4-436: Marla Spreadbury

Deposition Outline
Laura Cawthon, M.D. – radiologist
Monday, April 12,1999

Exhibits: **Dr. Cawthon's vitae – page 7**
Photo of CT scan image – page 53

PAGE / LINE	DESCRIPTION
5 / 23-25	Business address: Mercy Medical Center, 1320 Mercy Drive, Canton
7 1 4	Marking of deponent's CV – exhibit 1
7/11 1 – 8/14	Description of educational background
8 / 1 7	Board certified in Canton, Ohio
8 / 2 2	Employed by Radiology Services of Canton
9 / 3	Since 1993
9 / 8	Instructor of radiology residents at the hospital
10 / 4	Assistant Prof of Radiology at NEOUCOM since 1993
10 / 9-11	Lectures o OB ultrasounds, conducts film reading sessions of plain films, US's, CT's
11/ 10-12	Teaches 2nd year students who are part of a 6-year accelerated program
11/ 20	Medical school provides/recommends radiology text book
12 16-10	Curriculum is a set course done at all various hospitals to keep it standard
12 / 25	Teaching includes plain films, CTs & US's
13 / 6	Taught anatomy at Columbus Mercy School of Radiologic Technology
13 / 13	Gave presentation in April of 1997 Evaluation Of The Mediastinum On Chest Radiographs On Patients With Espohageal Cancer
14 / 4	Has not researched in the area of mediastinal disease
14 / 12	Has employment contract with Radiology Services
14 1 15	Has always had an annual contract
14 / 23	Doesn't if it contains a job description
15 1 6	As far as she knows, groups services to hospital are exclusive

15 / 10-11	Some people are semi-specialized, certain things all are able to read
15 / 22	Primarily read ultrasounds and plain films; secondarily reads CTs and MRIs
16 / 5	Spends more time reading US's in terms of volume; less people in group that do US's as in depth
16 / 15-25	On any given day, reads US's; would secondarily read plain films and CTs
17 / 6	No one person in group better able to read CTs
17 / 13	Group consists of 11 radiologists
17 / 19	Was on a stated salary in 1997 – not by how many films read
17/22	Daily schedules are kept
18 / 4	Schedules are discarded yearly
18/11	Most films are read on an emergent basis
18/21	Number of films read are kept in the records
18/24	Tracked by billing service
19/8-11	Number of films read are based on a monthly volume, then a yearly volume
20 / 2	In 1997, read 50 – 100 films on the average; sometimes only would read 2 films
201 14	No average amount of time spent on reading plain films to give approp diagnostic reading
20 / 20	Amount of films read per day depends on complexity of each film
21 / 6	CT reading in this case was electronically signed by Dr. Cawthon
21/25 – 22/5	Stat readings are hand written, faxed to doctor's office/nurses' station as to what's normal/abnormal, then dictates a formal report when time allows
22 / 14	Used to use the DECRAD system; now uses an electronic signature system
22 / 19	Meaning report is signed on the computer
23 / 14	What is dictated for electronic signature is what goes into the phone system report
23 / 23	Rereads her reports at a later time
24 / 6	(Electronically) signed WET report

24 1 19	WET Reports are sent to the ED in cases of emergencies
24 / 24	Then filed with the films
25 113-24	Has served as an expert in approx 5 or 6 cases medical negligence case within the last 5 years; mainly for physicians; did give an opinion for a plaintiff, but not used as an expert
26 13-12	Has given depositions as an expert on behalf of doctors; has worked for a number of law firms including Buckingham and 2 other groups but cannot recall who
261 19	Might have some records of such information
27111	Has never been sued before
28 / 3	Individually contacts insurance carrier when claims are made
28 / 8	Didn't male an incident report
28 113-25	Misreading of film was brought to her attention by Dr. Murphy on the morning of the 24th, but did not review it with him
2912	In re-reviewing of the films, they recognized a possible tear in the aorta
29 / 5	Re-read film for herself later that day
29 / 16	Re-read the films with Dr. Tawil (TAZ)
30 / 4	When re-reviewing the film on the 24th (the next day), saw a line that was suspicious for a tear
30 / 15	Doesn't recall discussing film with anyone else.
31 / 4	Does not agree that CT film was misread on 23rd as to the existence of a disruption in the aorta
31/19-3213	Defendant's affirmative three read into the record as to plaintiff assuming the risk
321 10	When asked if whether she offered Plaintifflpatient alternative procedures, Dr. Cawthon responded that Mrs. Spreadbury was not conscious when seen she was seen
32 / 22 – 25	When teaching at a medical school, she is introducing the students to radiology that involves some basic film reading
33 / 5	Doesn't usually discuss diagnostic errors with students
33 117	Doesn't agree that films can be misread, feels films can be interpreted differently
34 / 8	Agrees that some things are not as clear on films because of the patient's improper positioning

34 / 15	Improper positioning may result in poor diagnostic quality
35 14-8	As to why one person might see something on a film and another person doesn't depends on the quality of the film, position of the patient...
35 / 23	To determine what 'level of training a person needs to distinguish the disruption of an aorta depends on how a disruption of the aorta is defined
3616	One should be board certified to be able to diagnose a transection of the descending thoracic aorta, to see the evidence on a CT
3719	Some of the policies and procedures are promulgated by the radiology group
37/ 12	Some are by the hospital
37 / 16–21	There is no policy for reading; there is a procedure to allow for the performing of a traumatic CT promulgated by Dr. Rockenstein
38 / 23	Doesn't recall looking at Mrs. Spreadbury's chest x-ray that was done before the CT
3913	Doesn't think there is a procedure to read plain film before interpreting CTs
3918	Only recently looked at the chest x-rays
39 / 11-20	Plain films are usually read by the ED physician by the time the patient is sent for any CT scans
4014	Only gets requisition for CT, no other information
4019	Requisitions are not kept
401 16	Only knew Mrs. Spreadbury was hit by a semi-truck when she arrived in the department
40 123	Knew she had rib fractures because the doctor told her, plus there were chest tubes in place
41 / 3	Saw pneumothoraces on the film
41 / 14	Saw some of the rib fractures on the CT
41 / 25	Does read chest films in trauma cases
42 / 5	Findings on a film that are suggestive of a mediastinal hematoma are distorted aorta, massive protrusion, usually left-sided
42 / 12 – 15	Placement of an NG tube, deviation of to the right of T-4 may be an indication that there is blood in the mediastinum as well as depression of the left margin of the bronchus
42 122	Not told to include or exclude the existence of mediastinal hematoma

43 / 11	Only reviewed radiology reports
43 / 22	Reviewed the CT films of her head, chest, abdomen and pelvis and chest films
44! 10	To day a CT is not generally diagnostic for a tear would depend on the tear
44 / 13	CT is diagnostic for a complete tear
44 !21	May also be diagnostic of something that is less than a complete tear and disruption in the aorta
44/24 – 45/1	An indirect sign that there may be a disruption could be an abnormal contour of the aorta, false aneurysm, delayed contrast opacification of the lumen, extravasation of contrast, pleural effusion, large pleural effusion ….large pleural effusion, large hemothorax
45 / 8	The appearance of hematoma in the mediastinum probably suggests disruption of the mediastinal vein
45 113-15	. . . as well as the disruption of the aorta which is a more indirect sign
45 / 21	Has seen in past patients an aortic pseudoaneurysm
4615	Has seen about half a dozen Pas
46 / 10 – 15	Asked Dr. Murphy for assistance in interpreting Mrs. Spreadbury's films, but he did not sign
46 / 18-22	Asked for help when seeing evidence of mediastinal trauma
47 / 5	Reads more scans than Cawthon
47! 13	Asked for the second opinion because she saw mediastinal air that couldn't be explained by the rib fracture and subcutaneous air
47 *122*	Reviewed films Saturday before the depo
48! 13	Dr. Murphy is the same who told her on the 24th of the misread
48 116	Doesn't know if he now saw it; he just told her
49 / 2	Murphy told Cawthon that the trauma patient from day before did have disruption of her aorta or an aortic tear
49 / 10	Doesn't know how he knew
49 !23	When looking at a PA on a CT film, one sees an outpouching of the aorta, a distortion of the contour
50 / 2	Outpouching can occur anywhere in the aorta

5019	Outpouching, abnormal contour, delayed contrast opacification are signs of a PA
50 *123*	Believes photograph of a CT image is from this case (but it's not)
51 / 12	Interprets a line that looks like a disruption of the aorta
52 / 3	Can't point to the line, but can see it's suspicious
53 / 2	Exhibit 2 marked
53 / 5	Request made for shadow box
53 / 19	The chief of diagnostic radiology in 1997 was Robert Raven
5414	No policy that the chief perform a second overread of trauma patients' films
54 112	No such requirement that an overread be done
54 120	Films groups are plain films mammograms, then the rest are overflow
55 / 2	No special namesltitles in place
5518	Read Marla's CT because that was her assignment for that week in addition to head scans and MRIs of the brain and spine
55 / 13	Because that's what was on the schedule
55 117-20	One person gets assigned to read body CTs & MRIs, one person is assigned to read head and spine MRIs and CTs
561 1	Dr. Murphy was assigned to read the body CTs that week
56 / 14-16	Looked at copies of the chest x-rays; originals have been missing
56 / 18	No record of them being checked out
58 / 12	Identifies multiple rib fractures on film taken at 11:30
58 / 15-19	Identifies bilateral pulmonary infiltrates peripheral in location and a whited mediastinum on the supine chest
58 / 21	Says it looks a little full but it's a supine chest
59 / 8	Saw fullness of the whole mediastinum
59 / 11	Defines a wide mediastinum as anything that looks fuller than it would on the normal PIA and lateral chest
59 / 17	As to measuring, if it doesn't measure and still looks full, says it looks full

6012 The rib fractures are abnormalities

60 15-7 May have a pneumo as there are black areas on the film in the left costophrenic angle

60 / 12 Fuller than normal mediastinum – not necessarily an abnormality, but is a finding

60 / 19 Doesn't think trachea is deviated abnormally due to the position of the patient

60 / 24 Sees extensive subcutaneous air on left side

61 / 2 Relates it to the rib fractures

Review of 11:45 film

61 110-12 When Mrs. Spreadbury was brought down for the CT, the films were not brought down nor did Cawthon ask to see them

61 / 17-20 It depends on the situation as to whether or not she asks to see films

61 / 25 Didn't feel the need to see the films in this case

62 17-10 The film demonstrates a less rotated mediastinum not as wide; the aorta is not real distinct; there is still subcutaneous air, bilateral rib fractures, right rib fractures are better seen

62 / 20-25 Rib fractures indicate enough force to break bones; this kind of chest injury could mean contusion to any of the organs – lungs, pleural effusions, or trauma to the vessels or tracheobroncial tree; risk of pneumothorax

63 / 3 Said mediastinum appears a little less widened

63 / 8 Says it's not well defined on this study

63 / 13 Could mean there is a risk of a great vessel injury

Review of 12:30 film

63 / 20 Doesn't remember what time CT performed – remembers it was in the morning

63 / 24 CT times are recorded by when the tech took the image

64 / 5 Difference between 11:45 & 12:30 films is on 12:30 film, patient has bilateral chest tubes inserted

64 17-10 She's again rotated so it's difficult to assess trachea position & mediastinum

641 13 Mediastinum doesn't appear fuller

REVIEW OF CT SCAN

64 / 20	Identifies images 24 through 13
65 / 5	These are some of the images Cawthon was concerned about
65 / 10	Her report comments on images 16, 17, 18
65 / 20	Showed Dr. Murphy the whole mediastinum
65 / 21	Took from the highest level to the lowest level that include the mediastinum
66 / 3	Was concerned about the pattern of mediastinal air on images
67 / 1-3	Cawthon outlines area of air that appears to be tracking from the trachea, coming anterior
67 / 12	Agrees that air is leaking to the sternal wall from the trachea
67 / 18	Would recommend a bronchoscopy or esophagram
67 123	Image 17 is the descending aorta
68 12	Doesn't recognize the aortic pseudoaneurysm
6816	Doesn't based on that image
68 / 9	In retrospect, doesn't look normal·
68 / 14 – 18	Didn't see it when she read the x-ray; doesn't know why
68 120	Sees the line
68 / 24	States it's the descending aorta with a line
6912	Not sure which side
69 / 5	Restates that it is the descending aorta with a line through it
69 / 8	When asked if it represents a PIA, responds could represent a partial tear of the aorta
69 / 13	Agrees that was not what was reported
69 120	Doesn't agree as to a hemorrhage in the ascending aorta
7012	Appears to be normal to Cawthon
70 / 11	On image 17, between the ascending & descending aorta, does not call the blurry area a hematoma
70 / 13	Calls it a normal mediastinum

