determine one  
24       thing and one thing only?  
25      A    Right.

4 A Right, that's correct.  
5 Q Okay. And that's called the?  
6 A Lewis, L e w i s.  
7 Q Lewis and that's for secretor?  
8 A Secretor or non-secretor status.  
9 Q Okay. But if it's a non-secretor, you don't get much  
10 information from a non-secretor, would you?  
11 A That's correct.  
12 Q And we found that Peggy Altes was in fact a secretor?  
13 A That's correct.  
14 Q And that's a plus.  
15 A She would be Lewis B positive, that's the way it is  
16 designated or secretor, right.  
17 Q And that doesn't have anything to do with this B positive?  
18 A No sir, it does not.  
19 Q And we also found or you found, I didn't find anything,  
20 that Jerry Watkins was also a secretor?  
21 A Correct.  
22 Q So based on that would it be fair to say that you can't  
23 tell anything from the other test that you ran that - with  
24 regard to being a secretor or not being a secretor because  
25 both the victim and the accused in this case are secretors?

4 A Yes, I understand now.

5 Q How would that work?

6 A Okay, if Peggy Altes was a non-secretor and we pick up  
7 blood group substance activity on Absorption Inhibition  
8 analysis, then we know that activity being that she is  
9 a non-secretor could not come from her and it would  
10 directly be attributed to the semen donor or donors as  
11 the case may be. Since she is a secretor we should expect  
12 to see some of her blood group substance activity and  
13 they are from her normal body fluids.

14 Q Okay, when you were testifying on direct examination about  
15 seminal fluid in saliva and what have you and I was think-  
16 ing all the time about secretors, that's where you would  
17 pick up this blood type from, from semen or from saliva  
18 but you would also get it from the blood itself?

19 A Depends on the type of testing done. Absorption Inhibition  
20 analysis you're dealing - we take the extract and centri-  
21 fuge it. That removes any cellular particulate matter. We  
22 would not expect to see an Absorption Inhibition, any  
23 influence from blood samples. On Absorption Elution it is  
24 possible. It's a much more sensitive test that we would  
25 pick up some from blood and it would be possible on that

Cross Exam.  
Carol Kohlmann

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4       are the two tests that you run on the seminal fluid?

5   A   That's correct.

6   Q   And if I'm - I guess what I'm getting at, if I'm a Type

7           O blood which by the way I am, you can't exclude me from

8           being the semen donor in this case, can you?

9   A   That's correct.

10   Q   But I'm a Type O and I would secrete that if I'm a secretor

11          into my body fluid but I'd also - you'd pick it up from

12          a sample of blood?

13   A   I would pick up an O blood type.

14   Q   Right, that's what I'm talking about.

15   A   Right.

16   Q   And you might pick up also these proteins that you've

17          talked about?

18   A   Uh huh, that's correct.

19   Q   From blood, correct?

20   A   Correct.

21   Q   You've been at this for how long, fourteen?

22   A   Eleven.

23   Q   Eleven years. Okay. In violent crime --

24   A   -- yes sir --

25   Q   -- is it possible - is it not possible for the assailant

4 A Correct.  
5 Q And perhaps breaking the skin?  
6 A Would be possible, uh huh.  
7 Q And bleeding into the mouth of the victim?  
8 A Uh huh, possible.  
9 Q And is it also possible that for one reason or another  
10 that a man's privates might be wounded or whatever might  
11 have source - you could bleed from that area into the  
12 vaginal?  
13 A It would be possible, uh huh.  
14 Q And we're talking about extremely small amounts of things,  
15 aren't we?  
16 A I can't - there was no way for me to quantitate the amount  
17 that was actually there.  
18 Q Well I know but I'm talking about just from our own per-  
19 sonal experience, we're talking about microscopic size?  
20 A For spermatazoa you're dealing with microscopic size  
21 entities, yes.  
22 Q In a cc which is what about that much in a --  
23 A -- approximately one milliliter.  
24 Q Okay, one milliliter. Is it true that there are like  
25 seven to ten million sperm?

Cross Exam.  
Carol Kohlmann

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4 A -- uh huh --  
5 Q -- in that much fluid?  
6 A Uh huh.  
7 Q So I'm going to guess that they are little?  
8 A Extremely small. One five hundredth of an inch in size.  
9 Q Okay, now if I cut myself and you saw blood, you would  
10 know that its red and that caused from --  
11 A Hemoglobin.  
12 Q Hemoglobin. But you couldn't see those red blood cells,  
13 can you?  
14 A Not visually, no.  
15 Q Do you know how many of those are in a drop of blood?  
16 A No sir, I do not recall offhand.  
17 Q Is it a large amount?  
18 A Yes, it's a very large number.  
19 Q And when you say very large, maybe not as much as the  
20 sperm but --  
21 A -- probably not so, right.  
22 Q Okay, but --  
23 A -- quite a few.  
24 Q A bunch. Thousands maybe, hundreds of thousands, what-  
25 ever?

