[Cite as *Bandaru v. Ohio State Univ. Wexner Med. Ctr.*, 2023-Ohio-2840.]

IN THE COURT OF CLAIMS OF OHIO

KIRAN KUMAR BANDARU, et al. Plaintiffs v. THE OHIO STATE UNIVERSITY WEXNER MEDICAL CENTER Defendant	Case No. 2019-00852JD Judge Patrick E. Sheeran DECISION

{¶1} In their July 31, 2019 complaint, Plaintiffs Kiran Kumar Bandaru (Bandaru) and Prasanthi Kumchala (Kumchala), Bandaru's wife, brought this action against Defendant Ohio State University Medical Wexner Center (OSUWMC) for medical negligence, informed consent, and loss of consortium after Bandaru suffered cerebral venous sinus thrombosis (CVST), a type of stroke, while he was a patient at OSUWMC. Plaintiffs assert that, due to Defendant's failure to (1) recognize that Bandaru was in "acute distress" and (2) provide proper medical treatment, he then required and now requires more extensive care and treatment than he otherwise would have needed. Specifically, Plaintiffs claim that Defendant was negligent when it failed to timely diagnose and treat the CVST, which ultimately resulted in brain hemorrhaging and permanent disability.

{¶2} The case was bifurcated and proceeded to trial before the Court on the issue of liability in November 2022. Following trial, the parties submitted post-trial briefings for the Court's consideration. For the reasons stated below, the Court enters judgment in favor of Defendant.

Factual Background

{¶3} Bandaru, at the age of 37, was admitted to OSUWMC on January 10, 2018 for chemotherapy treatment for Acute Lymphoblastic Leukemia (ALL). Before contracting

this cancer, Kumchala described her husband as being generally healthy.[1] He was rarely ill, and he was very active. After his admission, his doctors prescribed an AYA chemotherapy regimen that was generally tailored for adolescents and young adults. Nevertheless, Plaintiffs make no claim that this treatment was anything other than appropriate and it is undisputed that Bandaru's cancer is and has been in remission.

{¶4} One of the medications in Bandaru's treatment regimen is PEG-asparaginase. Bandaru received his only prescribed dose of PEG-asparaginase on January 16, 2018. There is a consensus among healthcare providers that PEG-asparaginase increases a patient's risk of developing a blood clot, although there is a disagreement on precisely what percentage of patients develop a blood clot, a cerebral blood clot, or a venous blood clot. Additionally, expert witnesses agree that, in addition to the risk of a blood clot from the use of PEG-Asparaginase, there is an increased risk of stroke because of the ALL itself. Despite any disagreement in the probabilities or the percentage of risk involved, this Court concludes that the risk of a blood clot occurring is far from negligible, and the standard of care must take into account the very real possibility of a stroke occurring as a result of a blood clot.

{¶5} Kumchala testified that Bandaru was, all things considered, active in the days leading up to January 27, 2018. She generally stayed with him at the hospital throughout his admission other than when she went to work. He would regularly walk laps around the ward with her, participate in conversations with her regarding their household, and work on papers that he hoped to publish. Although the medical record is not entirely supportive of these statements, the record does confirm that Bandaru walked twelve laps on his hospital floor on January 26, without any incidents. *See, e.g.,* Joint Exhibit 1, at Ex. 12, at pp. 8987, 8990, 8996, and 9000; P. Ex. 1, p. 8722 ("He continues to walk around the unit—12 laps yesterday.").

{¶6} On January 27, 2018, Dr. James Blachly (Blachly) examined Bandaru at 8:42 a.m. with a medical fellow. (Joint Ex. A11, p. 9021-9022). Blachly noted that, when he saw Bandaru on the morning of January 27, Bandaru "was feeling well overall. [And his] abdominal pain has resolved." (P. Ex. 1, p. 8722). Blachly's examination included a

[1] The permanence of Bandaru's disabilities prevented him from testifying himself.

neurological evaluation. Bandaru did not have any focal deficits, his pupils were equally round and reactive to light, and no signs or symptoms of stroke were noted. (Joint Ex. A11, p. 9024.) At 9:19 a.m., he was assessed as a low fall risk / high injury risk, being overall assessed as a yellow fall risk. (Defendant's Ex. R, p. 11231).[2] Nurse Mary Switala (Switala) credibly testified that this fall / injury risk level was not a change from the day before. Moreover, medical records show that this risk assessment level was not a change from the previous few days. (Defendant's Ex. R, p. 11237, 11244, 11251). The sole medical explanation for the injury risk level was that Bandaru's arm was connected to an IV pole.