70 / 15	Sees possible hematoma around the esophagus
70 / 17	Or soft tissue fullness; thought it was abnormal
71 / 4	There is soft tissue fullness and the hematoma or esophageal leak
71 / 16	Doesn't agree that the area around the esophagus is similar in appearance to the area between the ascending and descending aorta
71 / 18-21	The esophagus' contour is convex when it should be concave; the contour between the ascending & descending aorta is based on normal contour
72 12	Disrupted blood flow could move structures; however, these aren't displaced
72 / 5	Can cause abnormalities in their shapes
72 / 12-21	Found most abnormalities to be in the chest; the mediastinal pattern bothered her, especially the air indicating significant trauma; asked tech to perform additional thin image of mediastinum
73 / 13	It's not indicated on her report that thinner images were taken
74 / 1	Something she added as part of her exam; did not communicate to the physician
74 14-9	Didn't see extravasation of contrast or any change in contrast enhancement that would indicate pseudoaneurysm; didn't see difference in contrast of opacification often seen with a P/A
74 13	Was looking for a contrast outside of tlie aorta rather than inside the aorta
74 / 19	One of the things seen with disruption of the aorta is extravasation of the contrast material
74 / 25	Doesn't know the likelihood of seeing extravasation of contrast material in a disrupted aorta
75 / 9	Films were done at 1350
75 / 13	Numbered 13 through 24
75 120	Numbering is based on where tech is told to scan; it's random numbering the tech puts on the film
75 / 24	Believes Dr. Murphy looked at these films also
76 14	Had him look at the mediastinal images
76 / 10	Was not reassured by images 1 – 24 that no great vessel injury existed

76 115-19 Felt the trachea area was bothersome in images 8, 9, 10, 11 12; Images 1, 2, 3, 4, 5 shows tracking from the distal trachea and carina area

7716 Image 12 delineates descending aorta

77 / 12-25 Doesn't see a mediastinal hematoma; only sees esophageal fullness, not between the ascending and descending aorta

78 / 6 In looking for a hematoma, one would see widening of the mediastinum, soft tissue fullness in the mediastinum and possible attenuation change in the mediastinum

78 / 10 Defines attenuation as difference in contrast

78 112 Between mediastinal fat and normal mediastinum

7% 19 Like a shade of gray

7%121 A hematoma would be a whiter shade of gray if it's acute

7916 To differentiate attentuation from fat depends on how well one sees shades of gray; depends how old or acute the hematoma is or the settings on the scanning'machine

81 / 21 When viewing plain films, recommendations would depend on the clinical situation

82 12-11 When recommending an aortogram vs a CT scan would depend if the patient had significant chest traum or if you had no idea of where the injury is at and if the patient is hemodyna ically stable, would recommend a chest CT to screen out the injuries

82 / 12-16 If someone is not hemodynamically stable with significant chest trauma, the worst scenario is aortic disruption, they go to the angiography suite or operation room

83 / 2 Doesn't agree that if a CT doesn't rule out the existence of disruption in the aorta to send that patient for an aortogram

83 113-16 An aortogram only tells you about the aorta, won't tell you about the trachea or esophagus or pneumothoraces or soft tissue injury or fractures

8417 If Cawthon was suspicious of disruption of the aorta, she would have suggested an aortogram

84 / 14 A mediastinal hematoma in the area of the aorta is a possible finding for the recommendation

84 116-21 Mediastinal hematoma indicates a disruption of the mediastinal vessels …most likely fi-om trauma; one doesn't know how affected the mediastinal organs might be; if suspicious of an aortic tear, an aortogram would better delineate the aorta

8511 A P/A would definitely be cause to send someone for an aortogram

85 / 6 A mediastinal hematoma is not

Cross-exam by Ron Mingus for Drs Telesz & Packer

861 19	Cawthon and Dr. Telesz talked about the aorta and the line that was on the films
87 / 1	Never talked to Dr. Packer [about this case]

Cross-exam by Thomas Treadon for Dr. Tawil

87 115-19	CT scan is best for a hemodynamically stable patient to determine great vessel injury, and if suspicion of aortic injury arises, aortogram is next step
87 / 25	Did not have suspicion of an aortic disruption at the time of reading the films
88 / 10	Dr. Murphy said to Cawthon, "By the way, that trauma patient did have an aortic tear, they were taking her to OR, she was in OR.
88 / 22	Looked at the CT a second time after there had been a surgery

Re-direct by DTK

90 18-13	Saw Dr. Telesz late in the day (24th or 25th) to see the films
91 116	Only remembers Telesz & Murphy being there; Dr. Murphy read the films with her
91 / 21	CTs usually stay in the department unless someone requests them
91 / 24	Left work that day around 6pm or 7pm
9214	Wouldn't know if someone looked at films after she left the hospital

Laura A. Cawthon, M.D.

4
1428 Danbury Road N.E.
N. Canton, OH 44720

(330)499-3576

Columbia Mercy Medical Center
Department of Radioloyy
1320 Columbia Mercy Drive N.W.
Canton, OH 44708
(330)4891067

Current Position

Staff Radiologist, Columbia Mercy Medical Center
Undergraduate Program Director
Northeastern Ohio Universities College of Medicine
1992 - Present
Assistant Professor of Radiology
Northeastern Ohio Universities College of Medicine
1993 - Present
Instructor
Columbia Mercy School of Radiologic Technology
1992-1993
Instructor
Radiology Residency Core Lecture Series
1992 - Present

Certification and Licensure

Certified by the American Board of Radiology
November 1992
Diplomate, National Board of Medical Examiners, 1988
Licensed in Michigan, Massachusetts, and Ohio

Post Graduate Training

Residency in Diagnostic Radiology
Chief Resident 1991
Oakwood Hospital
Dearborn, MI
July 1987 to June 1991

Fellowship in CT/MRI/US
Tufts University New England Medical Center
Boston, Massachusetts
July 1991 to June 1992

Education

Wayne State University School of Medicine - Detroit, MI	M.D.	June 1987
University of Michigan School of Public Health - Ann Arbor, MI	M.P.H.	Aug. 1983
Wayne State Univ. College of Pharmacy and Allied Health - Detroit, MI	B.S.	June 1978

PLAINTIFF'S EXHIBIT
4-12-99

Research and Publications

The Radiolucent Foreign Body, Cawthon, Meza, Eggleston, Journal of Pediatric Emergency Care, August 1991.

Why Not to "Pocket Shoot": Radiology of Intravenous Drug Abuse, McCarroll, Fisher, Cawthon, et al. Presented at the Radiological Society of North America, Nov. 1987

Evaluation of the Mediastinum on Chest Radiographs in Patients with Esophageal Cancer, McCarroll, Cawthon, et al, Presented at the Am Roentgen Ray Society meeting April 1987

Maximizing Cell Loading in Immobilized Cell Systems, Wang, Lee, Takach, Cawthon, Presented at the 3rd Ann. Symposium on Biotech. and Energy Prod. May 1952

Professional Memberships

American Medical Association
Ohio State Medical Society
Stark County Medical Society
American College of Radiology
American Roentgen Ray Society
Radiological Society of North America
American Association of Academic Radiologists

THE STATE Of OHIO,
: SS:
COUNTY of STARK.

IN THE COURT OF COMMON PLEAS

MARLA J. SPREADBURY, et al., :
plaintiffs, :

vs. : case No. 1998CV1681
1998CV00589

MERCY MEDICAL CENTER, et al.,:
defendants.

Deposition of LAURA CAWTHON, M.D., a defendant herein, called by the plaintiffs for the purpose of cross-examination pursuant to the Ohio Rules of Civil Procedure, taken before Constance Campbell, a Notary Public within and for the State of Ohio, at the offices of Buckingham, Doolittle & Burroughs, 4518 Fulton Drive, NW, Canton, Ohio, on MONDAY, APRIL 12TH, 1999, commencing at 9:10 a.m. pursuant to agreement of counsel.

APPEARANCES:

ON BEHALF OF THE PLAINTIFFS:

Donna Taylor Kolis, Esq.
Donna Taylor Kolis Co., LPA
330 Standard Building
Cleveland, Ohio 44113
(216) 861-4300.

and

George Emershaw, Esq.
Melissa D. Berry, Esq.
Emershaw, Mushkat & Schneier
437 Quaker Square
Akron, Ohio 44308
(330) 376-5756.

ON BEHALF OF THE DEFENDANT LAURA CAWTHON, M.D. and RADIOLOGY SERVICES OF CANTON:

Michael Ockerman, Esq.
Buckingham, Doolittle & Burroughs
4518 Fulton Drive, NW
Canton, Ohio 44735
(330) 492-8717.

ON BEHALF OF THE DEFENDANTS WALTER TELESZ, M.D. and STARK COUNTY SURGEONS, INC. and ROBERT PACKER, M.D.:

Ronald Mingus, Esq.
Reminger & Reminger
The 113 Saint Clair Building
Cleveland, ohio 44114
(216) 687-1311.

ON BEHALF OF THE DEFENDANTS ALEJANDRO SOS, M.D. and ALEJANDRO SOS M.D., INC.:

Edward E. Taber, Esq.
Bonezzi, Switzer, Murphy & Polito
1400 Leader Building
Cleveland, Ohio 44114
(216) 875-2767.

APPEARANCES:

ON BEHALF OF THE DEFENDANTS MARK TAWIL, M.D. and THORACIC SURGICAL ASSOCIATES, INC.:

Thomas A. Treadon, Esq.
Roetzel & Andress
222 South Main Street
Akron, Ohio 44308
(330) 376-2700.

ON BEHALF OF THE DEFENDANT MERCY MEDICAL CENTER:

Alicia M. Wyler, Esq.
Day, Ketterer, Raley, Wright & Rybolt
800 William R. Day Buidling
Canton, Ohio 44701
(330) 455-0173.

I N D E X

WITNESS: LAURA CAWTHON, M.D.

(FOR COMPLETE INDEX, SEE APPENDIX)

(IF ASCII DISK ORDERED, SEE BACK COVER)

LAURA CAWTHON, M.D.

of lawful age, a defendant herein, called by the plaintiffs for the purpose of cross-examination pursuant to the Ohio Rules of Civil Procedure, being first duly sworn, as hereinafter certified, was examined and testified as follows:

MISS KOLIS: Dr. cawthon, am I pronouncing it correctly?

THE WITNESS: cawthon.

MISS KOLIS: I'm probably going to call you Doctor the rest of the time. Allow me to introduce myself, my name is Donna Kolis, I'm one of the attorneys who has been retained to represent Marla and Mark spreadbury in an action, as you're well aware you've been named as a defendant.

CROSS-EXAMINATION

BY MISS KOLIS:

Q. Before we begin the question portion of the deposition, for the record would you state your name and professional address?

A. My name is Laura, L-a-u-r-a, cawthon, C-a-w-t-h-o-n. My address is at Mercy Medical Center, 1320 Mercy Drive, Canton.

Q. Fair enough. Before today have you ever had the opportunity to give a deposition?

A. Yes.

Q. I'll remind you of some of the ground rules. Each attorney probably states them differently. I assume you are aware you are required to answer each question verbally?

A. Yes.

Q. So that the court reporter doesn't end up interpreting what you and I say. Do try to keep that in mind.

Do you understand if I ask a question, you submit an answer to it, I will presume you understood the question?

A. yes.

Q. If at any time I ask a question that you do not understand, indicate that you don't know what information I'm seeking; can I extract that promise from you?

A. Yes.

Q. I've been handed this morning what is apparently your current CV. If you could examine the document and confirm for me it is an accurate statement of your educational and work history.

A. Yes.

MISS KOLIS: I'm going to have the court reporter mark my copy as a Plaintiffs' 1.

(Plaintiffs' Exhibit 1 marked for identification.)

Q. obviously I've just been handed this document, regrettably I didn't have a chance to digest your education. For the record briefly tell me about your education beginning with undergraduate school that led you to become degreed as a physician.

A. I obtained a Bachelor's degree in science and medical technology at Wayne State University. I worked for about five years at which time I went to graduate school full time, completed a Master's of public health degree. I have to look at the year.

Q. Since 1983; is that accurate'?

A. Yes. Then I went to medical school at Wayne State University, graduated four years later in 1987 with my M.D. I did a residency at Oakwood Hospital for four years, completed in 1991. Then did a one year Fellowship in Boston at Tufts University which was completed in 1992.

Q. Doctor, let me ask you a couple of questions just about that training you received at the postgraduate level.

You indicated of course clearly on your CV you were a resident in diagnostic radiology, that was a four year program?

A. Four year.

Q. Following that you did a Fellowship, it's got CT, MRI and US for ultrasound I'm assuming?

A. Yes.

Q. That was yet another one year specialty training specific to those kinds of examinations, right?

A. Yes.

Q. Prior to beginning, actually looks like after you finished your Fellowship training up, then became certified; is that right, in radiology?