4 A Uh huh.  
5 Q And it doesn't take very much in order for you to do the  
test, does it?  
6 A That's correct.  
7 Q Okay. So if it's present even in a minute amount, there's  
8 a good possibility, you've been at this eleven years,  
9  
10 you're going to pick it up?  
11 A Correct.  
12 Q Now the Lewis secretor test, the victim in this case and  
13 the defendant in this case were both secretors we've al-  
14 ready established that?  
15 A Uh huh.  
16 Q Okay. And then you went further than that even and you  
17 broke these blood samples or whatever you had, you broke  
18 this down for proteins?  
19 A Uh huh.  
20 Q Okay. Now I don't know what all those names are and I  
21 really don't want you to repeat 'em because they confused  
22 me.  
23 A Would an abbreviation help?  
24 Q Well I don't think for the purpose of my question it would  
25 but if you think it would you can tell us but we all know

4 Q And you've categorized for your purposes six of these  
5 many proteins that you find in nature?  
6 A These are proteins which are forensically important be-  
7 cause they are staple and dried stains which is our usual  
8 manner of analyzing evidence.  
9 Q And you've used for your report six of those?  
10 A Uh huh.  
11 Q That you're looking for?  
12 A Uh huh.  
13 Q Is it fair to say from reading your report and your testi-  
14 mony that you found no proteins inconsistent with the  
15 proteins you found in Peggy Altes blood?  
16 A Okay, no proteins on where, what are we talking about.  
17 Are we talking about blood samples or swabs?  
18 Q On anything that you tested, we can go down through it  
19 one by one if you like?  
20 A Okay.  
21 Q And you might feel more comfortable?  
22 A If you are talking about all the swabs and all the blood  
23 group proteins we found were consistent with Peggy Altes.  
24 Q Right?  
25 A Yes, okay.

Cross Exam.  
Carol Kohlmann

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4 Q And when you have swabs from her vagina and perhaps from  
5 her mouth if she was injured or whether she was or not,  
6 she's a secretor so in her saliva you would what expect  
7 to find her protein --

8 A -- secretor has nothing to do with the proteins. The  
9 proteins are always there in all the fluids, that has  
10 nothing to do with the secretor status, okay.

11 Q Okay, so its in saliva?

12 A Right.

13 Q Just cause its there?

14 A No, the blood group proteins would not be found in saliva.  
15 It depends on the particular protein, PGM would be found  
16 in seminal fluid, vaginal fluid and blood. Two others  
17 that we analyze for Esterase D and Glyoxalase, they are  
18 common in blood, found all the time in blood. May  
19 occasionally be found in seminal fluid and are found in  
20 vaginal fluids. That's why those particular proteins were  
21 checked.

22 Q Okay, so all the proteins that you found and were able to  
23 identify were consistent with those that you might expect  
24 to find from samples taken from Peggy?

25 A Right, from her blood.

4 A That's correct.

5 Q Can we kind of disregard that as being not helpful in  
6 this case?

7 A That's correct.

8 Q Okay. Now I want to go down through a few of the swabs  
9 that you took. Lost my notes.

10 BY THE COURT: Maybe while you find  
11 them, now is about the right time for  
12 a break and I notice you're going in-  
13 to something else. You're excused to  
14 the jury room.

15 RECESS.

16 BY THE COURT: Please be seated.

17 Q Mrs. Kohlmann, just by way of review, you do these exami-  
18 nations at the request of a police officer?

19 A That's correct.

20 Q And you didn't do any of these tests on your own hook so  
21 to speak, you had a specific request to test these sub-  
22 stances?

23 A I was - yes, I was requested to check them for presence  
24 of seminal fluid and identify the semen donor.

25 Q And as a forensic serologist, you confine your expertise

4 of thing?

5 A No sir, I'm not an expert in that area.

6 Q And one last question kind of by way of review, when you  
7 examine these materials whether its in this case or any  
8 of the other thousands that you've done, you are looking  
9 for some evidence of the donor of either the blood sample  
10 or the seminal stain or the saliva sample?

11 A That's correct.

12 Q That's what you're expecting to find or hope you can find?

13 A Hoping, un huh.

14 BY MR. GOSSETT: Excuse me just a  
15 second, I think you'll have to speak  
16 up, the truck traffic out here sort  
17 of covers your voice and so that every-  
18 one in the jury can hear. The mike  
19 doesn't amplify your voice.

