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IN THE COURT OF CRIMINAL APPEALS OF TENNESSEE
AT NASHVILLE
May 12, 2026 Session

STATE OF TENNESSEE v. CHELSEA LOUISE SMITH

Appeal from the Circuit Court for Dickson County
No. 2021-CR-49 Larry J. Wallace, Judge

No. M2025-00955-CCA-R3-CD

Defendant, Chelsea Louise Smith, appeals her Dickson County Circuit Court convictions for aggravated child abuse and first-degree felony murder committed in the perpetration of aggravated child abuse, for which she received sentences of fifteen years and life, respectively. Defendant contends that the evidence is insufficient to support her convictions; that the trial court abused its discretion by excluding the proposed testimony of her expert in biomechanics; and that her constitutional right to present a defense was violated by the trial court's exclusion of the proposed expert testimony. Following a thorough review, we affirm.

Tenn. R. App. P. 3 Appeal as of Right; Judgments of the Circuit Court Affirmed

ROBERT L. HOLLOWAY, JR., J., delivered the opinion of the court, in which TIMOTHY L. EASTER and STEVEN W. SWORD, JJ., joined.

Michael J. Flanagan (on appeal), Nashville, Tennessee; and Olin J. Baker and F. Lee Spratt (at trial), Charlotte, Tennessee, for the appellant, Chelsea Louise Smith.

Jonathan Skrmetti, Attorney General and Reporter; Nicholas W. Spangler, Special Counsel; Ray Crouch, Jr., District Attorney General; and Jennifer J. Stribling, Assistant District Attorney General, for the appellee, State of Tennessee.

OPINION

I. Factual and Procedural Background

This appeal arises from an incident that occurred on October 30, 2020, when six-month-old victim, who was in the care of Defendant, suffered blunt force trauma to his head resulting in his death five days later. The Dickson County Grand Jury subsequently

issued an indictment charging Defendant with aggravated child abuse and first-degree felony murder committed in the perpetration of aggravated child abuse. The case proceeded to a jury trial in August 2024.

State's Proof

At trial, the victim's mother, Elise Hall, testified that the victim was born on April 30, 2020, and that he had no health issues at birth. Mrs. Hall said that Defendant, whom she met through church, began babysitting the victim and his two-year-old sister in August 2020, when she returned to work. Mrs. Hall explained that she had to be at work in Brentwood at 7:00 a.m., so she would drop off the victim and his sister at Defendant's home around 5:30 a.m. Mrs. Hall said that by September 2020, Defendant was watching six children in total—Defendant's own two children, the victim and the victim's sister, and two additional children. She recalled that the oldest child was seven or eight years old; there was also a four-year-old, three two-year olds, and the six-month-old victim.

Mrs. Hall testified that, on October 30, 2020, she dropped off her children at Defendant's home as usual. She said that she carried the victim into the home in his car seat; he had a beanie on his head and a blanket over him because it was cold outside. She agreed that the victim was happy and healthy at that time. She explained that the victim had been to the doctor recently for a wellness check and that he had no health issues.

Mrs. Hall stated that, around 1:00 p.m., she received a phone call from Defendant, who told her that "something terrible" happened to the victim. Defendant said that the victim had "fallen off the table in his car seat." Mrs. Hall testified that the victim was taken to Vanderbilt University Medical Center's ("Vanderbilt") emergency room and later admitted to the children's hospital at Vanderbilt. She said that she did not know the severity of the victim's injuries until after he was admitted and that he was in the hospital until his death on November 4, 2020.

Kimberly Wingate testified that she was an operations supervisor at the Dickson County 9-1-1 Center. Ms. Wingate said that on October 30, 2020, the 9-1-1 operations center received a phone call from Defendant, who was at the post office in White Bluff, and that, based upon the call, an ambulance was dispatched to the location. When the 9-1-1 call was played for the jury, Ms. Wingate agreed that the dispatcher advised Defendant to begin CPR on the victim.

Darby Sangrey, a Family Nurse Practitioner at a primary care practice in Hermitage, testified that he saw the victim on October 28, 2020, for a well-check visit. Mr. Sangrey said that he weighed and measured the victim, took his vital signs, and conducted a physical examination of the victim. Mr. Sangrey noted that the victim was "meeting his

milestones." When asked if he had any concerns regarding the victim's health at that time, Mr. Sangrey replied, "Nothing that was of any kind of life-altering issue."

Officer John Dorland of the White Bluff Police Department (WBPD) testified that on October 30, 2020, he responded to the post office in White Bluff following Defendant's call to 9-1-1. Officer Dorland testified that, when he asked Defendant what happened, she stated that she "had put all of the children into the car. She had not gotten to [the victim] yet. That [the victim] was in his car seat on the table and that she dropped him on the floor."

Officer Dorland testified that he was at the police station when he was dispatched to the post office, which was across the street. He explained that, when he arrived, Chief Eric Deal was already at the scene and was holding the victim and performing chest compressions on him. Officer Dorland stated that he supported the victim's neck and head as Chief Deal administered CPR. He said that the ambulance arrived seconds later. Officer Dorland testified that he did not see any outward injuries to the victim's head. He denied that Chief Deal was "aggressively giving CPR" to the victim; he said that Chief Deal "was doing a two-finger compression . . . which is what you do."

Officer Dorland testified that, after the victim was transported to the hospital, Defendant left the scene with the remaining children in her vehicle. He said that, as he and Detective Jeff Lovell were following Defendant back to her home on Evening Shade Drive in Dickson County, Defendant pulled over and appeared to have a panic attack. Officer Dorland recalled that he had to drive Defendant's SUV the rest of the way to her home. He testified that he stayed outside watching the remaining children as other investigators entered the home. Officer Dorland agreed that, after Detective Lovell looked at the scene inside Defendant's home, Detective Lovell told him that "some sort of latch had popped off the car seat and there was no reason to doubt what [Defendant] said[.]" He further agreed that, based upon what Defendant told him at the post office and her demeanor, he did not see anything that raised suspicion at that time.

Chris Liebergesell testified that, at the time of the incident, he worked as an investigator with the Department of Children's Services (DCS). He said that he was assigned to investigate the case for DCS after a social worker at Vanderbilt reported the victim had life-threatening injuries. Mr. Liebergesell testified that he contacted the WBPD and learned that Detective Lovell would be leading the police investigation. He said that he met Detective Lovell at Vanderbilt where he talked to the victim's parents, the victim's grandmother, and a doctor, who reiterated that the victim's injuries were life-threatening. Mr. Liebergesell said that he made several attempts to talk to the mother of the two other children in Defendant's care but that she said she "didn't want to get involved" and "didn't want her kids spoken with or anything."

Mr. Liebergesell testified that he went to Defendant's home on November 1, 2020, with Officer Dorland. He said Defendant reported that the bottom of the victim's car seat hit the floor first; she said that the victim was "partially buckled in" and that she had to remove him from the car seat after it hit the floor. Defendant told Mr. Liebergesell that the bottom of the car seat hit so hard that a metal piece fell off it. Mr. Liebergesell testified that Defendant twice told him that the bottom of the car seat hit the floor. She then told him that she "had her back turned" and "didn't really see how [the victim] hit[.]"

