IN THE COURT OF APPEALS OF THE STATE OF MISSISSIPPI

NO. 2008-CA-01816

JANICE ERVIN, BY AND THROUGH HER HUSBAND AND NEXT FRIEND, CURTIS ERVIN, ON BEHALF OF THE WRONGFUL DEATH BENEFICIARIES AND AS ADMINISTRATOR OF THE ESTATE OF JANICE ERVIN **PLAINTIFFS/APPELLANTS**

VS.

DELTA REGIONAL MEDICAL CENTER, et al **APPELLEES/DEFENDANTS**

APPEAL FROM THE CIRCUIT COURT OF WASHINGTON COUNTY, MISSISSIPPI

CIVIL ACTION NO. CI2005-250

BRIEF OF APPELLANTS

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CERTIFICATE OF INTERESTED PERSONS

The undersigned counsel of record certifies that the following listed persons have an interest in the outcome of this case. These representations are made in order that the justices of the Supreme Court and/or the judges of the Court of Appeals may evaluate possible disqualification or recusal.

1. Curtis Ervin, Plaintiff/Appellant, Wrongful Death Beneficiary/Administrator of the Estate
2. Cedric Jermaine Ervin, Wrongful Death Beneficiary
3. Jasmine Jonte Ervin, Wrongful Death Beneficiary
4. Jennifer Chonte Ervin, Wrongful Death Beneficiary
5. Estate of Janice Ervin, Plaintiff/Appellant
6. George F. Hollowell, Jr., Attorney for Plaintiffs/Appellants
7. Delta Regional Medical Center, Defendant/Appellee
8. L. Carl Hagwood, Attorney for Defendants/Appellees
9. Chris Winter, Attorney for Defendants/Appellees
10. Katherine Austin, Attorney for Defendants/Appellees
11. Honorable Richard A. Smith, Circuit Judge

George F. Hollowell, Jr.
Attorney for Appellants

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases

Statutes

Rules

Other Authorities

STATEMENT OF THE CASE

Janice Ervin died from a pulmonary embolism shortly after Dr. James Beckham performed a hysterectomy on her in October of 2004 at Delta Regional Medical Center (DRMC) without using any prophylactic measures to reduce the risk of or prevent thromboembolism. Her husband filed a wrongful death action on behalf of himself, Janice's children and her estate against Dr. Beckham and DRMC on September 6, 2005. (R.[1] 4-21) After suit was filed, it was discovered that Dr. Beckman was an employee of DRMC who is responsible for his actions. (R. 143) After a bench trial, the Circuit Court entered judgment against the Ervins. The Ervins timely filed this appeal. (R. 578-591; RE. 5-15)

STATEMENT OF FACTS

In 2004, Janice Ervin, then a 40 year old obese black female with three children, was experiencing pelvic pain and heavy bleeding from irregular periods which made her anemic. (T. 26, 29-34, 115-117; Exs. P1, P2, D1 at 3, 95; RE. 70-72, 253, 277) A CT scan suggested uterine fibroid tumors. (T. 224; Ex. D2 at 228; RE. 287) Her gynecologist, Dr. Beckham, treated her with oral contraceptive hormone therapy three times a day before recommending surgery. (T. 112, 225; Ex. D2 at 225-227, 233-234; RE. 67, 112, 284-286, 288-289) When hormone therapy did not resolve the pain and irregular periods, Dr. Becker recommended a hysterectomy to remove both her uterus and the fibroids. She agreed. The surgery was scheduled for October 15, 2004. (T. 26, 29-30, 50-53, 226-227; Ex. D1 at 132; RE. 44, 113-114) Although deep vein

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[1] R. refers to the main record of Clerk's papers; DSR to Defendants' Proposed Supplement to the Record; PSR to Plaintiffs' Proposed Supplement to the Record, and T. to the trial transcript. Ex. P# refers to Plaintiffs' Trial Exhibits; Ex. D# to Defendants' Trial Exhibits. The page numbers following the exhibit numbers are to the Court Reporter's exhibit page numbers.

The testimony and scientific literature use many abbreviations. DRMC (Delta Regional Medical Center); DVT (deep vein thrombosis or blood clot; used interchangeably with VTE); GCS (graduated compression stocking; used interchangeably with TED hose); IPC (intermittent compression device; used interchangeably with SCD); LMWH (low molecular weight heparin); LDUH (low dose unfractionated heparin); PE (pulmonary embolism or blood clot breaking off and traveling to the lung where it often cuts off oxygenation of blood causing death); TED hose (used interchangeably with GCS); SCD (sequential compression device; used interchangeably with IPC) ; VTE (venous thromboembolism, blood clot; used interchangeably with DVT).

thrombosis (DVT) and pulmonary embolism (PE) are known complications of hysterectomy surgery, Dr. Becker did not discuss these specific risks with her. (T. 228; RE. 115)

Mrs. Ervin's admissions documentation shows she was obese and on oral contraceptives. (Ex. D1 at 95, 97; RE. 277-278) Dr. Beckham planned to do a vaginal hysterectomy without opening the abdomen. However, after examining her under anesthesia, he decided the abdominal approach was necessary. (Ex. D1 at 103; T. 490-491; RE. 279, 202-203) The surgery itself lasted one hour and 25 minutes, but Janice was under anaesthesia for one hour and 55 minutes. (Ex. D1 at 106; RE 280) Dr. Beckham did not order the use of any prophylactic measures to reduce the risk of DVT, blood clots or pulmonary embolism either before, during or after Mrs. Ervin's surgery. (T 55; Ex. D1 at 18-23; RE. 45, 257-262)

The Ervins' medical expert, Dr. Miller, has been a gynecologist since 1966. In 1995, he left private practice and joined the teaching faculty at Baylor College of Medicine where he now teaches. His duties include both overseeing others performing surgeries, including hysterectomies, and participating in them himself supervising the performance of surgery by the residents he is teaching. He is responsible for seeing to it that they do the surgery correctly. He intervenes and takes over himself when something occurs which requires more experience than the resident has or when something needs to be corrected. (T. 102-103, Ex. P8; RE. 57-58)

Dr. Miller testified Mrs. Ervin had four of the eight risk factors identified in DRMC's own policies and procedures as increasing her likelihood or risk of developing DVT (clots) leading to pulmonary embolism during or after abdominal surgery. Those risk factors included undergoing major abdominal gynecologic surgery,[2] obesity, taking birth control pills,[3] and having

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[2]DRMC's own policy on use of SCD Compression Systems (Ex. P9) states:

Guidelines

I. Indications: The SCD Compression System should be utilized on patients at moderate to high risk of developing deep vein thrombosis or pulmonary embolism. Risk factors include:

- Age greater than 40 years
- Surgical Procedure > 2 hours
- Prior history of deep vein thrombosis or pulmonary embolism (except for

passed her 40th birthday. Dr. Miller clearly stated these factors increased her risk enough to require the use of prophylactic measures to reduce the risk of DVT and pulmonary emboli regardless of what term was used to categorize Mrs. Ervin's risk level. (T. 105-111, 113-117, 123-129; RE. 60-66, 68-72, 74-80)

Dr. Miller does not criticize Dr. Beckham's decision to do the surgery. However, Janice Ervin's weight, age, use of oral contraceptives and the type and extent of surgery did increase her risk of DVT/PE to the point where the standard of care required the use of prophylactic measures, in the form of either TED hose or SCD devices *at a minimum*, to reduce the risk or prevent DVT/PE. *At a minimum*, Dr. Beckman should have ordered TED hose or SCD to be put in place before surgery started and continued after surgery until Mrs. Ervin was sufficiently ambulatory to reduce the risk of clots. If he didn't like those measures or think they were

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patients diagnosed with either within the last six months)
- Prolonged bed rest or profound venous stasis
- The following surgical procedures
  - ➢ Orthopedic
  - ➢ Neurological
  - ➢ Extensive abdominal procedures
  - ➢ OB/GYN (particular cancer surgery)
  - ➢ Extensive vascular surgery
  - ➢ Extensive thoracic surgery
  - ➢ Genitourinary
- Obesity
- Malignancy
- Oral Contraceptives

II. Contraindications

- Acute deep vein thrombosis or diagnosis of deep vein thrombosis within six months
- Severe arteriosclerosis or other ischemic vascular disease
- Massive edema of the legs or pulmonary edema from heart disease
- Any local condition in which sleeves would interfere, such as
  - ➢ Dermatitis
  - ➢ Vein ligation (immediate post operative period)
  - ➢ Gangrene
  - ➢ Recent skin graft
  - ➢ Extreme deformity of leg

[3]DRMC's policies stated any use of birth control pills increased the risk of deep vein thrombosis. Mrs. Ervin was taking three times the dose used for birth control and this medication was not stopped prior to surgery.

effective, other measures were available. Dr. Beckman's failure to use any prophylactic measures was a breach of the standard of care given Mrs. Ervin's increased risk factors for DVT/PE. (T. 130, 132-134, 176-177; RE. 81, 83-85, 99-100) Dr. Miller did not rest his opinion on a single particular article or text in the scientific literature of his field. Instead, his opinions were based on the totality of his fifty years of practice, his training, his experience (including teaching residents to do such surgery), *his reading of the literature,* attending meetings, and talking to colleagues. (T. 176-177; RE. 99-100)

The defense experts admitted Mrs. Ervin had several increased risk factors for developing DVT documented in the literature they relied on. Among the increased risk factors DRMC's experts and Dr. Beckman admitted were present in this case are obesity, and use of birth control pills. Dr. Beckman also admitted Mrs. Ervin was 40 years old which was an additional factor identified in DRMC's policy on preventing DVT as placing a patient in a risk category higher than low risk. Despite these increased risks which at the very least move the patient out of the low risk category, DRMC's witnesses continue to insist Janice Ervin was a low risk patient for whom no prophylactic measures other than early ambulation were required. Such testimony is directly in conflict with the published scientific literature in the field as well as the policies and procedures adopted by Dr. Beckman's employer DRMC. (T. 491, 493, 519, 529, 611-613; RE. 203-204, 215, 225, 236-238)

In fact, defense expert Dr. Reddix admitted Mrs. Ervin did not qualify as a low risk patient requiring only early ambulation according to the American College of Gynecologists criteria. He agreed according to Table 2 in the ACOG guidelines[4], Mrs. Ervin would be considered moderate or high risk and the ACOG guidelines recommended use of GCS or IPC devices for patients in her risk classification to reduce the risks from DVT/PE (T. 523-524; RE.

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[4]American College of Obstetricians and Gynecologists Committee on Practice Bulletins, "Prevention of Deep Vein Thrombosis and Pulmonary Embolism," *Clinical Management Guidelines for Obstetricians - Gynecologists*, No. 21 ACOG Practice Bulletin, 879-885 (October 2000); hereinafter ACOG guidelines. (R. 481a-481g; RE. 22-28)

219-220) The defense's vascular surgeon expert also admitted that Mrs. Ervin did not satisfy the criteria in the ACOG guidelines for being considered low-risk. (T. 617-618; RE. 239-240)

Dr. Beckman testified he only uses TED hose or SCD regularly in high risk patients. Sometimes he uses them with moderate risk patients. He claims he was not trained to use TED hose or SCD on low risk patients and he believed Mrs. Ervin to be a low risk patient. (T. 251-252; RE. 123-124) Dr. Beckman testified he did not feel Mrs. Ervin had enough risk factors to be considered anything other than low risk for developing DVT. However, he admitted Mrs. Ervin had a number of the risk factors for developing DVT listed in the hospital's practices and procedures for preventing DVT, in the Chest article,[5] and also in the ACOG guidelines he relied upon to support his opinion. These risk factors included being 40 or older, going through major abdominal surgery, being obese, and being on birth control, oral contraceptive or estrogen therapy. (T. 246, 248-251, 299; RE. 119-123, 132) He also admitted these risks are cumulative as the literature says. (T. 301; RE. 134) Nevertheless, he did not take into account any of these factors in concluding Mrs. Ervin was low risk. The only factors he took into consideration in making his decision about Mrs. Ervin's risk level and whether to order prophylactic measures for her was whether she was over 45, had cancer, previous radiation or a previous DVT. (T. 300; RE. 133) Thus, he treated Mrs. Ervin as if she had no increased risk factors at all.

Dr. Beckham admitted the ACOG standards apply to his practice as a gynecologist certified by the American College of Gynecology. (T. 290-291; RE. 130-131) He claimed he followed these ACOG guidelines in deciding not to order any prophylaxis treatment for Mrs. Ervin. (T. 287-288; RE. 128-129) He acknowledged the ACOG guidelines say "[p]atients in the low risk category *(as defined in Table 2)* who are undergoing gynecologic surgery probably do not need any thromboprophylactic agent as long as they are quickly mobilized." He also acknowledged Table 2 defines low risk as consisting of being under age 40 and surgery lasting

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[5]William H. Geerts, John A. Heit, G. Patrick Clagett, Graham F. Pineo, Clifford W. Colwell, Frederick A. Anderson, Jr. and H. Brownell Wheeler, "Prevention of Venous Thromboembolism," Chest 338S-400S (2004) (R. 504-553; RE. 31-43) hereinafter CHEST or Chest article.

less than 30 minutes and no additional risk factors. (T. 313-314; RE. 135-136).

Dr. Beckman claimed, however, the Table 2's criteria for classifying patients as low-risk were irrelevant because of a statement on the bottom of page 880 of the Practice Bulletin saying:

> In a univariate analysis of all characteristics identified to be statistically significant related to venous thromboembolism significant variables included recurrent malignant disease, a prior history of DVT, duration of anesthesia greater than 5 hours, prior pelvic radiation, venous stasis changes or venous vericosities and age over 45 years. (11)

(R. 481b; RE. 23) Dr. Beckman claimed this statement modified everything else in the entire guidelines Bulletin about who fit in a low risk category[6] because

> What the committee did is that wrote this bulletin is they looked at this, these studies, and just came up with some - just some general guidelines, and that's where this table [Table 2] came from. And when you're on a committee making these guidelines, you're going to overshoot the specifics of the exact science that you have just to give some cushion, and so they picked 40 years of age, but the studies show that you've got to get up to 45 before there's any increased risks. The studies don't - don't - don't go along with this, you know, what this [Table 2] is saying. ... I tried to explain to you how they come up with these tables. This is a recommendation based on that data. It's a general guideline as to what a practitioner can follow. But if you look at the studies that they got this from, the age 40 is - is a way overshoot. It really is up to 45. ... but if you go back and look at where they got the information from that study, you know 40 is sort of irrelevant really. The factors don't kick in until they're 45.

