

**UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF TENNESSEE
NASHVILLE DIVISION**

A.J.J.T. et al.,)	
)	
Plaintiffs,)	
)	
v.)	Case No. 3:15-cv-01073
)	Judge Aleta A. Trauger
UNITED STATES OF)	
AMERICA,)	
)	
Defendant.)	

FINDINGS OF FACT AND CONCLUSIONS OF LAW

A.J.J.T., a minor, and his parents, Kelly D. Wilson and Delvin D. Tavarez, filed claims against the United States under the Federal Tort Claims Act (“FTCA”), 28 U.S.C. § 2671 *et seq.*, based on injuries surrounding A.J.J.T.’s birth at the Blanchfield Army Community Hospital (“BACH”) at Fort Campbell. Wilson and Tavarez eventually dropped any claims raised on their own behalf. On August 19–22, 2019, the court conducted a bench trial on A.J.J.T.’s claims. Under Fed R. Civ. P. 52(a)(1), the court sets forth its findings of fact and conclusions of law herein, pursuant to which the court will hold that the United States is liable to A.J.J.T. in the amount of \$15,153,488.

I. PROCEDURAL BACKGROUND

On October 6, 2015, A.J.J.T., Wilson, and Tavarez filed a Complaint alleging that actions by BACH personnel led to injuries suffered by A.J.J.T. prior to his birth. (Docket No. 1.) On February 16, 2016, the United States filed a Motion to Dismiss arguing that the plaintiffs’ claims were barred by Tennessee’s statute of repose for medical malpractice actions. (Docket No. 18.) On June 21, 2016, the court denied the motion on the ground that Tennessee’s statute of repose had been partially preempted by the FTCA, which had required the plaintiffs to wait for several years

while their claims remained unresolved within the federal administrative process. (Docket No. 31 at 9.) On June 31, 2019, about a month and one-half before the scheduled trial, the United States filed a motion asking the court to reconsider its ruling (Docket No. 73), which the court denied (Docket No. 75). On August 16, 2019, the court entered the parties' Joint Pretrial Order (Docket No. 129), and the trial began on August 19, 2019.

II. FINDINGS OF FACT

A.J.J.T. was born at BACH on January 10, 2005. He suffered a hypoxic-ischemic brain injury prior to delivery, resulting in cerebral palsy and lifelong neurologic deficits. The parties agree that A.J.J.T.'s injury was not the result of an infection and that he "will require extraordinary medical care, services, and therapies throughout his life as a consequence of his brain injury." (Docket No. 78 (J. Stips.) ¶¶ 3–5.) The plaintiffs argue that A.J.J.T.'s injuries could have been avoided if BACH personnel had appropriately counseled and evaluated Wilson prior to the date of delivery and/or complied with the applicable standard of care after she arrived at the hospital presenting signs of labor.

A. Prior History & Prenatal Care

1. Facts

Wilson's First Pregnancy

A.J.J.T. is the second of three children born to Wilson and Tavaréz. (Trial Tr. vol. 3 at 49.) Their first child was born at BACH on January 14, 2004. Wilson and Tavaréz relied on BACH because they were, at the time, serving in the U.S. Army and stationed at Fort Campbell. (*Id.* at 50, 82.)

During Wilson's labor with her first child, the fetus's heart rate was monitored, as is standard practice. Patterns in the heart rate, including patterns in the heart rate relative to

contractions, may provide reassuring information that labor is going as expected or may suggest problems that would require obstetric intervention—in particular, inadequate fetal oxygenation. (Trial Tr. vol. 1 at 26.) Medical personnel also track other indicators of the status of the mother’s labor, including cervical dilation, thinning of the cervix (known as “effacement”), and the position of the fetal head (known as the “station”). (*Id.* at 37.)

During labor, medical personnel detected fetal bradycardia—that is, an unusually slow heartbeat. The bradycardia was resolved by repositioning Wilson. In the following hours, however, Wilson’s cervical dilation did not progress beyond 4 cm, less than was necessary for a vaginal delivery. (Pl. ex. 2 at MOM 3-55 to -56.) According to one of the expert witnesses called by the plaintiffs, the account of Wilson’s labor showed that she was experiencing dystocia, a type of difficult labor, although a government expert disagreed. (Trial Tr. vol. 1 at 38; Trial Tr. vol. 4 at 86.) The fetal heart rate also showed late decelerations—a type of deceleration in the heart rate associated with placental insufficiency¹—and fetal tachycardia—that is, an abnormally high heart rate.² (Pl. ex. 2 at MOM 3-55 to -56.) BACH employees performed an emergency cesarean section (“c-section”) and delivered the infant without any apparent injuries. (*Id.*; Trial Tr. vol. 3 at 50–51, 155.)

Wilson’s Pregnancy with A.J.J.T.

A few months after the birth of her first child, Wilson became pregnant again. (Trial Tr. vol. 3 at 51.) She was seen at BACH’s OB/GYN Clinic on June 4, 2004, and BACH personnel

¹ “Placental insufficiency” refers to a state in which the placenta is failing to provide sufficient oxygen to the fetus. (Trial Tr. vol. 2 at 54.)

² The difference between an “acceleration” or “deceleration” of the heart rate versus a mere variation of the heart rate depends on the length and magnitude of the variation. For example, an increase in heart rate is only an “acceleration,” as a clinical matter, if the increase is at least 15 beats per minute and lasts at least 15 seconds. (Trial Tr. vol 1 at 109.) “Late” or “early” refers to the relationship of the change to a contraction. For example, a “late deceleration” begins after a contraction has already started. (*Id.* at 48.)

confirmed her pregnancy. Because Wilson's second pregnancy had come less than four months after her first, it was classified as a "closely spaced pregnancy." Her expected due date was January 14, 2005, one year after her previous delivery. According to her medical record, she stated, at the time, that she wished to undergo a c-section for delivery. (Pl. ex. 1 at MOM 1-1 to -2.)

During her prenatal care, Wilson received regular care and underwent ultrasounds, fetal heart rate checks, fetal movement checks, customary blood work, and urinalyses. All of the prenatal testing was consistent with an ordinarily developing fetus. At some point, Wilson began to consider attempting to forgo a c-section in favor of a vaginal birth after cesarean, or "VBAC," an option that involved both potential advantages and known risks. Compared to delivery by c-section, a successful VBAC is associated with shorter maternal hospitalizations, less blood loss, fewer infections, and fewer thrombotic events. Not all attempts at VBAC, however, are successful. A failed VBAC is associated with major maternal and fetal complications, including uterine rupture, hysterectomy, fetal injury and death. (Pl. ex. 9 at 827.) Accordingly, it is important for a patient considering VBAC to have an accurate understanding of the likelihood of failure in her particular case, including any increased likelihood of failure based on patient-specific factors.

During a mid-November 2004 appointment at the BACH OB/GYN Clinic, Wilson was given a standard VBAC counseling and consent form by Barbara Fikes-Maki, CNM. Fikes-Maki advised Wilson to review the form and take it with her to her appointment with a high-risk obstetrician, Dr. Arif Mahood. (Pl. ex. 1 at MOM 1-39; Trial Tr. vol. 3 at 266-69.) Although Wilson herself was not considered a "high risk" patient, at least for the purposes of prenatal care,³

³³ There was substantial disagreement at trial regarding who is considered a "high risk" patient. For example, the plaintiffs' expert testified that Wilson would have been considered high risk with regard to labor and delivery, which the United States disputes. (Trial Tr. vol. 1 at 67.) The court found that the terminology of risk was less relevant to the standard of care than an evaluation of patient-specific factors and situation-specific practices.

BACH policy was to provide a high-risk consultation to any mother planning to attempt VBAC. (Trial Tr. vol. 2 at 220–22; Trial Tr. vol. 3 at 162; Pl. ex. 7 at 00010.)

Fikes-Maki testified that her practice at the time would have been to discuss VBAC with the patient when she presented the form. At the time, however, Wilson’s chart associated with the new pregnancy had not been supplemented with information from her prior pregnancy that would have informed Fikes-Maki of the details surrounding Wilson’s prior c-section. Accordingly, Fikes-Maki would not have been able to inform Wilson of any patient-specific risks associated with VBAC that only would have been apparent based on the details of the prior delivery. (Trial Tr. vol. 3 at 266–69.) Moreover, Fikes-Maki testified that it was “not [her] role” to counsel an expectant mother on the risks associated with VBAC. (Trial Tr. vol. 4 at 43.)

BACH uses a standard consent form for patients electing whether to attempt VBAC or whether, in the alternative, to pursue a repeat c-section. (*See* Pl. ex. 1 at MOM 1-44.) The form includes, among other things, the following statements:

- “I understand that approximately 60–80 percent of women who undergo a VBAC will successfully deliver vaginally.”
- “I understand that whenever a woman is in labor, emergency complications can occur so quickly that the medical providers in attendance may not have sufficient time to intervene to prevent death or injury to my baby and/or me. The emergency complications can occur not only in VBAC trials, but also in normal vaginal deliveries.”
- “I understand that the decision to have a VBAC is entirely my own and the option of an elective repeat cesarean section has been discussed with me.”