A. Yes.

Q. what did you do after you obtained your Board certification, where did you go to work?

A. Here in Canton, Ohio.

Q. who did you work for?

A. who I work for presently.

Q. That is?

A. Radiology Services of Canton.

Q. Radiology Services of Canton, their office is located in the hospital itself?

A. Yes.

Q. Do they have an office anyplace else?

A. No.

Q. That is who you went to work for when you came here in 1992, you continue through the present?

A. Yes.

Q. It seems that, or at least I'm reading this, you are an instructor of radiology resident core lecture series; where is that program taught?

A. At the hospital.

Q. At Mercy Medical Center?

A. Correct.

Q. what residents are you teaching?

A. Residents that are part of a residency program to share with Aultman Hospital.

Q. Do your residents come from one medical school or is it an AMA certified program you recruit from a number of medical schools?

A. It's an AMA certified program.

Q. How many radiology residents do you have at present?

A. I believe 14.

Q. Pretty lot of residents. Are you their supervisor at this point?

A. Not the direct supervisor.

Q. You have always done lectures for the radiology residents since you started here, correct?

A. Correct.

Q. It also indicates that you are an assistant professor of radiology at NEOUCOM?

A. Correct,

Q. Since 1993?

A. Correct.

Q. what do you specifically teach or have you taught beginning with 1993 through the present?

A. I gave lectures in OB ultrasound, I do some of the film reading sessions on Friday afternoons, which include plain films, chest, abdomen, ultrasound.

Q. CT?

A. Yes.

Q. This plain film reading, is that part of the training that is given to the students at the medical school before they go into say their postgraduate years?

A. Correct.

Q. How long have you taught that class?

A. Since I started at the hospital.

Q. In conjunction with teaching that course, have you prepared any written materials that would instruct or illustrate for your radiology -- I don't want to call them students --

MR. OCKERMAN: Excuse me.

(Interruption in proceedings.)

Q. I'm sorry, I believe when we were interrupted you had told me the sections that you teach.

(Answer read.)

Q. when you are teaching at the medical school, what year student are you teaching radiology to?

A. I think they are second year. They have this accelerated six year program, I think equivalent to the second year student at a four year school.

Q. I'll accept that answer because I'm familiar with what that program looks like.

They are not residents, they are students who happen to be taking a radiology course?

A. Correct.

Q. Do you recommend a textbook for that course or is there one that is prescribed for the course?

A. There is, it comes from the medical school. I'm not sure what it is right now.

Q. would you be able to provide the name of the textbook that was in use in 1997 at the medical school for the radiology course?

A. I could.

Q. Thank you.

The next question that I had was do you yourself in conjunction with teaching that course provide the students with citations to medical literature or use some form of writing to instruct them?

A. I usually don't personally. Most of that information comes from the medical school because it's a set course done at all the various hospitals, to keep it standard they send the same material to all the hospitals.

Q. Do you have a copy of the curriculum, not on your person, do you have a copy of the curriculum?

A. Yes, I do.

Q. would you provide that to your attorney?

A. Yes.

Q. Can I assume when you are indicating these sections that you teach, you do plain films, correct?

A. Yes.

Q. Do you do CAT scans?

A. Sometimes.

Q. MRIs?

A. I haven't personally. This course is shared by a radiologist, I haven't shown MRs at this course.

Q. You confined your teaching to the plain films, CT?

A. And ultrasound. I don't confine, that is just the

way the schedule worked out.

Q. Fair enough.

On your CV it says you were an instructor at the Columbus Mercy School of Radiologic Techno1ogy?

A. I no longer do that. I used to teach an anatomy course for the radiology technologists.

Q. Doctor, I also notice while you were out of the room that you had given a presentation in April of 1997, evaluation of the mediastinum on chest radiographs on patients.with esophageal cancer; I stated that accurately I'm assuming, correct?

A. Yes.

Q. In conjunction with this presentation did you prepare written materials to be submitted at the conference?

A. Yes.

Q. Do you still have a copy of the material which you submitted?

A. I might, I might not, I'm not sure.

Q. could I have your word in earnest you will search your file for a copy of the material that you prepared for that particular conference, if you do in fact locate it, give a copy to your attorney?

A. Yes.

Q. Have you done any research in the area of mediastinal disease that didn't end up being published, you did preliminary studies on?

A. No.

Q. Are you currently in the process of any research article or publication that doesn't appear on this CV?

A. NO.

Q. I want to ask you a few questions about your relationship with Radiology services of Canton.

First of all, do you have an employment contract with Radiology Services?

A. Yes.

Q. Have you always had an annual employment contract with that particular business?

A. Yes.

Q. I would ask that you provide your attorney with a copy of the contract that was in effect in 1997; can you do that?

A. I can try.

Q. Does the contract include a job description, what you were personally responsible for?

MR. OCKERMAN: Do you know?

A. I don't know. It's pretty loose. I read films.

Q. I'm just asking if you know if they had a job description in it?

You're indicating you've been a member of the group since you came here in 1992. Did your group, to your knowledge, at the time in 1997, have an exclusive contract to provide services for Mercy Medical Center, or did you read at other places?

A. As far as I know it's exclusive.

Q. As far as you know is that still true today?

A. As far as I know, yes.

Q. Is your group divided by specialties?

A. We have semi specialized, certain people that read certain areas, certain things all of us read.

Q. Obviously you knew what I meant. You have diagnostic radiologists, correct?

A. Yes.

Q. Do you have vascular radiologists?

A. We have an angiographer.

Q. I call that vascular radiologist, as long as we're speaking the same language. Therapeutic radiologist?

A. No.

Q. You fall into what category of specialists in your group?

A. I primarily read ultrasounds and plain films and secondarily I do CT and MR.

Q. I try to listen and sometimes I'm in the middle of writing, I don't get it.

YOU primarily do plain films, ultrasound, when you say you secondarily do CAT scan, explain to me in English what you mean when you say that?

A. I spend more physical time in ultrasound because of need, in terms of volume. There are less people in the group that do ultrasound in the depth that I do.

Q. Your nomination — I'm sure there is a much better word — your assignment to do ultrasound is based on A, your technical skill?

A. Correct.

Q. And B, the sheer volume of the ultrasounds that must be read for Mercy Medical Center?

A. Correct.

Q. understand I've never been in your radiology department, so I don't know how assignments come in.

On any given day are you the person that is up on the board if an ultrasound comes in, Dr. Laura cawthon — I'm mispronouncing your last name — is going to read them?

A. Correct.

Q. Secondarily you would be doing plain films?

A. Correct.

Q. But you have the ability to read CAT scans?

A. Correct.

Q. Who is the primary CAT scan reader for your group?
A. we have a number of readers.
Q. In 1997 was there one person who the group itself deemed to be more expert in reading CAT scans than any other?
A. No.
Q. who in your group was reading CAT scans in 1997?
A. As far as I know, Dr. Rockenstein, Dr. Murphy, Dr. Degallon, Dr. McNalty, he's a newer member of the group, I think he was in the group at that time, Dr. Bong.
Q. How many people are in your group?
A. 11.
Q. Doctor, are you individually -- let's frame it this way: In 1997 which is the time frame that is the subject matter of this lawsuit of course, was your salary determined by the number of films you read or were you a stated salary person?
A. Stated salary.
Q. Do you keep in the radiology department schedules, daily schedules?
A. Yes.
Q. would you be aware as to whether or not your schedule for September 23, 1997 would still be located in the department in paper form?

A. Probably not.

Q. why would you say that?

Q. would you happen to have an assessment of how many films a day you were reading in 1997?

A. I don't know.

Q. was it -- I don't mean to be impertinent -- it's more than one a day I'm assuming?

A. Likely.

Q. Does your practice or group practice not keep any numbers on individual doctors as to how many films you read on an annual basis?

A. They keep numbers.

Q. That is sort of in the form of a report that you submit to perhaps another body, JCOH or someone?

A. Our billing service keeps track of how many cases.

Q. what I would ask you to do through your attorney,

is to deal with whatever paperwork you find to be appropriate or informative that would allow me to determine how many films you read on September 23, 1997.

A. I don't think we would have information on a daily basis.

Q. on what basis do you believe that your group provides that kind of information?

A. They have reports on numbers of films from the billing services, the numbers are based on monthly volumes and then yearly volume, based on what the billing service bills for.

Q. So you don't specifically know whether or not your billing service has the ability to go back in, put the date and actually indicate to me by patient, and doctor provider code, the number of films you did that day?

A. No, I don't know.

Q. I'll draft a request to your attorney, we will see how it goes with your billings service; you aren't aware of how they do that?

A. Excuse me?

Q. You wouldn't be aware of how they do that?

A. NO.

Q. Even though you stated you didn't have any idea, do you have some idea of the volume of films you were reading on a daily basis in 1997?

A. Based on how many reports I sign, somewhere between 50 and 100, depending on plain films or specialty films. If I'm doing a lot of biopsies I read very little cases. Sometimes I may read only two cases a day.

Q. The number of films in actuality you read in a day would be driven by what kind of films you were required to read?

A. correct.

Q. As to a plain film, is there an average to the amount of time that you need to spend on a plain film to give an appropriate diagnostic reading?

MR. OCKERMAN: Objection.

A. NO.

Q. How variable is that?

A. It depends how complicated the film is.

Q. when you say you're in the range of 50 to 100 a day, it depends on A, what kind of film you have to read and the complexity of those films?

A. correct.

Q. There isn't a curve you say five minutes for a plain film, 10 minutes for a single sheet of CT; it doesn't work that way, does it?

A. No.

Q. Let me ask you some questions about dictation in

your group, how it's communicated to the hospital.

I've had an opportunity obviously to read your CT reading of Mrs. Spreadbury. At the bottom it says Dr. Cawthon, electronic signature; is that right?

A. Yes.

Q. Does that refresh your memory how it's signed?

A. um-hum.

MR. OCKERMAN: Say yes.

A. Yes.

Q. At that time in 1997, we can do it hypothetically, a request would come to you to read a film, okay; are you with me so far?

A. Yes.

Q. The examination, whether it was a plain film or CT or an MR got performed, then you looked at the film, tell me how you then communicated the film findings to the physicians that requested the study?

MR. OCKERMAN: Hypothetical situation?

Q. Yes, what was your standard routine, how did you do this?

A. In any case?

Q. Yes.

A. A number of cases come through this stat readings,

in which case I hand write a written report that is just a brief statement of what is normal, what is abnormal. It's faxed to the doctor's office or called to the nurse's station. when I have time I dictate a formal report.

Q. You're handwritten report, in the trade -- you're not a trade, a profession -- is that what you call your wet read, the handwritten note you would fax?

A. Yes, otherwise there is a delay in the transcription having a formal report generated.

Q. At the time of Mrs. Spreadbury's admission in September of 1997 did Mercy Hospital make use of a DECRAD system?

A. I believe so. we've changed over, I think we were using DECRAD then. We were using an electronic signature system.

Q. when you say using electronic signature system, can you explain to me what you mean by that?

A. Instead of hand signing the report you sign it on the computer.

Q. That's not what I meant when I said DECRAD. I'll give you a generic explanation.

In September of 1997 did Mercy Hospital have in place a telephone report system so that a physician could dial in the patients's number, call

radiology, hear the report orally?

A. Yes.

Q. That is what I'm using as DECRAD, at UH that is what they have.

A. Yes.

Q. To lay this out so I don't get lost, on any given case that comes in, not Mrs. spreadbury, let's say you were scheduled to read a plain film chest x-ray, it wasn't stat, would you both put the report in the phone system and dictate it for electronic signature?

A. It's all done at the same time.

Q. So what you dictate for your electronic signature is precisely what goes into your phone system report?

A. Yes.

Q. The only difference is -- let me back up.

The actual transcription of your report appears sometime after it's already logged into the phone system?

A. Yes.

Q. under the electronic signature program, you don't actually come back and reread the report after it's transcribed, or do you?

A. I reread it.

Q. You simply don't have to affix your written signature to it, is that what you are telling me?

A. You sign it on the computer, is that what you are asking?

Q. You sign it on the computer?

A. You reread it and sign it.

Q. Did you write a wet report?

A. Yes.

MR. OCKERMAN: In this case?

Q. In this case?

A. Yes.

Q. That wet report is not part of the hospital chart, correct?

MR. OCKERMAN: Do you know?

A. I don't know.

Q. If I represent to you I've never seen it in the hospital chart, do you have a copy of the wet report that you wrote?

A. No.

Q. where do you keep wet reports?

A. They are sent to the emergency room if it is an emergency room case, they are sent to the emergency room.

Q. You do not keep a copy in the radiology department?

A. They are supposed to get the films and report back to the emergency room and then when the films come back

to the file room they are supposed to be filed with the films.

Q. You file the wet report actually in the film jacket?

A. That is where they go, yes. I should add a number of ER reports don't end up in the jacket, they go to the emergency room, then we don't see them.