{¶7} Additionally, there were no deficits relative to fall risks noted in the record at that time. Bandaru's 9:19 a.m. assessment on January 27 also noted that he was able to walk, use the toilet, bathe, dress, and eat independently, with his activity level described as "walks occasionally." (Defendant's Ex. R, p. 11233-11234). However, given his connection to the IV pole, a bed or chair exit alarm was in use since at least the previous day, January 26. (Defendant's Ex. R, p. 11231).

{¶8} On the morning of January 27, Kumchala was out buying a car battery and she did not return to the hospital until between noon and 1 p.m. While she was on her errand, she testified that Bandaru called her to ask her when she would be back. She said that he explained that he was very weak. According to Kumchala, Bandaru stated that he lost his balance as he was getting up from the couch and dropped his laptop. While Kumchala testified that Bandaru told her that he had informed the nurses, there is nothing in the medical records that confirms this, and there is no separate way of corroborating the hearsay statement that he did so.

{¶9} One of the key issues in this case involves when Bandaru exhibited symptoms that were consistent with the possibility of a stroke. There are three main time periods

[2] Defendant's Exhibit R appears to be the complete medical record for Bandaru from March 2013 until August 2019. Citations to this and other exhibits that are excerpts of the medical record refer to the page number at the bottom of the page. Plaintiffs' pagination numbers occasionally differ from the pagination of the complete medical record, marked as Defendant's Exhibit R. References to any of Plaintiffs' exhibits where page numbers are referenced will be specifically identified as "P Exhibits."

that must be examined: 11:00 a.m. on January 27; 1:07 p.m. on January 27; and 2:13 p.m. on January 27.

{¶10} The first time period involves whether Bandaru exhibited stroke-like symptoms on or about 11:00 a.m. on January 27. Kumchala was not present at that time, and the Court finds that the hearsay account alone is not sufficient to prove by a preponderance of the evidence that Bandaru had exhibited sufficient signs that would justify a further neurological exam (even a basic one) before 1:07 p.m. However, the medical records contain three relevant notes regarding Bandaru's possible right-sided weakness at or around 11:00 a.m. or after 11:00 a.m. but before the vincristine administration which occurred shortly after 1 p.m. on January 27: one from Dr. Story (Story), one from Blachly, and one from Switala.

{¶11} Story, the "moonlighting" doctor during the pertinent times in this case, wrote a note at 8:12 p.m. on January 27, several hours after the times in question. The note reads as follows:

> The James III moonlighter pager was paged regarding an ERT [Emergency Response Team] for Mr. Bandaru due to right sided weakness. History was obtained from bedside nurse, who reported that he [Bandaru] had reported numbness and tingling diffusely this AM at 11:00 prior to Vincristine administration. Vincristine was marked as administered at 1304. Per bedside nursing, he was ambulated without difficulty around 1300. He [Bandaru] reported that he *may have* had right sided weakness going back to 11:00 AM.

(Emphasis added.) (Plaintiffs' Ex. 1A, p. 9195). The Court notes that Story's account only reports "numbness and tingling" *relative to 11:00 a.m.*, with no other symptoms mentioned.

{¶12} Blachly's note, written at 6:40 p.m. on January 27, includes the following statement: "Vincristine (would have expected bilateral symptoms; stories are variable but patient later [i.e. after the stroke code] related to nurse that he had dizziness and R sided symptoms *prior* to vincristine.)" (Emphasis sic.) (Defendant's Ex. R, p. 8722). To explain this note, Blachly testified that:

> I was recording the fact that after the stroke code came and we were discussing with the patient and family at bedside the timeline of symptomology, that the patient told us at that time, as were in the same room as the stroke code, that he thinks he may have had dizziness and right sided symptoms prior to vincristine. And so that was new information that had not previously been known, and so it was important to document.