(*Id.*) Wilson signed copies of the form on at least three occasions: November 17, 2004; December 14, 2004; and January 9, 2005. (Pl. ex. 1 at MOM 1-44, 2-15.) The signature block of the consent

form has a space for the medical provider's signature below the patient's, but a provider's signature only appears on Wilson's forms once, where Dr. Mahood signed on December 14, 2004. (*Id.*)

In his deposition testimony, which was read into the record at trial, Dr. Mahood testified that he counseled Wilson regarding her choice to pursue VBAC by going point-by-point through the information on the form. He did not counsel her about any increase in risk associated with the short interval between her pregnancies. He also did not consider any potential for increased risk based on her short physical stature, her pelvic measurements, or the difficulties that occurred during her prior labor. Dr. Mahood told Wilson that she was a good candidate for an attempted VBAC and that her chances of a successful vaginal delivery were, as pre-printed on the form, 60–80%. (Trial Tr. vol. 2 at 221, 235, 238.) Following the discussion and based on Dr. Mahood's counseling, Wilson confirmed and reiterated her preference to attempt VBAC. (Trial Tr. vol. 3 at 52–53.)

In his testimony, Dr. Mahood suggested that he believed, based on the fact that Wilson had already signed a consent form, that she had “already been . . . counseled for that procedure.” (Trial Tr. vol. 2 at 220.) He repeatedly stressed, in his testimony, that he believed that his discussion with Wilson was just one of many instances in which she would have been given the necessary information about her VBAC decision. (*See id.* at 222 (stating that Wilson had “already talked to other providers” about the matter); 233–34 (claiming that Wilson would have consulted with “multiple providers before and after me”).) While Wilson had, in fact, discussed the procedure with Fikes-Maki, Dr. Mahood was, according to the record, the only physician who counseled her about her decision prior to the day of labor. (Trial Tr. vol. 1 at 21, vol. 3 at 52.) Fikes-Maki, moreover, had emphasized to Wilson the importance of the consultation with Dr. Mahood. (Trial Tr. vol. 3 at 270.) Dr. Mahood, therefore, appears to have significantly underestimated the

importance of his discussion with Wilson in her ability to make an informed decision regarding VBAC.

Dr. Mahood testified that he considered Wilson to have been a good candidate for VBAC, given the normal course of her pregnancy, and that he answered all of her questions and made clear that the decision to pursue VBAC was hers alone. He testified that he understood that the ordinary standard of care required him to review her medical history for individual risk factors and that he had done so and “did not find anything significant” counseling against VBAC. (Trial Tr. vol. 2 at 221–28.) In other words, he did not conclude that Wilson’s risks were heightened by, for example, her short interpregnancy interval or the circumstances of her prior failed vaginal delivery, and therefore did not counsel her regarding any increased risks.

Wilson testified that she left the counseling with Dr. Mahood believing that VBAC was a safe option for her. (Trial Tr. vol. 3 at 52–53.) She testified that, at the time, she did not believe that she faced any “particularly increased risk” to her or her baby from pursuing VBAC and that no one at BACH informed her of any individualized risks related to her stature, pelvimetry, short interpregnancy interval, or prior failed vaginal birth. (*Id.* at 53, 178.) She testified that her decision to consent to VBAC was dependent on the accuracy of the information given by Dr. Mahood. (*Id.* at 178.)

2. Evidence Regarding Compliance with Standard of Care

Dr. Michael D. Hawkins, a board certified obstetrician/gynecologist from Dickson, Tennessee was called as an expert by the plaintiffs. He testified that, in his professional opinion, Dr. Mahood’s discussion of VBAC with Wilson was inadequate with regard to her likelihood of success and that Wilson should have been encouraged to have a repeat c-section. He testified that Wilson’s chances of success were “far lower” than the 60–80% included on the consent form and

cited by Dr. Mahood. (Trial Tr. vol. 1 at 21.) He testified that Wilson’s pelvic measurements taken in her first pregnancy should have been taken into consideration, although he admitted that clinical pelvimetry is rarely used to exclude a trial of labor now.⁴ (*Id.* at 22.) He testified next that the failure of fetal descent in the attempt at delivery of Wilson’s first child, during which Wilson remained dilated at 4 cm for 5 hours during labor, was a “strong point weighing against” attempting VBAC and that her short stature—61 inches—also reduced her likelihood of success, because shorter stature correlates with more restrictive pelvic dimensions. The closely spaced nature of her pregnancies also reduced her likelihood of success, he testified, because there would have been insufficient time for her uterine scar to heal. (*Id.* at 23.) He concluded that, although there is no widely accepted tool for calculating a percentage likelihood of success of a trial VBAC, his evaluation of the relevant factors suggested that Wilson’s actual likelihood of success had likely been less than 50%. (*Id.* at 24.) The court found Dr. Hawkins to be very credible.

The plaintiffs introduced a July 2004 Bulletin from the American College of Obstetricians and Gynecologists (“ACOG”) regarding VBAC. (Pl. ex. 9.) The ACOG Bulletin confirms that, generally, VBAC was considered to have a success rate of 60–80%, before accounting for patient-specific factors. However, it identified a number of variables that increased or decreased the likelihood of success. Women, like Wilson, whose earlier cesareans were due to dystocia during labor, “may,” the Bulletin states, have a lower likelihood of success. The fact that Wilson had never successfully given birth vaginally before also, according to the Bulletin, made her significantly less likely to succeed than a woman who had. The Bulletin also specifically identified interdelivery intervals of fewer than 19 months—Wilson’s was 12 months—were associated with a lower likelihood of success. (*Id.* at 827.)

⁴ He clarified at trial that pelvimetry was no longer widely practiced but would have been part of the standard of care in 2005. (Trial Tr. vol. 1 at 36.)

The expert report of Dr. Joseph P. Bruner, a Midland, Texas, board-certified obstetrician/gynecologist, who practiced in the Nashville area in 2005, was read into the record on behalf of the plaintiffs. He stated that the 60–80% success rate quoted to Wilson was a “gross exaggeration of the actual chance of a successful vaginal delivery in a woman who has already experienced an arrest of dilation in the active phase of labor in her first unsuccessful attempt at vaginal birth and with an extremely short interpregnancy interval.” (Trial Tr. vol. 1 at 265.) The actual odds, he stated, were less than 50%, and BACH personnel violated the ordinary standard of care by misinforming Wilson. (*Id.* at 266)

Janis Cox, a North Carolina licensed nurse-midwife, was the plaintiffs’ final witness on standard of care. She also testified that Wilson’s short interpregnancy interval rendered her a poor candidate for VBAC, although she admitted that the informed consent discussion involved was outside the scope of her expertise. (Trial Tr. vol. 2 at 21–22.)

Dr. Elbridge Bills,⁵ an obstetrician/gynecologist currently practicing in the Atlanta area, was called as an expert by the United States. He testified that a patient with Wilson’s delivery history would, absent other factors, have an “average” chance of success at an attempted VBAC. (Trial Tr. vol. 4 at 75.) He conceded that a short interpregnancy interval increases the risk

⁵ Counsel for the plaintiffs, not having filed a motion in limine on the issue, objected at trial that Dr. Bills was not qualified to testify as an expert because he was not sufficiently familiar with BACH or the demographics of Clarksville/Fort Campbell. A plaintiff in a Tennessee healthcare liability action has the burden of establishing the relevant standard of care “in the community in which the defendant practices or in a similar community at the time the alleged injury or wrongful action occurred.” Tenn. Code Ann. § 29-26-115(a)(1). Although that requirement is directed at the plaintiff’s burden, the court agrees that a defense expert’s lack of familiarity with the relevant community may limit his ability to serve as an effective rebuttal witness or to provide relevant evidence. The court, however, concluded that Dr. Bills had demonstrated sufficient familiarity with BACH and Clarksville for his testimony to be admitted as relevant and that the issue of his familiarity with local standards would go to its weight. *See Shipley v. Williams*, 350 S.W.3d 527, 552 (Tenn. 2011) (holding that the relevance of an otherwise qualified expert’s testimony can be established by his review of background materials regarding the relevant community and facility). The court notes, however, that, based on its observation of Dr. Bills and its review of the evidence, the court found Dr. Bills to be lacking in credibility as compared to Dr. Hawkins and Dr. Bruner, for reasons beyond merely any locality rule issue.

associated with VBAC, specifically with regard to the possibility of uterine rupture. He noted, however, that Wilson did not experience a uterine rupture, which led Dr. Bills to conclude that the short interpregnancy interval was “not pertinent to this case.” He likened the situation to a child failing to look both ways before crossing the street, then being snapped at by a dog; although the child took a risk and experienced a bad outcome, he was not hurt by the risk itself, but by an unrelated other problem. (*Id.* at 73–74.)

Dr. Bills performed an assessment of Wilson’s likelihood of a successful VBAC based on a formula published in a 2007 article. (*Id.* at 76.) The formula concluded that Wilson had either an 81% chance of success or a 69.4% chance of success, depending on how one interpreted the reason for her prior cesarean delivery. (*Id.* at 78.)

B. Initial Treatment on Day of Delivery

1. Facts

At around 2:30 a.m. on January 10, 2005, Wilson began experiencing painful contractions. The contractions continued, and she came to BACH around 5:00 a.m., where she came under the care of Fikes-Maki and other BACH personnel present. A cervical exam found that she was 3 cm dilated and 75% effaced. Her fetus was at the -2 station. At her most recent prenatal appointment less than a week before, she had been 2 cm dilated and 70% effaced, and her fetus had been at the -3 station. In other words, she had progressed. Her fetus’s gestational age at this point was about 39 and one-half weeks. (Pl. ex. 1 at MOM 1-43, 2-24.) She was placed on a fetal heart monitor to assess the fetus’s status and her contractions. (Trial Tr. vol. 1 at 26.) The initial fetal heart rate had a normal baseline and moderate variability. These findings were reassuring of the fetus’s status at the time. (*Id.* at 26, 42)

BACH Standard Operating Procedure (“SOP”) #B-5 provides guidelines for the handling of VBAC patients. The SOP states that, once a trial of labor is “in progress,” “[a]ppropriate personnel (anesthesia and obstetrical)” should be notified. (Pl. ex. 7 at 00013.) When Wilson arrived at BACH, however, no physician was notified. (Trial Tr. vol. 4 at 54.) Fikes-Maki testified that the reason for not doing so was that Wilson was not yet in “active labor,” but rather in “early labor,” as written in her medical record. (Pl. ex. 1 at MOM 2-24; Trial Tr. vol. 3 at 276–78.) Fikes-Maki testified that, to be in active labor, Wilson would have needed to be having strong, regular contractions every three to five minutes and have been “at least four centimeters dilated.” (Trial Tr. vol. 3 at 276.)