Q. They are replaced with the final read anyway, correct?

A. Yes.

Q. Have you ever served as an expert in a medical negligence case?

A. Yes.

Q. On how many occasions?

A. Five or six.

Q. During what time span were those five or six reviews done?

A. In the last five years.

Q. Have they been for the physician or the patient?

A. Most for the physician.

Q. Do you actually recall serving as an expert for a plaintiff?

A. I gave an opinion for a plaintiff once. I wasn't used as an expert.

Q. Then the other four or five where you have worked

on behalf of the doctors, have you given a deposition in any of those cases?

A. Yes.

Q. Have you worked for one law firm or a number of law firms?

A. A number of law firms.

Q. Can you, sitting here today, tell me who you've done work for?

A. I've done work for them.

Q. That would be a good guess. Anyone else?

A. I've done work for two groups up in Akron, I don't know them offhand.

Q. Do you remember the name of the cases that you testified in?

A. No.

Q. Do you keep reports of sufficient organized basis that you can go back and redact the names of the cases you've worked on?

A. I might. There is a lot of paperwork six months ago, I might have some of them.

Q. Doctor, I would ask that you provide to your attorney the case names, of the cases that you worked on, if you still can reconstruct that.

Are you currently working as an expert on any case?

A. No.

MR. OCKERMAN: case name she is working on or case name she has given deposition?

MISS KOLIS: only ones she's given deposition. I'm sure there are cases you looked at the case for people, gave advice, not appeared in court. I don't want to concern myself with those. Case number, county and number would be appreciated.

Q. other than the lawsuit you are now involved with myself, have you been sued previously?

A. No.

Q. I gather, Doctor, that as part of being a physician and a professional you carry liability insurance?

MR. OCKERMAN: objection.

A. Yes.

MISS KOLIS: You can have a continuing objection. I'm not going to ask you any more on that, I do have a written set of interrogatories your attorney is going to answer for me.

Q. Is it part of your responsibility under your insurance policy to notify your carrier of a potential claim when you are aware of a potential claim?

A. Yes.

Q. In your group are you individually responsible for

reporting those losses or is there someone in your group that contacts the carrier?

A. usually we contact them individually.

Q. Doctor, do you acknowledge that you actually made an incident report to the insurance company before I filed this lawsuit?

MR. OCKERMAN: objection.

A. I don't believe I did.

Q. At any time after you read Mrs. Spreadbury's CAT scan, but before I initiated a lawsuit, did any radiologist in your group bring to your attention that the film was misread?

A. Yes.

Q. Can you tell me what doctor brought this to your attention?

A. Dr. Murphy.

Q. Can you, Doctor, to the best of your ability, tell me approximately when Dr. Murphy brought this to your attention?

A. The next morning.

Q. The morning of the 24th?

A. Correct.

Q. Did you at that time review the CAT scan with Dr. Murphy?

A. NO.

Q. what do you recall Dr. Murphy telling you?
A. That re-reviewing the films they thought there was a tear in the aorta.
Q. So that day you didn't look at the film?
A. I think later that day I did. The films were missing at that time when I found out.
Q. Did you think they were with the cardiothoracic surgeon?
A. I don't know where they were.
Q. Later that day you think you went down and looked?
A. I had the films that day or the next afternoon, I reviewed them.
Q. Did you review them by yourself?
A. No.
Q. who reviewed them with you?
A. I believe I was with a physician, Dr. Tawil.
Q. Dr. Tawil?
A. Came and reviewed them.
Q. upon your second look at the films, did you see --
MR. OCKERMAN: Wait a second, when you are saying second look, the next day?
Q. Yes, you didn't only look at it one time originally?
A. I did not.
Q. The next day on the 24th, to the best of your

memory that day you looked at the films, did you then see what on the film seemed to demonstrate there had been an aortic disruption?

A. I saw a line that was suspicious for a tear.

Q. At that point -- this doesn't have a lot to do with your reading -- at the point you read the film, were you aware that Mrs. spreadbury had been taken, the morning of the 24th, for repair of a dissected aorta?

A. I was aware she went to surgery.

Q. Were you aware what it was for?

A. No.

Q. Did you discuss that particular film any further with any other physicians after the 24th, before I filed a lawsuit?

A. Not that I remember.

Q. So no one else discussed it with you to the best of your knowledge?

A. No.

Q. Doctor, do you concede at this point that your reading of September 23, 1997 was in error as it relates to a disruption in the aorta?

MR. OCKERMAN: objection. Go ahead.

A. I don't understand your question, your word concede.

Q. Do you agree you misread the CT on the 23rd as to the existence of a disruption in the aorta?

MR. OCKERMAN: objection.

A. No.

Q. You don't agree with that?

A. No.

Q. okay, I need to know that.

Before we get into actual additional medical questions, I received an answer to the complaint which I filed against you which was obviously drafted by your attorney, I want to ask you about one of the affirmative defenses in the answer.

Have you ever reviewed the answer filed on your behalf?

A. No.

Q. First I'm going to read the answer or the allegation into the record, ask you a couple questions about it.

In response to the lawsuit which I filed against you there was an affirmative defense that was pled that states as follows, three: The plaintiff was advised of alternative available treatment for the plaintiff's medical conditions, and the risk or potential complications associated therein; thereafter authority was .received for the medical and surgical

procedure employed in treating the plaintiff and in so doing assumed the risks explained to them as being inherent in said surgical or medical procedure; do you know what that means?

A. No.

Q. Just was checking.

Did you personally offer the patient, Mrs. Spreadbury, some alternative medical procedure other than the CAT scan that she declined?

A. she was not conscious when I saw her.

Q. That assertion doesn't apply to anything you recommended to the patient I gather?

A. I can't understand that assertion based on a one time reading of it.

Q. I was just curious, when I read it I thought I would ask you about it.

Let's talk generally about some issues in radiology. You related to me this morning based on your CV you do some teaching at a medical school, you do that by way of helping the students learn to read films; is that correct?

A. Introducing them to radiology.

Q. Do they actual try to read films as part of that course?

A. some basic film reading.

Q. I would assume as a person who is involved in the process of educating students in general radiology, that you probably teach them something about how diagnostic errors in radiology occur; is that a fair statement?

A. I don't usually get into that.

Q. Let's see if you and I can agree, we're not going to agree on a lot of things, we will see what we can agree on, okay?

As a general principle you understand that some films are misread, correct, that is an easy way to say that films get misread?

MR. OCKERMAN: objection.

A. I don't know what you mean by misread.

Q. Sometimes information is contained on a film that is not picked up by a radiologist, that is an easier way to say it for you?

A. Films can be interpreted differently. You are making black and white decisions based on shades of gray.

Q. In radiology there is such a thing as a subtle miss?

A. A subtle finding.

Q. some findings are obvious?

A. Some findings are more obvious than others.

Q. If I use the phrase perceptual miss, do you know

what I'm referring to?

A. No.

Q. Fair enough.

Do you believe and/or agree with the following statement: Sometimes things are not as clear as they should be on the film because of improper positioning of a patient?

A. That's true.

Q. That is one thing that will cause an error in reading?

MR. OCKERMAN: objection.

A. It's one error in reading.

Q. If a person is not in a proper position, a film is taken, you can't properly interpret the film?

A. It may not be of diagnostic quality.

Q. what are other reasons that misses occur that you are aware of?

MR. OCKERMAN: Objection.

A. Reasons that -- I think you need to rephrase that.

Q. I guess we will try to delineate it a couple of ways.

If something is obvious on a film, we're doing this very generally, okay, if there is an obvious lesion on a film, how could two radiologists looking at it, one of them sees it, one of them doesn't; what are

the reasons that happens?

MR. OCKERMAN: Objection.

Q. If you know?

A. Sometimes it depends on the quality of the film. A second film may be of higher diagnostic quality, patient positioning, technique, may mimic a normal structure, may mimic something external to the patient that projects on the film.

Q. What about level of knowledge of the particular kind of defect that a person is being asked to assess, how does that come into play with whether or not they may miss a finding?

MR. OCKERMAN: objection.

A. I'm not sure what you are asking.

Q. Let me ask you this as a global question: Any person who received their Board in radiology from the person who you took them from, should they be able to see a disruption of an aorta on a CAT scan?

MR. OCKERMAN: objection.

A. That's *too* broad of a question to answer.

Q. What level of training would you presume a person needs to be able to see that?

A. It depends on what you are saying is a disruption of the aorta.

Q. In this case the eventual diagnosis of a

transection of the descending thoracic aorta, to see evidence on a CAT scan for that diagnosis, what level of experience, training would a person have to have?

A. To see a transection of the aorta?

Q. Yes, to be qualified to read the film you had.

A. They should probably be Board certified.

Q. You are saying a Board certified person should be able to see a transection or disruption by looking at the CAT scan film once they have their Boards?

A. No.

Q. How much additional training do they need to be able to see that?

MR. OCKERMAN: . objection.

A. To see what?

Q. we will go back to that question when we look at the films, that might make it easier.

In the department of radiology at Mercy Hospital, do you have protocol and procedures for reading of CAT scans?

A. Yes.

Q. Who promulgated the policies and procedures that are in place in the radiology department?

A. All the policies and procedures? which policies and procedures?

Q. YOU acknowledge you do have policies and

procedures?

A. Correct.

Q. By your answer, I gather that more than one group has promulgated policies and procedures that are a part of your manual in the radiology department?

A. Correct.

Q. Are some of them promulgated or put in the book by your radiology group?

A. Yes.

Q. Are some promulgated and published by the hospital?

A. I believe so.

Q. Do you have protocols and procedures -- were they in existence as to the reading of a CAT scan to determine whether or not there is mediastinal hematoma?

A. There is not policy for reading. There is a procedure to allow for performing a traumatic CAT scan or performing a CAT scan on a patient who has sustained trauma.

Q. Who promulgated that?

A. I think Dr. Rockenstein.

Q. I ask that you provide your attorney with a copy of that procedure, hopefully we will be able to determine if that was the one, because do you know if that has changed, the policy and procedure for treating

or reading in a trauma situation since September of 1997?

MR. TREADON: I'm going to object, that is a different question than you asked before.

A. You asked about a reading and performance, you are interchanging both words.

MR. TREADON: You got it, Doctor.

MISS KOLIS: Can you read the question.

(Question read.)

Q. That I gather was for the performance of a CAT scan?

A. Correct.

Q. Do you know whether or not there is the same one that was in existence in September of 1997?

A. I believe it is.

Q. That is the one I would like to see a copy of.

when you interpreted Mrs. Spreadbury's CAT scan study, did you look at the chest x-ray which were performed before the CAT scan?

A. Not that I remember.

Q. Do you know whether or not there is a protocol in the radiology department requiring a CAT scan reader to

look at the plain films before they interpret the CAT scan?

A. Not that I know of.

Q. Did you end up looking at the plain films after the CAT scan at any time?

A. Not until --

Q. Recently?

A. -- recently.

Q. In reading CAT scans on trauma patients, is it just not your procedure to look at those plain films?

A. usually the plain films are read by a radiologist in the department, part of the department, the plain films are done first on a trauma patient. To insure things are performed as quickly as possible, those are generally read by the emergency room physician who wants the film back at the emergency room with the reports. So usually the trauma films are over in the emergency room by the time we have the patient for CAT scan. usually they have been read, the handwritten report with films goes back to the emergency room.

Q. Do you have a copy of the handwritten report?

A. NO.

Q. what information do you have about the patient if you don't have the handwritten report or the film?

A. I don't have any information except what the

emergency room tells me.

Q. when you say you don't have any information, other than a requisition for the CAT scan?

A. Correct.

Q. where do you keep the requisition for CAT scans, are those kept in the department?

A. Permanently?

Q. Um-hum.

A. No.

Q. In the case of Mrs. spreadbury, before you read her CAT scan, what information did you have about her trauma?

MR. OCKERMAN: That she recalls now?

Q. That you recall now?

A. That she was hit by a semi truck.

Q. YOU were unaware or aware of what the findings were on the plain chest films?

A. At the time she arrived at the department I was unaware.

Q. By the time she left the department did you know what the findings were on the plain films?

A. I know she had rib fractures, because the physician told me, plus there were chest tubes in.

Q. what does that mean, the chest tube?

A. Pneumothoraces.
Q. Did you see pneumothoraces on the film?
A. Yes.
Q. when you say the information the physician told you there was rib fractures, are you talking about one of the radiologists or one of the attending doctors?
A. I don't know. It was a physician, a physician with her, somebody telling me she has rib fractures, pneumothoraces, she had bilateral chest tubes, there was a whole trauma team that came with her to the CAT scan, I don't remember every individual that was there.
Q. You saw the rib fractures on the CAT scan, didn't you?
A. Some of them.
Q. Generally, let's talk about radiographic evidence of aortic disruption. Let's talk about x-rays first.