20 A Okay.

21 Q I'd like to if I could go down the report with you and  
22 I've made a little chart here and I think I explained to  
23 you during our recess, can everybody see, Column No. 1  
24 over here, I hope it might be helpful to you to use your  
25 Lab Item No. and then sense you didn't have any idea what

Cross Exam.  
Carol Kohlmann

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4 Q Now I've got a column I'd like for you to tell me as we  
5 go down through these samples where you had either a  
6 preliminary finding of blood or a confirmed blood sample  
7 and then I have the major blood groups that you talked  
8 about and then I've thrown an H in here and then I have  
9 a column over here for sperm so we can tell on what swab  
10 these things may have appeared. Is that okay with you?

11 A Okay, uh huh.

12 Q And if you wouldn't mind doing it let's just go down -  
13 I want to skip Item No. 1. Now Item No. 1 is a deep  
14 vaginal slide that was taken at the autopsy and submitted  
15 to you through the property room. Is that correct?

16 A That's correct.

17 Q And you didn't do any test on that other than microscopic  
18 examination?

19 A That's correct.

20 Q And you did find spermatazoa?

21 A That's correct.

22 Q So we don't have any information from that slide regard-  
23 ing blood groups?

24 A No sir, you would not from a slide, no sir.

25 Q Okay. Now Lab Item No. 2 is broken down before I write

4 Q Okay. And Lab Item No. 2 overall is identified as swabs  
5 that were taken from the vagina of Peggy Altes?  
6 A That's the labeling that was received on the envelope,  
7 that's correct.  
8 Q And I guess two of the swabs that you tested were deep  
9 vaginal swabs and the other two were designated just  
10 vaginal swabs?  
11 A That's correct.  
12 Q Okay. Is there any purpose in distinguishing for our  
13 purposes here whether it is a deep vaginal swab or not?  
14 A No sir, I have no idea why those were taken in that par-  
15 ticular manner. I'm not use to that.  
16 Q Okay. Do you work with Dr. Pless much?  
17 A Yes, I know of Dr. Pless, uh huh.  
18 Q Is this what he did?  
19 A Yes, I believe it is.  
20 Q Have you examined things for him before?  
21 A Yes sir.  
22 Q Now let's just go with Item - what you've said is Item  
23 2-1 and maybe you can find what exhibit number that is  
24 for me?  
25 A It's part of No. 30.

4       not allowed to testify. Okay, you have to tell me what  
5       the Lab No. and Exhibit No. is because you're the witness.  
6       A     Okay, fine.  
7       Q     Okay, let's go down this column now for Lab Item 2-1,  
8       State's Exhibit 30 and the first thing I want to ask you  
9       is, did you identify any blood on that swab?  
10      A     Yes sir, we did. It was confirmed.  
11      Q     Can I use a C O N F for that, confirmed. Okay, and the  
12       next thing I want to know is whether you found any sperma-  
13       tazoa on that swab?  
14      A     No sir.  
15      Q     And I'll just put none. Okay. Did you find any evidence  
16       of A Blood Group substance?  
17      A     Yes sir.  
18      Q     Did you find any evidence of B Group substance?  
19      A     Yes sir.  
20      Q     Did you find any evidence of AB?  
21      A     Finding A and finding B would be the same thing as there  
22       is no AB per se.  
23      Q     How about a major? You don't like that?  
24      A     No.  
25      Q     What would you like --

Cross Exam.  
Carol Kohlmann

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4 A Correct.  
5 Q Okay, well we'll just mark a squiggly line through that --  
6 A -- thank you --  
7 Q -- and we won't have any of that. Okay, did you find any  
8 O blood group substance?  
9 A We don't find O per se, we find the presence of H.  
10 Q Alright, so H would be yes?  
11 A Yes, correct.  
12 Q Okay. Let's talk about H again. H is a precursor of A?  
13 A That's correct.  
14 Q And it is also a precursor of O?  
15 A Correct.  
16 Q So if you have H you can't tell whether it may be coming  
17 from A or O?  
18 A That's correct.  
19 Q But you've got a positive for A blood group substances on  
20 this swab and you don't have one for O, is that correct?  
21 A You would not get the indication for the A blood group  
22 substance. The A - excuse me, let me correct that. For  
23 the O blood group substance you are detecting the presence  
24 of H activity. From an O individual who is a secretor  
25 they only secrete H substance and A or B individually

Cross Exam.  
Carol Kohlmann

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4 A Could be.  
5 Q But it could also be from the A secretor?  
6 A Correct.  
7 Q So that's not conclusive at least as to Swab 2-1?  
8 A Right.  
9 Q Okay, now let's go to Swab 2-2 and that's State's Exhibit  
10 what?  
11 A Also, again State's Exhibit No. 30 because there are four  
12 swabs contained within State's Exhibit 30.  
13 Q That's the second part of State's Exhibit 30 and what were  
14 your findings with regard to whether blood was on that  
15 swab?  
16 A Positive preliminary.  
17 Q Okay, can we just put a preliminary?  
18 A Uh huh.  
19 Q What does that mean?  
20 A It could indicate that there is blood staining present.  
21 The blood staining that appeared to be there was very  
22 weak and did not come up for the crystal test to confirm  
23 it was blood.  
24 Q Okay. But it is an indication that blood might be there?  
25 A Correct.