After about 30 minutes, Wilson was removed from the fetal heart monitor and instructed to walk the halls. (Trial Tr. vol. 2 at 23.) Fikes-Maki, who was the certified nurse midwife in charge at the time, testified that she did not know who removed the monitor and instructed Wilson to ambulate. (Trial Tr. vol. 4 at 46; Pl. ex. 1 at MOM 2-24.) It is not disputed that the ordinary standard of care for a non-high risk patient in early labor—as opposed to active labor—with no warning signs would permit allowing a patient to ambulate. The parties, however, disagree with regard to whether Wilson should have been treated as high-risk, whether she was in active labor, and whether the fetal heart monitor had, by the time she was allowed to ambulate, shown warning signs that required continuous monitoring.

The plaintiffs argue that Wilson should have been under the care of physicians and should not have been removed from the fetal heart monitor, which would have allowed for the immediate detection of any dangerous change in fetal heart rate. As an initial matter, the plaintiffs argue that, given the circumstances of her labor and Wilson’s individual risk factors, the fetal heart rate should have been monitored continuously, as a categorical matter. Next, they argue that, insofar as there

was some question regarding whether Wilson should have been continuously monitored, there were signs, immediately before the removal of the fetal monitor, that should have alerted BACH personnel that continued monitoring was necessary. Specifically, A.J.J.T.'s heart rate variability decreased from moderate to minimal. (Trial Tr. vol. 1 at 45, 267; Trial Tr. vol. 2 at 23; Trial Tr. vol. 4 at 17–18, 80–81.) Fikes-Maki testified that, based on her reading of the data from the monitor, the fetal heart rate did “slip[] into minimal variability,” but then a “moderate fluctuation” appeared, reassuring her. (Trial Tr. vol. 4 at 18.)

A decrease in the variability of a fetal heart rate is not necessarily a sign that something has gone wrong with the labor. In particular, decreased variability may merely be due to the fetus going to sleep. However, the decreased variability may also be a sign that the fetus is experiencing oxygenation problems and developing hypoxia—that is, low oxygen levels that could lead to severe injury or death. The plaintiffs argue that, at the very least, the decrease in variability necessitated continued monitoring. (Trial Tr. vol. 1 at 45–47, 267–68; Trial Tr. vol. 2 at 23–24.)

Nevertheless, Wilson was allowed to walk the halls unmonitored. Wilson walked the halls for about an hour before returning and being placed back on the heart monitor; accordingly, there is a one-hour period—from about 5:30 a.m. to 6:30 a.m.—when A.J.J.T.'s fetal heart rate was totally unmonitored. (Trial Tr. vol. 2 at 24.)

2. Evidence Regarding Compliance with Standard of Care

Dr. Hawkins' testimony was somewhat equivocal regarding when an obstetrician should have been notified of Wilson's status, but he stated that it “could have been done” shortly after she arrived and should have been done earlier than it eventually was. (Trial Tr. vol. 1 at 50.)

Dr. Hawkins also testified that, if Wilson had not had the prior c-section, it would have been acceptable to allow her to ambulate without the fetal heart monitor. He stated, however, that,

given her prior c-section delivery, it was a deviation from the standard of care to discontinue fetal heart monitoring when she was “obviously in labor.” He also stated that it was “imprudent” to discontinue monitoring in light of her heart monitor data. In his opinion, if Wilson had been kept on the fetal heart monitor as required, a concerning pattern in A.J.J.T.’s heart rate could have been detected earlier. (Trial Tr. Vol. 1 at 26–27.)

Dr. Bruner agreed that Wilson should have been continuously monitored with the fetal heart monitor rather than having been allowed to walk the halls unmonitored. His reasons were the same or similar to Dr. Hawkins’. (*Id.* at 268.)

Cox testified that the ordinary standard of care required Fikes-Maki to notify the obstetrician on service that Wilson had arrived, because Wilson was, as Cox characterized her, a high-risk VBAC patient in labor. (Trial Tr. vol. 2 at 23.) Cox explained on cross examination that, based on Wilson’s contractions and cervical change, Cox would have classified her as in active labor, which would have required contacting the obstetrician. (*Id.* at 71.) The plaintiff introduced into evidence an ACOG Bulletin from December 2003, which stated:

The definition of labor is the presence of uterine contractions of sufficient intensity, frequency, and duration to bring about demonstrable effacement and dilation of the cervix. At present, there is much uncertainty about the definition of the latent phase of labor, but there is agreement that women in labor enter the active phase when cervical dilation is between 3 cm and 4 cm.

(Pl. ex. 20 at 1.) Cox was asked whether Wilson was in active labor, as defined by the ACOG Bulletin, when she arrived at BACH, and Cox testified that she was. (Trial Tr. vol. 2 at 86.)

Cox agreed that, given Wilson’s background, her status as a VBAC patient, and the heart monitor readings, she should have been monitored continuously and should not have been allowed to ambulate. (Trial Tr. vol. 2 at 23.) She also testified that removing Wilson from the fetal heart monitor violated the hospital’s written VBAC policy. (*Id.* at 24.) Cox cited a well-regarded treatise

for midwives, *Varney's Midwifery*, for the proposition that a physician should have been informed immediately as soon as the fetus displayed abnormal heart patterns that lacked a clear cause and were not resolved by intrauterine resuscitative measures, such as repositioning Wilson. (*Id.* at 63.)

Dr. Bills, on the other hand, testified that Wilson's cervical dilation at the time that she arrived at the hospital did not confirm active labor. Specifically, he testified that he would not have considered Wilson to have been in active labor at that point because Wilson's contractions were not "more than moderate" and there was, in his view, "no significant cervical change" associated with the contractions. (Trial Tr. vol. 4 at 71.) He also testified that the period of reduced variability prior to Wilson's being removed from the fetal heart monitor was not concerning because it was of limited duration. Allowing Wilson to ambulate, he concluded, was "a normal process and not a deviation of standard of care." (*Id.* at 81.)

C. Birth

1. Facts

When Wilson returned from walking the halls around 6:30 a.m., she was 4 cm dilated and 90% effaced, with A.J.J.T. still at the -2 station. (Pl. ex. 1 at 2-25.) A.J.J.T.'s experts testified that, when fetal heart monitoring resumed, the minimal variability that had been detected earlier continued, accompanied by late decelerations—another sign of inadequate fetal oxygenation due to placental insufficiency. (Trial Tr. vol. 1 at 27, 104, 268; Trial Tr. vol. 2 at 24–25, 54.) Around 6:30 a.m., Fikes-Maki formally admitted Wilson to BACH and transferred her care to Nurse Sharon Reid. There is no evidence, however, that Fikes-Maki informed an obstetrician of Wilson's status at that time. (Trial Tr. vol. 2 at 37.)

The plaintiffs contend that obstetricians, nurses, and/or midwives confronted with minimal variability in the fetus's heartrate combined with late decelerations should, according to the

relevant standards of care, implement some type of intrauterine resuscitative measures to either restore a healthy fetal heart rate or increase oxygenation. Intrauterine resuscitative measures range from changing the mother's position to providing her with supplemental oxygen to administering a fluid bolus or a drug to stop contractions. (Trial Tr. vol. 1 at 51; Trial Tr. vol. 2 at 41–42, 54–55.) The plaintiffs also contend that Wilson should have been evaluated for a possible c-section. Between 6:30 a.m. and 7:30 a.m., neither Fikes-Maki nor Reid implemented any intrauterine resuscitative measures or sought a c-section evaluation. (Trial Tr. vol. 2 at 25–26.) Fikes-Maki's shift ended at 7:00 a.m. (Trial Tr. vol. 4 at 24.)

At around 7:30 a.m., a resident physician was at Wilson's bedside discussing epidural analgesia with her, when the fetal heart rate descended to the 60s and did not recover, a degree of bradycardia associated with fetal injury. (Pl. ex. 1 at MOM 2-66; Trial Tr. vol. 2 at 26.) Nurse Reid suggested inserting an internal scalp electrode to monitor the fetal heart rate more directly, but the resident was unable to place the electrode. At 7:31 a.m., Wilson finally saw an obstetrician, Dr. Diane Adams, who repositioned Wilson and successfully placed the electrode, which confirmed bradycardia. Dr. Adams immediately ordered an emergency c-section. (Trial Tr. Vol. 2 at 199; Pl. ex. 1 at MOM 2-65.) A.J.J.T. was delivered by c-section at 8:01 a.m., blue and showing no signs of life. (Trial Tr. vol. 1 at 184–85, 225.) His Apgar scores⁶ for the first several minutes of his life showed an infant in dire need of prolonged resuscitation. (Trial Tr. vol. 1 at 184–85.)