I understand your testimony today you did not look at the films, right?
A. which films?

MR. OCKERMAN: Plain films.

Q. Her chest fi1ms?
A. Correct.
Q. However, you do read chest films in cases of 'trauma?
A. Yes.

Q. what findings on a chest film do you believe suggest the presence of mediastinal hematoma, if any?

MR. TABER: continuing objection with respect to the fact she didn't review the films.

A. Distorted aorta, massive protrusion, usually 1eft-sided.

Q. Deviation of the trachea?

A. If it's severe.

Q. If an NG tube is in place, deviation to the right of T-4, is that an indication there may be blood in the mediastinum?

A. Can be.

Q. Depression of the left margin of the bronchus, does that suggest that to you?

A. Can be.

Q. Those are things that would suggest.

when you began to perform the CAT scan or when the requisition was received by you, do you recall being told by one of the radiologists that they recommended the chest CT to include or exclude the existence of mediastinal hematoma?

A. NO.

Q. Prior to today have you ever looked at radiology readings in cases other than your own?

A. Yes.

Q. would you agree with me that in fact, in terms of chronology, if someone else in the x-ray department had a suspicion there might be some mediastinal hematoma they ask for a chest CT to be included?

MR. OCKERMAN: objection.

A. It says it on the reports.

Q. Did you review a 12:30 x-ray report?

A. I don't know.

Q. Did you review any other medical records in this case?

A. Just radiology reports.

Q. You have not read the surgery report, any of her postoperative notes?

A. No.

Q. Did you read the clinical notes from the emergency room?

A. NO.

Q. So then I'm perfectly clear all you read in this case are the radiology findings?

A. Correct.

Q. what films have you looked at?

A. The CT films that I originally read of her head, chest, abdomen and pelvis and her chest films.

Q. The chest films prior to coming down for CT, not the later ones?

A. I saw some of the later ones, I didn't really review them.

Q. As a general statement I suppose, CAT scan itself is not diagnostic for a tear in the aorta in any location, generally speaking?

MR. MINGUS: objection.

MR. TABER: objection,

Q. would you agree or disagree?

MR. MINGUS: objection.

A. It depends on the tear.

Q. what tears do you think you can actually visualize in the CAT scan of an aorta?

A. If there is a complete tear.

Q. You could generally see that?

A. Yes.

Q. Minus a complete tear, a CAT scan is capable of providing you with information that is suggestive of the fact that there may be something less than a complete tear and disruption in the aorta; do you agree with that?

A. Yes.

Q. what are the indirect signs there is a disruption in the aorta on the CAT scan?

A. Abnormal contour.

Q. Of?

A. The aorta, false aneurysm, delayed contrast opacification of the lumen, extravasation of contrast, pleural effusion, large pleural effusion.

MR. TREADON: what was that?

A. Large pleural effusion, large hemothorax.

Q. what about the appearance of hematoma in the mediastinum itself, what does that suggest?

A. The appearance of hematoma in the mediastinum probably suggests disruption of the mediastinal vein.

Q. Does the appearance of hematoma in and around the area of the aortic arch suggest there is disruption to the aorta?

A. There could be.

Q. That is a more indirect sign?

A. Indirect sign.

Q. Prior to reading Mrs. Spreadbury's CAT scan, do you ever recall seeing a pseudoaneurysm, aortic pseudoaneurysm on a CAT scan?

MR. OCKERMAN: on past patients?

Q. on past patients?

A. Yes.

Q. Those are since you came to the hospital, not during your Fellowship?

A. Yes.

Q. Just asking to get a frame of reference.

How frequently have you seen aortic pseudoaneurysm?

MR. OCKERMAN: Do you know?

Q. If you know.

A. I would say a half dozen to a dozen occasions.

Q. On the particular day that you are interpreting Mrs. Spreadbury's CAT scan, did you ask anyone in the radiology department for any aid or assistance in interpreting what was on the film?

A. Yes.

Q. who did you talk to?

A. Dr. Murphy.

Q. Dr. Murphy didn't sign off on the electronic report; is that correct?

A. correct.

Q. At what point in the examination did you ask Dr. Murphy for aid and assistance?

A. she had evidence of mediastinal trauma, particularly the mediastinal area which concerned me. I did the image of the mediastinum, I asked him to look at the image to re-evaluate it, to see what he thought of the mediastinum and the vessels.

Q. Let me slow down and go backwards I guess.

Explain to me what Dr. Murphy's relationship is to you.

A. He's one of my partners.

Q. Does he have more experience in reading CAT scans than you do, less experience, or just happened to be around for you to ask?

A. By volume currently he probably reads more CAT scans than I do.

Q. Then the sequence of events is that the films are taken, you are reading them, you see something you're not sure what it means?

A. No, I wanted a second opinion.

Q. Specifically tell me what you saw that you wanted a second opinion on?

A. I saw that she had mediastinal air, that I couldn't explain solely by her rib fractures and her subcutaneous air. The pattern bothered me because the air looked at first to be tracking from the trachea.

with that amount of trauma I was also concerned there could be a trauma to the great vessels, so I asked him to specifically look at the chest images to see if he saw anything else that bothered him.

Q. How recently have you reviewed the films?

A. I looked at them Saturday.

Q. So that when we get to that point it might make it a little faster.

Do you remember what frame we're

discussing? I call them frames, you might call them impression numbers?

A. NO.

Q. Is it impressions 16 through 18 you listed in your report?

A. I don't know right now.

Q. I guess we will have to find them then.

Is Dr. Murphy the same person -- I'm asking questions, not taking great notes -- the same person that came to you on the 24th, told you there was a misread?

MR. OCKERMAN: objection.

A. Yes.

Q. On the 24th could Dr. Murphy now see the evidence for the disruption to the aorta on the CAT scan?

A. I don't know, I suppose he did.

MR. OCKERMAN: Don't guess.

A. He told me, I don't know.

Q. Obviously you can't read what is in his mind, let's explore a little better the conversation you had with Dr. Murphy.

Did Dr. Murphy come to you, say I've looked at the films again, there is a mistake?

MR. OCKERMAN: objection.

A. NO.

Q. what did he come to you and say?
A. From what I remember he said the trauma patient from yesterday did have disruption of her aorta or an aortic tear.
Q. Did he say that was his opinion based on the films?
A. No.
Q. where did he tell you he got that information from?
A. He didn't tell me where he got it from.
Q. Is Dr. Murphy still your partner?
A. Yes.
Q. Have you never subsequently discussed the sequence of events that led to him discussing that with you?
A. NO.
Q. Did you discuss it with him after I sued you?
A. No.
Q. Tell me, Doctor, in a descriptive term, radiologists are used to describing so I'm hoping you can do this, what does a pseudoaneurysm look like on a CAT scan film?
A. You generally will see an outpouching of the aorta, a distortion of the contour.
Q. when you say the outpouching, is it generally located in the area of the isthmus, that arching, one

side or the other; how does that pouching occur?

A. It depends where the tear is. It can occur anywhere in the aorta.

Q. what else tells you what you are looking for, or is that basically it?

A. For?

MR. OCKERMAN: Pseudoaneurysm.

Q. To see pseudoaneurysm?

A. outpouching, abnormal contour, delayed contrast opacification.

Q. Are those separate things that might be indicative or that's the constellation you have to see altogether?

A. They are separate things. It's better if you see them together.

Q. Sometimes you don't always see them together, right?

A. Correct.

Q. I'm going to hand you a photograph, we will make a copy so everyone can have it. It is a photograph of a CAT scan image. can you tell me what you see in this photograph on this CAT scan image?

MR. OCKERMAN: objection.

A. I believe this is from the case.

Q. I will represent to you that truthfully it is not.

A. There is a line through the descending part of the

aorta, partial line which could represent a partial tear.

MR. OCKERMAN: what else do you see?

A. No extravasation of the contrast, no widening of the mediastinum, NG tube in the esophagus. There is also a left effusion.

Q. Are you indicating that you can see in that an aortic pseudoaneurysm?

A. I see a line. I see a line through the -- actually you need to see the image above and below this point. There is a line that looks like disruption of the aorta.

MR. TABER: I'll state an objection.

MR. OCKERMAN: I'm going to object to this. This is something else that she has never seen before, she doesn't have any other image other than this one.

Q. Is it impossible for you without having seen other images? You already testified what you thought you saw, can you demonstrate for me with a simple arrow where you think you see a disruption?

A. I see a line that is suspicious for a partial tear.

Q. Can you tell me without seeing other films where the line is?

A. I can see it's suspicious. I can't point to a line.

Q. That's what I'm asking you, you can't tell me, you would have to circle or show me the area you believe is disrupted?

MR. OCKERMAN: I'm going to object. I'm not going to let her do that. You take it up with the judge.

MISS KOLIS: That's fine. We will state on the record, not to disrupt today's deposition, ■ asked the doctor to indicate an area of suspicion for disruption on the photograph, her attorney asked her not to perform the same.

MR. TABER: would you mind telling us where that came from?

MISS KOLIS: ■ can provide that, the case if they think it's necessary. I'll represent it's not a photograph from this case. The photographs from this case do not look precisely like this.

MR. OCKERMAN: That is why ■ objected.

MISS KOLIS: why don't you mark this. You hold onto this.

(Plaintiffs' Exhibit 2 marked for identification.)

MISS KOLIS: what I would like to do is get your attorney to get the shadow box so we can look at the actual films. Mr. Emershaw and I are going to take a short break.

(Recess had.)

BY MISS KOLIS:

Q. Doctor, before we look at films I had a couple other clarifying questions I want to ask you.

Back in September of 1997 you've indicated that different people in your group did different things, or provided different specialty services. was there a person who was considered to be the chief of the diagnostic radiologists?

A. The chief of diagnostic radiology I believe is Robert Raven.

Q. was he at that time?

A. I believe so.

Q. Did you, within your group or anywhere within the policies and procedures manual, have a requirement that the chief himself review trauma patient's CAT scans in

addition to the radiologist looking at them?

MR. OCKERMAN: A second overread?

Q. Yes, a second overread?

A. No.

Q. Did you have any sort of requirement that there was an overread on a traumatic CAT scan?

A. Do we have?

Q. what I'm saying is you read the CAT scan, was there in place in September of 1997 a protocol that required that CT to be at least looked at by another person in the group?

A. No.

Q. That was solely your decision to involve another person to look at it; is that right?

A. Right.

Q. Is a CT considered by your group a special film? I don't mean special, let me ask a better question.

when you broke it down into divisions, the diagnostic radiologists read what kind of films?

A. Plain films, mammograms, then they take care of overflow from other areas.

Q. what do you call within your group the group that reads CAT scans?

A. what do we call?

Q. what kind of radiologists do you call it when you

divide out responsibilities?

A. we don't have a special name for them.

Q. On this particular day, as best you can recall it now, you've already indicated that you primarily read ultrasounds, how was it you came to read her CAT scan?

MR. OCKERMAN: objection. Go ahead.

A. My assignment for that week was to read the head CAT scans and MRI's of the brain and spine.

Q. why was that your assignment for that week?

A. Because it was.

Q. Because that is what they told you to do?

A. That is what was on the schedule.

Q. s■ there a reason they would have assigned you head CAT scans and MRI versus CAT scans of the head, chest, pelvis, separated out that way?

A. The way the department is divided, because of space, we have one person that is assigned to read the body CT and MR■ cases, one person assigned to read the head and spine MRI and CT cases.

Q. why is it divided that way?

A. Because of volume and space. It's the way we have the films on alternators.

Q. who was assigned to read the body CT that week if you know?

A. Dr. Murphy.

Q. Is that why you asked Dr. Murphy to have a look at this finding?

A. Correct.

Q. What we would like to do, this is probably going to be difficult given the size of the shadow box, room and location, we're going to put this up and look at the films and show us where you found a problem. we will be like residents in a viewing room, we will all have to hang on that side.

Doctor, what I would first like to have you do is look at -- you've indicated that you have been able to look at the chest x-ray?

A. I looked at a copy of the chest x-ray, the original films have been missing from the jacket, I haven't spent hours looking for those.

Q. I have the folder that shows they are checked out.

A. There is no record of them being checked out.

Q. When I answered your questions, I went back, they were inside my envelope. It does say these obviously are the originals. I'm going to represent to you I think the copies are pretty good.

A. They aren't good.

Q. This is the first x-ray, if you can see it's identified Mercy Medical center at 11:30; you agree with

that?

A. Yes.

Q. If you want to mark on it, you can. If you don't want to mark on it, I don't know what we will do about that.

MR. OCKERMAN: Wait a second. I would strongly, I think Alicia would agree with me, not want her to mark on these originals.

MISS WYLER: I agree. I object on behalf of the hospital. So we'll take that up with the court since there are copies available. She can view the originals and mark a copy.