Cross Exam.  
Carol Kohlmann

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4 A Blood group A substance activity.  
5 Q Blood group A substance activity. B?  
6 A We were not finding B blood group substance activity.  
7 Q And was H found on that?  
8 A Yes, by one of the methods, it was.  
9 Q And that's no but as I understand it those two are  
10 synonymous. They are not synonymous, are they?  
11 A Correct, no.

12 BY THE COURT: I'm sorry, I couldn't  
13 hear what you said, ma'am.

14 A No sir, it's not correct, they are not synonymous. H  
15 blood group substance is different from O blood type.

16 Q Okay. Now I'm going to put down 2-3 and that's your  
17 Lab Item 2-3. Is this still Exhibit 30?

18 A Yes, it is 30.

19 Q Let's just use a little ditto mark. Oh, I forgot to ask  
20 you, was there sperm found on Lab Item 2-2?

21 A No sir.

22 Q Now we're at 2-3, State's Exhibit 30, was blood found on  
23 that swab?

24 A Positive preliminary chemical test for blood.

25 Q That's a preliminary test, it was positive?

Cross Exam.  
Carol Kohlmann

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4/3

4 Q Did you see any evidence of B blood group activity?  
5 A Yes sir, we did.  
6 Q No O, yes on the H, is that correct?  
7 A Yes, by one of the methods, yes, we detected the H.  
8 Q Did you find sperm on that?  
9 A Yes sir, we did.  
10 Q Are we ready now for Swab 2-4?  
11 A Uh huh, yes sir.  
12 Q And is that still State's --  
13 A -- State's Exhibit 30.  
14 Q Did you find blood on that swab?  
15 A Blood was identified on the swab.  
16 Q Is that a confirmation?  
17 A Yes sir, it is.  
18 Q Did you see A blood group activity on that swab?  
19 A Yes sir, we did.  
20 Q Did you see B blood group activity?  
21 A By one of the methods we were seeing B blood group sub-  
22 stance activity and also the H.  
23 Q Okay.  
24 BY MR. GOSSETT: Objection, your honor,  
25 she didn't say anything about O. She

Cross Exam.  
Carol Kohlmann

4.1019

4 A No sir.

5 Q Can I put a no there?

6 A It has no bearing really.

7 Q Should I mark that column --

8 BY THE COURT: -- excuse me, just a  
9 minute, what's your objection?

10

11 BY MR. GOSSETT: He marked an O on  
12 the exhibit. She never said anything  
13 about O period. She only said H.

14

15 BY MR. LOCKWOOD: I thought this was  
16 okay but if you want me to --

17 A -- scratch it out like the AB.

18 Q Do you want me to erase these too?

19 BY THE COURT: It's not a matter of  
20 what he wants. Just ask her whether  
21 they're always present, I think we  
22 can clear it up.

23 Q Would you prefer that I eliminate this column?

24 A Yes, we're detecting the presence of H substance.

25 BY MR. LOCKWOOD: Could I do that

Cross Exam.  
Carol Kohlmann

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5 Q Okay, are we through now with 2-4, no, we haven't asked  
6 you yet whether you found sperm on that?

7 A Spermatazoa were identified on 2-4.

8 Q Now the next Lab Item that you examined were swabs that  
9 were submitted to you and purportedly came from Peggy's  
10 shoulder and cheek. Is that correct?

11 A That's correct.

12 Q And is there any need to put anything down concerning the  
13 tests of 3?

14 A We found no indication of seminal fluid or elevated level  
15 amylase to indicate saliva so we couldn't identify any  
16 body fluid substance present on those swabs.

17 Q And there wouldn't have been any point to test them for  
18 blood, would there?

19 A No sir, they visually did not appear blood stained.

20 Q So I'm going to leave Item 3 off of here. Okay, now we  
21 go to Item 4. Would you testify, please, what those  
22 - what Item 4 is?