Mr. Liebergesell testified that he observed a childproof lock on the back door of the home, which Defendant claimed she had trouble unlocking on the day of the incident. He noted, however, that he watched Defendant open the door while holding her daughter in her arms and that she "didn't have any trouble opening it then."

Dr. Sean Donahue, an expert in pediatric ophthalmology, testified that he was a pediatric ophthalmologist and worked as the Chief of Pediatric Ophthalmology at Vanderbilt. He explained that he saw the victim on behalf of the hospital's ophthalmology service on November 2, 2020. Dr. Donahue explained:

> So if someone is concerned in the emergency department or neurosurgeons or the care team is concerned about child abuse, they will consult the ophthalmologist to look at the retina. And they need an attending ophthalmologist who is trained in this who can then interpret the results and make a statement.
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> And so I got involved just because I see all the consults. I happened to be on for that week. But also because of my role with the care team.
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> . . . .
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> So the ophthalmology house staff was consulted on [the victim] to evaluate him specifically to see if there were any hemorrhages in the retina that would be consistent with severe trauma. And they evaluated him. They looked at his eyes. They looked at the front of the eyes. They . . . saw significant hemorrhages throughout the entire back of the eye . . . . And then contacted me to really do the rest of the exam.

Dr. Donahue identified a retinal photograph taken during his examination of the victim; he explained that the photograph showed the victim's eye "was so full of blood and there was so much damage to the retina, that there were hemorrhages throughout the retina obscuring almost all of the retina." He continued, "But there's so much bleeding that's broken through the retina that's obscured the view from the rest of it. So this shows how

severe this trauma was and how extensive it is." Dr. Donahue explained that it was "much more difficult in a very young child for this to happen because the jelly inside of the eye is so thick and so firm that it really prevents the blood from coming forward." He continued, "But the fact that the blood came forward here tells us just how severe this trauma was." Dr. Donahue testified that both of the victim's eyes "looked nearly identical with the severity."

Dr. Donahue was shown another photograph of the victim's retina and testified:

> You'll get a little bit better view here. And the thing I'll call your attention to is this curvilinear shape that goes along there in the cord. What that is . . . the retina that has been so damaged that it's pulled up upon itself, almost as if it's a detachment. It's called a schisis cavity, or a fold, and those folds are also essentially seen only in babies like this with severe non-accidental trauma. And it's what's called a schisis cavity or a fixed fold.
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> . . . .
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> And then the fold is there because there was so much trauma moving the head back and forth that the retina got pulled together . . . and made this little form -- almost like a little tissue where it stuck together where it shouldn't be.

When asked what caused the folding, Dr. Donahue stated, "Essentially, in a baby who has no other history, there's only one cause and that's severe non-accidental trauma. This is one of the worst findings that we see, and it indicates the severity of the trauma." He affirmed that the victim's case was one of the worst he had seen over the course of his thirty years of experience.

Dr. Donahue explained that the victim suffered from hemorrhages in each of the different layers of the retina and commented, "[T]hat's really important, too, for child abuse." He testified:

> [T]he little babies when they get shaken back and forth . . . that whiplash injury within the eyes pulls the jellies of the eyes off of these blood vessels and then those blood vessels start to bleed. And that's why this is so distinctive for child abuse, for non-accidental trauma. Some people feel that there has to be some kind of impact as well. Used to be called shaken baby impact syndrome. Then it was called shaken baby syndrome. Now it's just called abusive head trauma.

But the impact syndrome was thought that after this shaking, that there was some kind of fast hit then against the wall or against a table or whatever it might be that then caused the last bit of rupture of those -- of those blood vessels.

The following exchange then occurred:

Q. For example, have you examined children that have fallen off of tables?

A. I have.

Q. And what do you see in those children?

A. They're fine.

Q. There're fine?

A. There's no hemorrhages.

Dr. Donahue continued:

Occasionally with CPR, you might see a couple of hemorrhages right in the center. After birth, after vaginal birth, sometimes you'll see some hemorrhages. They last for about a week, they last maybe two weeks if they're really severe, and they go away. But they don't obscure the retina, they don't cover the retinal vessels. They're only in the center of the retina. They're not way out to the side. These are multiple layers of the retina that go all the way out to the extent of the eye that the retina does and they're very, very, very specific for . . . severe non-accidental trauma.

When asked whether this type of injury would occur when a six-month-old in a car seat were to fall off a table, Dr. Donahue stated, "Not unless there was something systemically wrong with the child that would cause this. But that was looked at and ruled out distinctively. But never that type of injury." When asked what type of force and activity would be necessary to create the injuries he observed in the victim's eyes, Dr. Donahue responded:

It has to be massive amount of whiplash and shear to tear the jelly . . . inside of the eye away from the blood vessels that are carrying that blood that I

> showed you. And then they bleed and that's where the blood is coming from, okay.
>
> But it has to be enough back and forth to really create that much shear. And then oftentimes combined with impact. You can't tell whether it's impacted in every situation, especially if there's not head fractures there associated with it, but usually in a rapid deceleration. So there's an acceleration/deceleration, acceleration/deceleration, back and forth, and then eventually oftentimes an impact.

Dr. Donahue said that his findings were "not consistent with the reported history" and that "the only tenable diagnosis for this set of findings is severe non-accidental trauma."

Dr. Donahue then testified about an article entitled, "Abusive Head Trauma, Shaken Baby Syndrome." He explained that the article contained a policy statement about shaken baby syndrome and abusive head trauma from the American Academy of Ophthalmology, a membership organization of thousands of ophthalmologists, which read in relevant part:

> The involved caregiver may relate an episode of relatively minor trauma occurred, such as a short fall. However, the diagnosis can still be made with confidence on the basis of characteristic clinical findings in the absence of a valid history or of an identified pathologic process that could present with similar signs and symptoms, such as a metabolic disease or clotting disorder.
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> . . . .
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> Preretinal hemorrhages, intraretinal hemorrhages, and subretinal hemorrhages can be seen from shaken baby. Hemorrhages tend to be concentrated to the posterior pole that are often so extensive they can occupy nearly the entire fundus.
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> . . . .
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> Full thickness perimacular folds . . . of a retina, typically with a circumferential orientation, created a crater-like appearance and are . . . highly characteristic of a shaken injury to the retina, . . . splitting of the macula above the retina. Traumatic retina schisis . . . creates partially blood filled categories, usually in the macula. Although similar findings have been reported rarely in fatal crash injuries, an 11-meter fall, and fatal motor vehicle accidents, such histories are readily apparent and would allow rapid identification.

Dr. Donahue concluded, "You're not hearing this from me. You're hearing me tell you and teach you the same thing that all of us are teaching in pediatric ophthalmology. These findings are caused by severe non-accidental trauma."

On cross-examination, Dr. Donahue agreed that infants can be injured from low falls but stated that "the retinal hemorrhages that have been described in low falls, if they happen at all, are very small, they're confined to areas in the center of the retina or near the optic nerve, and they do not extend to the aura."