(Transcript at pp. 999-1000).

{¶13} Switala's note was written at 1:07 p.m., just after the vincristine was administered to Bandaru. It states: "Pt c/o [complains of] weakness and tingling throughout entire body. *Continues to c/o of (sic) dizziness with activity.* Denies vision changes and n/v. Vital signs stable. M. Spencer notified." (Emphasis added.) (Joint Exhibit A, Ex. 11, at p. 9025).

{¶14} In addition to the notes of the medical personnel, the Court also has the testimony of Kumchala, who arrived at the bedside of Bandaru at lunchtime, between noon and 1 p.m. When she arrived, she recounted that Bandaru was lying in his bed, and was not moving. She noticed the fall risk sign, which she had not seen before, and it prompted her to ask the nurse about it. According to Kumchala, the nurse said that Bandaru was very weak, and that he should not get out of bed without assistance.

{¶15} Additionally, Kumchala noted that this was the first time she had seen Bandaru not on the couch or chair, working on his computer. She testified that Bandaru does not like to eat in bed; he felt sitting up and eating in bed is a "bad habit." But on this day, upon his request, she brought Bandaru's lunch to the movable bedside table. She testified that he could not hold the spoon, she had to feed him, and that he only ate 2 to 3 tablespoons of the soup. However, the medical record shows that, from January 24-26, Bandaru ate "100%" of each meal "and has a good appetite." (Joint Exhibit 1, at Ex. 11, p. 9021).[3]

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[3] Joint Exhibit A, Ex. 11, at p. 9018, for Day 14, which, based on Blachly's note at the top of the page, is for January 27, 2018, notes Bandaru's Performance status: "Karnofsky scale 70 (ECOG grade 1). Cares for self, *unable to perform normal activity or active work."* (Emphasis added.) The report for the previous days, at pp. 9001, 9004, 9008, 9011, and 9015 note that Bandaru was either unable to perform normal activity or work (p. 9001), or "Performs normal activity with effort." (pp. 9004, 9008, 9011, and 9015).

{¶16} Kumchala was present for the administration of Vincristine, just after 1 p.m. This, she testified, took about 15 minutes. During that time, no matter what she did to try to engage Bandaru in conversation, she was not successful. She testified that he had no interest in any January 29th birthday plans for their daughter or about her second pregnancy, which was not like him.

{¶17} Kumchala indicated that she told the nurses about Bandaru's condition. She indicated that the response was that this was a normal reaction to the chemotherapy. There is no indication in the medical records or otherwise that any neurological tests were conducted between 11 a.m. and 1 p.m. on Bandaru. Kumchala's testimony never refers to any dizziness, but rather to an overall weakness.

{¶18} The medical record does indicate, however, that Bandaru had orthostatic vitals taken between 11:31 and 11:33 that morning (*See* Def. Ex. R., at pp. 13341-13342). This was done before Kumchala had arrived. Orthostatic vitals measure blood pressure while the patient is lying down, sitting up, and standing up. There is nothing in the medical records to suggest that Bandaru was not able to do what was necessary to have the orthostatic vitals. In fact, Dr. Story's note (Def. Ex. R, at p. 9494) indicates that Bandaru was ambulated "without difficulty" around 1:00 p.m.

{¶19} It must be asked, however, why orthostatic vitals were scheduled for Bandaru. Nurse Practitioner Spencer (Spencer) acknowledged that orthostatic vitals are often taken because a patient has complained of dizziness. She also acknowledged that she had no explanation as to why the orthostatic vitals were taken despite being the one who ordered the testing (*See* Joint Exhibit A, Ex. 10, at p. 10890 for her Order) She simply did not remember. There is a possible inference that Bandaru had complained of dizziness around or shortly prior to that time. However, there is no indication that Bandaru was dizzy when the orthostatic vitals were taken.