23 A Item 4, State's Exhibit No. 26, were two swabs obtained  
24 according to the envelope from the mouth.

25 Q From Peggy's mouth?

Cross Exam.  
Carol Kohlmann

4 Q -- and 4-2?  
5 A Correct.  
6 Q What exhibit number is --  
7 A -- State's Exhibit 26.  
8 Q 26. Okay, did you find any evidence of blood on Swab  
9 4-1?  
10 A Blood was confirmed on Swab 4-1.  
11 Q Now that's blood in Peggy's mouth?  
12 A Correct.  
13 Q Did you find any A blood activity?  
14 A Yes sir, we did.  
15 Q Did you find B group activity?  
16 A By one of the analysis we were detecting the presence of  
17 B blood group substance activity, yes.  
18 Q So is that yes?  
19 A Yes.  
20 Q Did you find any H activity?  
21 A Yes sir, we did.  
22 Q And there was no sperm found, is that correct?  
23 A That's correct.  
24 Q Now the last Lab Item I think that you examined would be --  
25 A -- 4-2. State's Exhibit 26.

Cross Exam.  
Carol Kohlmann

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4 Court and Jury what a positive preliminary test is again,  
5 please?

6 A There's two different types of tests that are run. A  
7 positive preliminary chemical test is a much more sensi-  
8 tive test. It is chemical in nature. We're trying to  
9 see if we are picking up the presence of blood. Other  
10 substances could cause a positive preliminary chemical  
11 test. When the staining --

12 Q -- excuse me, what kind of substances?

13 A For instance fresh vegetable or plant material can often-  
14 time cause it. Certain chemicals can cause a preliminary  
15 chemical reaction in it. Copper nickel salts can some-  
16 times cause a false positive reaction.

17 Q Is vegetation and the nickel salt normally found in the  
18 mouth?

19 A Not normally, sir.

20 Q How about in the vaginal area?

21 A No sir.

22 Q Okay. So you get a positive preliminary test for blood  
23 and then you want to be sure if you can and you go ahead  
24 and try and confirm it?

25 A Try and confirm it by means of crystal testing which

Cross Exam.  
Carol Kohlmann

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4 the presence of crystal testing.

5 Q But in the manner, I'm sorry, in the ones that you  
6 weren't able to confirm. It doesn't mean that it wasn't  
7 blood on the swab, does it?

8 A That's correct, it could be blood.

9 Q Okay. And more likely to be blood than it would be -  
10 what did you say, vegetation?

11 A It could be blood, it could be something else.

12 Q Alright. On State's Exhibit 26, your Lab Item 4-2, did  
13 you find A blood group activity?

14 A Yes sir, we did.

15 Q And on that swab, did you find evidence of B blood group  
16 activity?

17 A One of the tests showed the presence of B blood group  
18 substance activity.

19 Q And did you find H?

20 A Yes sir, we did.

21 Q And did you find any sperm?

22 A No sir.

23 Q Okay, thank you. Is that chart accurate - accurately  
24 portray what it purports to protray with regard to your  
25 laboratory findings?

Cross Exam.  
Carol Kohlmann

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4           a test on materials from Peggy's vagina?  
5       A    Uh huh.  
6       Q    And you mentioned in your direct testimony that this  
7           might be bacteria --  
8       A    -- yes sir --  
9       Q    -- causing B?  
10      A    Yes sir.  
11      Q    Did you do any cultures?  
12      A    No sir, we do not do cultures in our laboratory.  
13      Q    You don't do cultures in your laboratory?  
14      A    No sir.  
15      Q    Did you do any back typing tests?  
16      A    No sir, we do not.  
17      Q    You didn't test any of these samples for either culture,  
18           for bacteria or back typing?  
19      A    No sir, we would no tests like that available in our  
20           laboratory.  
21      Q    Now have you ever personally had a situation where  
22           bacteria mimicked a blood group activity?  
23      A    Not myself personally, there was one other serologist  
24           in the laboratory who had this particular activity possibly.  
25      Q    Only one?

Cross Exam.  
Carol Kohlmann

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4 A In our laboratory, yes sir.  
5 Q Now let me see if I can ask this correctly. You said  
6 on direct examination that this could be coming from  
7 bacteria, this B group activity --  
8 A -- uh huh -  
9 Q -- you said it was inconsistent but as we've gone down  
10 through the swabs, you noted it on all but one?  
11 A Okay.  
12 Q Is that correct?  
13 A That's correct.  
14 Q Okay. And if its possible that this is bacteria although  
15 you've only known of one other case where that's happened,  
16 isn't it also possible that a B blood type donor deposited  
17 that blood stain --  
18 A -- that's correct --  
19 Q -- or seminal fluid?  
20 A We could not eliminate that, no sir.  
21 Q You couldn't eliminate it?  
22 A No sir, we could not.  
23 Q And if someone had relations with Peggy Altes, left a  
24 sample of their blood or possibly seminal fluid in her  
25 or she bit that person and left a sample of their blood