BACH pediatricians intervened with resuscitative measures including chest compressions, bag-mask ventilation, intubation, and administration of epinephrine to address A.J.J.T.'s severe bradycardia. Due to the physicians' timely interventions, A.J.J.T.'s heart rate recovered, and he

⁶ The "Apgar score" is a tool used to assess the level of depression and need for resuscitation of a newborn infant based on factors including color, heart rate, and respiration. Apgar scores are on a 0–10 scale. A.J.J.T.'s Apgar score one minute after birth was 0. By five minutes after birth, it had risen to 1, then, five minutes later, to 2. Fifteen minutes after birth, his Apgar score was 4. (Trial Tr. vol. 1 at 184–85, 198.)

was transferred to the special care nursery. (Trial Tr. vol. 1 at 185–86.) Observation and a physical exam of A.J.J.T. revealed a number of troubling signs, including possible seizure activity. A.J.J.T. was transferred to Vanderbilt’s neonatal intensive care unit. His listed reasons for admission were respiratory failure, hypoxia, seizure activity, and metabolic acidosis. (Pl. exs. 3, 4.) A.J.J.T. experienced some improvement during his 26 days in the neonatal intensive care unit, but testing and examination has consistently shown that he suffered a significant injury to his brain consistent with a lack of oxygen/blood flow. (Trial Tr. vol. 3 at 59.) Although A.J.J.T.’s symptoms have changed and may continue to change in their presentation and degree of management over time, the injury itself cannot be repaired, and he is expected to have symptoms for the full span of his life.

2. Evidence Regarding Compliance with Standard of Care

The plaintiffs’ experts’ analyses of the fetal heart monitoring differed in minor ways but were generally corroborative of each other’s conclusions that the need for intervention was apparent significantly earlier than recognized by BACH personnel.

Dr. Hawkins testified that, when monitoring resumed after Wilson’s ambulation at 6:30 a.m., A.J.J.T. showed repetitive late decelerations, to which the staff should have immediately responded by implementing intrauterine resuscitation and having an obstetrician evaluate Wilson for delivery. Dr. Hawkins testified that he would have intervened in time for Wilson to be “headed back” for delivery by 7:00 a.m., which would have resulted in delivery to be completed before 7:33 a.m. Instead, the situation was allowed to deteriorate, and the incision to deliver A.J.J.T. was not made until 7:38 a.m. (Trial Tr. Vol. 1 at 27–28, 59, 84, 105.) Based on his reading of the fetal heart monitoring, Dr. Hawkins concluded that A.J.J.T. was undergoing a gradually progressing deterioration in fetal status and oxygenation during the period prior to the eventual decision to

intervene and perform a c-section, which should or would have been apparent to a physician monitoring the readings. (*Id.* at 57–58.) He testified that, if A.J.J.T. had been delivered by an elective c-section, or if the BACH staff had acted earlier on the morning of delivery to intervene and move to cesarean delivery, then A.J.J.T.’s neurologic injury, more likely than not, would have been avoided. (*Id.* at 29.)

On cross-examination, Dr. Hawkins conceded that, if Wilson had undergone an elective c-section, as a matter of ordinary practice, it would have been performed at 39 weeks—just three days before the eventual labor, meaning that even a slight delay would have meant that she would not have avoided labor. (*Id.* at 68.) He testified, however, that he did not believe that such a delay would have been likely. (*Id.* at 69.)

Dr. Bruner agreed that BACH personnel violated the standard of care by failing to make necessary interventions shortly after Wilson was placed back on the fetal heart monitor. (*Id.* at 269.) He stated that, based on the late decelerations that were apparent, the standard of care dictated that a decision to perform a c-section should have been made no later than 7:10 a.m., which would have resulted in delivery by 7:40, more likely than not avoiding A.J.J.T.’s injury. (*Id.* at 269–70.)

Cox testified that Fikes-Maki and Reid should have intervened when a pattern of late decelerations was apparent after Wilson was placed back on the monitor. Specifically, they should have begun intrauterine resuscitation and sought an urgent consult from an obstetrician, rather than allowing the condition to worsen. (Trial Tr. Vol. 2 at 25.) She also testified that Wilson’s risk factors generally dictated a higher degree of vigilance than Fikes-Maki and Reid had exercised. (*Id.* at 28.)

Dr. Bills testified that, when Wilson was placed back on the monitor, she had moderate variability. He also testified that the supposed decelerations she experienced prior to the fetal heart

rate crashing were not late decelerations that would have indicated a need for a cesarean section. (Trial Tr. vol. 4 at 81–82.) In particular, he took issue with other experts’ claims to have observed “subtle” late decelerations, which Dr. Bills characterized as a “garbage term[]” that was too subjective. (*Id.* at 99.) To demonstrate his point, he provided a fetal monitoring strip from another patient that more clearly showed a lack of variability combined with late decelerations. (*Id.* at 103.)

D. The Timing and Nature of A.J.J.T.’s Injury

Dr. Garrett C. Burris, a Woodlands, Texas pediatric neurologist who practiced in St. Louis, Missouri during the relevant time period, testified as an expert for the plaintiffs on the topic of when and how his injury occurred. He testified that he reviewed the relevant materials and considered multiple possible causes of the injury, concluding that it was most likely the result of acute hypoxia/ischemia—that is, severely insufficient oxygen/blood flow as part of a specific event. (Trial Tr. vol. 1 at 124–27.) The “damaging event” resulting in A.J.J.T.’s brain injury, he concluded, began after 7:30 a.m. (although he may have been experiencing less severe hypoxia earlier) and continued until his heart rate was restored post-delivery. As a result, if that late-arising period of hypoxia had been avoided, no injury would have occurred. (*Id.* at 115.)

Dr. Burris examined testing that was performed on venous and arterial umbilical cord samples, which suggested that A.J.J.T. had experienced significant metabolic acidosis—that is, the accumulation of lactic acid in the blood as a result of the anaerobic metabolism brought on by low oxygen. (*Id.* at 119) These results were consistent with neonatal encephalopathy and brain injury. (*Id.* at 120.) Electroencephalograms also demonstrated encephalopathy. (*Id.* at 122.) The injury, Dr. Burris concluded, was the direct cause of A.J.J.T.’s cerebral palsy, seizures, and developmental delays; they were not caused by any earlier problems within the womb, as alleged by defense expert Dr. Joyce E. Johnson. (*Id.* at 127.)

Dr. Edward H. Karotkin, a neonatologist from Norfolk, Virginia, also testified on the topic for the plaintiffs. He testified that he reviewed the relevant documentation and that, in his professional opinion, A.J.J.T. “sustained a significant hypoxic-ischemic insult during labor close to the time of delivery and most probably beginning with the decelerations that prompted emergent cesarean section.” (*Id.* at 194.) He explained that a fetus with the level of severe acidosis that A.J.J.T. suffered “would not survive long without delivery” and that, therefore, if the injury had occurred earlier, A.J.J.T. likely would have been stillborn. (*Id.*)

The deposition of Dr. Allen D. Elster, a Winston-Salem, North Carolina, neuroradiologist, was read into the record as an expert for the plaintiffs. He testified that he reviewed relevant materials (particularly brain imaging) and that his conclusion was that A.J.J.T. had a pattern of permanent brain injury representative of severe profound hypoxic-ischemic encephalopathy characteristically seen in infants who experience an acute loss of blood flow and/or oxygen during labor and delivery. (*Id.* 244.) He explained, in detail, the physical characteristics of A.J.J.T.’s injury, including its extreme severity and disabling prognosis. (*Id.* at 247–49.)

Dr. Johnson, a pathologist at Vanderbilt University Medical Center, testified as an expert for the United States. She testified that she reviewed the relevant materials and concluded that Wilson’s placenta showed evidence of acute chorioamnionitis, acute funisitis,⁷ and a short umbilical cord.⁸ It was reasonably likely, she testified, that those conditions contributed to A.J.J.T.’s brain injury and that the injury “could have occurred prior to January 10, 2005.” (Trial Tr. vol. 3 at 201.) Dr. Johnson was unable to offer an opinion regarding whether asphyxia or

⁷ Chorioamnionitis is an inflammatory condition that affects pregnant women that may be associated with infection or may have unknown non-infectionary causes. Funisitis is a related inflammatory condition. (Trial Tr. vol. 3 at 207–08, 213.)

⁸ Dr. Hawkins, whom the court found very credible, testified that the short umbilical cord was not a significant factor and would not have increased the decelerations. (Trial Tr. vol. 1 at 82.)

acidosis may also have contributed to the injury, and she stressed that she did not dispute “that there [were] lots of risk factors around the time of delivery.” (*Id.* at 230, 246.) She also conceded that, even based on her analysis, it was “very hard to measure” whether a delivery 24 hours earlier would have avoided A.J.J.T.’s injuries and that she, therefore, could not say that the injuries would have occurred regardless of an earlier intervention. (*Id.* at 231.)

Dr. Bills testified that “[t]here is no way to tell when the hypoxic event or events occurred” and that “it is possible that the fetus could have suffered an injury prior to January 10, 2005.” (Trial Tr. vol. 4 at 83.) On cross examination, however, he agreed that there was “no doubt” that A.J.J.T. suffered an injury during the bradycardia that occurred right before his delivery, although a preceding injury “could have” occurred earlier. (*Id.* at 144.)

IV. CONCLUSIONS OF LAW: GOVERNING STANDARD

The FTCA does not create a cause of action against the United States. *Premo v. United States*, 599 F.3d 540, 544 (6th Cir. 2010). Rather, the FTCA merely “waives sovereign immunity to the extent that state-law would impose liability on ‘a private individual in similar circumstances.’” *Myers v. United States*, 17 F.3d 890, 894 (6th Cir. 1994) (quoting 28 U.S.C. § 2674). Courts applying the FTCA must, therefore, “look to the substantive tort law of the state in which the cause of action arose to determine liability and damages.” *Huddleston v. United States*, 485 F. App’x 744, 745 (6th Cir. 2012). Because A.J.J.T.’s claims allegedly arose out of the malpractice of BACH medical staff, the court must look to Tennessee law to determine the liability of the United States.