This does not support the testimony of Kumchala. On the next page (p. 9019), at the top of the page, marked "Subjective", Bandaru references abdominal pain, which Bandaru rated as 2 on a scale of 1-10. Blachly also notes that Bandaru "is walking frequently and he walked 6 laps this morning." This would appear to be an independent event, not directly connected to Blachly's note that Bandaru walked *twelve* laps on January 26. And, per Dr. Blachly's note at Joint Exhibit A, Ex. 11, p. 9022, Bandaru's abdominal pain had resolved when he saw Bandaru on the morning of January 27.

{¶20} At 12:25 p.m., Bandaru was given assistance when he was repositioned in his bed. This had not happened previously, and there is no dispute that this happened again at 1:15 p.m.

{¶21} At 1:07 p.m., Switala entered the following note in the medical record: "Pt c/o numbness and tingling throughout entire body. *Continues to* c/o of dizziness with activity. Denies vision changes and n/v. Vital signs stable. M. Spencer notified." (Emphasis added.) (Joint Exhibit A, Ex. 11, p. 9025). What is missing from this report is any indication as to when Bandaru's "dizziness with activity" started, or for how long it had been going on. This Court, in reviewing the record, finds it possible that the dizziness pre-dated the taking of the orthostatic vitals. But whether it was continuous or recurring is not known. Regardless, the change in baseline status prompted Switala to immediately notify Spencer.

{¶22} For whatever reason, Spencer took no action. While Bandaru was not her patient and she does not remember being notified, Spencer testified that, if she had received a page concerning someone who was not her patient, she would have notified the provider caring for the patient; in this case, she would have notified Blachly. However, Blachly testified that he had no recollection of this complaint being brought to his attention. Blachly testified that if a complaint for one of his patients were brought to his attention, he would visit and evaluate the patient. He further testified that he would only document the evaluation if something had changed from the previous observation taken earlier that morning. Nevertheless, there was clearly a change as of 1:07 p.m. and there is no documentation that Bandaru was assessed by a medical provider. Spencer did agree that an assessment needs to be done if a patient experiences a new symptom and, if warranted, an escalation in treatment. Spencer also noted that she could not tell from the record how long the dizziness had been occurring before it was reported at 1:07 p.m.

{¶23} At 2:13 p.m. Bandaru refused to bathe, and the medical record again notes that he complained of dizziness. (P. Ex. 1, at p. 12300). Switala was not involved in this, and there is no record that any action was taken as a result of this repeated statement concerning dizziness.

{¶24} The first note after 2:13 p.m. about Bandaru's condition is the one from Switala at 5:06 p.m. As previously noted, she wrote: "Pt c/o of weakness on right side.

Alert and oriented x 4. Numbness and tingling throughout the body. Denies vision changes. Stat nurses called to bedside. R. Story notified." This was the first time that afternoon that anyone responded to Switala's request for assistance; there was no prior ERT call. It is also important to note that this is the first time any documentation exists of Bandaru complaining of "right sided weakness" in this record. Switala's call to the Stat nurse brought fast action. The timeline of events that occurred is set forth in the table below:

Time	**Event**	**Change in time from 5:06 p.m.**	**Exhibit**
5:06 p.m.	Switala/R sided weakness	baseline: 0 minutes	p. 9025
5:10 p.m.	Stat Nurse at bedside	+ 4 minutes	*Id.*
5:26 p.m.	Stroke Code Alert	+20 minutes	p. 10339
5:30 p.m.	CT Angio Brain/Neck ordered	+ 24 minutes	p. 10342
5:31 p.m.	CT Scan start	+ 25 minutes	*Id.*
6:05 p.m.	MRI ordered	+ 58 minutes	p. 10351
6:40 p.m.	Note from Dr. Blachly (re: MRI)	+ 93 minutes	p. 8722
6:55 p.m.	Findings from CT scan Discussed w/ Dr. Jordan	+ 109 minutes	p. 10340
7:14 p.m.	Heparin ordered by Dr. Story	+ 128 minutes	p. 10480
7:15 p.m.	Heparin order canceled/Wilkie	+ 129 minutes	*Id.*
7:34 p.m.	MRI done	+ 148 minutes	p. 10351
7:45 p.m.	CT intracranial scan discussed	+ 159 minutes	p. 10344
7:56 p.m.	CT Angio Brain/neck completed	+ 170 minutes	p. 10342
8:04 p.m.	MRI impression complete	+ 178 minutes	
9:03 p.m.	Heparin ordered	+ 237 minutes	
9:21 p.m.	Heparin started	+ 255 minutes	