(T. 315-316)

However, this testimony by Dr. Beckman is directly contradicted by the guidelines which state in endnote 11 that the sentence on page 880 Dr. Beckman relies on comes from a single study of 411 patients and Table 2 risk levels are based on scientific evidence drawn from more than 100 studies adopted by the 1986 National Institutes of Health Consensus Conference on prevention of venous thrombosis and pulmonary embolism published in the Journal of the American Medical Association. The guidelines very clearly state they do not support Dr.

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[6]In ¶28, the Circuit Court said the Ervins' expert, Dr. Miller, tried to modify accepted treatment tables to meet his opinion that Mrs. Ervin risk was slightly higher than low risk. However, the only expert who tried to modify any of the tables in the scientific literature was Dr. Beckman who claimed the sentence on page 880 modified Table 2 so that Mrs. Ervin fit in the low risk category. The other two defense experts agreed with Dr. Miller that Mrs. Ervin could not be put in the low risk category under the ACOG guidelines because she did not fit the criteria for low risk in Table 2 of those guidelines. They just claim under their own personal criteria, they would consider Mrs. Ervin as low risk. (T. 523-524, 617-618; RE. 219-220, 239-240)

Beckman's position that a patient is low risk and early ambulation is the only prophylactic treatment required by the standard of care until a patient is over age 45 unless the patient has had cancer, prior radiation, or a previous DVT. (See ACOG guidelines at 880, 882, 883, 885; R. 481b, 481d, 481e, 481g; RE. 23, 25, 26, 28.)

Janice Ervin was at least a moderate risk patient under the literature DRMC's witnesses rely upon and under DRMC's own policies. DRMC's own policies acknowledge TED hose or SCD should be used in patients with the risk factors Janice Ervin had to reduce the risk of DVT. The use of these policies to train nurses and the lack of direct use of the policies by doctors does not change the fact that DRMC has recognized the standard of care applicable to it requires the use of such prophylactic devices in patients such as Mrs. Ervin.

Dr. Miller also testified the nursing staff have a duty as patient advocates to recommend or bring to a doctor's attention the lack of prophylactic measures when none have been ordered prior to surgery on a patient with risk factors for DVT. He was of the opinion that DRMC's nurses breached that duty in regard to Mrs. Ervin because they did not bring the hospital's policy to Dr. Beckman's attention. (T. 105-106, 150; RE. 60-61, 98) When they assessed Mrs. Ervin, the nurses did not request such an order despite the existence of a hospital nursing policy stating such devices were indicated for a patient with Mrs. Ervin's risk factors. The Ervins' nurse expert testified the failure to request such an order from the physician was a breach of the nursing standard of care. Both Dr. Miller and the Ervins' nurse expert testified that if the doctor refused to order prophylactic measures in a patient at risk when brought to his attention by a nurse, the nurse should report that fact up the chain of command so her superiors could work with the medical staff to get something done to help the patient. (T. 343-345, 353-354, 356; RE. 139-144)

When defense counsel began cross examining nurse Josh Edwards, he tendered him as an expert in nursing standards of care. The Ervins' counsel objected because Edwards had not been designated as an expert in accordance with the scheduling order and his expert opinions had not

been properly disclosed before trial.[7] The court declined to rule on the motion and allowed the testimony to be taken. (T. 467-471; RE. 16-19) Although the direct examination of Josh Edwards was confined to the events between the time he was called to Mrs. Ervin's room and her arrival at ICU, defense counsel's entire cross examination was devoted to soliciting expert opinions from Edwards as to the standard of care primarily in regard to the use of prophylactic measures to prevent or reduce the risk of DVT. He questioned Edwards about the role of the nursing policies on use of TED hose and SCD devises to prevent DVT in setting the standard of care for nurses and physicians. Edwards testified nursing policies did not apply to doctors. He also testified, over objection, if a nurse brought risk factors listed in the policy to the attention of a physician who still refused to order the devices a nurse would have no duty to report the lack of preventive measures up the chain of command. Finally he testified the nurses did not breach any nursing standard of care in their care of Mrs. Ervin at DRMC. (T. 472-476; RE. 195-200)

Following surgery, Dr. Beckham ordered strict bed rest for Mrs. Ervin for the remainder of that day and the following night. The orders called for the nursing staff to perform turning, coughing and deep breathing exercises every two (2) hours. (Ex. D1 at 22; RE. 261) Whether these orders were followed was disputed. The only mention of turning in the nursing notes are an entry at 12:30 p.m. that she was on her left side and at 3:00 pm (15:00) that she was on her right side. There is no mention of any coughing or deep breathing at these times. She is reportedly awake and talking on the phone and to several visitors at her bedside at 5:25 p.m. (17:25), but there is no indication of turning, coughing or deep breathing at that time. (Ex. D1 at 50; RE. 270) The activity records show she was in the same position for the first four hours after surgery. After changing position during the next two hours, she stayed in the same position on her back for twelve hours straight. The nursing notes and activity logs do not mention coughing or deep

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[7]A scheduling order was entered on December 6, 2005 which set a deadline of February 3, 2006 for designating defense experts. This deadline was later extended to December 14, 2007. (R. 49; 202) On January 24, 2006 and December 13, 2007, DRMC designated its expert witnesses. Dr. Beckman was designated as a defense expert but nurse Josh Edwards was not. (R. 129, 333)

breathing at all much less at two hour intervals. (Ex. D1 at 50, 59 particularly the "Position" and "TCDB" lines; RE. 270, 273)

Mrs. Ervin's sister Beverly, a licensed practical nurse, was with her from the time she got out of surgery around 11 a.m. until approximately 6 p.m. In those 7 hours, she testified the nurses never turned Janice or had her breathe deep and cough. (T. 211, 214-215, 218; RE. 108-111) Gloria Jordon, a co-worker and friend of Mrs. Ervin visited her from around 5:10 p.m. (17:10) until 7:00 p.m. (19:00). She testified in that time period, which covered the 17:25 nurses note, no nurses turned Mrs. Ervin or asked her to cough or breathe deeply. She also asked the nurse why Mrs. Ervin did not have compression stockings because she had had them herself a few months earlier when she had surgery. The nurse told her Dr. Beckham did not use them. (T. 395-396; RE. 149-150) Mrs. Ervin's husband, Curtis, stayed with her all night. He was awake and testified his wife was not turned, and was not asked to breathe deeply and cough at any time during the day or night shift. (T. 57-58, 66-67; RE. 46-47, 49-50) The Activity Treatment sheet which begins at 11 a.m. on October 15, 2004 when she got to her room after surgery and goes through 6 a.m. the next morning supports Mr. Ervin's testimony. It shows Mrs. Ervin was in the same position on her back from 7 p.m. (19:00) until 6 a.m. the next morning. (Ex. D1 at 59; RE. 273) The Ervins' nursing expert testified that failing to follow Dr. Beckman's orders to turn Mrs. Ervin and have her cough and breathe deep every two hours would have been a breach of the nursing standard of care. She also testified leaving a patient in the same position without turning her every two hours would have decreased venous return, increasing the risk of venous stasis, DVT and PE. (T. 369; RE. 145)

In cross examining Mr. Ervin, Defense Counsel referred to DRMC 190 when stating there were checks on the TCDB line for 8 p.m. on October 15, 2004 to 8 a.m. the next morning. Exhibit D1 (the hospital records) have Bates numbers prefixed by DRMC. DRMC 190, (Ex. D1 at 142), is part of the IV Medication Administration Record for October 18, 2004. Page 190 of Exhibit D-1 is a blood transfusion record for 2:11 a.m. on October 18, 2004. Neither contains

lines labeled TCDB. The records with the line labeled "TCDB" are the ones titled "ACTIVITY TREATMENTS" found at pages 59 (DRMC 107), 67 (DRMC 115), and 73 (DRMC 121) of Exhibit D-1 (the hospital medical records). The TCDB line is approximately half way down each page and contain no checks. *Id.* (RE. 273-275, 282-283)

On the morning of October 16, 2004, the nurse caring for Mrs. Ervin changed to Natalie Fratesi (now Reed). (T. 400-401; RE. 151-152) When Dr. Beckham saw Mrs. Ervin shortly before 9 am, his orders were that she could be gotten up and out of bed to the extent she could tolerate activity. (Ex. D1 at 24; RE. 263) At approximately 10:00 a.m., Mrs. Ervin was assisted to the bathroom by the nurses aide. Once in the bathroom, she was left unattended. Mrs. Ervin then called out for her husband. Her husband and the nurses' aide responded finding her passing out. Nurses were called and Mrs. Ervin was put back to bed. (T. 69-72, 135-136, 408, 430-432; Ex. D1 at 6, 54; RE. 51-54, 86-87, 153, 165-167, 254, 271)

At 10:07 a.m., Mrs. Ervin's was unresponsive, her respirations were shallow and rapid, her eyes were glazed, and her skin was cold and clammy. Her blood pressure was very low, her oxygen saturation was extremely low at 68%, and her heart rate was very high. No code was called at this time because Mrs. Ervin was in respiratory distress but she was not in arrest. The nurses put Mrs. Ervin on 10 liters of oxygen per minute from the wall unit in her room. (T. 135-136, 138, 432-433, 447-449, 452; Ex. D1-6, 54; RE. 86-87, 89, 167-168, 176-178, 181, 254, 271)

A nurse called Dr. Beckham at 10:09 a.m., the nursing supervisor Josh Edwards at 10:10 a.m., and Dr. Beckham again at 10:12 a.m. Dr. Beckham arrived at 10:16 a.m. and gave orders to administer Lovinox, a blood thinner, and transfer Mrs. Ervin to ICU. By 10:25 a.m., after being on 10 liters per minute of oxygen from the wall unit in her room, Mrs. Ervin's oxygen saturation improved to a normal 97%. (T. 137-138, 434-435, 446, 451-452; Ex. D1 at 54; RE. 88-89, 169-170, 175, 180-181, 271)

At 10:30 a.m., Dr. Beckham ordered Mrs. Ervin to be transferred to the intensive care unit (ICU) and gave initial orders for her care in ICU. These orders reduced the oxygen from the

10 liters per minute to 5 liters per minute via a regular oxygen mask. (Ex. D1 at 24; RE 263) Note the amount of oxygen a patient is receiving is not described in percentages. It is liters per second. Percentages are used in the medical records only when a bag is being used to assist the patient's breathing. Those tending Mrs. Ervin when transport began were transporting a patient who was breathing on her own, whose oxygen sats had returned to normal, and for whom orders had been entered decreasing the oxygen supply. (T. 449-450; Ex. D1 at 54; RE. 178-179, 271)

All the doctor experts testified the standard of care or good medical practice required a patient in Mrs. Ervin condition to be kept on portable oxygen during transport from her room on the 4th floor to ICU on the 2nd floor. (T. 139, 265-266, 528, 626-627; RE. 90, 125-126, 224, 241-242) Drs. Miller and Beckham testified that it was being on oxygen that brought her saturation levels back up to normal and that without supplemental oxygen during transport, oxygen saturation in a patient in Mrs. Ervin's condition would have fallen again, depriving her of oxygen and resulting in oxygen deprivation to her organs. (T. 141, 266; RE. 92, 126) The longer a patient in her condition was off of oxygen, the lower the possibility of reviving her would fall, thus contributing to the patient's death. (T. 145-146; RE. 96-97) Dr. Miller testified both the nurses and Doctor Beckham had a duty or responsibility to make sure Mrs. Ervin had oxygen while being transported from her room to ICU and a failure to make sure she was on oxygen during transport would have breached the standard of care. (T. 142; RE. 93)

Whether oxygen was actually administered while the nurses transported Mrs. Ervin from her 4th floor room to ICU on the 2d floor was disputed. DRMC's designated nurse expert pointed to a single line in the ICU notes saying "Rec'd Pt.0_2 100% NRB" ("Received patient. Oxygen 100% nonrebreather mask") which she claimed proved Janice Ervin was on oxygen the entire time she was in transport from her 4th floor room to ICU. This line originally bore the time 10:55, but 10:45 was written over it. There is no other mention of a nonrebreather mask or 100% oxygen anywhere in the medical records. All other references to 100% are made in reference to respirations provided by an Ambu bag when Mrs. Ervin was not making any breath sounds on

her own in ICU. The next entry on this page reads "10:50 Pt intubated č 7.5 ETT secured @ 23 upper gums š difficulty. Pt ambued č 100%. CPR in progress." which means "patient was intubated with a 7.5 mm endotracheal tube secured at 23 gums without difficulty. 100% of patient's breathing is being done manually with an ambu bag.[8] Cardiopulmonary resuscitation in progress." This entry indicates manual breathing with an ambu bag began after Mrs. Ervin's was in ICU and intubated by the respiratory therapist. (T. 440-441, 568-569; Ex. D1 at 12, 55, 77; RE. 172-173, 226-227, 255, 272, 276)

The Cardiopulmonary Resuscitation Record, also beginning at 10:45 when the code blue was called, states the initial response was assisting breathing by Ambu bag, that Mrs. Ervin was intubated by Respiratory Therapist E. Jordon at 10:46, chest compressions began at 10:46, and the code team arrived at 10:48. This report details with specific times all the measures taken to resuscitate Mrs. Ervin from 10:45 to 11:55 a.m when the code ended. It does not mention Mrs. Ervin being on oxygen when she arrived or removing a mask to use the Ambu bag to breathe for her. (Ex. D1 at 12-13; RE. 255-256)

None of the other records, including the much more detailed entries by the nurses and Dr Beckham in Mrs. Ervin's 4th floor room (Ex.. D1 at 54; RE. 271) and in the ICU narrative on receiving Mrs. Ervin at 10:45 a.m. state she was on 100% oxygen administered via a nonrebreather mask when she was transported from her room to ICU. The first entry in the ICU narrative reads

> 10:45 Arrived via stretcher with RN x 3 unresponsive, no breath sounds, no heart tones Ambu assisted resp @ 100% per RT. Code blue called. Dr. Beckham at bedside.