To prevail on a healthcare liability claim under Tennessee law, a plaintiff must establish the following:

- (1) The recognized standard of acceptable professional practice in the profession and the specialty thereof, if any, that the defendant practices in the community

- in which the defendant practices or in a similar community at the time the alleged injury or wrongful action occurred;
- (2) That the defendant acted with less than or failed to act with ordinary and reasonable care in accordance with such standard; and
 - (3) As a proximate result of the defendant's negligent act or omission, the plaintiff suffered injuries which would not otherwise have occurred.

Rye v. Women's Care Ctr. of Memphis, M PLLC, 477 S.W.3d 235, 266 (Tenn. 2015) (quoting Tenn. Code Ann. § 29-26-115(a)).

“Any want of skillful care or diligence on a physician's part that sets back a patient's recovery, prolongs the patient's illness, increases the plaintiff's suffering, or, in short, makes the patient's condition worse than if due skill, care, and diligence had been used, constitutes injury for the purpose of a [health care liability action].” *Id.* (quoting *Church v. Perales*, 39 S.W.3d 149, 171 (Tenn. Ct. App. 2000)). However, “the law ‘does not require perfect faculties or perfect use of existent faculties, but only ordinary care, which presupposes a margin of error[.]’” *Bradley v. Bishop*, 538 S.W.3d 518, 532 (Tenn. Ct. App. 2017) (quoting *Coleman v. Byrnes*, 242 S.W.2d 85, 89 (Tenn. Ct. App. 1950)). Moreover, even a failure to exercise ordinary and reasonable care is not, in and of itself, grounds for recovery; rather, the plaintiff “must introduce evidence which affords a reasonable basis for the conclusion that it is more likely than not that the conduct of the defendant was a cause in fact of the result.” *Dickson v. Kriger*, No. W2013-02830-COA-R3-CV, 2014 WL 7427235, at *5 (Tenn. Ct. App. Dec. 30, 2014) (quoting *Lindsey v. Miami Dev. Corp.*, 689 S.W.2d 856, 861 (Tenn. 1985)).

In addition to cause-in-fact, a plaintiff must establish proximate cause. A determination of proximate cause is based on a three-part test:

- (1) the tortfeasor's conduct must have been a substantial factor in bringing about the harm being complained of; and (2) there is no rule or policy that should relieve the wrongdoer from liability because of the manner in which the negligence has

resulted in the harm; and (3) the harm giving rise to the action could have reasonably been foreseen or anticipated by a person of ordinary intelligence and prudence.

Cotten v. Wilson, 576 S.W.3d 626, 638 (Tenn. 2019) (quoting *McClenahan v. Cooley*, 806 S.W.2d 767, 775 (Tenn. 1991)). The second of those considerations is not at issue here, because there is no intervening rule or policy at stake other than ordinary healthcare liability principles. The role of the alleged malpractice in A.J.J.T.'s injury and the foreseeability of that injury, however, are disputed.

V. FINDINGS OF FACT: LIABILITY

A. Nature and Timing of A.J.J.T.'s Injury

The parties have stipulated to the following: A.J.J.T. suffered a hypoxic-ischemic brain injury prior to delivery; as a consequence of that brain injury, A.J.J.T. has been diagnosed with spastic quadriplegic cerebral palsy with severe developmental delays and suffers from impaired motor function, delayed cognitive abilities, and seizures that are controlled by medication; and A.J.J.T.'s brain injury, cerebral palsy, and neurologic deficits are not attributable to infection. (J. Stips. ¶¶ 3–4; 10.)

The court finds, based on its evaluation of the evidence and the credibility of the individual witnesses, that A.J.J.T. suffered a severe hypoxic-ischemic brain injury shortly before his cesarean delivery, prior to which he was healthy and normally developed. The injury more likely than not began when A.J.J.T. experienced a significant deceleration in his heart rate around 7:30 a.m. on his date of birth. In particular, A.J.J.T.'s dire status at the moment of delivery—which placed him virtually at the point of death—is strongly corroborative of a late-arising injury. Testimony regarding potential alternative causes, such as A.J.J.T.'s short umbilical cord, was unpersuasive and effectively addressed by A.J.J.T.'s experts. Even witnesses who testified about the possibility

of an earlier injury at most established a vague possibility that some injury could have occurred earlier, without ruling out the strong evidence that a hypoxic-ischemic injury *did* occur in the final minutes of Wilson's pregnancy. Therefore, the court finds that, if A.J.J.T. had been delivered prior to 7:30 a.m. on January 10, 2005, his injury would have been avoided.

B. Deviation from Ordinary Standard of Care/Causation

Counseling and Evaluation of Suitability for VBAC

The court finds that BACH personnel deviated from the ordinary standard of care by failing to fully assess Wilson's individual risk factors for VBAC, particularly those related to her short interpregnancy interval and the details of her prior unsuccessful vaginal delivery, and by giving Wilson inaccurate information about her likelihood of successfully delivering vaginally. The court finds that the ordinary standard of care for a community hospital obstetrician in a community similar⁹ to that in which BACH was located would have required the physician to inform Wilson that her likelihood of success was significantly less than 60–80%. The court also finds that, if Wilson had been properly counseled, she more likely than not would have had an elective c-section prior to January 10, 2015, avoiding A.J.J.T.'s injury. BACH's deviation from the ordinary standard of care, therefore, was an actual cause of, and substantial factor in, A.J.J.T.'s injuries and resulting condition.

The court further finds that the improper evaluation and counseling were a proximate cause of A.J.J.T.'s injuries. The defendants have argued that, even if VBAC was risky for Wilson, the primary risk was uterine rupture, which did not occur, making the fact that the risk was not disclosed to her beside the point. Proximate cause, however, does not require that the plaintiff suffered the most likely injury, just that the harm was of a type that could have reasonably been

⁹ For ease of reading, the court will not recite the full locality rule each time it mentions the ordinary standard of care. Its findings, however, incorporate that rule at each stage.

foreseen. As the plaintiffs' expert witnesses credibly testified and as supported by documentary evidence, uterine rupture was not the sole risk associated with a trial VBAC, and one of the key risks was being subjected to the hazards attendant to an unnecessary, failed trial of labor. That risk did come to pass here, directly due to the actions of BACH personnel. VBAC was not successful—which Wilson should have been informed it likely would not be—and A.J.J.T. was unnecessarily subjected to the dangers associated with unproductive labor, resulting in injury. A.J.J.T.'s injuries were therefore proximately caused by the failure to counsel his mother appropriately.

Failure to Contact Obstetrician When Wilson Arrived

The court finds that the plaintiffs failed to show, by a preponderance of the evidence, that Fikes-Maki's not informing an obstetrician when Wilson arrived at BACH was a deviation from the ordinary standard of care that actually or proximately caused A.J.J.T.'s injuries. First, the plaintiffs did not establish that the ordinary standard of care necessitated informing an obstetrician of Wilson's arrival unless she was in active labor. The evidence regarding whether Wilson was in active labor when she arrived was conflicting. Her dilation was sufficient to be consistent with active labor, but there was also evidence that diagnosing active labor required a more complicated analysis than simply an isolated dilation measurement. Even if BACH personnel did err in failing to diagnose active labor, however, the plaintiffs did not establish that the failure to notify an obstetrician at the time of arrival was a cause of A.J.J.T.'s injuries. Specifically, the evidence did not establish that the presence of an obstetrician would have resulted in a detection of readings necessitating intervention prior to 6:30 a.m.

Discontinuing Heart Monitor While Wilson Walked the Halls

Next, the court finds that the decision not to continuously monitor A.J.J.T.'s fetal heart rate after Wilson arrived at BACH violated the ordinary standard of care. Even if continuous

monitoring had not been categorically required, the reduced variability in her fetal heart tracings should have led BACH personnel to continue monitoring. However, the court finds that the plaintiffs failed to establish that that particular failure to adhere to the standard of care was a cause of A.J.J.T.'s fetal injuries. Evidence, including that from A.J.J.T.'s own witnesses, tended to show that A.J.J.T.'s injuries still could have been prevented after monitoring resumed. It is, moreover, impossible to know, from the available evidence, whether continual monitoring would have resulted in a meaningfully earlier detection of fetal distress.

Failure to Evaluate Wilson for C-Section Sooner

Finally, the court finds that BACH personnel deviated from the ordinary standard of care by failing to intervene with intrauterine resuscitative measures and evaluation by an obstetrician for cesarean delivery in time for delivery to be initiated by 7:10 a.m., at the latest. The court further finds that, if intervention had been made by 7:10, a cesarean delivery more likely than not would have been performed in time to avoid A.J.J.T.'s injuries. The court also finds that injuries of the sort A.J.J.T. suffered were a foreseeable risk of inaction and that inaction was a substantial factor in the injuries. The failure to intervene earlier was therefore an actual and proximate cause of A.J.J.T.'s injuries.