Dr. Heather Williams, an expert in pediatric medicine and pediatric child abuse, testified that she was the medical director for the child maltreatment team at WakeMed Children's Hospital in Raleigh, North Carolina. Dr. Williams stated that she was previously employed as an Assistant Professor of Clinical Pediatrics at Vanderbilt, where she was a member of the "care team," which is "a group of medical providers who get consulted when a child presents to the hospital that other doctors or medical providers are concerned was the victim of child maltreatment of some sort[.]"

Dr. Williams testified that she received a call to consult on the victim's case after he was seen at Vanderbilt's emergency department, where he was already in critical condition. She said that she examined the victim and photographed any observable injuries. She testified that, based upon the victim's prior medical records and history, he had no known illnesses or diseases that would have contributed to his injuries.

Dr. Williams identified a photograph she took of the victim's right leg that showed a bruise close to his hip on the front of his thigh. In another photograph, Dr. Williams identified a bruise on the "right lateral side chest wall in . . . the armpit or axilla area." Dr. Williams explained that, "when there's a bruise on a baby who is not independently mobile, it's concerning and more history needs to be obtained to figure out why that baby has a bruise." She noted that the locations of the bruises she found on the victim were areas that were typically protected from accidental injury.

Dr. Williams testified that the victim had a large occipital skull fracture and suffered "severe diffuse cerebral swelling." She explained that because of the swelling to the victim's brain, it "herniated through the hole . . . that your brain stem goes through and made it so that he wasn't able to breathe or live on his own." Dr. Williams recounted that the victim additionally had extensive, bilateral retinal hemorrhages and suffered subdural hemorrhages, or "bleeding in a layer between the skull and the brain."

Dr. Williams stated:

> So when I get consulted on kids falling off of tables that are strapped into the devices and they land on their head and they have a skull fracture, it's normally the parietal bone with a small little bleed underneath and some scalp swelling, if they're going to have anything.
>
> The vast majority of kids don't have anything, not even a skull fracture. But if they do, it's typically a parietal bone. So it's rare for it to be an occipital bone fracture, and certainly rarer for them to die from it.

She testified that there was "no other way to explain an occipital skull fracture other than blunt impact to the back of the head." She explained that, when there is an accidental occipital fracture, "there's typically a more complex nature to it, a higher energy to it, some of the dynamics of the fall or the injury that led to the back of the head striking the ground hard enough to cause a fracture in it." She recalled two prior cases in which caregivers had confessed to "slamming the child's head into a hard object," thereby causing an occipital bone fracture.

Dr. Williams stated that most of the time "these simple falls don't result in any actual sort of injury to the brain itself." She stated that "what you don't see and what is not documented in the literature is from a simple fall, even with a device connected to the child, that you get diffuse accidental injury and cerebral or cerebella swelling that results in death."

Dr. Williams testified that, when there is an acceleration/deceleration injury, "the head is moving and stops. You can think of the head -- the skull as a car and the brain is an unrestrained passenger in it. So the skull stops, the brain keeps going." She explained that this action "tears the veins, that causes the bleeding in the subdural space that also causes the brain to shear, the actual brain itself gets injured from that acceleration and deceleration." She said that an impact to the back of the head was "one way that you can get acceleration/deceleration injuries." Regarding the constellation of injuries found in the victim, Dr. Williams stated that it had been documented in medical literature that crush injuries caused by something very heavy falling on a child's head can cause something like the victim's injuries, as well as "multi[-]turn . . . rollover car crashes" and "[r]eally large falls[.]"

Dr. Williams stated that the victim's parents reported that the victim had a large bruise on his left cheek two to three weeks before, which occurred at Defendant's home. They said that Defendant claimed the bruise was from Defendant's daughter striking the victim in the face with a toy. Dr. Williams read her conclusions from her report, stating;

> In summary, [the victim's] constellation of symptoms, including life-threatening intracranial injuries, extensive retinal hemorrhages, and occipital skull fracture, bruising overlying multiple planes of the body in a nonmobile infant, including areas typically protected from accidental bruising, with a report of prior bruising to the [victim's] cheek and the absence of . . . accidental mechanisms of injury provided that could explain these injuries, and no underlying medical condition that could contribute to [the victim's] injuries, it is most consistent with child physical abuse, including [abusive] head trauma.

On cross-examination, Dr. Williams testified that she consulted on "a lot of kids falling off tables . . . with multiple devices" but that she never saw shearing injuries to the patient's brain like that suffered by the victim. She continued, "And I was not provided a history that was substantial enough to cause the shearing forces that would have caused the injuries to [the victim's] brain, nor was I given an injury of any sort of impact to the back of the head."

Dr. Emily Dennison, a forensic pathologist employed as a medical examiner in Davidson County, testified that she performed the victim's autopsy and that she did not find any natural disease contributing to the victim's death. Dr. Dennison said that, in her external examination of the victim, she observed some bruising "randomly across his torso" and "to his extremities." She further said that he had "some red discoloration" across the "whole back of his head."

Dr. Dennison testified that the victim had a large hemorrhage across the back of his scalp and a large, linear skull fracture across the occipital bone, which Dr. Dennison explained was located at the back of the skull. She testified that the occipital bone fracture was ten centimeters long. Dr. Dennison testified that the victim's brain was extremely swollen and that there was some herniation of the victim's brain due to the swelling. She further testified that he had a subdural hemorrhage that extended across both sides of the brain. She said that she found blood surrounding the victim's spinal cord but explained that this finding did not necessarily mean there was trauma to the spinal cord specifically; she opined that it was not unusual "to see blood all the way down the spinal cord in babies who have trauma or bleeding in their brains." Dr. Dennison additionally stated that the victim had optic nerve sheath hemorrhages and retinal hemorrhages at the back of both eyes. Dr. Dennison testified that the victim had retinal hemorrhages that were "not confined to the back of the eye." She said that the hemorrhages were in both eyes and "all the way out to the periphery and they were in multiple areas."

Dr. Dennison stated that Defendant's story—that the victim suffered a "short fall face forward in a car seat"—did not explain how the victim had an impact site and skull

fracture across the back of his head. She said that the story also did not "account for detached retinas, which are associated with severe, typically inflicted, blunt trauma of the head." Dr. Dennison testified that the victim's cause of death was blunt head trauma and that the manner of death was homicide.

Detective Jeff Lovell testified that he was employed by the Dickson County Sheriff's Office (DCSO) and that he also worked part-time with the WBPD. Detective Lovell stated that on October 30, 2020, he was working for the DCSO when he was dispatched to the post office in White Bluff. When he arrived, Chief Deal and Officer Dorland were already on scene, as well as Defendant and the children in her care. Detective Lovell testified that, upon observing the victim, he did not notice any exterior injuries. He stated that "most of the time they are accidents" and that, initially, he did not see anything to cause him to doubt Defendant's story about what happened.

Detective Lovell said that he followed Defendant and Officer Dorland to Defendant's home on Evening Shade Drive. He recalled that, on the way, Defendant appeared to have a panic attack and stopped her SUV in the roadway. He said that Officer Dorland parked his vehicle and drove Defendant's SUV the remainder of the way to her home.