(Ex. D1 at 55; RE. 272) indicating Mrs. Ervin arrived on a stretcher with 3 nurses. The initial assessment was she was not breathing and her heart as not beating. A respiratory therapist used an Ambu bag to force air into her lungs to breathe for her, something which the testimony

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[8]An Ambu bag is used to manually increase a patient's breathing (respirations) or to breathe for a patient. It consists of a face mask and bulb which can be squeezed to force air into a patient's lungs like a bellows. (T. 460-461; RE. 189-190)

showed could not be done with an oxygen mask on. The Ervins' nursing expert testified the phrase "Ambu assisted resp @ 100% per RT" meant a respiratory therapist was using an Ambu bag to pump air into Mrs. Ervin's lungs. This is consistent with 10:45 and 10:50 notes signed by respiratory therapist Jordan stating he began bagging Mrs. Ervin after he intubated her at 10:50. The Ervins' expert also testified there is no indication anywhere in the medical records of a respiratory therapist prior to Mrs. Ervin's arrival in ICU and there is no mention of a respiratory therapist being present during transport in any of the testimony. (T. 390-392, 460-461; RE. 146-148, 189-190)

Nurse Natalie Fratesi Reed testified in both her deposition and at trial that no ambu bag was used on Mrs. Ervin during transport from her 4th floor room to ICU. (T. 411, 440-441; RE. 155, 172-173) Josh Edwards said Mrs. Ervin's breathing deteriorated in the elevator. When they left the elevator on the 2nd floor, one of the three nurses got the ambu bag from the wall near the ICU door. (T. 461-462; RE. 190-191) Edwards testified there was no respiratory therapist with them during transport. The respiratory therapist began working on Mrs. Ervin after they got to ICU. (T. 464)

Natalie Fratesi Reed's deposition was taken five and a half weeks before trial. The right to read and sign the deposition was waived. (Ex. P16 at 148, 150; RE. 245-246). Nurse Reed was questioned extensively about the order in which things happened and whether Mrs. Ervin was receiving any breathing assistance, such as oxygen or an ambu bag during transport. Her deposition testimony shows she had a clear memory of the transport, was not confused, understood what she was being asked, and gave clear and unambiguous answers. She repeatedly answered questions with statements and explanations showing Mrs. Ervin was not on oxygen during transport.

> Q. So, the ambu assisted for the respirations, was that done by respiratory therapy or was that done by y'all as y'all were going to the - - in transport?
> A. No, sir. This was documented when she arrived at the ICU.
> Q. So, that wouldn't have involved y'all whatsoever?
> A. No, sir.
> Q. That would have been the respiratory therapist?

A. Yes, sir.
Q. They were the ones that did all of that?
A. Yes, sir.
Q. When y'all were traveling from the 4th floor to the 2nd floor, nobody was ambuing her at that time?
A. No, sir.
Q. There was no assistance for oxygen?
A. No, sir.
Q. In fact, the entire trip she had no oxygen, is that correct?
A. Yes, sir.
Q. Was there a reason why she didn't have on oxygen?
A. We was just trying to get her to ICU at that point quickly. It was not available. It was not portable.
Q. You don't have portable oxygen in the hospital?
A. Yes, sir.
Q. Did you have portable oxygen on the 4th floor south at the time Ms. Ervin was there?
A. We could have gotten it but would have taken – Yes, sir. We could have gotten it.
Q. Would have taken what?
A. Taken more time.
Q. How much more, a minute? Would it even have taken a minute?
A. Yes, sir.
Q. More than a minute?
A. Yes, sir.
Q. How many?
A. We would have to call the respiratory therapist to have it set up on the stretcher.
Q. Well, you had gotten the oxygen – excuse me. You had gotten her SATs from 68 to 97 with oxygen, is that correct?
A. Yes.
Q. Why would you think that oxygen was not necessary. Is there a reason in there?
A. No.

(Ex. P16 at 199-201, 203) She reviewed the records before her deposition and had them with her during the deposition. At one point where she was asked if there was anything in the medical records that she did not think was entirely accurate, she said even though the times in the record showed a 15 minute interval between the order to transport and arrival in ICU, she knew it did not take 15 minutes to transport Mrs. Ervin to ICU because they did not wait for a stretcher or anyone. They just rolled Mrs. Ervin's bed out of her room and straight down the elevator two floors to ICU. (Ex. P16 at 203-204; RE. 247-248)

One week before the start of trial, with the assistance of Defense Counsel, Natalie Reed filled out and signed an errata sheet changing her deposition testimony to say Mrs. Ervin was on

oxygen during transport. (T. 410, 419-420; Ex. P17; RE. 154, 163-164, 251-252) Nurse Reed signed an errata sheet thirty four days after giving her deposition and waiving review and signature. Defense counsel mailed the errata sheet to the Ervins' counsel so late it could not reasonably be expected to arrive before trial. The first time the Ervins' counsel saw a copy of the errata sheet was midway through the testimony on Monday giving neither the Ervins' counsel nor their expert witnesses time to prepare for this abrupt change in testimony. As noted in the Circuit Court's findings, the Ervins' counsel objected repeatedly to this late change in testimony. (R. 586; RE. 13)

At trial, Nurse Reed recanted her deposition testimony regarding oxygen during transport, saying it was a mistake and she recalled the presence of oxygen during transport later. She acknowledged the bed on which they moved Mrs. Ervin to ICU did not have portable oxygen hookups. However, she claimed she recalled after her deposition that the nursing supervisor Josh Edwards got portable oxygen from a crash cart at the end of the hallway on the 4th floor and brought it to her bed in her room. She claimed he knew how to hook it up and placed it near the head of the bed. (T. 411-418, 435-436; RE. 155-162, 170-171)

Reed's trial testimony about oxygen was inconsistent with the testimony of other witnesses who were actually present when transport occurred. Mrs. Ervin's husband, Curtis, accompanied her to ICU. His testimony was consistent with Nurse Reed's deposition testimony. He did not see either an oxygen tank or mask or an Ambu bag during the transport. Whether or not an oxygen tank and mask or Ambu bag was present during transport was within the understanding of a layperson. (T. 76-77, 143-144; RE. 55-56, 94-95)

Much of Josh Edward's testimony demonstrates his memory of what actually occurred with Mrs. Ervin is limited despite having reviewed the records shortly before trial. (T. 447, 450-451, 453-454, 456-459; RE. 176, 179-180, 182-183, 185-188) He was in Mrs. Ervin's room for approximately 20 minutes prior to transporting her to ICU and during that time her oxygen saturations went from a low 68% to a normal 97% as a result of the oxygen she received from the

wall unit. (T. 449-453; RE. 178-182) While he often responded to questions by saying he could not remember, he clearly stated he did not bring oxygen to Janice Ervin's room. Josh claimed Mrs. Ervin was transported with oxygen but he doesn't know where it came from or who got it. He mentioned several possible locations for portable oxygen, but none of his testimony was consistent with Natalie Reed's that Josh Edwards got the portable oxygen from a crash cart at the end of the hall. (T. 451-452, 455-456; RE. 180-181, 184-185) Unlike Natalie Reed who said the oxygen was at the head of her bed, Josh Edwards said he thought it was between her legs or next to her leg, not because he remembered it but because that is where it is usually put. (T. 459-460; RE. 188-189)

Although she had normal oxygen saturation levels and was breathing on her own when she left her 4th floor room, Mrs. Ervin was not breathing and had no heart tones or pulse when she arrived in ICU. The ICU staff called a "Code Blue" emergency. CPR was started. Her heartbeat returned after an extended period but she remained unconscious and unable to react to painful stimuli. She was put only able to breathe because she was placed on a ventilator. (Ex. D1 at 55, 77; RE. 272, 276)

At this point, Dr. Beckham turned her care over to Dr. Karim who planned to get a CT scan of her chest. (Ex. D1 at 43; RE. 264) Dr. Karim's diagnosis was a pulmonary embolism which is a form of blood clot. While there is some disagreement between the experts as to the form of clot and embolism which Mrs. Ervin had, it is undisputed she died as a result of some form of clot or embolism which traveled to her lung and caused her to stop breathing and her heart to stop. She suffered brain death as a result of oxygen deprivation.

The CT scan was interpreted by all but one doctor as demonstrating she had a pulmonary embolism. Dr. Oliver believed her symptoms and lab findings were more consistent with a thromboembolism than a pulmonary embolism. However, her treating physicians continued to believe Mrs. Ervin's clinical symptoms were more consistent with cardiac arrest following a pulmonary embolism. They continued anti-coagulant therapy. (Ex. D1 at 44-45; RE 265-266)

Despite these efforts, during the afternoon and evening of the 17th, Mrs. Ervin continued to deteriorate suffering multiple organ failure and eventually brain death. On the morning of October 18, after Dr. Karim discussed the situation with the family, a decision was made to terminate life support. When life support was discontinued, Mrs. Ervin died.(Ex. D1 at 44-48; RE. 265-269)

Dr. Miller clearly stated his opinion to a reasonable degree of medical certainty that it was more probable than not that Mrs. Ervin died as a result of a pulmonary embolism which resulted from a DVT (blood clot) in the leg when parts of it broke off and traveled to her lung. He testified early on the first day of trial and was never asked about the defense theory that the pulmonary embolism might have resulted from clots forming and breaking lose in the pelvic area. (T. 105, 129-131, 135, 176, 185, 191-192; RE. 60, 80-82, 86, 99, 102, 106-107)

Dr. Miller testified if TED hose or an SCD device had been used on Janice Ervin, it would have diminished her increased risk of developing a DVT because the compression would provide better circulation and prevent blood from remaining or pooling in her legs, making it difficult for clots to form. Reducing the risk of clots would further reduce the risk of clots breaking off and traveling to the lungs where they block or limit oxygen exchange to the blood. Thus, there would have been less oxygen deprivation which is what caused her death. Therefore, Dr. Beckman's failure to use prophylactic devices to reduce her increased risk of DVT's proximately caused and/or contributed to Mrs. Ervin's death. (T. 130-132, 176-78; RE. 81-83, 99-101)

SUMMARY OF ARGUMENT

Mississippi has adopted a modified *Daubert* standard to ensure that cases are not decided on faulty science. We also have the manifest error and substantial credible evidence in the record

standards to ensure cases are decided on the actual evidence and not mistaken memories or misperceptions of the evidence. In this case, the scientific literature was not really in conflict. The important facts concerning Mrs. Ervin's increased risks for DVT and pulmonary embolism were not in dispute. But late undisclosed changes in testimony, the admission of undisclosed expert testimony, expert testimony which twisted and misrepresented the scientific literature and exploited differences in language used by various scientific documents to create apparent conflicts after the Ervins' experts had finished testifying and departed, and mischaracterizations of the scientific and expert evidence by defense counsel had a cumulative effect which led the Circuit Court to make several errors which cumulatively denied the Ervins a fair trial. The end result was a judgment based on clearly erroneous factual findings, faulty science, and a failure to apply the correct legal standard regarding the duty of medical providers in regard to unnecessary exposure of patients to known risks by failing to ensure appropriate preventive or precautionary procedures are adopted and followed.

ARGUMENT

I. The Standard of Review

The factual findings of a Circuit Court Judge sitting without a jury in a Tort Claims Act case will be reversed on appeal where they are not supported by "substantial, credible, and reasonable evidence." *City of Jackson v. Spann*, 4 So. 3d 1029, ¶9 (Miss. 2009) citing *Donaldson v. Covington County*, 846 So. 2d 219, 222 (Miss. 2003). A trial court has wide discretion in rulings on the admission or exclusion of evidence, but such discretion must be exercised within the bounds of the Rules of Evidence and Civil Procedure and prior case law. *Banks v. Hill*, 978 So. 2d 663, ¶¶ 6, 17 (Miss. 2008). Questions of law are reviewed de novo. *Edwards v. Stevens,* 963 So. 2d 1108, ¶ 5 (Miss. 2007).

II. Circuit Court Errors Regarding Factual Findings Concerning Janice Ervin's Risk of Developing DVT/Pulmonary Embolism and the Testimony on that Issue

The Circuit Court's Order is based on several erroneous findings concerning the risk of DVT/pulmonary embolism, including the following:

> [Dr. Beckham] had assessed Ervin as being a low risk for pulmonary embolism and acknowledged he did not order any type of compression devices such as TED hoses or sequential compression devices because according to his education, training and medical literature, those devices were not required for a low risk patient.
> 25. He testified Ervin was low risk because she was forty (40) years of age, had no history of cancer or radiation therapy and had no history of clots. He referred to "Prevention of Deep Vein Thrombosis and Pulmonary Embolism," ACOG Practice Bulletin, Oct. 2000, at 879-85, which the Court finds supports his opinion. Plaintiff argued the length of time of the surgery and Ervin using birth control pills (estrogen treatment) moved Ervin into a higher risk category; however, Plaintiff's expert did not testify Ervin was moderate or high risk, merely not low risk. ...
> 28. Dr. Miller tried to modify the accepted treatment tables for patients with a risk of pulmonary embolism to meet his opinion that Mrs. Ervin was at a slightly higher risk than low risk, but he refused to categorize Ervin as moderate or high risk. No literature or published studies supported his opinion. ...
> [Dr. Rigdon] cited learned treatises and scientific literature which refuted the position of the Plaintiff that intermittent pneumatic compression devices and TED hoses are the standard of care and that they are effective.
> 35. Literature: In CHEST "Prevention of Venous Thromboembolism: The Seventh ACCP Conference on Anti-Thrombic and Thromboltic Therapy" at page 343, stated the studies pertaining to mechanical prophylactics for pulmonary embolism are suspect. Further, from this same publication at page 346, it stated "There is insufficient evidence to assess whether IPC (intermittent pneumatic compression) prophylactics alone has any effect on symptomatic VTE (venous thrombo embolism) or mortality" and "in low risk general surgery patients (Table 5) who are undergoing a minor procedure, or [sic] are less than 40 years of age and have no additional risk factors, we recommend against the use of specific prophylactics other than early and consistent mobilization."

(R. 581-584; RE. 8-11)

The Circuit Court was clearly wrong in its finding that Dr. Miller refused to categorize Mrs. Ervin as moderate risk or a risk level at which the literature supports the use of prophylactic measures to prevent DVT or pulmonary embolism. Dr. Miller was simply trying to be clear in his opinion that despite the use of different language and approaches to categorization in different publications, Mrs. Ervin had risk factors putting her into the class of patients for whom some form of prophylactic measures, mechanical compression measures at a minimum, are required to reduce the risk of DVT/pulmonary embolism. On direct examination, he testified:

> Q. ... Are there anymore risk factors that you can - you would find as far as Mrs. Ervin was concerned?
> A. No more than the four we have spoken about a minute ago.
> Q. And they are?
> A. They are greater than age 40. Female surgery, the hysterectomy. Obesity and

oral contraceptives.
Q. ... and these are risks for what, when they talk about risks?
A. Blood clots are pulmonary emboli.
Q. Okay. ... after reviewing the charts, reviewing the records, reviewing this policy and procedure that you just made reference to, how would you - - what would you list her as, as far as a risk factor? And tell us why and how you got to your figures.
A. This young lady ***was not low risk. She was above low risk.*** Low risk to me means prophylactic therapy is not indicated. Anything above low risks indicates prophylaxis is necessary. The definition we spoke about earlier high categorizes at low and not low.