Cross Exam.  
Carol Kohlmann

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4           blood group B substance activity from seminal fluid from  
5           a secretor.  
6   Q   From a secretor.  
7   A   And Absorption Elution testing we were picking up the B,  
8           then it could be coming from blood or it could be coming  
9           from seminal fluid of either a secretor or a non-secretor.  
10   Q   Mr. Gossett wanted you to say and you did testify that  
11           you could not exclude Jerry Watkins on the basis of your  
12           tests?  
13   A   That's correct, sir.  
14   Q   It's not your experience in courtrooms that we convict  
15           people on the basis of what we can exclude, do we?  
16   A   I don't know, sir.  
17   Q   You don't?  
18   A   Repeat the question again.  
19   Q   Is it your experience in testifying with our criminal  
20           justice system that you convict people on the basis of  
21           what you cannot exclude?  
22   A   It depends on what you're trying to prove.  
23   Q   Prove this. This is no proof that Jerry Watkins --  
24   A   -- no sir --  
25   Q   -- it isn't, is it?

Cross Exam.  
Carol Kohlmann

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4       semen donor. I could not eliminate him or any other  
5       person of any blood type as being the semen donor.

6       Q     But you can say this, if this is not bacteria, it's not  
7       Jerry Watkins either, is it?

8       A     That is correct. If that is not bacterial activity, that  
9       is not Jerry Watkins.

10      Q     And it's not Peggy Altes?

11      A     That's correct.

12      Q     Mrs. Kohlmann, do you ever check instruments for blood  
13       stains like a knife?

14      A     Yes sir.

15      Q     How would you go about doing that?

16      A     First of all we would examine it visually for the presence  
17       of blood staining. Then we would look at it, usually de-  
18       pending on how much is on there or examine it under a  
19       high magnification light source, high intensity light  
20       source, then we would go ahead and run preliminary chemical  
21       tests, the same thing that we would run on the vaginal  
22       swabs and the other swabs. If there is enough blood  
23       sampling on there, we would run confirmatory tests for  
24       the presence of the blood staining. After that we would  
25       go ahead and run what's called a precipitant test to

Cross Exam.  
Carol Kohlmann

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4       blood type, the major blood type and then after that  
5       if there is enough blood staining left we would deter-  
6       mine the protein, the various protein fractions by  
7       electrophoresis analysis.

8       Q    You could run all these tests off of samples that you  
9       might take from a knife?

10      A    That's correct.

11      Q    Is it uncommon, Mrs. Kohlmann, to look at a knife visually  
12       and see no evidence of blood with the naked eye but later  
13       be able to develop that there was in fact blood on that  
14       knife?

15      A    Sometimes we can find it in places where you visually will  
16       not see it. Sometimes in the inside of the handle, under-  
17       neath of edges of the handles, sometimes in the groove.

18      People don't often look at the groove. Sometimes in  
19       microscopically we can see it in the letters which are --

20      Q    -- I'm sorry, in what?

21      A    In the letters which are forged into the blade which is  
22       identification of the manufacturer's name.

23      Q    And what grooves are you talking about?

24      A    The grooves that you'd use sometimes on a pocket knife  
25       to open the pocket knife, there is a groove in the blade

Cross Exam.  
Carol Kohlmann

4 we will check the entire knife.

5 Q And if there was fingerprint analysis, you could check  
6 the entire knife after that was completed?

7 A It's possible. Sometimes we would reserve our areas  
8 that we would check for testing if we saw any - what  
9 appeared to be latent fingerprints on the item, reserving  
10 those areas.

11 Q It doesn't matter whether the blood is fresh or dried?

12 A No sir.

13 Q You could still pick up evidence of that?

14 A Yes sir.

15 Q Did anybody ask you to examine any knife for blood in  
16 this case?

17 A No sir.

18 BY MR. LOCKWOOD: Mrs. Kohlmann, thank  
19 you for putting up with me. I don't  
20 have any further questions.

21 -----

22 BY THE COURT: Any redirect?

23

24 BY MR. GOSSETT: Yes sir.

25 -----

Cross Exam.  
Carol Kohlmann

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4 Prosecuting Attorney, 18th Judicial  
5 Circuit, State of Indiana.

6 Q Now, Mrs. Kohlmann, we've got a couple of columns here  
7 with lines in it, can I change the headings on those  
8 columns and ask you a few questions in conjunction with  
9 thi graft so I at least understand a little better what  
10 we talked about. My understanding is that your H sub-  
11 stance activity could be attributed to O - Type O blood,  
12 is that correct?