Detective Lovell testified that, once inside Defendant's home, he began photographing the scene; he also had Defendant "kind of explain to [him] how things happened." He testified:

> Initially, she said that she . . . was reaching for the door and accidentally knocked [the car seat] off the table. She said [the victim] fell face forward and then rolled over to his left side. She actually took the seat and . . . showed me, kind of re-enacted it.

Detective Lovell testified that Defendant reported the other children were in the SUV but that she and the victim were still inside the home. Defendant said that the back door was locked when she went to take the victim out to the vehicle, that she sat the victim's car seat down because she had trouble getting her finger in the childproof lock on the back door "to get the thing to turn[,]" and that this was when she knocked the car seat off the table. Detective Lovell testified, however, that he observed Defendant's exiting the back door of the home while he was there. He stated, "When she was going out the door, she had a child in one arm, a bag in the other, and she opened the door." He said that the door had the same childproof mechanism on it and that Defendant did not appear to have any trouble opening the door.

Detective Lovell identified a photograph of the victim's car seat, which was on the floor of the kitchen about two and a half to three feet from the kitchen table. He noted that a pacifier was still inside the car seat. He next identified a photograph of the back of the car seat. He said that he inspected the car seat to see if it was broken or damaged in any way. He testified, "I noticed that . . . there's a little metal clip on the back that had come off, but I did not notice any damage to it or anything. The clip just goes right back on." Detective Lovell recalled that the metal clip was sitting on the kitchen counter when he began taking photographs.

On cross-examination, Detective Lovell testified that he measured the height of Defendant's kitchen table and that it was thirty inches high. He said that, when Defendant reenacted what had happened, she said the car seat "was on the table facing, like, toward the stove . . . . She went to unlock the door, knocked it off, and the car seat fell face-first and then rolled over on its left side."

On redirect examination, Detective Lovell explained that Defendant also said the car seat "hit on the bottom and flipped over." He noted, however, that she then told Mr. Liebergesell that "she didn't see it, that she had her back to it." He testified that Defendant had given three different statements by that time. He stated that the case was the first he had ever investigated where there was a fatality from a reportedly "low fall."

Defense Proof

Dr. Stephen Nelson, an expert in pediatric neurology, testified that he was a pediatric neurologist and was currently employed at both Ochsner Medical Center and Tulane University School of Medicine. Dr. Nelson said that he was consulted on the victim's death by the defense. He said that, before preparing his report, he reviewed the victim's medical records from Vanderbilt, a report prepared by Dr. Donahue, the autopsy conducted by Dr. Dennison, and a report from forensic pathologist Dr. Paul Uribe.

Dr. Nelson testified that he disagreed with Dr. Donahue's finding that the only explanation for the victim's extensive retinal hemorrhaging was abusive head trauma. He agreed that significant retinal hemorrhages were associated with severe head injury but said that he had seen severe retinal hemorrhages in both accidental and non-accidental situations. Dr. Nelson additionally said that there were several published case studies where children suffered "either severe intracranial injuries or even passed away" from a "short fall." He stated that "what causes retinal hemorrhages and severe intracranial injury is rotational force, and rotational force is the head being moved in a turning position as it is struck. And so, certainly, you can get that from accidental and non-accidental causes." Dr. Nelson opined that, "given the story about how [the victim] fell, I think that that's . . . a reasonable explanation" for the victim's injuries and ultimate death.

Dr. Nelson testified that he was familiar with an article written by Dr. John Plunkett for *The American Journal of Forensic Medicine and Pathology*, documenting nineteen child deaths from "small falls." He stated that some of the cases referenced by Dr. Plunkett had "all the triad of symptoms" found in the victim.

Dr. Nelson also testified about a study in the *Forensic Science Journal* of "a fatal acute intracranial injury, subdural hematoma, and retinal hemorrhages caused by a stairwell fall on carpet[.]" Reading from the study, Dr. Nelson stated:

> These published reports of original data are disconcordant and controversial making the correct classification of a young child's death following a reported short fall a diagnostic challenge. Most childhood stairway and low level falls do not cause serious head injuries. Nevertheless, not all seemingly minor falls are minor. This case reports -- this case report refutes a pervasive belief that childhood low height falls are invariably trivial events and cannot cause subdural bleeding, fatal intracranial injuries, and extensive multilayered retinal hematomas.

Based upon these articles, Dr. Nelson disagreed with Dr. Donahue's testimony that a patient can only get multilayer retinal hematomas from abusive head trauma.

On cross-examination, Dr. Nelson agreed that child abuse is a significant concern in children with the victim's injuries, stating, "[I]n fact, I would probably say it's more common than an accidental injury." He said that he did not disagree with Dr. Donahue's findings that the victim had severe retinal hemorrhages. He further said that he concurred with Dr. Williams' findings that the victim suffered a severe head injury that led to his death but stated that he did not think there was enough information to say that the injuries were caused by abusive head trauma. Dr. Nelson also testified that, although he agreed that the victim suffered injuries caused by blunt force head trauma, he disagreed with Dr. Dennison's conclusion that the victim's manner of death was homicide.

Dr. Nelson was then asked to read the "professional opinions" listed in the report Dr. Nelson prepared for the defense. Reading from his report, Dr. Nelson said, "Professional opinions. One, skull fractures, extracranial, intracranial hemorrhages, and hemorrhages around the spine all can occur with any type of traumatic brain injury. And two, cerebella edema . . . can also occur from [traumatic brain injury] resulting in retinal hemorrhages, clinical decomposition, and ultimately death."

Dr. Paul Uribe testified as an expert in forensic pathology. Dr. Uribe stated that he was employed at the Fort Bend County Medical Examiner's Office in Rosenberg, Texas.

He said that he reviewed Dr. Dennison's autopsy report, the photographs taken by Dr. Dennison during the victim's autopsy, and the victim's medical records from Vanderbilt.

Dr. Uribe said that he agreed with Dr. Dennison's autopsy findings, explaining "I don't think there was anything wrong with the way the autopsy was performed"; he said, however, that he disagreed with the conclusions drawn from the findings. Specifically, Dr. Uribe testified that he disagreed with the manner of death classification as homicide. Dr. Uribe explained:

> I do not believe accident can be ruled out in this case. I would like to see an explanation as to why Dr. Dennison . . . leapt toward the determination that this was a homicide and that an accidental fall from a countertop would not explain or could not possibly explain these head injuries.

He said that a conclusion of inflicted head trauma could be "very hard to make . . . because you are trying to get as much information as you can regarding it, and sometimes you look for additional things." He continued:

> Like, does the story change? Are there . . . other injuries that can really only be explained by abuse?
>
> One of the things that I look for, in particular, is something referred to as . . . battered child syndrome, which, to me, constitutes multiple different injuries in multiple different locations over multiple periods of time. Because you can explain -- you can explain a bruise at any given time. It's like it's a bruise. They, you know, got hit by something or, you know, bumped into something and they developed a bruise. Okay.
>
> But it's much harder to explain different bruises of different ages over different areas of the body. That's . . . harder to explain. And we look for different patterns like that to try and make that . . . distinction of, hey, is this, indeed, inflicted trauma, is this child abuse, or can it be explained with the facts that we have[.]