MISS KOLIS: we can work that out I'm sure.

MR. TABER: I would like to object to her reviewing films she didn't review contemporaneous on the 23rd. I think we establish that already, I don't need to keep interrupting.

MISS KOLIS: Mr. Taber, that is okay.

MR. MINGUS: I'll join the objection.

Q. You've seen a copy of the chest x-ray film; is that right?

A. Yes.

Q. This is obviously the original since it has the hospital sticker on it. This is better quality than the copy you were provided with?

A. Yes.

Q. Are you able to see things in this film that you couldn't see in the copy?

A. I don't remember.

Q. Doctor, why don't you tell me what you see in that x-ray.

MR. OCKERMAN: Objection. Go ahead, Doctor.

A. I see multiple rib fractures, it looks from here like the 1st, 2nd, 3rd, 4th, 5th, 6th, maybe 7th ribs.

Q. On the right-hand side of the patient's body?

A. On the left-hand side. Bilateral pulmonary infiltrates peripheral in location. The heart looks normal in size, I don't see significant pleural fluid in the supine chest. Her mediastinum does look whited on the supine chest.

MR. TABER: Does or doesn't?

A. Does, looks a little full, but it's a supine chest, they often look full on supine chest.

Q. This particular chest film taken, was that sufficient for diagnostic information purposes, you don't have a problem with the quality of that film?

A. Just the part of the right chest is missing from the film.

Q. Right chest is missing, left is there. You indicated for the record that you do see, I wasn't paying attention because I was holding this film and looking at it, you see a widening of the superior mediastinum; that's what you said?

A. ■ said fullness, the whole mediastinum.

Q. Can I have your definition of a widened mediastinum?

A. A wide mediastinum is anything that looks fuller than it would on the normal P/A and lateral chest.

Q. Do you have, I guess I have seen it written a couple of ways, do you go with if it is fuller or wider than .025 of the entire diameter of the chest or greater than 8 centimeters or either?

A. I usually more look. If it doesn't measure, still looks full, I'm going to say it looks full.

Q. Do you see anything else that does not appear normal on that particular chest film?

MR. TABER: Objection to the extent she didn't say it was abnormal before.

MR. OCKERMAN: objection, I agree. Go ahead.

Q. well, I take it rib fractures of the left 1

through 6 are abnormalities; would you agree with that?

A. Those are abnormalities.

Q. The pneumo, I think you said she has pneumos, right?

A. I can't see pneumo very well on this film. she may have one because there are black areas in the left costophrenic angle.

Q. That would be an abnormality?

A. Right.

Q. The fuller mediastinum, that would be an abnormality?

A. Correct. Not necessarily an abnormality, it's a finding.

Q. It's a finding. This isn't exactly a normal chest film, is it?

A. No.

Q. Do you see the deviation or a deviation of the trachea on that film?

A. It's deviated a little but the patient is rotated, I don't think it's abnormally deviated considering the position.

Q. Do you see any other findings on there that would suggest traumatic injury?

A. she has extensive subcutaneous air on the left side.

Q. what do you think that would represent?
A. Probably related to her rib fractures.
Q. I'm going to put up the film that was done at 11:45. Doctor, as I'm putting this up, you indicated that Mrs. spreadbury came down to have that CAT scan with a trauma team; is that correct?
A. Correct.
Q. They didn't bring down her x-rays when they came down with her?
A. Not that I know of.
Q. Did you ask to see them?
A. No.
Q. Do you generally not look at the plain films before you do a chest CAT scan?
MR. TREADON: I'm going to object, you've been through all this before.
A. It depends if I need them.
Q. Do you determine your need for the plain film before or after the examination?
A. It depends on the situation.
Q. In this instance, did you think that you needed to see the plain film at any time during your evaluation either after the film was done or after you interpreted it?
A. No.

Q. This is the film that was produced at apparently 11:45. what changes do you see from the one you just looked at?

MR. TABER: Same objection.

MR. MINGUS: objection.

MR. OCKERMAN: objection.

A. A less rotated mediastinum, doesn't look as wide on this study. The aorta is not real distinct on this study, there is still subcutaneous air, bilateral rib fractures, right rib fractures are better seen.

Q. Now you can see the right-hand side a little better on the one that you have; that's an accurate statement?

A. You can now see it.

Q. what is the significance of the fractures in terms of determining what underlying chest injuries the person may have sustained, if any?

MR. OCKERMAN: Objection. Go ahead.

A. If she has rib fractures she had enough force to break her bones. That means there is injury to the chest, which could be contusion of any of the organs, contusion of the lungs, pleural effusions, contusions or trauma to the vessels or any of the tracheobronchial tree. There is the risk of pneumothorax.

Q. Did I hear you correctly, on this particular film the mediastinum appears a little less widened?

A. Correct.

Q. would you say diagnostically that would be a key finding, a widened mediastinum?

A. I wouldn't call it widened in this case.

Q. what would you call it, full?

A. Well, not well defined.

Q. If the mediastinum is not well defined, does that indicate perhaps that there is a risk that there has been great vessel injury?

MR. OCKERMAN: objection.

A. It could.

Q. Then another film is done at about 12:30.

MR. TREADON: what is the time on this one?

MISS KOLIS: 11:45.

Q. This one is 12:30. what time did you start to perform the CAT scan; if you remember?

A. I don't remember, it was in the morning.

Q. How are the times for these films recorded?

MR. OCKERMAN: which films?

Q. CT's?

A. The CT films it's the time that the technologist took the image.

Q. You'll be able to show me where the times are on these, I cannot make that out. That is the 12:30 plain film portable chest x-ray. what is now different about this film versus the one you just looked at?

A. she has bilateral chest tubes inserted.

MR. TABER: Same objection.

A. The rib fractures are still present, subcutaneous air is present, the heart looks normal in size, bilateral infiltrates. she is again rotated so it's difficult to assess trachea position and mediastinum.

Q. In that one does the mediastinum appear fuller than it did at the 11:45 film?

A. I don't think so.

Q. You don't think-so, okay. Those are I believe the three chest films that were done before the CAT scan. You might have to get a little closer for this. This is a sheet from the CAT scan, obviously not the complete CAT scan, correct? Can you identify what images are shown on this particular sheet?

A. Images 24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, and 13.

Q. Is this the group of images that are contained within the group of images that gave rise to a concern on your part?

MR. OCKERMAN: objection.

A. Concern about what?

Q. You just testified that you asked Dr. Murphy to step in, take a second look based on what you thought was some mediastinal air is what I think you said?

A. These are some of the images I was concerned about.

Q. Your report, I'll hand you this copy right here, that is my highlighted copy, you end up commenting on image 16 through 18; is that an accurate statement?

A. Yes.

Q. I do have the right sheet, correct?

A. I believe so.

Q. There is 18, 17, 16?

A. Yes.

Q. we're in the same place, right? I'm going to ask you a couple of questions.

Do you believe as you sit here today that it is those films, images 16, 17, 18 are the ones that you showed Dr. Murphy?

A. I showed him the whole mediastinum.

Q. You took from the highest level to the lowest level that would include the mediastinum, you went through each and every image?

A. As far as I remember.

Q. I'm asking you specifically, if you can recognize

that it's one of these three images where you had some concern about the mediastinal air?

A. I was concerned about the pattern of mediastinal air in these images.

MR. OCKERMAN: Excuse me one minute.

(Recess had.)

BY MISS KOLIS:

Q. Doctor, the last question that I asked you I think you fairly answered that you were concerned about the pattern of mediastinal air that you saw; is that an accurate statement?

A. Yes.

Q. Ultimately on your CT report the area of concern which you made recommendations for were images 16 through 18; am I also stating that accurately?

A. Yes.

Q. So just for the last time -- first of all, not for the last time, in any of those three images, 16, 17 or 18, can you indicate for me -- this is a grease pencil, if anybody is going to cry about it, this is what she looked at before -- point out to me what areas of mediastinal air you were concerned about?

A. I'm concerned about this air right here which appears to be tracking from the trachea, coming anterior.

Q. For you and me we're not going to mark these up right here, for this little black arch, this is the trachea coming down from here?

A. Right.

Q. what you are concerned about is you see air leaking, would it appear to be leaking, that's the best way to say it if I was a radiologist, to the sternal wall from the trachea?

A. Correct.

Q. obviously doesn't belong there?

A. Correct.

Q. Based upon this interpretation, we both agree that is the trachea and air toward the sternum, you recommend the bronchoscopy or esophagrarn, right?

A. Right.

Q. Doctor, I would like for you to tell me what this structure right here is on image 17?

A. what structure?

Q. Right here, tell me what I'm pointing to?

A. That is the descending aorta.

Q. Can you recognize that?

A. As a descending aorta?

Q. No, as an aortic pseudoaneurysm?
A. NO.
Q. why would you say that area of luminescence with that line through it here is not a traumatic pseudoaneurysm?
A. I don't know that it is based on this image.
Q. Does this look normal to you for the descending aorta?
A. In retrospect, no.
Q. At the time you looked at it were you not concerned about this luminescence that appears with the line through the middle in the area where the descending aorta goes in?
A. I probably didn't see it at the time I read the x-ray.
Q. Why didn't you see it at the time you read the x-ray?
A. I don't know.
Q. would you agree with me that is what that is?
A. That's a line.
Q. on either side of it or one of these two sides is the pouch we talked about earlier that represents the aortic pseudoaneurysm?
A. That is the descending aorta with a line.
Q. which side are you indicating there is a line

there?

A. I'm not sure which side.

Q. It is not a normal appearing descending aorta; you agree with that?

A. There is a line through the descending aorta.

Q. which in all probability could represent a pseudoaneurysm?

A. It could represent a partial tear.

Q. A partial tear of the aorta, correct?

A. Correct.

Q. That you and I can agree was not reported in your CAT scan evaluation?

A. Correct.

Q. Just above this area that we just described, up here, this is the ascending aorta; do I have this correct?

A. That is the ascending aorta.

Q. Right in this area here, between those two structures, would you agree with me that is hemorrhage?

A. NO.

Q. what do you believe that represents?

A. I can't tell that is hemorrhage based on that.

Q. If you can't tell it's hemorrhage, does that have a normal appearance to you?

A. Of the mediastinum?

Q. Yes.
A. Yes.
Q. I want to be perfectly clear because we're going to ask someone to look at this testimony, the area we're referring to is the area of material on this CAT scan, image number 17, between the ascending and descending aorta, the blurry area between it you are indicating you don't think represents hematoma?
A. This area here?
Q. Yes.
A. I don't call that hematoma.
Q. What do you call that?
A. Normal mediastinum.
Q. Have you seen any evidence of hematoma?
A. Possibly around the esophagus.
Q. You thought this area was hematoma, not this area?
A. Or soft tissue fullness. I thought it was abnormal.
Q. You can't distinguish whether it is soft tissue fullness or hematoma; is that what you are telling me?
A. Correct.
Q. So I don't put words in your mouth, the area you thought looked abnormal was not the area between the ascending and descending but the area near the esophagus?

MR. OCKERMAN: I think it is more consistent to say hematoma than area between the ascending and descending aorta.

A. There is soft tissue fullness and the hematoma or esophageal leak, I can't tell what that is.

Q. Not the normal appearance?

A. Correct.

Q. Does the mediastinum usually look blurry like that?

A. what do you mean look blurry?

Q. Did you agree with me the area around the esophagus which you are saying could be soft tissue fullness, a leak or edema has the same or very similar appearance to that area between the ascending and descending aorta?

A. No.

Q. How would you describe those differently?

A. There is a contour abnormality around the esophagus, it's convex where it ought to be concave, the contour between the ascending and descending aorta, that is based on normal contour.

Q. The contour abnormality of the esophagus, can that be caused by an aorta that has been -- I don't want to use transected -- disrupted blood flow, will that also move structures within the mediastinum, the esophagus,

the trachea?

A. It could move structures, these aren't displaced though.

Q. Can it cause abnormalities in their shapes?

A. Yes.

Q. Did you consider that when you were looking at these impressions?

A. Yes.

Q. How did you rule out that there was a potential disruption to the descending aorta based upon your examination?

A. I looked at the mediastinum, I looked at the whole CT to the whole body, most abnormalities were in the chest. The mediastinal pattern bothered me, especially mediastinal air indicating there is significant trauma to this area.

while the patient was still on the table they wanted to get her up and move her, I told the technologist to do an additional thin image of the mediastinum so we could get a second look at them with thinner images.

Q. where are the thinner images, are these them?

A. These are not them, these are the original images.

Q. Have you recently looked at the thinner images?

A. Yes.

Q. There is a folder. Doctor, do you happen to remember what numbers were on those slices?

A. NO.

MR. OCKERMAN: why don't you hand it to her.

Q. YOU can find it for me?

MR. OCKERMAN: we want to look for additional images taken of the mediastinum?