The other classification is low, moderate, or high. And it really matters not, ***if she is not low risk, then therapy needs to be instigated.*** And that is my distinction between whether or not it's moderate or high; *whatever classification, therapy is needed.* ...
Q. Now, as far as Mrs. Ervin was concerned, what, if any, kind of therapy should have been provided to her, when, and explain it to us, if you would?
A. *Minimally*, because of her risk factors she should have had some devices on her legs to decrease the possibility of blood clots ... .

(T. 122:29 to 123:8, 123:18-124:10, 129:4-10) On cross examination, he was equally clear:

Q. Now, it's also clear, isn't it, Doctor, that from your testimony you placed Mrs. Ervin in low risk?
A. ***That's not correct.***
Q. All right, let's take a look at it. ... Then, on Page 11, Line 25, answer. Question: By not using compression devices in gynecological patients, what is the percent of increase that a DVT will occur in your opinion. Your answer was, are we talking about low-risk patients – do you see that – or are you talking about moderate or high-risk patients, because in low-risk patients the instance of it occurring would be very, very small. That's the reason why in low-risk patients we use compression devices. In moderate and high-risk patients, we use other measures, such as Heparin therapy, or Lovenox, some anticoagulate so that we are prophylaxis based on the degree of risk. So, your classification of Mrs. Ervin was low risk, correct?
A. ***Wrong***.
Q. Okay, did you ever in your entire testimony that you gave ever describe her as being anything other than low risk? Do you want to go to Page 47? Is that where you would like to go?
A. Yes. ...
Q. The question - the question was, okay, I think we all agree about the low-risk and high-risk factor. Taking into consideration Mrs. Janice Ervin, would you consider her, now that you know about her obesity and the fact that she was on birth control pills, would you consider her risk factor to be long range, low range, or mid range? Just kind of explain that position. And your answer was, well, I think we define low-risk and high-risk patients have a tendency toward DVTs. So, it incorporates whether you have anticoagulate therapy to prevent DVTs from occurring. I would not put her in - - next page, please ma'am – a category that I would label her that risk that I would put her on anticoagulation therapy, but I would use other prophylaxis, and prophylaxis, you repeated said was simply compression devices?

A. Correct.
Q. So, at no time did you in your deposition testimony try to cauterize [sic] her as high risk?
A. That is correct.
Q. And at no time in your testimony did you try to categorize her as moderate risk?
A. ***That's wrong.***
Q. Did you ever use the term moderate risk?
A. No I did not. As I have mentioned to you earlier, in my mind I divided the risk factors as low risk, and no therapy above risk as treatment needs to necessary. And on Page 47, line 4, it says, I cannot say that she was low risk. So, if she is not low risk, she is at risk of something.
Q. Yes, sir.
A. ***By your definition moderate to high or by my definition at a risk that requires some prophylaxis.***
Q. Yes, sir. And the prophylaxis is nothing more than compression devices
A. Uh – that were not used in this case.
Q. Yes, sir. Just so we're clear.
A. That's correct.

(T. 188:25 to 191:20)

The ACOG guidelines which the Circuit Court said supports Dr. Beckman and not Dr. Miller contains the risk level table to the right. (ACOG Practice Bulletin, Oct. 2000, at 882; R. 481d; RE. 25). This article says to be classified as low risk the patient has to be age 40 or less with surgery lasting less than 30 minutes and have no other clinical risk factors. A patient undergoing surgery lasting over 30 minutes with no other risk factors is moderate risk. A patient who is over age 40 and has even one of the following risk factors is considered high risk by this article: prior DVT or pulmonary embolism, vericose veins, infection, maligancy, estrogen therapy, obesity, and prolonged surgery. From the other categories, it is clear any surgery over 30 minutes is considered long enough to increase the patient's risk level.

Table 2. Classification of Risk Levels for Venous Thromboembolism Among Gynecologic Surgery Patients

Classification	Definition
Low risk (<3% risk of DVT*)	Age ≤40 y and Surgery lasting <30 min
Moderate risk (10–40% risk of DVT)	Age >40 y and Surgery of any duration No other clinical risk factors
High risk (40–70% risk of DVT; 1–5% risk of pulmonary embolism)	Age >40 y plus risk factors: • Prior DVT or pulmonary embolism • Varicose veins • Infection • Malignancy • Estrogen therapy • Obesity • Prolonged surgery

*DVT indicates deep vein thrombosis.

Data from NIH Consensus Conference. Prevention of venous thrombosis and pulmonary embolism. JAMA 1986;256:744–749

In regard to causation, efficacy, and the standard of care, the ACOG guidelines state

Fatal pulmonary embolism is a common preventable cause of death in

hospitalized patients. ... The purpose of this document is to review the current literature on the prevention of thromboembolism in gynecologic patients, discuss the rationale behind sometimes conflicting guidelines, and offer evidence based recommendations to address the most clinically relevant issues in the management of these patients. [emphasis in original]

... [T]he fibrinogen I-125 uptake test ... is sensitive to detecting DVT only distally (calf) and is poor at detecting DVT in the upper thigh. ... Because diagnosis [of DVT] is difficult, perioperative prophylaxis has become the mainstay of management. ... Postoperative venous thromboembolism, as diagnosed by the fibrinogen I-125 uptake test ranges from 7% to 29% in general gynecological surgery ... [The actual incidence would be higher as this test is poor at detecting DVT in the upper thigh.]. Pulmonary embolism occurs in 0.1 - 5% of the cases depending on the level of risks. Unfortunately, pulmonary embolism occurs without clinical evidence of DVT in 50-80% of cases and is fatal in approximately 10-20% of cases. ...

Preoperative patients should be classified according to the levels of risk of thrombosis to determine the benefits and risks of pharmacologic and physical methods of preventing venous thromboembolism. *Table 2* [reproduced on page 21 of this brief] *summarizes the classification of risk levels based on published data.*

...The use of graduated compression stockings, which reduce stasis, is by far the simplest of the prophylactic approaches and has the advantages of being inexpensive, easy to use and free of side effects if properly fitted. Graduated compression stockings reduce the prevalence of DVT (especially calf) in medium risk patients when compared with placebo according to a meta-analysis of all randomized controlled trials. ... If used at the induction of anesthesia and continued until patients are fully ambulatory, pneumatic compression appears to be effective in reducing DVT in medium-risk and high-risk patients. ...

Patients in the moderate -risk category would likely benefit from prophylaxis ***with either*** *graduated compression stockings, pneumatic compression*, low dose unfractionated heparin ... LMWH [low molecular weight heparin] ... ***or*** enoxaparin. ... Adding graduated compression stockings or pneumatic compression to anticoagulant therapy may be a good alternative for high risk patients ... . Prophylaxis with either graduated compression stockings, pneumatic compression, low dose standard heparin, LMWH is less expensive than no prophylaxis in patients undergoing general abdominal surgery.[9]

(ACOG Practice Bulletin, at 879-885; R. 481a-481g; RE. 22-28)

Dr. Beckham admitted as a gynecologist board certified by the American College of Gynecology, the ACOG standards apply to his practice. (T. 290-291; RE. 130-131) Dr. Beckham claimed he followed these ACOG guidelines in deciding not to order any prophylaxis treatment

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[9]Dr. Beckham testified he followed these ACOG guidelines in deciding not to order any prophylaxis treatment for Mrs. Ervin. (T. 287-288; RE. 128-129) However, given the repeated references in the article to low risk "as defined in Table 2," Dr. Beckman clearly did not follow these guidelines. He effectively eliminated everything the article says about what patients fall into the category for which no prophylaxis other than early ambulation is recommended.

for Mrs. Ervin. (T. 287-288; RE. 128-129) He acknowledged the ACOG guidelines say "[p]atients in the low risk category *(as defined in Table 2)* who are undergoing gynecologic surgery probably do not need any thromboprophylactic agent as long as they are quickly mobilized." He also acknowledged Table 2 defines low risk as consisting of being under age 40 and surgery lasting less than 30 minutes and no additional risk factors. (T. 313-314; RE. 135-136). Both of the defense non-party experts, Drs. Reddix and Rigdon, admitted Mrs. Ervin did not qualify as a low risk patient for whom only early ambulation is required under the American College of Gynecologists criteria and guidelines. (T. 523-524, 617-618; RE. 219-220, 239-240)

The second publication relied upon by the Circuit Court was the Chest article. (R. 504-553; RE. 30-43.) This article contains a long list of risk factors for venous thromboembolism in Table 3 including surgery, malignancy, previous VTE, increasing age, estrogen-containing oral contraception or hormone replacement therapy, and obesity. *Id* at 340 (R. 504; RE. 32). Table 4 states that patients hospitalized for major gynecologic surgery have a 15 to 40% risk of developing a DVT. *Id.* On the same page, the Chest article states:

> The first manifestation of VTE may be fatal PE. The routine screening of patients for asymptomatic DVT is logistically difficult and is neither effective in preventing clinically important VTE nor cost-effective. Accordingly, prophylaxis against VTE remains the most appropriate strategy to reduce [VTE, DVT, PE and fatal PE].
>
> A vast number of randomized clinical trials over the past 30 years provide irrefutable evidence that primary thromboprophylaxis reduces DVT, PE, and fatal PE. PE is the most common preventable cause of hospital death and is the number one strategy to improve patient safety in hospitals. The Agency for Healthcare Research and Quality has published a report entitled "Making Health Care Safer: a Critical Analysis of Patient Safety Practices." ... The highest ranked safety practice was the "appropriate use of prophylaxis to prevent VTE in patients at risk." This recommendation was based on overwhelming evidence that thromboprophylaxis reduces adverse patient outcomes while, at the same time, decreasing overall costs.[10]

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[10]This paragraph of the article is in direct conflict with Dr. Beckham's claim the article says surveys from around the world demonstrate there is no consensus or agreement on the proper approach to prophylaxis to prevent DVT and pulmonary embolism. In fact, the only pages of this article which refer to the countries Dr. Beckham testified were surveyed and show a lack of consensus are the footnote for acknowledgments and the endnotes. The article simply does not say what defense counsel and Dr. Beckham said it says. (Compare Chest article with T. 281; RE. 30-43, 127)

This Chest article recognizes two generally accepted approaches to making decisions about when and what type of prophylaxis therapy to use with a particular patient. *Id* at 341S (R. 505; RE. 33). The first is a simplified approach that puts a patient into one of four risk level categories based on age, extent of surgery and additional risk factors and gives a rough estimate of appropriate prophylactic treatments. It is presented in Table 5 from page 341 of the article (reproduced below) which the Circuit Court appears to have been referring to in its order. *Id.*

Table 5—Levels of Thromboembolism Risk in Surgical Patients Without Prophylaxis*

Level of Risk	DVT, %		PE, %		Successful Prevention Strategies
	Calf	Proximal	Clinical	Fatal	
Low risk Minor surgery in patients < 40 yr with no additional risk factors	2	0.4	0.2	0.01	No specific prophylaxis; early and "aggressive" mobilization
Moderate risk Minor surgery in patients with additional risk factors Surgery in patients aged 40-60 yr with no additional risk factors	10–20	2–4	1–2	0.1–0.4	LDUH (q12h), LMWH (3,400 U daily) GCS, or IPC
High risk Surgery in patients > 60 yr, or age 40–60 with additional risk factors (prior VTE, cancer, molecular hypercoagulability)	20–40	4–8	2–4	0.4–1.0	LDUH (q8h), LMWH (3,400 U daily), or IPC
Highest risk Surgery in patients with multiple risk factors (age > 40 yr, cancer, prior VTE) Hip or knee arthroplasty, HFS Major trauma; SCI	40–80	10–20	4–10	0.2–5	LMWH (3,400 U daily), fondaparinux, oral VKAs (INR, 2–3), or IPC/GCS LDUH/ LMWH

*Modified from Geerts et al.2

The second approach divides patients into more specific target groups based on the type of surgery plus age and additional risk factors and makes recommendations for each target group based on the available research for that target group. According to the article, it is more reliable.

> The second approach involves the implementation of group-specific prophylaxis routinely for all patients who belong to each of the major target groups. We support the latter for several reasons. First, we are unable to confidently identify individual patients who do not require prophylaxis. Second, an individualized approach to prophylaxis has not been subjected to rigorous clinical evaluation. Third, individualizing prophylaxis is logistically complex and is likely associated with suboptimal compliance. After discussing several important issues related to the interpretation of thromboprophylaxis evidence, the remainder of this article

> categorizes patients according to the type of hospital service that is providing care for their primary surgical or medical disorder. Within each patient category, the risks of VTE and the effective methods of prophylaxis are discussed, if they are known. For most patient groups, sufficient numbers of randomized clinical trials are available to allow strong recommendations (ie, Grade 1A or Grade 1B) to be made with regard to the benefits and risks of specific thromboprophylaxis options. VTE is an important health-care problem, resulting in significant mortality, morbidity, and resource expenditure. Despite the continuing need for additional data, we believe that there is sufficient evidence to recommend routine thrombo-prophylaxis for many hospitalized patient groups. The implementation of evidence-based and thoughtful prophylaxis strategies provides benefit to patients, and should also protect their caregivers and the hospitals providing care from legal liability. We recommend that every hospital develop a formal strategy that addresses the prevention of thromboembolic complications. This should generally be in the form of a written thromboprophylaxis policy, especially for high-risk groups.

Id at p. 341 (R. 505; RE. 33).

On pages 342-343 (R. 506-507; RE. 34-35) , the Chest article does not say studies of mechanical prophylactics are suspect. It says generally studies show all three mechanical methods have been shown to reduce the risk of DVT in several patient groups but they have not been studied as intensively as pharmacological methods. The smaller amounts of data are insufficient to conclusively prove mechanical prophylaxis reduces the risk of pulmonary embolism or death for all surgery and hospitalization patients. Despite the limitations in available studies on mechanical prophylaxis, the article clearly states at page 343 (R. 507; RE. 35):

> In the recommendations that follow, the use of mechanical prophylaxis is an acceptable option in certain patient groups, especially in those patients who are at high risk for bleeding, or when used in combination with anticoagulant prophylaxis to improve efficacy.