Dr. Nelson testified that, based upon the information he had, he would have classified the victim's manner of death as "undetermined." Dr. Nelson also testified that he was aware of Dr. Plunkett's article about fatal pediatric head injuries caused by short distance falls, and he agreed that the constellation of injuries documented in some of the cases in the article matched the victim's injuries.

On cross-examination, Dr. Nelson acknowledged that he was not provided with any investigative findings and police reports relating to the victim's death. He agreed that those reports were important and should have been provided to him for review. Dr. Nelson agreed that, when he conducted autopsies in Texas, he always met with law enforcement and reviewed their investigative findings. He agreed that, before providing his opinion in this case, he did not review any histologic slides from the autopsy; investigative documents other than the summary of the case; photographs of the car seat or the scene; antemortem or postmortem radiographic images; assessments of the physical conditions of the children in the house; and medical records of other children in the house.

Voir Dire of Dr. Powell

The defense also tendered Dr. Douglas Powell as an expert in the field of biomechanics. During voir dire, Dr. Powell testified that he was employed as a biomechanist at YA Engineering and that he was an associate professor at the University of Memphis. He defined biomechanics as the study of the application of physics to living organisms. Dr. Powell explained that he had a Ph.D. in biomechanics in sports medicine and a master's degree in biomechanics and that he would "soon finish a master's degree in biomechanical engineering." Dr. Powell testified that he had a certificate from the Society for Automotive Engineers but confirmed that he was not accredited by the Accreditation Commission for Traffic Accident Reconstruction, which he acknowledged was "the highest credential . . . that one could achieve and . . . internationally recognized as that." He said that he had published articles in peer-reviewed literature but acknowledged that he had not published anything relating to the study of impacts on the skull. Dr. Powell said that he had previously testified as an expert in Tennessee.

On cross-examination, Dr. Powell agreed that he was not a medical doctor or a professional engineer. He acknowledged that he had no research experience with retinas, hemorrhages, retinal hemorrhages, subdural hematoma, or occipital bones and that he had published no peer-reviewed papers on occipital bone fractures, hematomas, or retinal hemorrhaging. Dr. Powell also agreed that he had no research experience with "traumatic brain injury caused by force impact causing an occipital fracture and subdural hemorrhages and retinal detachments." He agreed that he was not an expert in retinal hemorrhaging, occipital bone fractures, or subdural hematomas. Dr. Powell explained that his "research [was] focused on the influence and impact on concussion and the secondary components of that." He agreed that the "vast majority" of the publications listed in his curriculum vitae dealt with "sports-related matters for walking, running, jumping, female breast movement in sports bras during sports, and Parkinson's." Dr. Powell's curriculum vitae represented that he was permitted to present expert testimony in a case in Maryland, but he acknowledged that this was inaccurate as his testimony was excluded in that case after the court found he was not qualified.

Dr. Powell agreed that his report concluded the victim's mechanism of injury was a "vertical fall of the infant onto the surface floor while partially strapped into a Graco 35 seat[.]" He acknowledged, however, that the "duration of impact" figure used to support that conclusion was not measured but was rather "based on research literature of infant falls . . . or testing associated with infant falls, specifically falls of a head onto concrete." Dr. Powell agreed that the duration of impact is a major component of the formula he used to opine about the force of impact involved with the victim's alleged fall. He admitted that no one knows the duration of impact involved with the victim's alleged fall.

Dr. Powell testified that, for this case, he had conducted a simulated fall of an anthropometric testing device and that he used this testing to support his conclusions about the mechanism of the victim's injuries. He admitted that he did not record, or provide the State with a recording, of the reconstruction and that he provided the State with no data from the motion capture system he used in the reconstruction. Additionally, he admitted that he did not include or account for a car seat in the simulated fall of the anthropometric testing device used to support his conclusions about the mechanism of the victim's injuries.

Dr. Powell also acknowledged that the study he referenced to make a conclusion about the mechanism of the victim's occipital bone fracture concerned fractures in the parietal bone. He admitted this was a "significant error"; he also agreed that he "mis-cited" that study, which concerned the use of piglet brains. Dr. Powell further acknowledged that, in his reconstruction, he recreated the worst-case scenario of head-first contact despite knowing that the victim was supposedly in a car seat at the time he contacted the floor. He agreed that he had not studied "the impact within a car seat."

When the trial court asked Dr. Powell how many times he had been disqualified as an expert in a legal proceeding, he responded, "It seems the prosecutor would have a better count than I would, actually."

Following this testimony, the trial court excluded Dr. Powell's testimony. After citing and reading aloud Rule 702 of the Tennessee Rules of Evidence, the trial court said, "[T]here's a lot of things during this voir dire that has caused the [c]ourt much concern. You know, obviously, to say that this whole report with all the mistakes was sloppily done is an understatement, in the [c]ourt's mind." The court also expressed concern that "[t]he State did not get the requested information from Dr. Powell." Expressing doubt about Dr. Powell's overall reliability, the trial court said, "He's been qualified two times as an expert in Tennessee and Kentucky and doesn't know the exact number of disqualifications. He wants me to ask the prosecutor the number. It's mind boggling."

The trial court concluded:

> The mistakes are significant in the report and, in the [c]ourt's mind, it's not going to substantially assist the trier of fact. In fact, the [c]ourt will even go as far to say that the probative value of this testimony is substantially outweighed under 403 by the danger of confusion of the issues misleading the jury. It's just not . . . going to be good for this trial for it to be heard, and the [c]ourt just feels like and believes that it's not going to assist the jury whatsoever.
>
> And, of course, the rule is actually substantially assist. And I don't even believe it would assist the jury. So the [c]ourt is going to disallow the expert.

Offer of Proof

The trial court then allowed the defense to make an offer of proof, during which Dr. Powell testified that he was an associate professor in the field of biomechanics at the University of Memphis where his focus was on "sports performance [and] sport-related injury." He stated that he also worked at an engineering firm where he performed "forensic biomechanical analyses of . . . accidents, slips, trips, falls, [and] motor vehicle accidents." He testified that he reviewed materials from this case and "did some calculations involving the forces involved in the fall" of the victim. Dr. Powell used a "standard 30-inch calculation" for the height of the table the victim allegedly fell from and used the victim's medical records to derive that he weighed about 16 pounds. Based upon his calculations using that data, Dr. Powell concluded that the victim "would have struck the floor at approximately 8.6 miles per hour. And if that force or energy was dissipated over 15 milliseconds, the force of impact would have been approximately 421 pounds." Dr. Powell stated that he derived the 15-millisecond figure "from the literature" involving a "simulation study." He said that "approximately 63 pounds of force would be sufficient to generate a fracture of any nature in the occiput of an infant . . . about 58 percent of the time."