Q. Exactly. Let me ask you a couple of questions. There is no indication in your CT report that you had additional you are saying thinner section slides, right?

A. Um-hum.

MR. OCKERMAN: YOU need to say yes.

A. Yes.

Q. These are thinner sections, that is not contained in your report that you would have dictated that you decided to do additional scanning to better define this area?

A. I did it as part of the original exam, there is not an extra chart or extra interpretation, it was something I added.

Q. Something you didn't think you needed to communicate to the physician you had done an extra look at to evaluate that area of the mediastinum?

A. Correct,

Q. what if anything do you see on these films that assured you that there was no great vessel injury?

A. I didn't see extravasation of contrast, I didn't see a change in contrast enhancement that would indicate a pseudoaneurysm. I didn't see difference in contrast of opacification which you often see with pseudoaneurysm. On delayed image the arch will be bright, the rest will have contrast that is more normal.

Q. This is probably the third time you mentioned extravasation, what is it that you think that you are looking for on the CT?

A. You are looking for the contrast outside of the aorta rather than inside the aorta.

Q. was that your training in medical school and then postgraduate, that with a disruption -- we'll start with disruption of the aorta -- you would see extravasation of the contrast material?

A. One of the things you might see.

Q. How highly likely is it that you would see extravasation of the contrast material in a disrupted aorta?

A. I can't answer that.

Q. You just don't know, do you?

A. NO.

Q. So that was one thing you based it on, the other thing was, I'm sorry, I was trying to listen, Mr. Emershaw wrote it down -- difference in the technique on this is what?

A. These are delayed from the initial images, they are thinner images.

Q. on these particular films, these started at what time?

A. 1350.

Q. These are numbered 1 through 12 and 13 through -- I can't read that far way?

MR. OCKERMAN: 24.

A. 13 through 24.

Q. Did it start numbering at 1 through 24 because you started a new series, is that the right way to phrase it?

A. when I was looking at the original CT I said let's do some images through the mediastinum. He said from where to where. I said here to here, I pointed on the initial chest image. They are numbered based on where I tell them to go. That is random numbering the technologist puts on the film.

Q. Did Dr. Murphy also look at these films?

A. I believe so.

Q. You're not positive?

A. I'm not positive.

Q. You are fairly positive you had him look at the regular cuts?

A. I had him look at the mediastinal images, I'm not sure if he saw one set or both sets, but I know he looked at the mediastinal images. I don't remember exactly what area he looked at.

Q. It's your testimony that these image 1 through 24 reassured you there was no great vessel injury?

A. It didn't reassure me, I didn't see any finding to indicate such when I read this.

Q. Did you see any findings on 1 through 24 that indicated to you that there was a problem with the trachea or the esophagus?

A. The trachea area showed up more bothersome, the mediastinal air anterior from the trachea in the images 8, 9, 10, 11, 12, you have the 1, 2, 3, 4, 5 image, there appears to be tracking from the distal trachea and carina area.

Q. Let's use number — I don't know if you like that one, did you like number 12?

MR. OCKERMAN: In terms of?

Q. The trachea tracking?

A. This is right here, it's tracking there, there it's very clear.

MR. OCKERMAN: To image 8, 9, 10, 11.

Q. Did you see anything abnormal -- first of all tell me which of these additional images delineate or define for you the descending aorta?

A. Probably image 12.

Q. In image 12, for my purposes, tell me what this area in here is, is that the aorta; am I reading this right?

A. Yes.

Q. Back here with the trachea and esophagus, is there any abnormality that you can see on the aorta right there?

A. I don't see abnormality there.

Q. Do you see any evidence of mediastinal hematoma?

A. I don't, not by the aorta. I see the esophageal fullness.

Q. You see the esophageal fullness, you do not see it on 12 in the area of the aorta; is that right?

A. Don't see what?

Q. Hematoma?

A. I see the esophageal fullness on image 12, I don't see it between the ascending and descending aorta. You see partial volume image of the image above. You are partially seeing part of the aortic arch coming over.

Q. what would you expect hematoma to look like in the

A. Between what you would expect to be mediastinal fat and normal mediastinum.

Q. How does a person know what mediastinal fat looks like?

A. You look at fat in the mediastinum. It's got fat attenuation.

Q. Does it have to do with shade?

A. Like a shade of gray.

Q. Isn't hematoma also a shade of gray?

A. It has a little whiter characteristic if it's acute.

Q. How skilled do you have to be to differentiate between the white attenuation caused by fat and white attenuation caused by hematoma?

MR. OCKERMAN: objection.

MR. TREADON: How skilled do you have to be, medium, very, low?

MISS KOLIS: I don't know how to ask that question.

A. It depends how well you see shades of gray. It depends how old or acute the hematoma is, it depends on your setting on your scanning machine. How many shades of graduated gray you are filming this at. what your window settings are.

Q. It's based on the skill of the reader being able to call what grayish white shade is a hematoma versus what is fat?

A. That's based on how well you see shades of gray. I don't know what you are asking in terms of skill.

Q. I just don't know how much experience you have to have to differentiate between that shade of gray and that shade of gray, call one fat, call one hematoma, I'm asking if you have any idea?

MR. OCKERMAN: You answered that question.

MISS KOLIS: she answered it.

MR. OCKERMAN: Then go on.

Q. when you were in school, subsequent to that time -- I guess we will start with when you were in

school?

MR. OCKERMAN: Medical school?

Q. when you were in medical school, before you went into PGY-I through seems like a lot of years, VI think, what did you know or what was your perception of what was the best diagnostic tool to use to look for injury to the great vessels?

MR. MINGUS: Objection.

MR. OCKERMAN: objection. Go ahead.

A. I don't know. I can't remember what knowledge base had back then.

Q. If you don't remember that is fine, it may have changed over time.

After you got out of medical school, as you received your specialty training up to and including through your Fellowship year, were you trained as a radiologist in this: Pretend you saw the plain chest film we already looked at today, those three, would you have recommended a CAT scan, or would you have recommended a visit to the arteriogram suite?

MR. TABER: objection. well beyond her field *of* expertise.

MR. MINGUS: objection.

MR. OCKERMAN: objection.

Q. I'm asking you what -- you as a radiologist make recommendations based on the chest films; do you agree with that?

MR. OCKERMAN: You want her to pretend all she saw was a chest x-ray, then say what would she recommend based on the chest x-ray?

Q. Let me make it so nobody gets upset.

MR. OCKERMAN: I don't think you can do it.

Q. Ignore the chest x-rays you saw today. Those are not the ones I'm referring to. I'm trying to ask if you had a chest film, with findings suggestive of a possible disruption of the great vessels, i.e., descending thoracic aorta or other vessels, you are the radiologist, what recommendation would you have made at that time you completed your graduate program, would you have referred the person to CT or sent them to have the aortogram?

MR. MINGUS: objection.

MR. OCKERMAN: objection.

A. Depends on the clinical situation.

Q. what clinical situation do you believe requires a radiologist, if any, to refer a person for the aortogram versus CAT scan?

MR. MINGUS: objection.

MR. OCKERMAN: objection.

A. If a patient had significant chest trauma, you can't tell from the chest x-ray whether it's injury to the great vessels or esophagus or trachea or lungs, you have no idea where the injury is at, you know the patient has experienced significant chest trauma, the exam of choice is, if the patient is hemodynamically stable, is a chest CT to screen out the injuries and evaluate what is the most important injury at that time. That is why you do the chest CT, you get a better look at all the vessels in the chest.

If someone is not hemodynamically stable, there is a reason for it, you couldn't tell what it is, if they had significant chest trauma, the worst scenario is aortic disruption, they go to the angiography suite or to the operating room.

Q. If you are not able to exclude by CAT scan the existence of disruption in the aorta, the next thing you do based upon a film with a serious amount of chest trauma is to send them for the aortogram; do you agree with that?

MR. TABER: objection.

MR. MINGUS: objection.

MR. TREADON: I think that is a totally different question.

MR. OCKERMAN: Objection.

A. No.

Q. At what point then, you just said if you can't exclude damage to the great vessels by a CAT scan --

A. That's not what I said. I said you can't tell from the plain film chest what is going on in the body, you can tell maybe there is a rib fracture, pneumothorax, you have the idea with soft tissue, if the patient is hemodynamically stable to undergo a CAT scan, that is usually the examination of choice because it better screens out injury, shows you a bigger area of the body than an aortogram would to look for other injuries. Aortogram will only tell you about the aorta, won't tell you about the trachea, will not tell you about the esophagus, will not tell you about pneumothoraces or soft tissue injury or fractures.

Q. You are right, I did ask the question incorrectly based upon your answer.

If you have a suspicion based upon the things that we previously discussed that you might see on CAT scan, mediastinal hematoma, a pseudoaneurysm, did you say attenuation of the flap around the aorta, did you say that?

A. NO.

Q. If you didn't say that let me ask you a different

way.

what things would you need to see on a CAT scan in the area of the aorta that would have caused you as a radiologist to refer the person for the aortogram?

MR. MINGUS: objection.

A. If I was suspicious of disruption of the aorta I would have referred, suggested an aortogram be done.

Q. Once again, let me ask you the specific findings. If you had found mediastinal hematoma in the area of the aorta, is that something included in your list that would have required you to refer for the aortogram?

MR. MINGUS: Objection.

A. Possibly.

Q. Possibly being maybe --

A. Mediastinal hematoma tells you there is disruption of the mediastinal vessels, most likely those are veins which happen from trauma to the mediastinum. How much that trauma affects the mediastinal organs, you don't know. If you are suspicious there is an aortic tear, you do an aortogram to better delineate the aorta.

Q. If I understand, what you are saying is what would definitely cause you to send someone for an aortogram is if you recognized the pseudoaneurysm, that's a definite; is that right?

A. Yes.

Q. Maybe if you recognized mediastinal hematoma, but that is not --

A. Okay.

Q. -- it's not a definite, am I fairly phrasing that?

A. Yes.

MISS KOLIS: I need about two minutes with Mr. Emershaw to see if there is anything he really wants me to ask. Anybody else want to ask questions?

(Recess had.)

MISS KOLIS: Doctor, I don't personally have any further questions for you at this time. There are other attorneys representing other parties.

MR. TABER: No questions.

MR. OCKERMAN: You represent?

MR. TABER: Dr. Sos.

MR. MINGUS: Doctor, my name is Ron Mingus, I represent Dr. Telesz and Packer, I have a couple of questions for you.

CROSS-EXAMINATION

BY MR. MINGUS:

Q. To your knowledge, other than yourself and Dr. Murphy, did any other physician look at the CT scans on September 23rd or September 24th?

A. Not that I know of.

Q. Can you recall the specifics of any conversation with Dr. Telesz?

A. I believe it was after she, Mrs. spreadbury, had been taken to the operating room, he wanted to review the CAT scan again. Meanwhile I had been trying to locate the films to review them for my own knowledge. He came down and said do you have time to review the films, I said let's see if they are available. we looked at them, went through the whole films again, it seems to me that was after her surgery, I don't know, the 24th or 25th, sometime after.

Q. Do you recall what you and Dr. Telesz talked about?

A. we talked about the aorta and the line that was on the films. Then I asked him about the other, I believe I asked him about the other injuries, what else she had

Q. Do you recall anything else?

A. NO.

Q. Did you ever talk to Dr. Packer?

A. No.

MR. OCKERMAN: About this case.

A. Not about this case. I talk to him all the time.

MR. MINGUS: I don't have anything else.

MR. TREADON: Dr. cawthon, I represent Dr. Tawil and his group.

CROSS-EXAMINATION

BY MR. TREADON:

Q. It's my understanding you believe the best method for determining traumatic injury to the great vessels if the patient is hemodynamically stable is to do a CT scan?

A. Correct.

Q. If there is some suspicion of an aortic injury, based upon the CT scan, then you move ahead and recommend an aortogram?

A. Correct.

Q. In this case, not retrospectively, in this case at the time you looked at these CT scans did you have a suspicion of aortic disruption?

A. Back at that time?

Q. Yes.

A. No, I didn't.

Q. You talked to Dr. Murphy apparently the day after the day of the surgery?

A. Yes.

Q. The 24th?

A. Yes.

Q. Then you and Dr. Murphy went back and looked at these?

A. I didn't go back and look at them with him. I was coming in to work, I saw him in the hallway, he passed me. He said by the way, that trauma patient did have an aortic tear, they were taking her to OR, she was in OR. That was the extent of the conversation, we were passing, I got called away.

Q. when Dr. Murphy saw you that day he knew that the patient already had been taken to surgery?

A. Yes.

Q. Then went and looked at the CT scan?

A. I don't know. I don't know if he saw it ahead, I don't know.

Q. The second time you looked at the CT scan results you knew that there had been surgery?

A. Yes.

Q. on the aorta, to repair the aorta?

A. Yes.

Q. So you knew the end of the story when you looked

at the CT scans the second time?