The Chest article has separate sections and recommendations on general surgery and gynecologic surgery. In the general surgery section on page 346 (R. 510; RE. 38), the article says

> Although mechanical methods of prophylaxis (ie, GCS [graduated compression stockings] and IPC [intermittent pneumatic compression]) are attractive options in general surgery patients who have a high risk of bleeding, they have not been studied as extensively as has pharmacologic prophylaxis. A systematic review observed a significant 52% reduction in the rate of DVT with the use of GCS ... compared with no prophylaxis ... . This finding was confirmed by two additional meta-analyses. The use of GCS has also been shown to enhance the protective effect of LDUH against DVT by a further 75% compared with LDUH alone ... .

> The effect of GCS on the risk of proximal DVT or symptomatic PE, and their effectiveness in patients with malignancies remains unknown due to the presence of only a few small studies. Some practical limitations of GCS include ... poor compliance with their use by both health-care providers and patients.
>
> Several small, older studies have suggested that prophylaxis with IPC might reduce the incidence of DVT in general surgical patients to an extent similar to LDUH ... . There is insufficient evidence to assess whether IPC prophylaxis alone has any effect on symptomatic VTE or mortality. In a single randomized clinical trial of 2,551 cardiac surgery patients, the rate of symptomatic PE was lower with combined IPC and LDUH (1.5%) than with LDUH alone (4.0%).

In the section on General Surgery Recommendations, *Id* at 346-347 (R. 510-511; RE. 38-39), the parts quoted by the Circuit Court and the other relevant recommendations say:

> 2.1.1. In low-risk general surgery patients (Table 5) who are undergoing a minor procedure, are < 40 years of age, and have no additional risk factors, we recommend against the use of specific prophylaxis other than early and persistent mobilization (Grade 1C).
> 2.1.2. Moderate-risk general surgery patients are those patients undergoing a nonmajor procedure and are between the ages of 40 and 60 years or have additional risk factors, or those patients who are undergoing major operations and are < 40 years of age with no additional risk factors. We recommend prophylaxis with LDUH, 5,000 U bid or LMWH 3,400 U once daily (both Grade 1A).
> 2.1.3. Higher-risk general surgery patients are those undergoing nonmajor surgery and are > 60 years of age or have additional risk factors, or patients undergoing major surgery who are > 40 years of age or have additional risk factors. We recommend thromboprophylaxis with LDUH, 5,000 U tid or LMWH, 3,400 U daily (both Grade 1A).
> 2.1.4. In high-risk general surgery patients with multiple risk factors, we recommend that pharmacologic methods (ie, LDUH, tid or LMWH, 3,400 U daily) be combined with the use of GCS and/or IPC (Grade 1C).
> 2.1.5. In general surgery patients with a high risk of bleeding, we recommend the use of mechanical prophylaxis with properly fitted GCS or IPC, at least initially until the bleeding risk decreases (Grade 1A).

However, the sections from the Chest article on gynecologic surgery are more applicable to Mrs. Ervin as a hysterectomy with removal of the ovaries and tubes, particularly from an open abdominal approach, is indisputably major gynecologic surgery. The relevant discussion and recommendations for gynecologic surgery on pages 348-349 (R. 512-513; RE. 40-41) state:

> VTE is an important and potentially preventable complication of major gynecologic surgery, with rates of DVT, PE, and fatal PE comparable to those seen after general surgical procedures. Several factors appear to increase the risk of VTE following gynecologic surgery, including older age, prior pelvic radiation therapy, and use of an abdominal surgical approach. ... ***Several practice guidelines have addressed the issue of thromboprophylaxis in patients***

undergoing gynecologic surgery. **Patients who are otherwise well and undergo *brief procedures, typically defined as < 30 min,*** *do not require any specific prophylaxis but should be encouraged to mobilize early after surgery.* The previous American College of Chest Physicians Consensus Conference on Antithrombotic Therapy concluded that twice daily dosing of LDUH was effective in *patients undergoing gynecologic surgery for benign disease* in the absence of additional risk factors. ***Mechanical prophylaxis with IPC also appears to be efficacious in this group*** and should be considered for patients who are at a high risk of bleeding. IPC prophylaxis should be started just before surgery, used continuously while the patient is not ambulating, and stopped just before hospital discharge. Formal strategies to optimize compliance with IPC by patients and nursing staff are essential. ... Combining mechanical prophylaxis with LDUH or LMWH therapy may enhance efficacy, although, to our knowledge, this has not been studied in gynecology patients. ... In a recent study of 1,862 patients who underwent gynecologic surgery and received IPC prophylaxis, the risk factors for symptomatic VTE included cancer surgery, previous DVT, and age > 60 years.

Recommendations: Gynecologic Surgery

2.3.1. For gynecologic surgery patients undergoing *brief procedures of < 30 min* for benign disease, we recommend against the use of specific prophylaxis other than early and persistent mobilization (Grade 1C).

2.3.2. For patients undergoing laparoscopic gynecologic procedures, in *whom additional VTE risk factors are present,* we recommend the use of thromboprophylaxis with one or more of the following: LDUH, LMWH, *IPC, or GCS* (all Grade 1C).

2.3.3. We recommend that thromboprophylaxis be used *in all major gynecologic surgery patients* (Grade 1A).

2.3.4. For patients undergoing major gynecologic surgery for benign disease, without additional risk factors, we recommend LDUH, 5,000 U bid (Grade 1A). Alternatives include once-daily prophylaxis with LMWH, 3,400 U/d (Grade 1C), or *IPC* started just before surgery and used continuously while the patient is not ambulating. (Grade 1B).

2.3.5. For patients undergoing extensive surgery for malignancy, and for *patients with additional VTE risk factors,* we recommend routine prophylaxis with LDUH, 5,000 U tid (Grade 1A), or higher doses of LMWH (ie, 3,400 U/d) [Grade 1A]. ***Alternative considerations include IPC alone continued until hospital discharge (Grade 1A)***, or a combination of LDUH or LMWH plus mechanical prophylaxis with GCS or IPC (all Grade 1C).

2.3.6. For patients undergoing major gynecologic procedures, we suggest that prophylaxis continue until discharge from the hospital (Grade 1C). For patients who are at particularly high risk, including those who have undergone cancer surgery and are > 60 years of age or have previously experienced VTE, we suggest continuing prophylaxis for 2 to 4 weeks after hospital discharge (Grade 2C).

It is undisputed Mrs. Ervin was undergoing major gynecological surgery (not minor general surgery) and had several of the risk factors identified in both of these articles as raising her risk for DVT or PE above low risk including oral contraceptive/estrogen therapy, obesity, gynecologic surgery longer than 30 minutes, and using the abdominal instead of the vaginal

approach to surgery. Having passed her 40th birthday, she was either within or near another risk factor, depending upon which publication's criteria are used. (T. 228-230; RE. 115-117) She clearly did not fall in the low risk category of patients by the criteria used in Table 2 of the ACOG guidelines or Table 5 of the Chest article. Thus, the sentence in the ACOG guidelines saying "[p]atients in the low risk category *(as defined in Table 2)* ... probably do not need any thromboprophylactic agent as long as they are quickly mobilized" is clearly inapplicable to Mrs. Ervin. (ACOG Practice Bulletin, Oct. 2000, at 883; R. 481e; RE. 26). Similarly, the sentences "[p]atients who are otherwise well and undergo brief procedures, typically defined as < 30 min, do not require any specific prophylaxis but should be encouraged to mobilize early after surgery" and "[i]n low-risk general surgery patients (Table 5) who are undergoing a minor procedure, are < 40 years of age, and have no additional risk factors, we recommend against the use of specific prophylaxis other than early and persistent mobilization" from the Chest article are clearly inapplicable to Mrs. Ervin.

She obviously falls into a category defined in Table 2 for which the ACOG guidelines say compression stockings, pneumatic compression or some pharmacological thomboprophylactic measures are required. *(Id* at 882-883; R. 481d-481e; RE. 25-26.) Thus, the ACOG guidelines clearly support Dr. Miller's classification of Mrs. Ervin as being in a category requiring compression stockings or pneumatic compression at a minimum. It does not support Dr. Beckman's classification of Mrs. Ervin being in a risk category low enough that no prophylaxis other than ambulation the next day was required. Dr. Beckman's testimony that the ACOG guidelines "clearly says if the patient is 40 or less, unless they have a major cancer or something, they're low risk" is directly contrary to these guidelines which expressly limits low risk patients not requiring any prophylaxis other than early ambulation to those listed as low risk in Table 2 which requires the surgery to last less than 30 minutes and the patient not to have any of the risk factors listed in that table. Janice Ervin's surgery lasted an hour and 25 minutes and she had two of the factors listed in Table 2 as increasing her risk: obesity and estrogen therapy. Even the

defense's own experts, Dr. Reddix and Dr. Rigdon, admitted that Mrs. Ervin was not low risk as defined in Table 2 of the ACOG guidelines and was in a risk classification for which the ACOG guidelines recommend the use of some prophylactic measures other than early ambulation – mechanical prophylactic measures at a minimum. (T. 523-524, 617-618; RE. 219-220, 239-240)

The Chest article does not support Dr. Beckman's classification of Mrs. Ervin's risk level either. It too supports Dr. Miller's testimony. Again, Mrs. Ervin clearly did not fall into the low risk category of patients by the criteria used in Table 5 of the Chest article as her surgery lasted longer than 30 minutes and was not minor or general surgery, she was not under age 40 and she had additional risk factors. Thus, the line in Table 5 and the sentence misquoted[11] by the Circuit Court for the proposition that Mrs. Ervin fell into a category for which no prophylactic treatment other than early ambulation was required do not apply to Mrs. Ervin. Instead, the material quoted above for gynecologic surgery patients applies to Mrs. Ervin. This material demonstrates gynecologic surgery patients are one of the certain groups in which mechanical prophylaxis have been shown to be effective and are an acceptable alternative to anticoagulant drugs. They also demonstrate that no prophylaxis therapy is not an acceptable choice for patients such as Mrs. Ervin. Like Dr. Miller's testimony, the gynecologic surgery section of the Chest article does not classify patients using the terms low, moderate, and high risk. Instead it breaks patients down into those needing no prophylactic treatment and those who do need such treatment stating which forms are recommended for each category. Mrs. Ervin clearly does not fit in the category for which no treatment other than early ambulation is recommended as her surgery was not under 30

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[11]The Circuit Court inserted a disjunctive "or" into the quote not present in the article. The articles says "in low risk general surgery patients (Table 5) who are undergoing a minor procedure, are less than 40 years of age and have no additional risk factors, we recommend against the use of specific prophylactics other than early and consistent mobilization" not ""in low risk general surgery patients (Table 5) who are undergoing a minor procedure, ***or*** are less than 40 years of age and have no additional risk factors, we recommend against the use of specific prophylactics other than early and consistent mobilization." All four criteria (general surgery, minor surgery, ages less than 40 and no additional risk factors) must be present for this sentence and recommendation to apply. (R. 510; RE. 38)

minutes, was major gynecological surgery with an abdominal approach, she had passed her 40th birthday and she had additional risk factors. Of the arguably applicable recommendations, most recommendations either specifically mention or use language broad enough to include graduated compression stockings (T.E.D. hose) and/or intermittent pneumatic compression devices (SCD).

Thus, contrary to the Circuit Court's finding, Dr. Miller's testimony is supported by the literature and Dr. Beckman's is not. (ACOG Practice Bulletin, Oct. 2000, at 882-883; Chest article at 346-349; R. 481d-481e, 510-513; T. 243; RE. 25-26, 30-43, 118) For all of these reasons, the Circuit Court's factual findings regarding the scientific evidence and the Ervins' failure to prove breaches of the standard of care by Dr. Beckman and Delta Regional Medical Center are clearly not supported by substantial credible evidence in the record. *Spann*, at ¶33-36 (reviewing record, comparing Circuit Court ruling based on a single medical expert's testimony to medical literature and other testimony in the record and finding Circuit Court ruling unsupported by substantial credible evidence where it did not follow medical literature.)

III. Trial By Ambush

The Mississippi Supreme Court has repeatedly held that trial by ambush and surprise is not permitted in our courts. See *Harris v. General Host Corp.*, 503 So. 2d 795, 796 (Miss. 1986); *State Highway Comm'n v. Jones*, 649 So. 2d 201 (Miss. 1995); *K-Mart Corp. v. Hardy by & Through Hardy*, 735 So. 2d 975 (Miss. 1999); *Kindred v. Columbus Country Club, Inc.*, 918 So. 2d 1281 (Miss. 2005); *Banks v. Hill*, 978 So. 2d at 665.

A. Errors Regarding Testimony of Natalie Fratesi Reed

A week before the trial started, Natalie Fratesi Reed and defense attorney Chris Winter filled out, and Reed signed, an errata sheet on Monday April 14, stating she made several mistakes in her deposition as Mrs. Ervin actually did receive oxygen during transport. Defense counsel mailed the errata sheet to the Ervins' counsel so late it could not reasonably be expected to arrive before trial. The first time the Ervins' counsel saw a copy of the errata sheet was midway through the testimony on the first day of trial giving neither the Ervins' counsel nor their

expert witnesses time to prepare for this abrupt change in testimony. As the Circuit Court noted, the Ervins' counsel objected repeatedly to this late change in testimony. (R. 586; RE 13)

Statements made by a nurse employed by the defendant hospital in a deposition are admissible as admissions by a party-opponent under M.R.E. 801(d)(2)(D) and M.R.C.P. 32(a)(1). *McMillan v. King* , 557 So. 2d 519 (Miss. 1990). Thus, the statements made by Nurse Natalie Reed in her deposition are admissible as admissions by DRMC.

M.R.C.P. 30(e) provides a means for a deponent to review her deposition and make corrections to it on the actual deposition provided the deponent has not waived her rights to review and signature. It also requires prompt notice of the changes, together with a statement of the reasons to all parties. Neither requirement was complied with in this case. It was stipulated at the beginning of Nurse Reed's deposition, on March 11, 2008 that her right to review and sign the deposition was waived. She executed an errata sheet on April 14, 2008 which did not state any reasons for the multiple changes she made to her deposition testimony. The errata sheet was not delivered to the Ervins' counsel until midway through the first day of testimony. Such actions do not comply with either the spirit or the letter of M.R.C.P. 30(e) or a defendants' continuing obligation to timely supplement discovery under M.R.C.P. 26(f)(2).