Dr. Powell acknowledged he did not know the mass of the car seat involved in the victim's alleged fall from the table. He further testified, "[G]iven that we don't know the true status of the configuration of the [car seat] latch, we don't know the rotational velocities of the car seat, it's very difficult to identify what the exact kinematics of the occupant or movement patterns of the occupant would be." Nonetheless, he concluded, "It is possible that the child moved enough within the car seat to get to a position where the occiput could strike certain components of the car seat that would create a linear fracture . . . ." Dr. Powell further testified that it was "plausible that the table was bumped resulting in a rotation and a fall leading to injury and that fall would have had sufficient energy to create [the victim's] injury." Dr. Powell acknowledged that none of his testimony about

"the car seat, roll dynamics, the buckling, the strapping, . . . was in the report that was provided to [the prosecution]."

Verdict, Sentencing, and Appeal

Following deliberations, the jury convicted Defendant as charged, and the trial court sentenced Defendant to life for first-degree felony murder. At a subsequent sentencing hearing, the trial court sentenced Defendant to fifteen years for aggravated child abuse and ordered that the conviction merge with Defendant's conviction for first-degree felony murder.[1]

Thereafter, Defendant filed a timely motion for new trial and amended motion for new trial. Following a hearing, the trial court entered a written order denying relief. This timely appeal follows.

II. Analysis

A. Sufficiency of the Evidence

Defendant contends that the evidence is insufficient to support her conviction for aggravated child abuse, arguing that, "[o]ther than the State's witnesses drawing conclusions from the nature of the injuries, there is absolutely no proof, either direct or circumstantial, that . . . Defendant acted knowingly." Defendant contends further that because the proof cannot sustain a conviction for aggravated child abuse, the evidence is also insufficient to support her conviction for first-degree felony murder committed in the perpetration of aggravated child abuse.

The State responds that the evidence is sufficient to support Defendant's convictions for aggravated child abuse and first-degree felony murder, asserting that "[p]owerful medical proof supported the jury's rational conclusion that [Defendant] acted knowingly by treating [the victim] in a manner that inflicted serious bodily injury causing his death."

Our standard of review for a sufficiency of the evidence challenge is "whether, after viewing the evidence in the light most favorable to the prosecution, *any* rational trier of fact could have found the essential elements of the crime beyond a reasonable doubt." *Jackson v. Virginia*, 443 U.S. 307, 319 (1979) (emphasis in original); *see also* Tenn. R. App. P. 13(e). Questions of fact, the credibility of witnesses, and the weight of the evidence

[1] Because the State has raised no issue relating to the trial court's merger of Defendant's aggravated child abuse conviction into her conviction for first-degree felony murder, we express no opinion regarding the substantive propriety of the merger. *See e.g., State v. Berry*, 503 S.W.3d 360 n.2 (Tenn. 2015).

are resolved by the fact finder. *State v. Bland*, 958 S.W.2d 651, 659 (Tenn. 1997). This court will not reweigh the evidence. *Id.* Our standard of review "is the same whether the conviction is based upon direct or circumstantial evidence." *State v. Dorantes*, 331 S.W.3d 370, 379 (Tenn. 2011) (quoting *State v. Hanson*, 279 S.W.3d 265, 275 (Tenn. 2009)) (internal quotation marks omitted). Accordingly, the evidence need not exclude every other reasonable hypothesis except that of the defendant's guilt, provided the defendant's guilt is established beyond a reasonable doubt. *Id*. at 381.

A guilty verdict removes the presumption of innocence, replacing it with a presumption of guilt. *Bland*, 958 S.W.2d at 659; *State v. Tuggle*, 639 S.W.2d 913, 914 (Tenn. 1982). The defendant bears the burden of proving why the evidence was insufficient to support the conviction. *Bland*, 958 S.W.2d at 659; *Tuggle*, 639 S.W.2d at 914. On appeal, the "State must be afforded the strongest legitimate view of the evidence and all reasonable inferences that may be drawn therefrom." *State v. Vasques*, 221 S.W.3d 514, 521 (Tenn. 2007).

As relevant here, first-degree felony murder is the "killing of another committed in the perpetration of or attempt to perpetrate any . . . aggravated child abuse[.]" Tenn. Code Ann. § 39-13-202(a)(2) (2020). A conviction for felony murder requires no culpable mental state "except the intent to commit the enumerated offenses or acts." Tenn. Code Ann. § 39-13-202(b) (2020).

A person commits aggravated child abuse when he/she commits child abuse and "[t]he act of abuse . . . results in serious bodily injury to the child[.]" Tenn. Code Ann. § 39-15-402(a)(1) (2020). A person commits child abuse when he/she "knowingly, other than by accidental means, treats a child under eighteen (18) years of age in such a manner as to inflict injury[.]" Tenn. Code Ann. § 39-15-401(a) (2020). Aggravated child abuse is a nature-of-conduct offense. *Dorantes*, 331 S.W.3d at 386. "[A] person acts knowingly with respect to the conduct or to circumstances surrounding the conduct when the person is aware of the nature of the conduct or that the circumstances exist." Tenn. Code Ann. § 39-11-106(a)(22) (2020). The jury may infer a defendant's mental state from "the character of the assault, the nature of the act and from all the circumstances of the case in evidence." *State v. Davis*, 466 S.W.3d 49, 69 (Tenn. 2015) (quoting *State v. Inlow*, 52 S.W.3d 101, 105 (Tenn. Crim. App. 2000).

Bodily injury includes "a cut, abrasion, bruise, burn or disfigurement, and physical pain or temporary illness or impairment of the function of a bodily member, organ, or mental faculty[.]" Tenn. Code Ann. § 39-11-106(a)(3) (2020). At the time of the offense, "serious bodily injury" was defined as bodily injury that involved: a substantial risk of death; protracted unconsciousness; extreme physical pain; protracted or obvious disfigurement; protracted loss or substantial impairment of a function of a bodily member,

organ or mental faculty; or a broken bone of a child who is twelve years of age or less. Tenn. Code Ann. § 39-11-106(a)(36)(A)-(F) (2020).

When viewed in the light most favorable to the State, the evidence established that Defendant knowingly treated the six-month-old victim in such a manner as to inflict serious bodily injury and that the victim died as a result of that injury. The victim was healthy and uninjured when his mother dropped him off at Defendant's home on the morning of October 30, 2020. The victim was in the sole care of Defendant when, later that day, he sustained injuries caused by severe non-accidental trauma. Specifically, he suffered a ten-centimeter-long occipital skull fracture, subdural hemorrhages, severe bilateral retinal hemorrhages, and "severe diffuse cerebral swelling"; the cerebral swelling ultimately caused the victim's brain to herniate "through the hole . . . that [the] brain stem goes through and made it so that he wasn't able to breathe or live on his own[.]" Additionally, Defendant provided inconsistent statements about the cause of the victim's injuries. She first told Detective Lovell that the victim "fell face forward and then rolled over to his left side." During a later DCS interview, however, she changed her story, claiming that "the bottom of the car seat hit the floor first" and "then it flipped over." Then, in a third version, Defendant said that her back was turned and that she "didn't really see how [the victim] hit."