A. Yes.

MR. OCKERMAN: The next day?

Q. The next day on the 24th?

A. Yes.

MR. TREADON: That's all I have.

MISS WYLER: No questions.

MR. OCKERMAN: Follow-Up?

MISS KOLIS: Just briefly so I didn't miss hear.

RECROSS-EXAMINATION

BY MISS KOLIS:

Q. Initially I asked you if you discussed the CAT scan with anyone else after the 23rd, you told me no, apparently could be the way I asked the question.

A. I went over it with --

Q. Dr. Murphy?

A. Not afterwards, just at the time.

Q. So you are indicating today you've spoken also with Dr. Telesz that day?

A. Let me go through the whole thing. The next day I had a couple of hours off so I came in later in the morning. when I came in, I was unlocking my office, putting my coat in, Dr. Murphy went by, that lady with

the bad car accident had an aortic tear, they are doing an aortogram, taking her to OR. I was called away, had to do something else. I tried to get a hold of the films and couldn't because I didn't know where they were. Meanwhile I have a job to do.

Either late the following day, I believe it was the following day, 24th or 25th, I believe after her surgery, Dr. Telesz wanted to see the films, he happened to come down and he caught me somewhere in the radiology department, can I look at those films with you. I say sure, let's see if we can find them. I haven't been able to find them. That was the first time I saw the films after I initially read them.

Q. You saw the films with him?

A. Yes, after the event.

Q. Had you reviewed CAT scans previously in the past with Dr. Telesz?

A. I don't remember.

MR. OCKERMAN: on other cases?

Q. On other cases?

A. probably.

Q. You were also asked by one of the counsel as to whether or not anybody else came down on the 23rd to look at the CAT scans. would you know whether any other doctors were down there reviewing the films after you

had done the reading on them?

A. The time the films were taken, the times they were officially dictated was a couple hours. I know there were people in and out, I was calling ER physicians with findings as I saw them. I not only sent a written report, I called and said the chest tube needs to be pulled back, there is air. I don't think I went over the films with anyone else though.

MR. OCKERMAN: Her question is do you know whether any physician other than yourself came and looked at these films when you were there or not there; do you know that?

A. Meaning right after she had been scanned, while still in the department?

Q. Right.

A. The only people I remember being there with me was Dr. Telesz and Dr. Murphy. Dr. Murphy looked at the images with me.

Q. when you were done scanning where would the films have gone, upstairs or stayed in the department?

A. The CT generally stays in the department unless someone asks for them.

Q. Do you remember what time you left work that day?

A. Probably 6:00 or seven o'clock at night.

Q. If someone came downstairs to look at the film, a

physician attending Mr. Spreadbury after 6:00 or 7:00, you would have no knowledge of that, would you?

MR. TABER: Objection.

A. NO.

MISS KOLIS: No further questions. Anybody else?

MR. TREADON: NO.

MR. OCKERMAN: We will read.

MISS KOLIS: I'll waive the seven days.

(Deposition concluded; signature not waived.)

ERRATA SHEET

NOTATION	PAGE/LINE

I have read the foregoing transcript and the same is true and accurate.

LAURA CAWTHON, M.D.

The state of Ohio,

County of Cuyahoga. : CERTIFICATE:

I, Constance Campbell, Notary public within and for the State of Ohio, do hereby certify that the within named witness, LAURA CAWTHON, M.D. was by me first duly sworn to testify the truth in the cause aforesaid; that the testimony then given was reduced by me to stenotypy in the presence of said witness, subsequently transcribed onto a computer under my direction, and that the foregoing is a true and correct transcript of the testimony so given as aforesaid.

I do further certify that this deposition was taken at the time and place as specified in the foregoing caption, and that I am not a relative, counsel or attorney of either party, or otherwise interested in the outcome of this action.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office at Cleveland, Ohio, this 19th day of April, 1999.

Constance Campbell, stenographic Reporter,
Notary Public/State of Ohio.
Commission expiration: January 14, 2003.

ERRATA SHEET

NOTATION	PAGE/LINE
Science in	7/11
program we	9/12
shared by the radiologists.	12/21 + 23
Rauchenstein	17/8
Degalen, McNulty	17/9
Bang	17/11
JCHO	18/23
twenty	20/4
from the emergency	24/25
I threw out a lot	26/19.
No, Dr Murphy told me the patient had a transection of her aorta	28/13
Yes, we have protocol for performing cater	36, 20
Dr Rauchenstein	37, 21
In another part of the department.	39, 12
read by the radiologist assigned to ER films who sends	39, 15
film back to the	39, 16
Usually, after	39, 19

I have read the foregoing transcript and the same is true and accurate.

Laura Cawthon

LAURA CAWTHON. M.D.

ERRATA SHEET

Page	Line	
42	5	effusion
45	9	of mediastinal veins.
46	20	images
46	21	images to re evaluate them
48	13	No. He told me the patient had a dissection of her aorta or aortic tear.
53	20	Dr Reardon
56	16	I or personnel have
58	18	does look widened.
59	11	I look at the mediastinum Even if it measures normal and still looks full
71	4	fullness. Could be hematoma
72	13	CT of the whole body
72	19	additional thin images
74	8	images, the pseudoaneurysm will be
77	24	volume imaging
82	11	organs.
83	9	Stable enough
91	20	Between the time taken and the time they were

I have read the foregoing transcript and the same is true & accurate.

Laura Cantrell

FLOWERS, VERSAGI & CAMPBELL

.16-771-5133
FAX

COURT REPORTERS
113 SAINT CLAIR AVENUE NE * SUITE 505
CLEVELAND, OHIO 44114-1214
04 JUNE 1999
E-mail: fvc.reporters@worldnet.att.net

216-771-8018
1-800-837-DEPO

ERRATA SHEET RESPONSE

RE: Marla J. Spreadbury, et al., vs. Mercy Medical Center, et al.

04-12-99 deposition of Laura Cawthon, M.D.

PAGE/LINE		
7	11	AGREE WITH CHANGE
9	12	ANSWER STANDS AS SUBMITTED
12	21/23	ANSWER STANDS AS SUBMITTED
17	8	SPELLING CHANGE
17	9	SPELLING CHANGE
17	11	SPELLING CHANGE
18	23	SPELLING CHANGE
20	4	ANSWER STANDS AS SUBMITTED
24	25	ANSWER STANDS AS SUBMITTED
26	19	AGREE WITH CHANGE
28	13	ANSWER STANDS AS SUBMITTED
36	20	ANSWER STANDS AS SUBMITTED
37	21	SPELLING CHANGE
39	12	AGREE WITH CHANGE
39	15	AGREE WITH CHANGE
39	16	AGREE WITH CHANGE
39	19	ANSWER STANDS AS SUBMITTED
42	5	AGREE WITH CHANGE
45	9	ANSWER STANDS AS SUBMITTED
46	20	ANSWER STANDS AS SUBMITTED

PAGE/LINE		
46	21	**ANSWER STANDS AS SUBMITTED**
48	13	**ANSWER STANDS AS SUBMITTED**
53	20	**SPELLING CHANGE**
56	15/16	**ANSWER STANDS AS SUBMITTED**
58	18	**AGREE WITH CHANGE**
59	19	**ANSWER STANDS AS SUBMITTED**
71	**4**	**ANSWER STANDS AS SUBMITTED**
72	**13**	**ANSWER STANDS AS SUBMITTED**
72	**19**	**ANSWER STANDS AS SUBMITTED**
74	**8**	**ANSWER STANDS AS SUBMITTED**
77	24	**ANSWER STANDS AS SUBMITTED**
82	**11**	**ANSWER STANDS AS SUBMITTED**
83	9	**ANSWER** STANDS **AS SUBMITTED**
91	2	**ANSWER STANDS AS SUBMITTED**

E

ERRATA SHEET

NOTATION	PAGE/LINE
Science in	7/11
program we	9/12
shared by the radiologists.	12/21 + 23
Rauchenstein	17/8
Degalen, McNulty	17/9
Bang	17/11
JCHO	18/23
twenty	20/4
from the emergency	24/25
I threw out a lot	26/19.
No, Dr Murphy told me the patient had a transection of her aorta	28/13
Yes, we have protocol for performing cater	36, 20
Dr Rauchenstein	37, 21
In another part of the department	39, 12
read by the radiologist assigned to ER films who sends	39, 15
film back to the	39, 16
Usually, after	39, 19

I have read the foregoing transcript and the same is true and accurate.

Laura Cawthon

LAURA CAWTHON, M.D.

ERRATA SHEET

Page	Line	
42	5	effusion
45	9	of mediastinal veins.
46	20	images
46	21	images to re evaluate them
48	13	No, he told me the patient had a dissection of her aorta or aortic tear.
53	20	Dr Reuben
56	16	I personally have
58	18	does look widened.
59	8	I look at the mediastinum Eaven if it measures normal and still looks full fullness. Could be hematoma
71	4	
72	13	CT of the whole body
72	19	additional from images
74	8	images, the pseudoaneurysm will be
77	24	volume imaging
82	11	organs.
83	9	Stable enough
91	2	Between the time taken and the time they were

I have read the foregoing transcript and the same is true & accurate.

Laura Cantrell

FLOWERS, VERSAGI & CAMPBELL

216-771-5133
FAX

COURT REPORTERS
113 SAINT CLAIR AVENUE NE * SUITE 505
CLEVELAND, OHIO 44114-1214

216-771-8018
1-800-837-DEPO

E-mail: fvc.reporters@worldnet.att.net

THE STATE of OHIO, :
: SS:
COUNTY of STARK.

- - - - -

IN THE COURT OF COMMON PLEAS

- - - - -

MARIA J. SPREADBURY, et al.,

plaintiffs,

vs. : Case No. 1998 CV 1681
: 1998 CV 00589
MERCY MEDICAL CENTER, et al., : NOTARY'S REPORT TO TEE
: COURT, ERRATA RETURN
RESPONSE, DR. CAWTHON

- - - - -

Now comes Constance Campbell, Notary Public within and for the State of Ohio, duly commissioned and qualified, and advises this Honorable Court that at the request of plaintiffs' counsel a verification of the transcribed testimony of Dr. Cawthon's deposition was undertaken on this date, including stenographic notes, computer disks, and final transcribed work product. Attached please find results of same.

_____
Constance Campbell
Notary Public, State of Ohio,
Commission expiration: 01-14-02.

cc: all counsel of record
files: fv&c

FLOWERS, VERSAGI & CAMPBELL

216-771-5133
FAX

COURT REPORTERS
113 SAINT CLAIR AVENUE NE * SUITE 505
CLEVELAND, OHIO 44114-1214
04 JUNE 1999
E-mail: fvc ;e;=orrers@\Norianer.arl.net

21E-771-8018
1-800-837-DEPO

ERRATA SHEET RESPONSE

RE: Marla J. Spreadbury, et al., vs. Mercy Medical Center, et al.

04-12-99 deposition of Laura Cawthon, M.D.

PAGE/LINE		
7	11	AGREE WITH CHANGE
9	12	ANSWER STANDS AS SUBMITTED
12	21/23	ANSWER STANDS AS SUBMITTED
17	8	SPELLING CHANGE
17	9	SPELLING CHANGE
17	11	SPELLING CHANGE
18	23	SPELLING CHANGE
20	4	ANSWER STANDS AS SUBMITTED
24	25	ANSWER STANDS AS SUBNITTED
26	19	AGREE WITH CHANGE
28	13	ANSWER STANDS AS SUBMITTED
36	20	ANSWER STANDS AS SUBMITTED
37	21	SPELLING CHANGE
39	12	AGREE WITH CHANGE
39	15	AGREE WITH CHANGE
39	16	AGREE WITH CHANGE
39	19	ANSWER STANDS AS SUBMITTED
42	5	AGREE WITH CHANGE
45	9	ANSWER STANDS AS SUBMITTED
46	20	ANSWER STANDS AS SUBMITTED

PAGE	LINE	
46	21	ANSWER STANDS AS SUBMITTED
48	13	ANSWER STANDS AS SUBMITTED
53	20	SPELLING CHANGE
56	15/16	ANSWER STANDS AS SUBMITTED
58	18	AGREE WITH CHANGE
59	19	ANSWER STANDS AS SUBMITTED
71	4	ANSWER STANDS AS SUBMITTED
72	13	ANSWER STANDS AS SUBMITTED
72	19	ANSWER STANDS AS SUBMITTED
74	8	ANSWER STANDS **AS** SUBMITTED
77	24	ANSWER STANDS AS SUBMITTED
82	11	ANSWER STANDS AS SUBMITTED
83	9	ANSWER STANDS *AS* SUBMITTED
91	2	ANSWER STANDS AS SUBMITTED