Federal Courts of Appeal in two circuits and district courts in at least two other circuits interpreting the federal counterpart to Mississippi's Rule 30(e) have held Rule 30(e) allowing a deponent to submit a deposition errata sheet

> cannot be interpreted to allow one to alter what was said under oath. If that were the case, one could merely answer the questions with no thought at all then return home and plan artful responses. Depositions differ from interrogatories in that regard. A deposition is not a take home examination.

Reynolds v. IBM, 320 F. Supp. 2d 1290, (MD Fla 2004) aff'd by *United States v. Vasquez-Estupinan*, 2004 U.S. App. LEXIS 28508 (11th Cir. Fla., Dec. 2, 2004) quoting *Garcia v. Pueblo Country Club*, 299 F.3d 1233, 1242 n.5 (10th Cir. 2002) quoting *Greenway v. Int'l Paper Co.*, 144 F.R.D. 322, 325 (W.D. La. 1992)); see also *Thorn v. Sundstrand Aerospace Corp.*, 207 F.3d 383, 389 (7th Cir. 2000). The Seventh Circuit has stated " "that a change of substance

which actually contradicts the transcript is impermissible unless it can plausibly be represented as the correction of an error in transcription, such as dropping a 'not.'" *Thorn*, 207 F.3d at 389. The Tenth Circuit has held it could "not condone counsel's allowing for material changes to deposition testimony and certainly do not approve of the use of such altered testimony that is controverted by the original testimony." *Burns v. Bd. of County Comm'rs,* 330 F.3d 1275, 1282 (10th Cir. 2003) (quoting *Garcia*, 299 F.3d at 1242 n.5). The Fifth Circuit has held that errata sheets are inadmissible unless there has been strict procedural compliance with the requirements of the rule permitting them. *Reed v. Hernandez*, No. 03-50934, 114 Fed. Appx. 609 (5th Cir. Oct. 8, 2004).

The federal law is consistent with what little applicable law exists in Mississippi. *Wilson v. State Farm Fire & Cas. Co.*, 761 So. 2d 913 (Miss. App 2000) held that summary judgment could be granted despite a deponent's submission of an errata sheet attempting to change his deposition testimony. Moreover, the Mississippi Supreme Court has repeatedly held that trial by ambush and surprise is not permitted in our courts. See *Harris*, supra, *Jones*, supra, *K-Mart*, supra, *Kindred*, supra.

Natalie Reed testified repeatedly in her deposition that Mrs. Ervin was not being given oxygen (O_2) to breathe while she was being transported from her room to ICU. This is an admission by DRMC that Mrs. Ervin did not receive oxygen while she was on the way to ICU. The Circuit judge found this ambush was harmless because he found the other evidence, specifically the remaining testimony and the respiratory therapy notes, ICU notes and Code Blue flow sheet (DRMC 60, 102, 103, and 125), clearly established that Mrs. Ervin was provided supplemental oxygen during transport from her 4th floor room to ICU.

DRMC 102 (Ex. D1 at 54; RE. 271) is the last page of records for what happened in Mrs. Ervin's 4th floor room before she was transported to ICU. Its only reference to oxygen is the rise in Mrs. Ervin's oxygen saturation rates from a very low 68% at 10:07 to a normal 97% at 10:25 when the nurses gave her oxygen at a rate of 10 liters per minute in her room. It is undisputed

that oxygen was from the wall unit which could not accompany her during transport. (T. 451-452; RE. 180-181) That record ends at 10:30 when a phone report was made to ICU. This is a full 15 minutes before arrival in ICU. It says nothing about when transport began or what occurred during transport. (Ex. D1 at 54-55; RE. 271-272)

The testimony of all the eye witnesses (Natalie Reed, Josh Edwards, and Curtis Ervin) establishes there was no ambu bag present or used on Mrs. Ervin between leaving her 4th floor room and approaching ICU on the 2nd floor. (T. 76-77, 411, 440-441, 461-462; RE. 55-56, 155, 172-173, 190-191) DRMC 60 (Ex. D1 at 12; RE. 255) is the cardiopulmonary resuscitation record or Code Blue flow sheet. It starts at 10:48, a full three minutes after Mrs. Ervin's arrival in ICU. (Ex. D1 at 12, 55; RE. 255, 272) It says the initial respiratory response to the Code being called was ventilation by ambubag which was begun at 10:46 which is after her arrival in ICU. (Ex. D1 at 12; RE. 255) It does not establish anything about what happened between leaving her room and getting to ICU.

DRMC 103 (Ex. D1 at 55; RE. 272) is the first page of the ICU nurses narrative. The first entry is timed at 10:45. This note covers what occurred between 10:45 and 10:50 as it notes Dr. Beckham was at the ICU bedside and he testified that he did not arrive until after the Code Blue team which arrived at 10:48. (Ex. D1 at 12-13; RE 255-256) The 10:45 narrative note's only reference to breathing says "Ambu assisted resp[irations at] 100% per R[espiratory] T[herapist]." As already pointed out, it is undisputed there was no Ambu bag being used on Mrs. Ervin from the time she left her 4th floor room until after she exited the elevator on the 2nd floor and neared the ICU door. (T. 411, 440-441, 461-462; RE. 155, 172-173, 190-191)

The final record relied upon by the Circuit Court is DRMC 125 (Ex. D1 at 77; RE. 276). These are the ICU respiratory therapist notes. The first entry initially timed at 10:55 and later written over as 10:45 states "Rec[eived] Pt. [patient] on 100% NRB." At most, if NRB means "non-rebreather mask" as testified to by one nurse expert, this record would establish that when Mrs. Evan's went through the doors of ICU on the 2nd floor, she had on a non-rebreather oxygen

mask. It does not establish that she was receiving oxygen through that mask during the entire transport from her 4th floor room to ICU.

Josh Edward's testimony, relied on by the Circuit Court to find a preponderance of the evidence supported the use of oxygen during transport, is not based on specific memory of Mrs. Ervin at that time but rather on what should have been done for a patient in Mrs. Ervin's condition. Assuming it was done because it should have been done doesn't establish the lack of a breach of the standard of care. He doesn't remember who got the oxygen, where it came from, or who, when or where it was put on Mrs. Ervin. He speculates as to several possible sources. He doesn't remember where it was put on the bed. What he speculates conflicts with Reed's trial version of the testimony of oxygen being there. She said Josh got it from a crash cart. He said he didn't get it and doesn't remember who did. A crash cart is not among his possible sources when he speculates as to where portable oxygen might have come from. (T. 451-452)[12] On the

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[12]A. Did I bring the oxygen with me?
Q. Yeah
A. No. We had oxygen via hospital system at the bedside. ...
Q. Now, when ya'll began the transfer, did you have oxygen?
A. Yes. [next answer shows he is referring to the wall oxygen in the room]
Q. Where was the oxygen?
A. Well, the patient was in the room - -
Q. Right.
A. - - the oxygen coming out of the wall.
Q. Right
A. And in certain areas of the hospital, we have portable oxygen bottles. [explaining what's available, not what he remembers seeing with Mrs. Ervin.]
Q. Right
A. *I don't remember* if there was one on the OB floor or not, but I do remember *we can't, you know, move her off this wall oxygen until we have a portable oxygen bottle.* [Stating what should have occurred, not what he specifically remembers.] So, we rapidly went to *an area* where that had one, which *I don't remember* if it was the OB floor or the respiratory department. It was on the fourth floor. Matter of fact, the next corridor down where a large supply of portable O2 things are. So, we got in a very reasonable amount of time for the patient.
Q. All right, so what you're saying is ya'll waited - - you say we. Who went and got the oxygen?
A. I don't recall. ...
Q. Okay. Now this bed - this bed didn't have a rack for oxygen right?
A. Right.
Q. Okay, Now, when you started transferring her, where did you put that portable?
A. *Usually*, we place the O2 bottle between the patient's legs or beside the leg.
(T. 451-452, 455-456)

other hand, Reed's deposition testimony supports Curtis Ervin's testimony that there was no oxygen during transport which the Circuit Court found not to be credible solely because Mr. Ervin hadn't slept in more than 24 hours and was under emotional strain.

In such circumstances, this change in testimony was not harmless. It was trial by ambush.

B. Acceptance of Josh Edward's As an Expert and Reliance on His Expert Testimony

A Scheduling Order was entered on December 6, 2005 which set a deadline of February 3, 2006 for designating defense experts. This deadline was later extended to December 14, 2007. (R. 49; 202) On January 24, 2006 and December 13, 2007, DRMC designated its expert witnesses. Josh Edwards was not designated as an expert and no expert opinions for him were disclosed. (R. 129, 333; T. 470; RE. 18)

At trial, the Ervins called Josh Edwards as an adverse fact witness and questioned him about what happened with Janice Ervin on the morning of October 16, 2004. (T. 443, 469; RE. 174, 17) At the end of the Ervins' direct examination, DRMC's counsel asked Edwards about his education and experience and then tendered him as an expert in nursing. The Ervins' counsel objected as Edwards had not been designated as an expert and his opinions had not been disclosed. The Circuit Court took the ruling under advisement and allowed the testimony to be presented. (T. 466-477; RE. 192-193) DRMC's counsel then proceeded with his cross examination, asking Edwards nothing about the matters covered on direct. Instead, the entire cross examination was devoted to asking Edwards to give expert opinions concerning DRMC's nursing policies on the use of TED hose or SCD devices to prevent DVT; whether nurses have a duty to bring to a physician's attention the lack of an order for use of such measures with a patient who has risk factors listed in the policy; whether nurses have a duty to report up their chain of command if a physician declines to enter an order for prophylactic measures for a patient with risk factors for DVT; and whether the DRMC nurses complied with the standard of care in their care of Mrs. Ervin. (T. 472-477; RE. 195-201)

Edwards testified nurses have no duty to bring a patient's risk factors or hospital nursing policies to a physician's attention when the physician does not order preventive measures to reduce DVT risk. He also said they have no duty to report the lack of an order for preventive measures up their chain of command. The Circuit Court relied on this expert testimony in reaching its decisions that DRMC's nurses were not negligent. (T. 472-477; R. 579, 581, 586; RE. 6, 8, 13,195-201)

The issue of nurses assessing patients for DVT risk factors, their duties in the absence of a physician's order for DVT preventive measures for a patient with risk factors, their duty to bring such matter to a physician's attention, their duty to report up the chain of command when a physician refuses to order such measures, and the role of nurses in the development of hospital policies for standing orders for such measures without the need for specific physician orders was discussed at some length in the deposition of the Ervins' nurse expert Deborah Woodward on August 16, 2007. (DSR Ex. 11 at deposition pages 77-80, 84-87; RE. 290-293) This was four months prior to DRMC's December 14, 2007 deadline for designating experts and eight months before trial.

In *Banks v. Hill*, the Mississippi Supreme Court ruled that a party who has had a fair opportunity to obtain experts to counter the expected testimony of the other side's experts and to timely disclose their opinions, but fails to do so cannot be allowed to subvert the rule by offering the expert opinions as rebuttal to something offered by the other side.

> [I]t would be inherently unfair and a violation of our rules of civil procedure for [a party - who] has ignored the rules and violated the discovery deadlines - to appear at trial with experts whose opinions have not been properly disclosed to the [other party], and to call these experts to "rebut" evidence offered in the [other party's] case-in-chief.
>
> This Court must reject such ambush tactics, just as it has in the past. In *Harris v. General Host Corporation*, 503 So. 2d 795 (Miss. 1986), the defendant failed to disclose its expert witness in discovery. The *Harris* defendant argued (as Hill argues in the case sub judice) that failure to disclose the expert was not fatal, since the expert was to be called only as a rebuttal witness. The trial court in *Harris* "allowed the expert, who was a physician, to be called as a witness, apparently on the theory that the physician was a 'rebuttal witness.'" Id. In rejecting the "rebuttal" argument and reversing the trial court, the *Harris* Court stated:

> [The defendant]'s claim that [the expert] was a rebuttal witness profits it nothing. There is nothing in our rules of procedures that authorizes a party to withhold the names of likely expert witnesses on such grounds, except only for the circumstance where the party had no reasonable means of anticipating in advance of trial the need for calling the witness. . . .
>
> In any event, [the defendant]'s argument proves too much. If the testimony of [the expert] is rebuttal testimony because it is given in answer to some of the testimony offered as a part of the Plaintiff's case in chief, all evidence of a defendant must be treated as rebuttal. If we accept [the defendant]'s theory, there would be no basis on principle for ever requiring a defendant to disclose in advance the evidence it would offer at trial, for all such defense evidence in this sense is rebuttal.

Id. at 797.

978 So. 2d at 666. It is an abuse of discretion for a trial court to permit undisclosed expert testimony to rebut testimony from the other side which was disclosed in discovery or could have been reasonably anticipated based on discovery. *Id.* Accordingly, the Circuit Court erred in admitting any expert testimony by Josh Edwards and in relying on such expert testimony. *Id.*

VI. The Circuit Court Erroneously Failed to Apply Mississippi Law on a Hospital's Duty to Take Reasonable Measures to Reduce Known Serious Risks and Unnecessary Exposure of a Patient to Unnecessary Risks

This is a Tort Claims Act medical malpractice case. DRMC is a community hospital entitled to the protections of the Tort Claims Act but also subject to its waivers of immunity. DRMC is liable for any negligence of its nurses and other employees. Dr. Beckham is an employee of DRMC. Thus, DRMC would also be liable for any negligence of Dr. Beckham. See Miss. Code 11-46-5; *Wright v. Quesnel*, 876 So. 2d 362 (Miss. 2004);*Univ. of Miss. Med. Ctr. v. Pounders*, 970 So. 2d 141, ¶ 29 (Miss. 2007)

Under Mississippi law, a hospital owes its patients a duty to exercise reasonable care. This duty requires a hospital to exercise such reasonable care and attention for its patient's safety as the patient's mental and physical condition, if known or should be known, may require. *McMillan v. King*, 557 So. 2d 519 (Miss.1990). A hospital and its employees must take reasonable care to prevent foreseeable injuries to foreseeable plaintiffs. *Clark v. St. Dominic-Jackson Memorial Hosp.*, 660 So. 2d 970 (Miss. 1995) (recently cited with approval in

Univ. of Miss. Med. Ctr. v. Pounders, 970 So. 2d 141 (Miss. 2007))

All the experts and Dr. Beckham agree DVT is a known risk of abdominal surgery such as abdominal hysterectomy. They also agree DVT is a primary cause of pulmonary embolism which is a major cause of death following surgery. Thus, DRMC was "on notice that people might die as a result of the procedure [an abdominal hysterectomy]" *Clark*, 660 So. 2d at 972

Dr. Miller stated in all his years of practice as a gynecologist doing abdominal surgery, which exceeds 40 years and includes more than 10 years of teaching gynecological surgery to medical residents, it has been his experience that the seriousness of the injury that may result from DVT followed by pulmonary embolism, i.e. death, is so great that the standard of care requires the use of preventative measures in the form of using compression devices during and after surgery to reduce the risk of DVT and/or pulmonary embolism for all patients with any risk factors for developing DVT in connection with abdominal gynecological surgery. As the number of risk factors, including obesity and recent use of hormone therapy, such as birth control pills, increase, the risk of death rises and the failure to use such devices is an even greater breach of the standard of care.