{¶25} Notwithstanding this action, Bandaru's condition still deteriorated to the extent that he needed a craniotomy on the morning of January 28, 2018 to save his life. Although this surgery was successful in one sense, because Bandaru did not die, the effect of the stroke left him with permanent brain damage despite the surgery.

Conclusions of Law

{¶26} Under Ohio law, Plaintiffs are required to establish their civil claims by a preponderance of the evidence. *See Merrick v. Ditzler*, 91 Ohio St. 256, 260, 110 N.E. 493 (1915). A preponderance of the evidence "is defined as that measure of proof that convinces the judge or jury that the existence of the fact sought to be proved is more likely than its nonexistence." *State ex rel. Doner v. Zody*, 130 Ohio St.3d 446, 2011-Ohio-6117, 958 N.E.2d 1235, ¶ 54. The trier of fact determines what weight should be given to the evidence presented and the credibility of the witnesses testifying. *State v. DeHass*, 10 Ohio St.2d 230, 227 N.E.2d 212 (1967), paragraph one of the syllabus. The Court, as the trier-of-facts in this case, is free to believe all, part, or none of the testimony of any witnesses, including expert witnesses. *See State v. Green*, 10th Dist. Franklin No. 03AP-813, 2004-Ohio-3697, ¶ 24.

{¶27} Under Ohio law, a specialized hospital should be held to a higher standard of care. *Wilburn v. Cleveland Psych. Inst.*, 126 Ohio App.3d 153, 156, 709 N.E.2d 1220 (10th Dist.1998); *see Johnson v. Grant Hosp.*, 32 Ohio St.2d 169, 178, 291 N.E.2d 440 (1972) ("[a] general hospital, which ordinarily does not and is not equipped to treat mental patients, should not be held to the same standard of care as a hospital which is operated and equipped to provide care for a patient who has displayed a tendency to commit suicide"); *Sabol v. Richmond Hts. Gen. Hosp.*, 111 Ohio App.3d 598, 602, 676 N.E.2d 958 (8th Dist.1996) ("[c]rucial to *Johnson* is the idea that a general hospital caring for a suicidal patient cannot be held to the same standard of care as a specialized hospital which routinely deals with such patients").

{¶28} Here, Defendant is an academic medical center that has considerable expertise in dealing with all types of strokes. Defendant, therefore, should be held to a standard of care consistent with an academic medical center that provides specialized care to persons undergoing chemotherapy who have a risk of stroke.

{¶29} In the medical context, "because only individuals practice medicine, only individuals can commit medical malpractice." *Natl. Union Fire Ins. Co. v. Wuerth*, 122 Ohio St.3d 594, 2009-Ohio-3601, 913 N.E.2d 939, ¶ 14. However, under the doctrine of respondeat superior, a hospital "is liable for the negligent acts of its employees." *Berdyck*

v. Shinde, 66 Ohio St.3d 573, 577, 613 N.E.2d 1014 (1993), citing *Klema v. St. Elizabeth's Hosp. of Youngstown*, 170 Ohio St. 519, 166 N.E.2d 765 (1960). There is no dispute that Defendant has employed certain individuals who were acting within the course and scope of their employment when they provided medical care to Bandaru. Therefore, Defendant may be liable for any negligent acts of its employees when they provided medical care to Bandaru in January 2018.

{¶30} In order "[t]o establish the negligence of a hospital employee, an injured party must demonstrate that a duty of care was owed to the injured party by the employee, that the employee breached that duty, and that the injuries concerned were the proximate result of the breach." *Berdyck v. Shinde*, 66 Ohio St.3d 573, 577, 613 N.E.2d 1014 (1993).