Drs. Donahue, Williams, and Dennison testified extensively as to how the victim's constellation of injuries was not consistent with Defendant's explanation of what happened and why they concluded the victim's injuries were non-accidental. Dr. Donahue testified that the victim's eyes were "so full of blood and there was so much damage to the retina, that there were hemorrhages throughout the retina obscuring almost all of the retina." Dr. Donahue explained that it was "much more difficult in a very young child for this to happen because the jelly inside of the eye is so thick and so firm that it really prevents the blood from coming forward." He continued, "But the fact that the blood came forward here tells us just how severe this trauma was." Dr. Donahue further testified about the schisis cavity or fixed fold seen in the victim's eyes, explaining that "the retina . . . has been so damaged that it's pulled up upon itself, almost as if it's a detachment." When asked what caused the folding, Dr. Donahue stated, "Essentially, in a baby who has no other history, there's only one cause and that's severe non-accidental trauma. This is one of the worst findings that we see[.]" Additionally, Dr. Donahue explained that the victim suffered from hemorrhages in each of the different layers of the retina and commented, "[T]hat's really important, too, for child abuse." He testified:

> [T]he little babies when they get shaken back and forth . . . that whiplash injury within the eyes pulls the jellies of the eyes off of these blood vessels and then those blood vessels start to bleed. And that's why this is so distinctive for child abuse, for non-accidental trauma.

Dr. Donahue said that his findings were not consistent with a six-month-old in a car seat falling off a table as reported by Defendant and that "the only tenable diagnosis for this set of findings is severe non-accidental trauma." He testified that, "[a]lthough similar findings have been reported rarely in fatal crash injuries, an 11-meter fall, and fatal motor vehicle accidents, such histories are readily apparent and would allow rapid identification." While Dr. Donahue agreed that infants can be injured from low falls, he stated that "the retinal hemorrhages that have been described in low falls, if they happen at all, are very small, they're confined to areas in the center of the retina or near the optic nerve, and they do not extend to the aura."

Dr. Williams testified that there was no way to explain an occipital skull fracture "other than blunt impact to the back of the head." She explained that this action "tears the veins, that causes the bleeding in the subdural space that also causes the brain to shear, the actual brain itself gets injured from that acceleration and deceleration." Dr. Williams, likewise, confirmed that the victim's injuries were inconsistent with falling off a table. She explained that it had been documented in medical literature that crush injuries caused by something very heavy falling on a child's head can cause something like the victim's injuries, as well as "multi[-]turn . . . rollover car crashes" and "[r]eally large falls[.]" Dr. Williams concluded that

> [the victim's] constellation of symptoms, including life-threatening intracranial injuries, extensive retinal hemorrhages, and occipital skull fracture, bruising overlying multiple planes of the body in a nonmobile infant, including areas typically protected from accidental bruising, with a report of prior bruising to the [victim's] cheek and the absence of . . . accidental mechanisms of injury provided that could explain these injuries, and no underlying medical condition that could contribute to [the victim's] injuries, it is most consistent with child physical abuse, including [abusive] head trauma.

Finally, Dr. Dennison certified the victim's cause of death as blunt head trauma and his manner of death as homicide. She testified that Defendant's story—that the victim suffered a "short fall face forward in a car seat"—did not explain how the victim had an impact site and skull fracture across the back of his head. She said that the story also did not "account for detached retinas, which are associated with severe, typically inflicted, blunt trauma of the head."

Although Defendant's experts, Drs. Nelson and Uribe, disagreed with the testimony from the State's expert witnesses that the only explanation for the victim's extensive retinal hemorrhaging was abusive head trauma and could not rule out an accidental cause of the victim's injuries, Dr. Uribe agreed that, before providing his opinion, he did not review

any histologic slides from the victim's autopsy; investigative documents other than the summary of the case; photographs of the car seat or the scene; antemortem or postmortem radiographic images; assessments of the physical conditions of the children in the house; and medical records of other children in the house. From his testimony, it appears Dr. Uribe was unaware that Defendant's story of how the victim sustained the injuries changed several times.

In any event, the record reflects that the trial court properly instructed the jury pursuant to Tennessee Pattern Criminal Jury Instruction 42.02, on how to receive and consider expert testimony. A rational trier of fact could have accredited the testimony of Drs. Donahue, Williams, and Dennison, and we will not disturb the jury's conclusion in this regard. *See State v. Flake*, 88 S.W.3d 540, 554 (Tenn. 2002) ("The weight and value to be given expert testimony is a question for the jury."); *accord State v. Flake*, 114 S.W.3d 487, 507 (Tenn. 2003) ("While a jury may not arbitrarily ignore evidence, a jury is not bound to accept the testimony of experts where the evidence is contested.").

Here, the expertly identified mechanisms of the victim's extensive injuries—"rapid shaking back and forth" and "slamming the child's head into a hard object"—certainly support a rational juror inference that Defendant was aware her conduct was reasonably certain to cause serious bodily injury. Therefore, we conclude that the evidence fully supports Defendant's convictions for aggravated child abuse and first-degree felony murder committed in the perpetration of aggravated child abuse. This issue is without merit.

B. Exclusion of Dr. Powell's Testimony

1. Rule 702

Defendant argues that the trial court abused its discretion by excluding Dr. Powell's proposed expert testimony on biomechanics. She asserts that "the fact in issue [was] how the child received the injuries" and that, "as evidenced in his offer of proof," Dr. Powell would "certainly [have] assist[ed] the jury on this fundamental issue."

The State responds that the trial court acted well within its broad discretion by excluding Dr. Powell's testimony under the standards of Tennessee Rules of Evidence 702 and 703.

A trial court's decision regarding the "admissibility, qualifications, relevancy and competency of expert testimony" is subject to review under an abuse of discretion standard. *State v. Watkins*, 648 S.W.3d 235, 260 (Tenn. Crim. App. 2021) (quoting *McDaniel v. CSX Transp., Inc.*, 955 S.W.2d 257, 263 (Tenn. 1997)). "[A]n abuse of discretion occurs when

a court strays beyond the applicable legal standards or when it fails to properly consider the factors customarily used to guide the particular discretionary decision." *State v. McCaleb*, 582 S.W.3d 179, 186 (Tenn. 2019) (citation and internal quotation marks omitted). "A court abuses its discretion when it causes an injustice to the party challenging the decision by (1) applying an incorrect legal standard, (2) reaching an illogical or unreasonable decision, or (3) basing its decision on a clearly erroneous assessment of the evidence." *Moore v. Lee*, 644 S.W.3d 59, 63 (Tenn. 2022) (citation and internal quotation marks omitted).

The admissibility of expert testimony is governed by Rules 702 and 703 of the Tennessee Rules of Evidence. Rule 702 addresses the need for expert testimony and the qualifications of the expert: "If scientific, technical, or other specialized knowledge will substantially assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise." Tenn. R. Evid. 702. Rule 703 provides, however, that "[t]he court shall disallow testimony in the form of an opinion or inference if the underlying facts or data indicate lack of trustworthiness." Tenn. R. Evid. R. 703.