V. FINDINGS OF FACT & CONCLUSIONS OF LAW: DAMAGES

Prior to trial, the plaintiffs dropped all claims for damages for past medical expenses and for loss of parental consortium. (Stips. ¶¶ 12-13.) Thus, the only remaining claims for damages to be decided are A.J.J.T.'s future medical expenses, future lost earnings, and non-economic damages. The plaintiffs offered testimony from the following witnesses on the issue of damages:

Dr. Robert Cooper, a Texas-based physiatrist, who provided a life care plan for A.J.J.T. and addressed his likely future needs and health; and Patricia L. Pacey, Ph.D., a Colorado economist, who provided her expert opinion on the amount of damages based on Dr. Cooper's plan and the amount of A.J.J.T.'s lost earnings. The United States responded with testimony from the following witnesses: Cathlin Vinett Mitchell, a certified registered rehabilitation nurse and life care planner based in Brentwood, Tennessee, who provided her opinion on A.J.J.T.'s life care plan; and Michael A. Cohen, Ph.D., an economist and Vanderbilt University professor, who provided his expert opinion on damages based on Ms. Vinett Mitchell's life care plan.

A. Future Medical Expenses

The parties have stipulated that A.J.J.T will require extraordinary medical care, services, and therapies throughout his life as a consequence of his brain injury. (J. Stips. ¶ 5.) Therefore, the amount of A.J.J.T.'s future medical expenses is, broadly speaking, the function of two variables: first, the type of care he will need and, second, his life expectancy. Dr. Cooper estimated that A.J.J.T.'s life expectancy was 76.4 years, a figure he reached by applying a 5% reduction in life expectancy due to his injury, including the fact that he is presently underweight and has a seizure disorder that is treated with medication. (Trial Tr. vol. 2 at 107.) The United States raised a number of potential risk factors that, it argued, rendered that estimate implausible. In particular, the United States emphasized A.J.J.T.'s historical and recent failure to maintain a healthy weight and his failure to eat successfully without a feeding tube, the insertion of which Wilson had so far declined as an option. The court finds that the severity of A.J.J.T.'s injury and his inadequate nutrition plausibly bring Dr. Cooper's estimate into question.

Some of the other factors cited by the United States, however, were unpersuasive. In particular, the United States devoted a substantial amount of time to attempting to establish that

Wilson had, at times, struggled to meet all of A.J.J.T.'s needs while also being a single mother with other children and dealing with the disabling post-traumatic stress disorder related to her military service.¹⁰ Any difficulties that Wilson has experienced so far, however, have limited relevance to the expected level of care A.J.J.T. would receive if he were awarded compensation for his injuries. In particular, the availability of a case manager to coordinate his care would likely significantly reduce the risk of key interventions being missed, and he also would have access to significantly increased support resources, as well as therapies that could lead to improvements in his behavior and capabilities.

Moreover, while the government raised some plausible challenges to Dr. Cooper's estimate, it presented no expert medical testimony regarding how severely A.J.J.T.'s risk factors might affect his life expectancy. The government's life care expert, Mitchell, specifically testified that she was not offering an opinion on life expectancy. (Trial Tr. vol. 4 at 168.) Its economist, Dr. Cohen, similarly testified that he was not offering an opinion on "what [A.J.J.T.'s] life expectancy is," only citing to statistics and literature to attempt to undermine Dr. Cooper's estimate. (*Id.* at 182.) As Dr. Pacey credibly explained, however, an economist working merely from broad data categories is not capable of accounting for the medical complexities of an individual patient's condition and circumstances. (Trial Tr. vol. 3 at 19.)

Based on the foregoing, the government asks the court to cut the estimated life expectancy more than by half from Dr. Cooper's estimate, to 30. The court does not find a reduction of that magnitude to be supported, particularly in light of Dr. Cooper's testimony that the chances of a cerebral palsy patient's survival for a lengthy period of time significantly increase if he is able to make it through his youth. (Trial Tr. vol. 2 at 109.) Dr. Cooper also credibly testified that, despite

¹⁰ Wilson's mother lives with them and assists in A.J.J.T.'s care.

the severity of A.J.J.T.'s condition, he has been encouragingly healthy with regard to many of the risks that are most dangerous for cerebral palsy patients, particularly recurring respiratory problems and pneumonia. Finally, Dr. Cooper testified that the dangers of malnutrition could be addressed by the installation of a feeding tube. (*Id.* at 136, 138, 171, 174.) Although the court did not find Dr. Cooper's highly optimistic final conclusion to be plausible, the court found his reasoning for why A.J.J.T. had strong chances of surviving significantly into adulthood to be both plausible and credible.¹¹

The court recognizes that the determination of any individual's expected longevity is inherently uncertain and that affixing any specific life expectancy is imprecise, reflecting merely a probability rather than anything resembling a certainty. Based on the preponderance of the available evidence, however, the court concludes that A.J.J.T. has established a likely life expectancy of 57 to 60 years. Dr. Cooper characterized 57 years as a worst-case scenario based on his analysis. (*Id.* at 143.) Dr. Cooper also cited a study suggesting that 70% of adults with cerebral palsy that survived to age 20—which the court finds that A.J.J.T. is at least very likely to do—survived to age 60. (*Id.* at 109.) It is, of course, possible that A.J.J.T. will live a longer or shorter life. However, the court, as factfinder, has reviewed the evidence presented and selected the age that, it concludes, is supported by a preponderance of the evidence.

With regard to the details of the necessary life care plan, the court finds Dr. Cooper's account to be credible in most respects. Dr. Cooper examined A.J.J.T. and testified that he considered A.J.J.T.'s functional limitations and likelihood of complications in his analysis. (*Id.* at 96–97.) The court acknowledges that, ideally, a life care plan would be formulated after a patient

¹¹ The court also declines to impose any adverse inference against A.J.J.T. based on what the United States characterized as evasive behavior with regard to disclosing relevant medical information. The United States did not establish any violation of a duty warranting such an inference. It was, moreover, the government's litigation choice not to pursue a medical expert opinion on life expectancy.

had reached a certain level of stability that would allow greater predictability in his needs. (*See* Trial Tr. vol. 4 at 153 (Mitchell discussing formulation of life care plans after a patient is stabilized).) Nevertheless, the court finds that Dr. Cooper appropriately accounted for the uncertainty in A.J.J.T.'s needs and his capacity for improvement. The court finds that Dr. Cooper demonstrated greater familiarity with A.J.J.T.'s needs than Mitchell, as well as greater understanding of his treatment options and likely future development.¹² The need for physician expertise such as Dr. Cooper's is especially important in a case such as this, where A.J.J.T. is still young and his life care plan must reflect medical judgment about numerous potential future factors.

However, Dr. Cooper's plan included one element that the court finds not to be supported, in its entirety, by a preponderance of evidence—Dr. Cooper's unrealistically high expected hours of therapeutic services for A.J.J.T. to receive. Dr. Cooper recommended that A.J.J.T. receive behavioral therapy, behavioral analysis, cognitive/speech therapy, family counseling, medical case management, occupational therapy, and physical therapy, with the services offered most frequently over the next decade or so of his life and then discontinued or offered on a periodic basis later on. Dr. Cooper credibly testified that therapy was necessary; he admitted, however, that he was recommending that A.J.J.T. receive, at some points, 45 hours of therapy per week. The government persuasively pointed out that A.J.J.T.'s behavioral and educational history do not support the assumption that he would tolerate such an intensive schedule. The exact amount of therapy that A.J.J.T. will need and tolerate is, of course, unknowable. To reflect the amount of costs that the plaintiffs have demonstrated by a preponderance of the evidence, however, the court will cut

¹² For example, Mitchell testified that A.J.J.T. would not need a gastroenterologist or a feeding tube. (Trial Tr. vol. 4 at 175–76.) To the contrary, the evidence at trial established that the insertion of a feeding tube would likely be one of the most beneficial interventions that could be made in A.J.J.T.'s treatment. Indeed, the government's own argument regarding life expectancy focused intensely on his current lack of adequate nutrition.

A.J.J.T.'s therapy damages in half, to reflect that the plaintiffs have established that he is likely to be able to receive and tolerate roughly half of the therapy services recommended in Dr. Cooper's aggressive plan.

Dr. Pacey performed an analysis of the net present value of the services under the Cooper plan, and the United States did not meaningfully undermine that analysis. Dr. Pacey's analysis of net present value included a table reflecting the cumulative net present value of A.J.J.T.'s care at particular ages. At age 57.6, that cumulative value is \$7,385,100.00, before the court applies a reduction based on A.J.J.T.'s reduced therapy costs. Based on the court's tabulations, the cumulative net value of therapy costs to age 57.6, based on Dr. Cooper's suggested regimen, is \$1,836,423. Half of that, rounded to the nearest dollar, is \$918,212.00. (Pl. Tr. ex. 19, attachment II at 2.) The court, therefore, will subtract \$918,212.00 from \$7,385,100.00, to reach damages for future medical care of \$6,466,888.00.¹³

The plaintiffs have warned the court of the potential risks of awarding A.J.J.T. too small an amount in future medical expenses based on underestimating his life expectancy. Specifically, it is possible that he could run out of money from the award to cover his future medical expenses and have to revert to a lower level of care. Of course, that risk would always be present to some degree, given the uncertainty in estimating future medical expenses and the future healthcare landscape. In any event, while the plaintiffs' concerns are understandable, the court has no power to award him damages over and above those that he has established by a preponderance of

¹³ The court notes that Dr. Cohen valued the government's Option 1 life care plan (the independent living option) at \$4,288,700 up to age 48. (Pl. ex. 48 at 6.) Assuming that the value would continue to increase over the course of the next decade, the amount of the damages pursuant to that life care plan up to age 57.6 would likely not be far from what the court is awarding based on Dr. Cooper's plan, as modified to reflect a reduction in therapy costs.

evidence. The court, therefore, will award damages for future medical expenses in the amount of \$6,466,888.00.