13 A That's possible, it can be.

14 Q Now on the first Lab No. 1, you said on cross examination  
15 that you found B substance activity, what type of test  
16 were you using on Swab 2-1 by your numbers that indicated  
17 B activity?

18 A We were using a test called Absorption Inhibition.

19 Q So it was Absorption Inhibition?

20 A Uh huh.

21 Q Show that as an ABS.I, I don't claim to be able to draw  
22 on a blackboard very well but would that be fair to say  
23 that, is that designation for that test?

24 A Yes sir.

25 Q And do you also find B by using your Absorption Elution

ReDirect Exam.  
Carol Kohlmann

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4 A Absorption Inhibition is a means of taking a extract of  
5 a sample, putting it with a diluted antiserum which we'll  
6 check for the A and the B properties and putting it with  
7 a C extract called Lectin H which checks for the H sub-  
8 stance activity. What we're looking for is the vaginal  
9 fluid or seminal fluid to pull out the antibodies present  
10 in the antiserum and lower the amount that is present.  
11 When we subject that later on to red blood cells of known  
12 types, we look for these red blood cells to clump or  
13 group together and we rate that anywhere from no clumping  
14 to plus four rating. By looking at this rating we are  
15 trying to see where we are losing this activity, in other  
16 words, where is there an indication that we have either  
17 vaginal fluid or seminal fluid pulling out the antibody  
18 activity present in the antiserum that we have applied  
19 to the sample.

20 Q Now what is - that was Absorption Inhibition?

21 A Uh huh.

22 Q What is your test or how is your test conducted for  
23 Absorption Elution?

24 A Absorption Elution is a much more sensitive test. It is  
25 run by taking threads, dipping them into the extract and

4       cell and the antibodies to agglutinate or stick to-  
5       gether. After a procedure in which any antiserum that  
6       has not been bound is washed away. They are subjected  
7       to known red blood cells after they have been incubated.  
8       The incubation will break up that initial bond that has  
9       been established between the antigen and the antibody.  
10      We put in known red blood cells and try and detect where  
11      we had this antibody that was bound originally. With  
12      an A blood stain or an A secretion stain we would expect  
13      to see A activity and we might see the H activity also.

14     Q   What about B activity?

15     A   If you were a person of blood type B we would expect to  
16      see the B activity and also sometimes the H activity.

17     Q   Now you say the Absorption Elution test is a much more  
18      sensitive test?

19     A   Yes, it's a much more sensitive test.

20     Q   And why is that?

21     A   Just the nature of it.

22     Q   Now with regard to Swab No. 1, what factors did you  
23      identify by Absorption Inhibition?

24     A   We were determining the presence of AB and H.

25     Q   A B and H factors?

4       Absorption Inhibition, is that correct?  
5   A   Uh huh.  
6   Q   Now did you also perform the Absorption Elution test?  
7   A   Uh huh.  
8   Q   On this swab?  
9   A   We were showing the presence of A and H.  
10   Q   So the more sensitive test showed A and H?  
11   A   Uh huh.  
12   Q   Then on your Swab No. 2, did you perform both those  
13       tests again, is that correct?  
14   A   Swab 2-2?  
15   Q   2-2?  
16   A   Correct.  
17   Q   And your Absorption Inhibition test showed what?  
18   A   A and H.  
19   Q   And your Absorption Elution test showed what?  
20   A   A.  
21   Q   Then on your Swab 2-3 which you tested, what did you  
22       find through the Absorption Inhibition test?  
23   A   A B and H.  
24   Q   And with the Absorption Elution test which you said is  
25       more sensitive, what did you find?

ReDirect Exam.  
Carol Kohlmann

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4 A A B and H.

5 Q And with the Absorption Elution test, what substance  
6 activity did you find?

7 A A.

8 Q So with the more sensitive test, in only one instance  
9 of those samples did you find B, is that correct?

10 A That's correct.

11 Q Now with regard to Swab No. 4-1 with your test for  
12 Absorption Inhibition, what did you find?

13 A A and H.

14 Q This time on the Absorption Elution, what did you find?

15 A A B and H.

16 Q To what do you attribute that, ma'am?

17 A To what do I attribute what, I don't understand the ques-  
18 tion.

19 Q The loss of the factor B from one column to the other?

20 A It's possibly that it's not in a concentration high enough  
21 for us to detect by Absorption Inhibition but we are de-  
22 tecting it by Absorption Elution in sporadic activity.