DRMC, Dr. Beckham and the defense experts argue Dr. Beckham and DRMC complied with the standard of care even though no compression mechanisms were placed on Mrs. Ervin's legs during or after surgery because Dr. Beckham did not believe she was a high risk patient and it was his custom not to use TED hose or SCD unless the patient falls within a very high risk category. Dr. Beckham and DRMC have not argued that TED hose and sequential compression devices were not available[13] to be placed on Mrs. Ervin just before surgery started and to be used for at least a day after surgery. Instead they argue the standard of care does not require prophylactic measures for low risk surgical patients and that TED hose and SCD are not

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[13]Nurse Reed testified that both TED hose and SCD were available in the hospital. She also testified that while Dr. Beckman rarely used them, Dr. Jackson, the only other surgeon doing such surgery at DRMC, always used TED hose or SCD when doing gynecological abdominal surgery. (See Ex. P16 at pp. 221-222; RE. 249-250)

customarily used for low risk patients like Mrs. Ervin.

DRMC's analysis is flawed because the very literature they relied upon demonstrates some measures are required even for patients under age 40 with abdominal gynecologic surgery lasting as long as Mrs. Ervin's surgery lasted, and more is required for patients with additional risk factors. Given the risk factors DRMC's witnesses admitted Mrs. Ervin had, she clearly did not fall in the category of patients that would be classified as being low risk enough not to require any prophylactic measures by the articles DRMC relied upon. (Chest article - risk stratification; ACOG guidelines) Since DRMC's experts did not testify as to the standard of care when operating on a patient with moderate to high risk, they have not rebutted the testimony of the Ervins' expert whose testimony in full context shows it was his opinion that Janice Ervin had risk factors placing her in category with sufficiently high risks to require prophylactic measure whether that category is labeled moderate risk, high risk or higher than low risk.

As was pointed out in *Clark* at 972-973, a hospital or physician cannot shirk liability for failing to take measures to reduce a known risk by relying on the fact that a substantial part of a profession customarily does not take measures to reduce a known reducible or avoidable risk.

> St. Dominic contends that only when a patient is classified as high risk should an operating room be kept on standby during a catheterization. Furthermore, the hospital argues -- and plaintiff's experts seem to agree -- that unless the attending physician notifies the hospital that a patient is high risk, there is no duty to reserve an operating room, and that because it followed the customary practice of hospitals throughout the nation, it cannot be found liable. However, in *George B. Gilmore Co. v. Garrett*, we noted:
>
> > Indeed in most cases reasonable prudence is in fact common prudence; but strictly it is never its measure; a whole calling may have unduly lagged in the adoption of new and available devices. It never may set its own tests, however persuasive be its usages. Courts must in the end say what is required; there are precautions so imperative that even their universal disregard will not excuse their omission.
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> 582 So. 2d 387, 394 (Miss. 1991) (quoting The T.J. Hooper, 60 F.2d 737, 740 (2d Cir. 1932)). In the field of medicine, the Court has held:
>
> > Conformity with established medical custom practiced by minimally competent [hospitals] . . . while evidence of performance of the duty of care, may never be conclusive of such compliance. The content of the duty of care must be objectively determined by reference to the availability of medical and practical knowledge which would be brought to bear in the treatment of like or similar patients under like or similar circumstances . . . given the facilities, resources and options available. The content of the

> duty of care may be informed by . . . medical custom but never subsumed by it.
>
> *Hall v. Hilbun*, 466 So. 2d 856, 872 (Miss. 1985) (citations omitted). The same is true of the instant case. Testimony from several employees indicated that the hospital was aware that catheterizations could be life threatening before the Judge Clark episode. Several patients had in fact died during catheterizations before. Despite this, the hospital continued to operate under its previous policy. Given that notice, it would not be unreasonable to conclude that the hospital failed to exercise reasonable care.
>
> In assessing reasonable conduct, there is a vast difference between taking a chance when unavoidable and when avoidable. Taking a 1% chance when necessary might be exemplary, but taking the same chance when unnecessary might be negligence.
>
> The hospital was on notice that (1) upon occasion the operating room would be needed because of an emergency arising during a catheterization procedure, and (2) when such a need did arise, it would be critically important to the life of the patient. Why else would the American College of Cardiology have recommended that such procedures only be performed at hospitals that have cardiac surgery capability?
>
> Under such circumstances the hospital was under a duty to show, at least more than is shown in this record, why no operating room was kept available as a matter of course during catheterization procedures. If patients are undergoing procedures in one part of a hospital that can be life threatening, and there are known methods by which physicians can meet such emergencies which are available in another part of the hospital, the question naturally arises, why should hospital regulations permit any life threatening procedure without also having safeguards in place? St. Dominic favors us with no such explanation.

The medical literature relied upon by DRMC and its witnesses establishes TED hose and SCD devices are effective when used correctly. While some of DRMC's experts claimed TED hose and SCD do not work, they all admitted they presently use them. The literature relied on by DRMC's experts also establishes TED hose and/or SCD have a far greater than 1% chance of preventing the serious consequences of DVT and pulmonary embolism following gynecological abdominal surgery. Given the totality of the circumstances, particularly the likelihood of the most serious injury of death, not implementing compression devices during and immediately after surgery was the unnecessary taking of a significant avoidable risk which was not reasonable under the circumstances regardless of how many doctors at DRMC and elsewhere have preformed this surgery without using TED hose or SCD.

Furthermore, all the doctors who testified stated that it would have been a breach of the standard of care to transport a patient in Mrs. Ervin's condition to ICU without portable oxygen.

While there is disagreement as to where portable oxygen could have come from, it is undisputed that portable oxygen was available in the hospital. Transporting Mrs. Ervin without portable oxygen when it was available and she had just responded to the use of oxygen in her room unnecessarily exposed her to increased risk of oxygen deprivation resulting in death during the transport from her room to ICU. She succumbed to that same unnecessary risk of oxygen deprivation after her resuscitation in ICU.

Thus, the situation in this case is analogous to that referred to in *Clark.* The hospital and its employees had available means of implementing preventative measures to substantially reduce the risk associated with the surgery which resulted in Mrs. Ervin's death and unreasonably chose to subject Mrs. Ervin to unnecessary risks by not using them. *Clark* has been cited and followed recently by the Mississippi Supreme Court in *Univ. of Miss. Med. Ctr. v. Pounders*, 970 So. 2d 141 (Miss. 2007) for the principle that where a patient is at risk for a particular type of complication, the hospital must take reasonable precautions to reduce or eliminate the risk, if possible. Failure to avoid the avoidable risk constitutes actionable negligence.

Based on the above evidence and analysis, the Ervins offered sufficient proof that DRMC and its employees breached their duty to exercise such reasonable care and attention for Mrs. Ervin's safety as her mental and physical condition required. DRMC and its employees failed to take reasonable care to prevent foreseeable injuries to Mrs. Ervin by failing to use readily available means to reduce avoidable know risks of the procedure being conducted on her and by transporting her to ICU without oxygen. Although this law requiring hospitals to take reasonable measures to reduce known risks was brought to the Circuit Court's attention, the Circuit Court erred in refusing to apply it to this case.

VII. The Circuit Court's Findings Regard Causation Are Not Supported by Substantial Credible Evidence in the Record and Raised the Ervins' Burden Above Preponderance of the Evidence to a Scientific Certainty Level of Proof.

The Circuit Court found the Ervins failed to prove proximate causation because they failed to definitively prove the clot forming the pulmonary embolism that killed Janice Ervin

originated in her legs and not in her pelvis, saying:

> Plaintiff's expert, Dr. Harold Miller, could not say definitely where Ervin's pulmonary embolus originated; it could have been either in the legs or in the pelvis. The Court finds that this was an essential element in the Plaintiff's causation proof and this proof is missing. Defendants' experts opined and supported their opinions that the pulmonary embolus originated in the pelvis.

These findings are not supported by substantial credible evidence in the record.

Dr. Miller clearly and definitively stated his opinion that Ervin's fatal pulmonary embolism originated from a DVT in the leg. He was never asked if it could have originated in the pelvis. He did not say it could have originated in her pelvis.[14] T. 105, 129-131, 135, 176, 185,

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[14]A. The deviation I found was the lack of utilizing anti-prophylaxis measures. ... It is the lack of not using measures to attempt to prevent blood clots forming in the lower extremities that could get loose and travel to the lungs and block major blood vessels subsequently ending up in the lack of an oxygen supply, which is critical to the life of a patient.
Q. All right, in your opinion, based upon reasonable medical probability, did Dr. Beckham's failure to use these – what did you call it? – Anti-thrombosis embolic procedures, did that in any way cause or contribute to her death?
A. In my opinion, they did. ... The fact that they were not used did not decrease or diminish the risk of formation and ultimately freeing of the blood clot, which traveled to her lungs and created problems that I mentioned resulted in her death. (T. 105) ...
A. Uh – the hoses are graduated pressures that start at the toes, and they compress the calf and the thigh so that you do not get pooling of the blood - or diminish the pooling of the blood. ... [W]hen you get pooling of the blood, it can increase the formation of blood clots ... .
Q. All right, what is a DVT?
A. That's a deep vein thrombosis, and that is specifically located in the site where the thrombus occurred.
Q. All right, would these hoses in any way prevent DVT or deep vein thrombosis, and if so, how?
A. Well, it would diminish the risk, because there is compression on the leg which is then transmitted to the blood vessels so that blood does not pool or collect, and it becomes stagnant. It's compressing the vessels, so you get better circulation ... .
Q. ... how do they come from clots to pulmonary embolism? ...
A. The clots break off in the origin of the legs. They travel up through major blood vessels into the heart, and the heart pushes them out into the lungs, which blocks off terminal areas of the lung, which is there to support oxygen exchange. ... (T. 129-131) ...
Q. ... in your opinion, based on a reasonable medical probability, and considering all the factors, the risk factors, in your opinion, did this failure to put the SCDs on Mrs. Ervin in any way cause or contribute to the death of Janice Ervin and explain?
A. I feel like it contributed because there was a major prophylaxis to try to prevent this event from taking place. It was not utilized. ... The opinion is based upon fifty four years of practicing medicine, my training, my experience, reading literature, attending meetings, talking to colleagues ... and standard of care in the community. (T. 176-177)
Q. Now, can you cite me any literature which finds affirmatively, where trials has been run and anyone has concluded that Ace bandages, TED hose, or SCDs affirmatively prevent the development of deep vein thrombosis?

191-192. It was the defense experts who could not definitively say where the clot originated.

A careful reading of Dr. Miller's testimony demonstrates he never used any form of the word pelvis in regard to where Janice Ervin's pulmonary embolism originated and he never equivocated about the clot originating in her leg. Nothing in his testimony supports the Circuit Court's finding that "Dr. Harold Miller, could not say definitely where Ervin's pulmonary embolus originated; it could have been either in the legs or in the pelvis." (T. 100-201; R. 587) The only language in the transcript supporting the claim Dr. Miller equivocated as to the source of the Mrs. Ervin's pulmonary embolism comes from defense counsel in his closing arguments.

> Dr. Miller totally ignored all the evidence and did not at any time attempt to challenge the evidence that the Plaintiff himself identified in Rule 802.18, Disclosures, filed by the Plaintiffs in this case, that the most prevalent source of GYN surgery of a pulmonary embolus is a emboli coming from the pelvis. Dr. Miller's opinion cannot – not supplement, surpass, or in any way overcome the overwhelming weight of the evidence in this case that in GYN surgery, the high probability is that a pulmonary embolus would have come from the pelvis.

(T. 647-648)

The defense experts admit DVT is a major cause of pulmonary embolism. They also admit mechanical compression devices (GCS, TED, IPC or SCD) are effective in helping to prevent DVT. (T. 494-495; RE. 205-206)

A. It's the current opinion of ACOG. American College of OB-GYN has come out with a statement that says, this is the standard of care. And obviously, I can't quote you articles. I did not bring articles. But, obviously, that research, that data, has been collected; otherwise, that would not be a statement of the American College of OB-GYN. (T. 185)
Q. ... as I understood it, you believe that she had deep vein thrombosis. A blood clot formed in her leg and traveled up stream to her heart and lungs?
A. That's my belief.
Q. Yes, sir, that's your opinion. So, your opinion necessarily is that there was – as I understand it and appreciate it – there was a significant blood clot in her leg that traveled up stream, and that's what caused this?
A. Yes.
Q. So we have a large blood clot that went up stream, deep vein thrombosis, and that's what caused this pulmonary emobolus to occur?
A. Yes. ...
Q. One final question, Doctor. The opinion that you have just given is based on your forty years of experience in the field of obstetrics and gynecology?
A. That's part of the that ground. As I mentioned earlier, it has to do with educational courses, continued medical education, conferences, taking care of patients, policies and procedures, based on bulletins, and discussion with colleagues. ... and whole gamic [sic]. (T. 191-192)

Dr. Carl Reddix, who has only been a gynecologist for nine years, admits he has no knowledge of pulmonary matters[15], and has never had a patient who developed a DVT. He testified he thinks the pulmonary embolism causing Mrs. Ervin's death originated in her pelvis rather than her legs simply because the site of her surgery was the abdomen. He admitted his opinion was based solely on conjecture. (T. 502; RE. 207) However, he reasons from his opinion the clot originated in the pelvis that a failure by Dr. Beckham to use mechanical anti-thrombosis prophylactic treatments could not have caused Mrs. Ervin's death because such devices only prevent the formation of blood clots in the legs. (T. 503, 507-508, 522; RE. 208, 211-212, 218)

Dr. Reddix readily admits scientific evidence clearly shows most blood clots form in the leg, especially the lower leg. He acknowledges the American College of Gynecologists has stated venous thrombus embolism is the leading cause of death among hospitalized patients causing over 60,000 deaths a year. He also acknowledges the most likely and most common place for venous thrombus embolism to develop is the lower leg. Nevertheless, he clings to his opinion that more fatal pulmonary embolisms originate in the pelvis rather than the veins of the leg. However, he admits there is no sign in Mrs. Ervin's autopsy of clots in her pelvis and that there is nothing about her autopsy that would allow him to say where this particular clot originated. He claimed there should be literature showing a high probability that clots causing pulmonary embolism develop near the site of the surgery, but could not cite anything supporting that claim which could be verified. (T. 504-505, 507, 520-521; RE. 209-211, 216-217) Moreover, when Dr. Reddix identified the veins by name which are most likely to be where the clots that become fatal pulmonary emboli form, he named the femoral and iliac veins which the scientific literature in the record says are in the leg. (T. 503; R. 492; RE. 29 - Dino W. Ramzi and Kenneth V. Leeper, *DVT and Pulmonary Embolism: Part I. Diagnosis*, 69#12 American

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[15]Dr. Reddix would not even express an opinion as to whether Mrs. Ervin needed oxygen after she was in distress stating he had no expertise in pulmonary or respiratory matters because "[a]ll of my knowledge is below the pelvis." (T. 525-527; RE. 221-223) Thus, he clearly does not have the expertise to testify as to what was or was not the probable source of a pulmonary embolism.