B. Lost Earnings

The United States concedes that both parties' experts reached similar conclusions regarding A.J.J.T.'s lost future earnings. (Docket No. 149 at 25.) For A.J.J.T.'s lost earning capacity, Dr. Pacey arrived at a present value of \$2,186,600.00. (Trial Tr. Vol. 3 at 18.) Dr. Cohen instead reached a figure of \$1,776,056. (Trial Tr. vol. 4 at 215.) The primary driver of disagreement between the two appears to be the number of years in which A.J.J.T. would have participated in the active labor force if healthy. Dr. Pacey credibly testified that his analysis reflected more plausible assumptions regarding, for example, A.J.J.T.'s expected retirement age. The court therefore finds damages in the form of lost earnings in the amount of \$2,186,600.00, for a cumulative \$8,653,488.00 in economic damages.

C. Non-Economic Damages

Under Tennessee law, the plaintiff in a civil suit for personal injuries "shall be allowed to argue the worth or monetary value of pain and suffering . . . [,] provided[] that the argument shall conform to the evidence or reasonable deduction from the evidence in such case." Tenn. Code Ann. § 20-9-304. The Tennessee Supreme Court has held that this rule applies to medical malpractice actions. *Elliott v. Cobb*, 320 S.W.3d 246, 252 (Tenn. 2010).

Over the years, caselaw has broken down the types of permissible non-monetary damages more precisely, with the allowed damages now to "include 'pain and suffering, permanent impairment and/or disfigurement, and loss of enjoyment of life—both past and future.'" *Id.* at 248 n.1 (quoting *Overstreet v. Shoney's*, 4 S.W.3d 694, 715 (Tenn. Ct. App. 1999)). Because Tennessee law recognizes these categories as embodying "separate and distinct losses to the

victim,” *Huskey v. Rhea Cty.*, No. E2012-02411-COA-R3CV, 2013 WL 4807038, at *15 (Tenn. Ct. App. Sept. 10, 2013) (quoting *Overstreet*, 4 S.W.3d at 715), A.J.J.T. asks the court to award a dollar amount in damages for each of five categories: past pain and suffering; future pain and suffering; past loss of enjoyment of life; future loss of enjoyment of life; and disfigurement. The court will do so but, as discussed more fully hereafter, will remain aware of the risk that such a method could, if applied imprecisely, result in double recovery. The court also notes that there are other ways that the same injuries could be broken down or described and that the specific taxonomy used is far less important than (1) making sure no damages are duplicative and (2) making sure the plaintiffs only receive damages for injuries of the type recognized by Tennessee law.

Finally, the court notes that, in 2011, the Tennessee General Assembly enacted a provision limiting noneconomic damages in a single action to \$750,000 or, in certain select types of case, \$1,000,000. 2011 Tennessee Laws Pub. Ch. 510 § 10 (H.B. 2008), *codified* Tenn. Code Ann. § 29-39-102. Accordingly, if the facts in this case were to recur today with regard to another infant, the non-economic damages would be limited to one of those two amounts, regardless of whether the fact-finder would otherwise have awarded more. At the pretrial conference, however, the parties agreed that, because A.J.J.T.’s injury occurred in 2005, his claim is not subject to that statutory cap. The United States nevertheless urged the court to be aware of the cap as a general statement of Tennessee policy. The court acknowledges the cap but also acknowledges the converse—that, in 2005, a cap of that sort *was not*, in fact, the policy of the State of Tennessee, which instead awarded non-economic damages based on ordinary tort principles. That is not, of course, to say that there was a policy of awarding damages in excess of the current cap if the facts did not support it; rather, a court was to award damages in the amount supported by the facts. The court, therefore, will award damages in the categories of non-economic injury acknowledged in the governing

caselaw, while acknowledging that, in future cases that are not about decade-old injuries, a statutory cap would be applicable to the cumulative value of those awards.

Principles for Avoiding Duplicative Awards

A brain injury such as A.J.J.T.'s expresses itself in many ways. Many of his numerous symptoms, moreover, affect his life from many different angles. For example, A.J.J.T. struggles with physical locomotion. That can cause him pain and discomfort, as he struggles to control his body and remain in a comfortable position or when he drags himself across the floor. It can also cause him anguish and frustration. On top of that, the same impairment has prevented and will prevent him from engaging in many enjoyable activities. From this one set of symptoms, there are many conceptually distinct injuries—yet those distinct injuries are undeniably closely related. A court, therefore, must confront how it will deal with the potential interrelatedness and overlap of A.J.J.T.'s noneconomic injuries.

Tennessee courts have been faced with arguments that the various categories of noneconomic injury overlap before but have nevertheless upheld the practice of awarding separate damages for each, as long as there is evidence to support the distinct types of injury represented. *See Overstreet*, 4 S.W.3d at 717; *Livingston ex rel. Livingston v. Upper Cumberland Human Res. Agency*, No. 01A01-9609-CV-00391, 1997 WL 107059, at *2 (Tenn. Ct. App. Mar. 12, 1997). However, “[t]he trier of fact must take care not to duplicate an award” *Livingston*, 1997 WL 107059, at *3. The court therefore acknowledges that the law imposes dual duties on it as the fact finder in this situation: first, to put a dollar figure on A.J.J.T.'s compensable damages; and, second, to exercise the highest possible caution to make sure that, in doing so, it is not double-counting the same fundamental harm merely because it is amenable to different descriptions.

The need to avoid overlapping *awards*, however, does not mean that some of the same *facts* might not be relevant to multiple damages categories; to the contrary, Tennessee courts recognize that the “same . . . factors” may “be considered in different categories” of non-economic injury, because those factors affect the plaintiff’s life in different ways. *Livingston*, 1997 WL 107059, at *2. Accordingly, the facts in one section of these findings may be relevant in another. Each actual assessment of a specific monetary amount, however, has been made through a concerted effort not to grant a duplicative award. In other words, if, in reading this analysis, one concludes that the court should have put a particular harm under one category rather than another, that reclassification would not affect the court’s total award; it would simply move a dollar from one pile to the other.

Past & Future Pain and Suffering

“Pain and suffering encompasses the physical and mental discomfort caused by an injury. It includes the ‘wide array of mental and emotional responses’ that accompany the pain, characterized as suffering; such as anguish, distress, fear, humiliation, grief, shame, or worry.” *Overstreet*, 4 S.W.3d at 715 (citations omitted). Although courts sometimes distinguish between temporary pain and suffering related to a particular injurious event and pain and suffering related to a persistent injury, *see id.*, the court sees little reason to make such a distinction here. A.J.J.T.’s injury occurred *in utero*, and it would be artificial to draw some arbitrary line between the initial incident of injury and the injury’s presence in his life. The court, therefore, will consider pain and suffering based on the injury at all points in time.

There is little evidence in the record that A.J.J.T.’s injury has caused him physical pain in and of itself. There is some evidence that he may experience sensation in ways that cause him physical discomfort in some situations. For example, Dr. Cooper testified to the likelihood that A.J.J.T. has “sensory processing issues,” causing some sensations to be “different and more

noxious” for him than for an uninjured person. (Trial Tr. vol. 2 at 177.) On the other hand, there is some evidence of A.J.J.T.’s “high pain tolerance,” although the court has no way of knowing whether he is indeed tolerating pain or simply not expressing it more clearly. (*Id.* at 102.)

There is, on the other hand, substantial evidence that his injuries have caused him anguish, distress, and discomfort. Wilson testified at length about her son’s day-to-day struggles related to his limitations in movement, communication, and ability to receive nutrition, and those struggles were confirmed by the physicians who reviewed A.J.J.T.’s medical records. The court also viewed a video depicting A.J.J.T.’s status and routine. All of the evidence supports the conclusion that A.J.J.T.’s cerebral palsy is, as Dr. Burris described it, “profound and severe,” affecting essentially every part of A.J.J.T.’s life. (Trial Tr. vol. 1 at 173.)

A.J.J.T., from a very young age, experienced sources of anguish that a healthy baby would not have. For example, Wilson testified that, when she tried to hug A.J.J.T. as an infant, “he became stiff like a board.” (Trial Tr. vol. 3 at 60.) He could not tolerate being on his back for diaper changes or time in a car seat. (*Id.*) He often cried until his face turned purple and he seemed to be holding his breath, and he lost weight at a dangerous rate, causing him to require frequent medical care. (*Id.*) He hit some early developmental milestones, but Wilson testified that he largely stopped progressing in terms of milestones at age 2. (*Id.* at 61.)

A.J.J.T. has historically experienced seizures, although the seizures are now largely controlled with medication. (*Id.* at 143.) His sleep patterns are highly variable, and he is frequently awake at night. (Trial Tr. vol. 2 at 101.)

A.J.J.T. clearly regularly finds his circumstances to be extraordinarily upsetting, which he expresses through sounds and behavior. He has, at times, lashed out and become violent in the face of his near-total inability to act directly to ameliorate conditions that he finds unacceptable.

Historically, in these situations, he has screamed and bitten himself, although such episodes have become less frequent. (*Id.* at 124.) Sometimes, A.J.J.T. has bitten, hit, or kicked his mother and/or siblings for no reason that they could discern—although he was unable to communicate his reasons himself, due to his verbal limitations. (*Id.* at 65.) He has headbutted his mother and given her a black eye. (Trial Tr. vol. 2 at 101.)

The full extent of A.J.J.T.’s impairments is discussed in greater detail in the next section. Based solely on pain and suffering, however, and excluding other forms of noneconomic harm, the court hereby finds that A.J.J.T. has suffered \$500,000 in past damages and has established that he will suffer \$1 million in future.