{¶31} Under Ohio law, cause in fact and proximate cause are distinct. *See Ackison v. Anchor Packing Co*., 120 Ohio St.3d 228, 2008-Ohio-5243, 897 N.E.2d 1118, ¶ 48. The standard test for establishing cause in fact is "but for" causation. *Id*. More specifically, "a defendant's conduct is a cause of the event (or harm) if the event (or harm) would not have occurred *but for* that conduct; conversely, the defendant's conduct is not the cause of the event (or harm) if the event (or harm) would have occurred regardless of the conduct." *Anderson v. St. Francis-St. George Hosp., Inc*., 77 Ohio St.3d 82, 84-85, 671 N.E.2d 225 (1996) (emphasis sic). Then, "[o]nce cause in fact is established, a plaintiff then must establish proximate cause in order to hold a defendant liable." *Ackison* at ¶ 48. The Ohio Supreme Court has discussed the concept of proximate cause:

> "Proximate cause is a troublesome phrase. It has a particular meaning in the law but is difficult to define. It has been defined as: 'That which immediately precedes and produces the effect, as distinguished from a remote, mediate, or predisposing cause; that from which the fact might be expected to follow without the concurrence of any unusual circumstance; that without which the accident would not have happened, and from which the injury or a like injury might have been anticipated.' 65 C.J.S. § 103 Negligence pp. 1130-1131. * * *" *Corrigan v. E. W. Bohren Transport Co*. (C.A. 6, 1968), 408 F. 2d 301, 303.

Jeffers v. Olexo, 43 Ohio St.3d 140, 143, 539 N.E.2d 614 (1989). A*ccord Aiken v. Indus. Com.*, 143 Ohio St. 113, 117, 53 N.E.2d 1018 (1944) (noting that in the field of torts "the

proximate cause of an event is that which in a natural and continuous sequence, unbroken by any new, independent cause, produces that event and without which that event would not have occurred"); *Clinger v. Duncan*, 166 Ohio St. 216, 223, 141 N.E.2d 156 (1957) (**"**Ordinarily, the existence of both negligence and proximate cause are, in a jury trial, questions of fact for the determination of the jury under proper instructions from the court.").

{¶32} As a matter of law, the Court finds that Defendant, through its medical team, owed a duty of care to Kiran Bandaru that complied with accepted standards of care. *See Mussivand v. David*, 45 Ohio St.3d 314, 318, 544 N.E.2d 265 (1989) ("[t]he existence of a duty in a negligence action is a question of law for the court to determine. * * * There is no formula for ascertaining whether a duty exists"). While the Court recognizes that "'medical care is a complex process becoming increasingly more complicated as medical technology advances'" and "'[l]arge teaching hospitals * * * care for patients with teams of professionals, some of whom never actually come in contact with the treated patient but whose expertise is nevertheless vital to the treatment and recovery of patients,'" it nevertheless remains that "'[m]edical professionals may be held accountable when they undertake to care for a patient and their actions do not meet the standard of care for such actions as established by expert testimony.'" *Lownsbury v. VanBuren*, 94 Ohio St.3d 231, 236-237, 762 N.E.2d 354 (2002), quoting *Mozingo v. Pitt Cty. Mem. Hosp., Inc.*, 331 N.C. 182, 188-189, 415 S.E.2d 341 (1992).

{¶33} With respect to the accepted standard of care, medical professionals must "exercise the degree of care that a medical professional of ordinary skill, care, and diligence would exercise under similar circumstances." *Cromer v. Children's Hosp. Med. Ctr. of Akron*, 142 Ohio St.3d 257, 2015-Ohio-229, 29 N.E.3d 921, ¶ 27, citing *Bruni v. Tatsumi*, 46 Ohio St.2d 127, 346 N.E.2d 673 (1976), at paragraph one of the syllabus. In *Cromer*, the Ohio Supreme Court explained:

> Although the standard of care for a medical professional is heightened, it does not necessarily supplant all consideration of foreseeability. As part of their standard of care, medical professionals are expected to be able to recognize certain symptoms of illness and injury, and they are expected to be aware of the associated risk of harm. *See Berdyck*