Family Physician 2829-2836 (June 14, 2004)) Furthermore, Dr. Reddix acknowledged the hospitals where he does surgery apparently think sequential compression devices are beneficial for all hysterectomy and C-section patients because they routinely put them on his patients in the recovery room after all such surgeries. (T. 510-511; RE. 213-214)

The second defense expert was Dr. Rigdon, a vascular surgeon. He testified the three primary causes of clots are chemical factors in the blood, reduced or low blood flow (stasis), and abnormalities in the inner wall of a vein which can be caused by trauma. (T. 589; 229) He believed it most likely Janice Ervin died as a result of a clot large enough to block the arteries to both lungs getting stuck at the junction of these arteries where it could block blood flow to both lungs. (T. 629-630; RE. 243-244) Dr. Rigdon is not a gynecologist and has no experience in performing hysterectomies. (T. 581, 592-593; RE. 228, 230-231) Nevertheless, he gave opinions as to Mrs. Ervin's risk factors and level of risk for developing pulmonary embolism and what prophylactic measures were indicated for her in connection with having a hysterectomy. He claimed compression stockings and sequential compression devices would not have prevented Mrs. Ervin's death because he believed the clot causing her death originated in her pelvis. He claimed Mrs. Ervin's pulmonary embolism developed in her pelvic area and not in her legs based on an assumption the majority of pulmonary emboli in gynecological surgery patients develop in the pelvis. The only literature mentioned in his testimony to support this theory was one sentence in a small section in a gynecology textbook (outside his own field) which he said states the majority of pulmonary emboli in gynecological patients originate in the pelvis. He acknowledged that the femoral veins of the legs are also a common source of clots causing pulmonary embolism but he claimed, without citing any authority, in gynecologic surgery patients, particularly hysterectomy patients, the leg is a less frequent source of pulmonary emboli. (T. 593-594, 596-598; RE. 231-235)

The sentence from the gynecology textbook Dr. Rigdon cited is quoted in the Circuit Court's opinion as saying "(M)ost pulmonary emboli in gynecologic patients originate from

thrombi in the pelvic and *femoral* veins." (R. 583; RE. 10) As both Dr. Rigdon's testimony and the scientific literature in the record establish, the femoral vein is in the leg. Furthermore, the sentence quoted by the Circuit Court demonstrates that the gynecology text relied on by Dr. Rigdon does not establish that the femoral vein of the leg is a less frequent source of pulmonary emboli than the pelvis. Moreover, contrary to defense counsel closing argument, the literature in the record does not say there is a high probability that with gynecologic surgery a pulmonary embolism will originate from the pelvis rather than the leg. On the source of blood clots and pulmonary emboli, these sources say:

> • These vein blood clots most commonly occur in the inner (deep) veins of the leg or pelvis (deep vein thrombosis). Because veins are carrying blood back to the heart from where it is pumped to the lungs, a deep vein thrombosis may dislodge *from the leg veins*, travel with the flowing blood back to the heart, and subsequently lodge in an artery to the lungs (as in pulmonary embolism.) John A. Heit, MD, *Prevention of Deep Venous Thrombosis*, The Vein Handbook: Chapter 10 (R. 447; RE. 21)
> • Most clinically important PEs originate from proximal DVT of the leg (popliteal, femoral, or iliac veins)." Dino W. Ramzi and Kenneth V. Leeper, *DVT and Pulmonary Embolism: Part I. Diagnosis*, 69#12 American Family Physician 2829-2836 (June 14, 2004) (R. 492; RE. 29) citing Moser KM, LeMoine JR. Is embolic risk conditioned by location of `deep venous thrombosis? Ann Intern Med 1981;94(4 pt 1):439-44.

Thus, contrary to defense counsel's closing argument, there is no evidence in the record that Dr. Miller ignored any scientific evidence concerning the probable location where the clot originated which became the pulmonary embolism that killed Mrs. Ervin. Contrary to the Circuit Court's findings, the defense experts were the ones who were uncertain of the source of the clot and there was no scientific evidence presented to back up their conjecture that the clot originated in the pelvis and not the leg.

Mississippi law does not require a plaintiff to prove through expert testimony that a defendant's negligence conclusively caused the decedent's death. It does not require plaintiffs to conclusively prove the decedent would have survived in the absence of a defendant's negligence. A plaintiff satisfies his burden of proof when expert testimony is offered establishing the defendant's negligence probably contributed to the deceased's death. The Ervins offered

sufficient proof of causation through the testimony of Dr. Miller and the admissions of all the doctors who testified that Janice Ervin died as a result of oxygen deprivation to her brain caused by a blood clot which blocked her lungs. Dr. Miller's testimony and the other evidence is also sufficient to support the conclusion that the failure to use available devices for reducing the risk of fatal clots following surgery contributed to her death from such a clot. There was also sufficient proof to establish a causal connection between the lack of oxygen during transport to ICU and length of time her brain went without oxygen which also contributed to her death. See *Mariner Health Care, Inc. v. Estate of Edwards*, 964 So. 2d 1138, ¶¶ 8-11 (Miss. 2007); *Spotlite Skating Rink, Inc. v. Barnes*, NO. 2006-CA-00289-SCT, 988 So.2d 364, ¶¶ 7, 13-16 (Miss 2008).

The scientific literature relied upon by the Circuit Court in its opinion demonstrates that Dr. Miller's testimony on causation rose above the level of speculation including his testimony that in his opinion the pulmonary embolism originated from a clot in her leg. For example, the Chest article at p. 340 (R. 504; RE. 32) states:

> A vast number of randomized clinical trials over the past 30 years provide irrefutable evidence that primary thromboprophylaxis reduces DVT, PE, and fatal PE. PE is the most common preventable cause of hospital death and is the number one strategy to improve patient safety in hospitals. The Agency for Healthcare Research and Quality has published a report entitled "Making Health Care Safer: a Critical Analysis of Patient Safety Practices." ... The highest ranked safety practice was the "appropriate use of prophylaxis to prevent VTE in patients at risk." This recommendation was based on overwhelming evidence that thromboprophylaxis reduces adverse patient outcomes while, at the same time, decreasing overall costs.

The ACOG guidelines state "*Fatal pulmonary embolism is a common preventable cause of death in hospitalized patients.*" (ACOG Practice Bulletin, Oct. 2000, at 879 (emphasis in the original); T. 309; R. 481a; RE. 22.) It clearly takes Dr. Miller's causation testimony out of the realm of the speculative and into the realm of the probable and is sufficient to satisfy legal causation.

Neither article says anything about clots causing pulmonary embolism originating more frequently in the pelvis than the legs. Statistically, the vast majority (up to 95%) of pulmonary emboli develop from clots in the deep veins of the legs. See *Robinson v. Lewis*, 20 Md. App. 710, 715-716, 317 A.2d 854 (1974) (up to 95% from the legs); *Allen v. State*, 566 N.E.2d 1047,

1051 (Ind. App. 1991) (up to 90% from the legs)

Definitively establishing that the pulmonary embolism which killed Janice Ervin originated in her leg and did not originate from her pelvis was clearly not an essential element of the Ervins' case. In *Franklin Corp. v. Tedford*, NO. 2007-CA-01454-SCT, 2009 Miss. LEXIS 169 (April 16, 2009), our Supreme Court found that a plaintiff need not prove the amount of a harmful chemical which was harmful to humans or the amount of the chemical the plaintiffs were exposed to in order to establish the chemical proximately caused their injuries.

> As the circuit judge stated, "this is a field with limited reliable methodology . . . ." Furthermore, ... determining the exact lower level of 1-BP exposure which causes neurologic injury in humans is challenging given appropriate, ethical constraints. At best, nondefinitive determinations have been rendered via relevant case reports, MSDSs, and organizational recommendations. This Court finds such sources to be sufficient. "[I]t would be unreasonable to conclude that the subject of scientific testimony must be 'known' to a certainty." *Daubert*, 509 U.S. at 590. ... Similarly, this Court finds that the absence of data on the exact exposure level at which humans suffer neurologic injury ought not preclude the Plaintiffs' experts from testifying, when combined with Franklin Corporation stipulation that 1-BP is a neurotoxin which can cause neurologic injury to humans and the testimony of its expert, Dr. George Wilkerson, that exposure to 1-BP caused the neurologic injuries suffered by Plaintiffs Tedford and Haire (despite not knowing the exact level at which 1-BP causes injury in humans).

Id at ¶ 42. Similar reasoning applies to whether it is necessary to definitively establish where the clot that became the pulmonary embolism that killed Mrs. Ervin originated.

VIII. Cumulative Error

Even where individual errors are not enough to warrant reversal alone, when the cumulative effect of all the errors effectively deprives a party of a fair trial, reversal and a new trial is warranted. *Blake v. Clein*, 903 So. 2d 710, ¶ 68 (Miss. 2005); see also *E.I. DuPont de Nemours & Co. v. Strong*, 968 So. 2d 410 (Miss. 2007). The cumulative effect of the errors in this case allowed DRMC to be tried not on the actual evidence in this case but upon mischaracterizations of the evidence and the science exacerbated by trial by ambush tactics depriving the Ervins of a fair trial.

CONCLUSION

Fatal pulmonary embolism is the most common preventable cause of death in

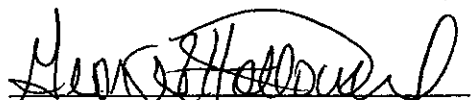
hospitalized patients. A large number of randomized clinical trials over several decades has provided irrefutable evidence that the preventive measures used over those decades are effective in reducing deep vein thrombosis, pulmonary embolism and fatalities from pulmonary embolism. Yet the nature of the beast (a silent killer with few overt symptoms prior to a PE blocking a vessel in the lung) and customary practices following death in American hospitals (rarity of autopsies) is such that the cause of many of these preventable deaths passes unnoticed by many physicians. Thus, physicians who rely on informal impressions of effectiveness or ineffectiveness based on their clinical practices, their own personal experience, the rare diagnosis of fatal PE by autopsy in their own hospitals, or customs for not using prophylactic measures to prevent DVT can be lulled into a false sense that such measures are unnecessary. By not applying guidelines of numerous consensus groups, based on scientific evidence from numerous studies, calling for wider uses of such preventive measures, such physicians are exposing their surgical patients to unnecessary risks of serious injury or death. (R. 458, 504); ACOG guidelines at 879. The Mississippi Supreme Court has already decided that hospitals and physicians may not hide behind medical custom to avoid liability for negligence when they expose their patients to a greater risk of injury or death than necessary by not adopting hospital regulations requiring the use of available medical knowledge, facilities, resources and options to reduce known reduceable risks to patients and implementing safeguards to insure such preventive measures are followed. *Clark* at 972-973.

DRMC's own policies demonstrate that it was aware that obesity, estrogen use, major abdominal surgery, and age were factors increasing a patient's risk of DVT and fatal PE. It had the information showing Janice Ervin had such risk factors. It had the supplies available to use on Mrs. Ervin. It had the ability to require the nurses and doctors it employed to follow the guidelines of numerous respected organizations such as the American College of Obstetricians and Gynecologists, the American College of Chest Physicians, and the National Institutes of Health which had adopted guidelines setting a standard of care which required the use of some

preventative measures for patients with the risk factors Janice Ervin had. Yet DRMC did nothing to ensure that Dr. Beckham would follow these national standards of care while in its employ and performing surgery in its hospital. The result was that Janice Ervin was denied irrefutably effective preventive measures required by national standards of care and suffered the most common preventable cause of death in hospitalized patients.

The other errors committed by the Circuit Court deprived the Ervins of a fair trial on the actual scientific and factual evidence in the record and the levels of proof required by the law in civil disputes. The actual evidence and scientific materials in the record demonstrate that the Circuit Court's factual findings are not supported by substantial credible evidence and that the Judgment entered rests upon faulty science and an incorrect assessment of the facts enhanced by the credibility witnesses gain by being accepted as experts. Accordingly, the Judgment of the Trial Court should be reversed.

RESPECTFULLY SUBMITTED,



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CERTIFICATE OF SERVICE

Pursuant to M.R.A.P. Rule 25(a), I hereby certify that I have mailed the original and three (3) true and correct copies of the above and foregoing Brief of Appellant via First Class U.S. Mail to:

Hon. Betty W. Sephton
Clerk, Supreme Court of Mississippi
P.O. Box 249
Jackson, Mississippi 39205-0249

I further certify that I have mailed a true and correct copy of the above and foregoing Brief of Appellant via First Class U.S. Mail to:

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I further certify that pursuant to M.R.A.P. 28(m), that I have also mailed an electronic copy of the above and foregoing on an electronic disk and state that this brief was written in Wordperfect format.

This the 23 day of June, 2009.

GEORGE F. HOLLOWELL, JR., MSBN [redacted]
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