Past & Future Loss of Enjoyment of Life/Permanent Impairment

“Damages for loss of enjoyment of life compensate the injured person for the limitations placed on his or her ability to enjoy the pleasures and amenities of life. This type of damage relates to daily life activities that are common to most people.” *Overstreet*, 4 S.W.3d at 715–16 (citations omitted). A court can calculate loss of enjoyment damages by considering the negative effect of the plaintiff’s injuries on activities and aspects of life, even mundane ones, and assigning a monetary value to that effect. *See, e.g., Overstreet*, 4 S.W.3d at 717 (upholding award, where, after injury, plaintiff could not swim or wash her own her hair, she no longer enjoyed socializing, she no longer swam because the chlorine burned her eye, and she burned herself while cooking). Losses for which courts have allowed compensation include the loss of the ability to drive more than one hour at a time, the ability to reach lower piano keys without pain, the ability to sew for an extended period, and the ability to open cans or jars, *Huskey v. Rhea County*, No. E2012-02411-COA-R3-CV, 2013 WL 4807038, at *17 (Tenn. Ct. App. Sept.10, 2013); the loss of the ability to do chores, such as sweeping and mopping, easily, *Rippy v. Cintas Corp. Services, Inc.*, No. M2010-

00034-COA-R3-CV, 2010 WL 3633469 (Tenn. Ct. App. 2010); and the loss of the ability to lift heavy furniture without needing to rest, the ability to play guitar for extended periods of time, and the ability to sit freely without feeling “antsy,” *Riley v. Orr*, No. M2009-01215-COA-R3-CV, 2010 WL 2350475, at *8 (Tenn. Ct. App. June 11, 2010).

Because A.J.J.T.’s injury occurred prior to his birth, the court does not have the benefit of a pre-injury lifestyle to which his post-injury life can be compared. Nevertheless, it is possible to assess, at least in broad strokes, what pleasures he likely would have enjoyed. As a small child, he likely would have enjoyed toys and physical play, socializing with peers, visiting new places, and conversing with his family. As he grew older, he likely would have enjoyed some sports and games, and his social life outside the home would have grown more complex. He would have been able to enjoy the experience of learning new things, either in school or from his peers or as part of a hobby. He would have had the opportunity to challenge himself academically, socially, athletically, or in whatever direction his interests took him.

As he approached and entered adulthood, the world would open up further to him. He would likely experience romantic relationships and opportunities for marriage and family. He could build a work life, and the interests and skills he cultivated earlier could grow into true expertise or merely enjoyable hobbies. He could become involved in his communities, local and otherwise. The court does not know what a healthy fifty-year-old A.J.J.T. would be doing in 2055; indeed, the court does not know what anyone will be doing in 2055. However, among the array of activities from which people derive pleasure, there are a number of abilities important to experiencing pleasure: the ability to communicate, the ability to move around, the ability to control one’s body, the ability to use one’s hands, the ability to ensure one’s own safety, the ability to navigate crowds, the ability to sit or stand easily in a comfortable position, the ability to be self-

sufficient, the ability to thrive in a variety of environments, and the ability to taste food and drink, to name a few. A.J.J.T.'s injury has impaired him in all these regards.

For example, A.J.J.T. is nonverbal. He communicates thirst by coughing and hunger by moving his mouth; otherwise he makes noises and babbles, although there was some evidence that he can say "no." (Trial Tr. vol. 1 at 116; Trial Tr. vol. 2 at 100; Trial Tr. vol. 3 at 125.) He screams and laughs, sometimes at appropriate times and sometimes at inappropriate times. He can gesture somewhat but not use sign language. In short, his ability to communicate has been extraordinarily constrained for the entirety of his life. There is some hope that that could be partly addressed with future technological assistance, but substantial impairment of communication is likely to remain. (Trial Tr. vol. 2 at 101.)

When A.J.J.T is home, he spends a large amount of time on the floor, and the toilet has to be kept shut, or else he will play in it. (Trial Tr. vol. 2 at 101.) Many of his physical movements are involuntary and disruptive, characterized by twisting motions throughout his body. He needs supervision throughout his day to keep him safe. (Trial Tr. vol. 1 at 138; Trial Tr. vol. 3 at 77–78.)

A.J.J.T. is able to crawl awkwardly, sit without support, and pull to stand, but he is unable to walk and struggles to keep himself upright. (Trial Tr. vol. 1 at 116; Trial Tr. vol. 2 at 114; Trial Tr. vol. 3 at 66.) He has braces for his feet and requires a wheelchair and back chair. (J. Stips. ¶ 11.)

A.J.J.T. wears diapers, which his mother has to change. (*Id.* at 76.) He gives no indication when he needs to urinate or have a bowel movement. (Trial Tr. vol. 2 at 100.) During diaper changes, he is frequently uncooperative and, according to Wilson, seems anguished, although the diaper change depicted on the video shown to the court was relatively peaceful. (Trial Tr. vol. 3 at 71, 77.)

A.J.J.T. can only be given a few drops of liquid at a time because he tends to choke, and his food has to be broken into small pieces. (Trial Tr. vol. 3 at 77.) He cannot take the pieces of food off of silverware and into his mouth himself, so Wilson either places the food directly into the “side of his mouth to engage his chewing reflex or his biting reflex,” or, if she feeds him with silverware, “slide[s] it to the roof of his mouth because he has a tendency with his tongue to push food out.” (*Id.* at 71.) A.J.J.T. is very thin and has struggled significantly to maintain a healthy weight, although the court is hopeful that his nutritional status can be improved with medical intervention, including, if recommended by his treating physicians, installation of a feeding tube. The placement of a feeding tube, however, would come with its own capacity for discomfort and inconvenience. At the time of Dr. Cooper’s February 2017 exam, A.J.J.T., at twelve years old, weighed 60 pounds and was 4’4” tall. (Trial Tr. vol. 2 at 104.)

A.J.J.T. has struggled to attend school on a consistent basis. When he has been enrolled, he missed a good deal of time due to medical appointments or having slept poorly the night before. If he attempted to attend school after a poor night’s sleep, he would either become very agitated or would fall asleep at school, causing the school to call Wilson. (Trial Tr. vol. 2 at 100.) A.J.J.T.’s behavioral problems have provided another obstacle to regular school attendance. Wilson also developed concerns about A.J.J.T.’s safety and well-being at school after he began developing rashes while there, which progressed to an infection. She is currently keeping him home but acknowledges that A.J.J.T. needs to be in an appropriate school program of some sort. (Trial Tr. vol. 3 at 74–75.)

As the court has already discussed, A.J.J.T. cannot engage in ordinary conversation and can only engage in very limited forms of play. He can play with toys for periods of time but has sometimes struggled to do so, often merely throwing toys instead of playing with them. (Trial Tr.

vol. 3 at 124, 130.) His ability to pursue education has been limited, and, although the court is hopeful that Wilson will be able to obtain appropriate special education and related services for A.J.J.T., it is clear that the education that he is able to receive will remain significantly defined by his impairments. A.J.J.T.'s ability to engage in hobbies or pastimes as an adult is also likely to be impaired. It is impossible to know, with certainty, what level of participation in life A.J.J.T. will ultimately experience as a result of the treatment and support made possible by the damages awarded herein and medical advances. He has, however, shown by a preponderance of evidence that he has suffered a great deal from his inability to live an ordinary life and will continue to do so.

The court would be remiss if it failed to note that A.J.J.T.'s life is about more than what he cannot do. The evidence shows that he does experience pleasure and joy and that he feels an immense love for his family, particularly his mother and siblings. It is the fervent hope of the court that A.J.J.T. has a long, full life, and that he is able to have as wide an array of happy experiences as a person can have. As a legal matter, however, the court must assess monetary damages based on the negative impact on his ability to participate in life activities demonstrated by a preponderance of the evidence.

The court hereby finds that A.J.J.T. has suffered \$1 million in damages for past loss of enjoyment of life and has established that he will suffer \$4 million in damages for future loss of enjoyment of life/permanent impairment.

Disfigurement

“Disfigurement is a specific type of permanent injury that impairs a plaintiff’s beauty, symmetry, or appearance.” *Overstreet*, 4 S.W.3d at 715. While A.J.J.T.’s physical appearance has been affected by his injuries—for example, in his posture and gait—there is no evidence that he is

specifically harmed by this change in appearance, over and above the substantial harms related to his impairments themselves. The court, therefore, finds no additional injuries based on disfigurement.

It may be that counsel for A.J.J.T. intended this category to capture, more generally, the issue of permanent impairment from injury. If so, the court notes that all such damages have been included in the categories previously discussed.

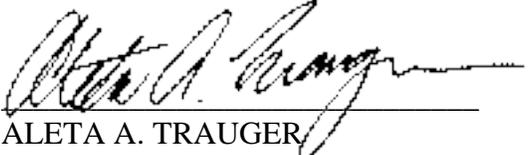
In conclusion, the court finds damages in the following amounts:

Future medical care	\$6,466,888
Future lost earnings	\$2,186,600
Past pain and suffering	\$500,000.00
Future pain and suffering	\$1,000,000
Past loss of enjoyment of life	\$1,000,000
Future loss of enjoyment of life/permanent impairment	\$4,000,000
Total	\$15,153,488

V. CONCLUSION

For the foregoing reasons, the court holds that the United States is liable to A.J.J.T. in the amount of \$15,153,488. The court will grant judgment to the United States with regard to the abandoned individual claims of Wilson and Tarez.

An appropriate order will enter.


Aleta A. TRAUGER
United States District Judge