In *State v. Scott*, 275 S.W.3d 395 (Tenn. 2009), our supreme court further defined the role of the trial court in assessing the propriety of expert testimony, stating:

> Trial courts act as gatekeepers when it comes to the admissibility of expert testimony. Their role is to ensure that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field. A court must assure itself that the expert's opinions are based on relevant scientific methods, processes, and data, and not upon an expert's mere speculation. The court's reliability analysis has four general inter-related components: (1) qualifications assessment, (2) analytical cohesion, (3) methodological reliability, and (4) foundational reliability.

Id. at 401-02 (internal citations and quotation marks omitted).

Turning to the facts in this case, we cannot conclude that the trial court abused its discretion by excluding Dr. Powell's proposed expert testimony. In exercising its role as gatekeeper, the trial court found that Dr. Powell's testimony would not substantially assist the jury, highlighting its concerns with the reliability of Dr. Powell's testimony. *See* Tenn. R. Evid. 702, 703. The court stated, "[T]here's a lot of things during this voir dire that has caused the [c]ourt much concern. You know, obviously, to say that this whole report with

all the mistakes was sloppily done is an understatement[.]" Expressing further doubt about Dr. Powell's overall reliability, the trial court said, "He's been qualified two times as an expert in Tennessee and Kentucky and doesn't know the exact number of disqualifications. He wants me to ask the prosecutor the number. It's mind boggling." The trial court concluded:

> The mistakes are significant in the report and, in the [c]ourt's mind, it's not going to substantially assist the trier of fact. In fact, the [c]ourt will even go as far to say that the probative value of this testimony is substantially outweighed under 403 by the danger of confusion of the issues misleading the jury. It's just not . . . going to be good for this trial for it to be heard, and the [c]ourt just feels like and believes that it's not going to assist the jury whatsoever.

The record supports the trial court's findings regarding the unreliability of Dr. Powell's proposed testimony. First, Dr. Powell acknowledged that he was not a medical doctor or a professional engineer and that he was not an expert in retinal hemorrhaging, occipital bone fractures, or subdural hematomas. He further admitted that he had no research experience with retinas, hemorrhages, retinal hemorrhages, subdural hematoma, or occipital bones; that he had written no peer-reviewed papers on occipital bone fractures, hematomas, or retinal hemorrhaging; and that he had no research experience with "traumatic brain injury caused by force impact causing an occipital fracture and subdural hemorrhages and retinal detachments."

Moreover, although Dr. Powell's report listed the victim's mechanism of injury as a "vertical fall of the infant onto the surface floor while partially strapped into a Graco 35 seat[,]" Dr. Powell acknowledged that the "duration of impact" figure used to support his conclusions regarding the force of the impact involved in the fall was not measured but was based on "testing associated with infant falls, specifically falls of a head onto concrete." Dr. Powell agreed that he did not account for a car seat in the simulated fall of the anthropometric testing device used to support his conclusions about the mechanism of the victim's injuries. Further, Dr. Powell agreed that the study he referenced to make a conclusion about the mechanism of the victim's occipital bone fracture concerned fractures in the parietal bone, and he admitted this was a "significant error" on his part. Dr. Powell also acknowledged that he "mis-cited" that study, which concerned the use of piglet brains.

Under these facts, the trial court acted within its discretion in excluding Dr. Powell's proposed testimony. The court did not apply an incorrect legal standard, reach an illogical or unreasonable decision, or base its decision on a clearly erroneous assessment of the evidence. *Moore*, 644 S.W.3d at 63. Accordingly, Defendant is not entitled to relief.

2. Right to Present a Defense

Finally, Defendant contends that, even if Dr. Powell's proposed testimony was properly excluded under the Tennessee Rules of Evidence, "admission of the evidence [was] required in order to satisfy . . . Defendant's right to present a defense under the Federal and State Constitutions."

The State responds that Defendant waived her claim that excluding Dr. Powell's testimony violated her constitutional right to present a defense. The State argues that Defendant failed to preserve the constitutional claim at trial or in her motion for new trial and that she cannot establish plain error.

As noted by the State, Defendant did not argue before the trial court that the court's exclusion of Dr. Powell's proposed expert testimony violated her constitutional right to present a defense; she did not raise a contemporaneous objection based upon this theory during trial and did not raise the issue in her original or amended motion for new trial. Accordingly, Defendant's claim that the exclusion of Dr. Powell's testimony violated her due process right to present a defense is waived, *State v. Rowland*, 520 S.W.3d 542, 545 (Tenn. 2017) (stating that "issues raised for the first time on appeal are waived"), and the issue is limited to plain-error review. *State v. Bishop*, 431 S.W.3d 22, 45 (Tenn. 2014).

Plain error relief is "limited to errors that had an unfair prejudicial impact which undermined the fundamental fairness of the trial." *State v. Adkisson*, 899 S.W.2d 626, 642 (Tenn. Crim. App. 1994). In order to be granted relief under plain error, five criteria must be met: (1) the record must clearly establish what occurred in the trial court; (2) a clear and unequivocal rule of law must have been breached; (3) a substantial right of the accused must have been adversely affected; (4) the accused did not waive the issue for tactical reasons; and (5) consideration of the error is "necessary to do substantial justice." *Id*. at 640-41; *see also State v. Smith*, 24 S.W.3d 274, 282-83 (Tenn. 2000) (Tennessee Supreme Court formally adopting the *Adkisson* standard for plain error relief). Importantly, appellate courts must exercise plain error review "sparingly." *State v. Bledsoe*, 226 S.W.3d 349, 354 (Tenn. 2007).

As the appellant, Defendant bears the burden of persuading this court that plain error exists. *State v. Dotson*, 450 S.W.3d 1, 48-49 (Tenn. 2014). Moreover, this court has emphasized that a party seeking plain error relief generally must "raise and argue the issue in the party's briefing, just as the party would do with all other issues in the ordinary course of an appeal." *State v. Ruiz*, 716 S.W.3d 439, 453 (Tenn. Crim. App. 2024) (citation and quotation marks omitted); *State v. Nunez*, No. M2024-00179-CCA-R3-CD, 2025 WL 1892446, at *9 (Tenn. Crim. App. July 9, 2025), *perm. app. denied* (Tenn. Nov. 20, 2025).

In her brief, Defendant did not request that we conduct plain error review and did not argue or analyze any of the factors that could justify plain error relief. Moreover, the State specifically argued in its responsive brief that Defendant waived the issue by failing to raise it in the trial court. Despite being notified that her issue may be waived because it was not presented and preserved in the trial court, Defendant failed to file a reply brief responding to the State's waiver argument or arguing that she was entitled to plain error relief. "Where a defendant fails to respond to a waiver argument, only particularly compelling or egregious circumstances could typically justify our sua sponte consideration of plain error relief." *Id*. at 454 (quoting *State v. Thompson*, No. W2022-01535-CCA-R3-CD, 2023 WL 4552193, at *5 (Tenn. Crim. App. July 14, 2023)) (internal quotation marks omitted). Because such circumstances do not exist here, we respectfully decline to consider plain error relief on our own. Defendant is, therefore, not entitled to relief.

III. Conclusion

Based upon the foregoing, we affirm the trial court's judgments of conviction.

s/*Robert L. Holloway, Jr.*

ROBERT L. HOLLOWAY, JR., JUDGE