23 Q Do those results indicate to you sporadic activity as far  
24 as the B factor?

25 A They do to me, sir, from swab to swab.

ReDirect Exam.  
Carol Kohlmann

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4 Q Now with regard to Swab No. 4-2, what was your Absorption  
5 Inhibition results?  
6 A A B and H.  
7 Q And with regard to your Absorption Elution analysis of  
8 Swab No. 4-2, what did you come up with?  
9 A A and H.  
10 Q Just so we put it on the chart, you weren't asked about  
11 your Lab Item No. 1 being the slide, what the State's  
12 Exhibit No. on that?  
13 A 27.  
14 Q 27. And what you made of that was a microscopic exami-  
15 nation with Christmas Tree staining and you found a sperm,  
16 is that correct?  
17 A That's correct.  
18 Q What - going back to a couple of questions, you made no  
19 cultures, is that correct?  
20 A No sir, we don't make cultures in our laboratory.  
21 Q And what's back typing?  
22 A I don't know, sir.  
23 Q It's not anything that you're familiar in the area of --  
24 A -- no sir, I imagine it's a form of bacterial typing or  
25 bacterial analysis of some kind. I do not know.

ReDirect Exam.  
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4 Q -- or something that is accepted in the science?

5 A No sir.

6 BY MR. LOCKWOOD: I'm going to object  
7 to that question as being leading and  
8 it's calling for a conclusion on the  
9 part of this witness.

10

11 BY THE COURT: Sustained.

12 Q Now you said that bacteria can mimick activity more -  
13 activity of bacteria, I believe the question was, could  
14 mimick - could mimick results or show the results of a  
15 B factor, B substance activity, is that correct?

16 A That's correct.

17 Q You were asked, first of all, do you run most of your  
18 examinations on samples that have come from live people  
19 or samples that have come from dead people?

20 A Most of the analysis that have been run with this parti-  
21 cular type of analysis has been run on living rape victims.

22 Q So not very many of your tests have been run on a situa-  
23 tion such as the body we had with Peggy Altes where she  
24 was already dead?

25 A That's correct.

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Carol Kohlmann

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4 come up?  
5 A We were questioning that as being a possible source of  
6 our activity, that's correct, sir.  
7 Q And did you review the literature on the subject of  
8 bacterial mimicry?  
9 A Yes.  
10 Q In serology?  
11 A Yes sir, I did.  
12 Q And have you read articles that show that it is something  
13 that does occur?  
14 A It is reported in the literature that it can occur and  
15 it can act like a B blood group substance or it can also  
16 give you false A blood group substance activity.  
17 Q Do you believe based upon your study and your investigation  
18 of this case that you were getting a false B positive  
19 blood group activity result?

20 BY MR. LOCKWOOD: Objection, leading.

21

22 BY THE COURT: Sustained.

23 Q What is your opinion about the results that you received  
24 regarding B blood group results in your test?

25 A They could be coming from bacterial contamination caused

ReDirect Exam.  
Carol Kohlmann

4 allow you to exclude the possibility of Jerry Watkins  
5 being the semen donor?

6 A That's correct.

7 Q Or any other male for that matter, is that correct?

8 A That's correct.

9 BY MR. GOSSETT: No other questions.

10 -----

11 The said witness testified further  
12 on RECROSS EXAMINATION in response  
13 to questions propounded by Mr. Lock-  
14 wood, Attorney for Defendant.

ReCross  
Carol  
Kohlmann

15 Q Mrs. Kohlmann, how many of these kinds of blood tests  
16 has your lab run in the last three years?

17 BY MR. GOSSETT: Excuse me, are you  
18 talking about on bodies or living  
19 people?

20  
21 BY MR. LOCKWOOD: This kind of test.

22 A I might estimate approximately twenty or twenty-five times.

23 Q Okay. And you've only done twenty-five of these tests in  
24 the last three years?

25 A Not myself personally, no, that's all the serologists in

4 with identity. It is not a very routine test.  
5 Q Okay, so you're not asked on a regular basis to do tests  
6 like this?  
7 A No sir, no sir, it is a special test.  
8 Q And you were called to testify here by the State of  
9 Indiana, weren't you?  
10 A That's correct, sir.  
11 Q We didn't subpoena you. One other question I have.  
12 According to the chart there or the addition to the  
13 chart, it would appear that under the Absorption Elution  
14 test which you've described as more sensitive than the  
15 presence of H is also inconsistent?

16 A That's true.

17 BY MR. LOCKWOOD: No further questions.

18 -----  
19 BY MR. GOSSETT: No questions.

20 -----  
21 BY THE COURT: Step down.  
22 WITNESS EXCUSED.

23 -----  
24 BY THE COURT: Recess for lunch then  
25 at this point. Remember that you are

ReCross Exam.  
Carol Kohlmann