> at 581 (obstetrical staff nurses are expected to recognize symptoms of major obstetrical complications and take appropriate action to prevent harm). In other words, they are expected to foresee a risk of harm that a medical professional of ordinary skill, care, and diligence would foresee under similar circumstances. And just as with the general negligence standard, it necessarily follows that we would not expect medical professionals to guard against a risk of harm that a medical professional of ordinary skill, care, and diligence would not foresee. *See, e.g., Keebler v. Winfield Carraway Hosp*., 531 So.2d 841, 844-845 (Ala.1988), citing *Fernandez v. Baruch*, 52 N.J. 127, 244 A.2d 109 (1968) (explaining that a physician does not have a duty to take measures to prevent a patient from committing suicide if the patient's suicide was not reasonably foreseeable under generally accepted medical standards). Accordingly, foreseeability of harm is relevant to a physician's standard of care, and a correct, general statement of the law regarding the standard of care or the breach of that standard includes the element of foreseeability.

Decision

{¶34} One of the main issues in this case is whether Switala should have requested or performed a neurological assessment of Bandaru at 11 a.m., 1:07 p.m., or 2:13 p.m. Based on the evidence, the Court first finds that there was no breach of the standard of care when Switala did not perform, or request, a neuro examination at or around 11 a.m. The main reason for this finding is that there was a verified report of only *one* possible stroke symptom at that time: numbness and tingling diffusely.

{¶35} If the Court were to speculate, it could infer that dizziness, as a second possible symptom, started shortly before the orthostatic vitals were taken starting at 11:31 a.m. And while Bandaru may have experienced, as a third possible symptom, right-sided weakness at or around 11 a.m., a preponderance of the evidence establishes that Bandaru only reported this afterward as being a *possible* symptom.

{¶36} Other possible references noted by Kumchala, including Bandaru's inability to use a spoon and his poor appetite, cannot be placed back in time to the 11:00 hour

because Kumchala was not present at Bandaru's bedside until at least noon. Additionally, there is sufficient evidence in the medical record that, however unusual it may have been for Bandaru to call Kumchala and ask her to come to the hospital, Bandaru's condition was not always as good as Kumchala recollected. While this Court found much of Kumchala's testimony to be credible, she took or wrote no notes at any time and her testimony was based on her memories of that stressful day. To the extent that Kumchala's testimony conflicts with the medical record that was documented at the time, the medical record, created contemporaneously (or close to it) carries more weight with the Court. Based on the evidence before the Court, Plaintiffs failed to prove by a preponderance of the evidence that Nurse Switala breached the standard of care at 11:00 a.m.

{¶37} The events at 1:07 p.m. present another matter entirely. Bandaru's treatment regimen included the administration of vincristine. On January 27, 2018, his third dose (he had received one dose every week) was administered at 1:04 p.m. (Defendant's Ex. R, p. 10871). As Switala testified was protocol, two nurses signed off on this action prior to administering the drug. At 1:07 p.m., a few minutes after vincristine was administered, Bandaru complained of numbness and tingling throughout his entire body and continued dizziness with activity. (Defendant's Ex. R, p. 9025). Switala testified that she notified Spencer *of this* because this complaint was a change from Bandaru's baseline status from that morning. This Court finds that testimony to be both supported by the medical record and credible.

{¶38} However, Spencer testified that she does not remember being notified of this change in Bandaru's status, and no medical records exist that Spencer acted on Switala's notification. Notwithstanding that Bandaru was not Spencer's patient, she testified that if she had received a page about him, she said she would have notified Blachly. As previously noted, Blachly testified that he had no specific recollection of this complaint being brought to his attention, but his habit would be to visit the patient upon receiving such a complaint. He would also have performed an evaluation of the patient and decided whether anything needed to be done. In terms of the medical records, however, he would only document such a visit if there was a significant change from the previous documentation. Nonetheless, the undisputed evidence from Switala indicates that there was a baseline change in Bandaru's condition.

{¶39} Upon review of the medical record and testimony from Switala, Spencer, and Blachly, the Court finds that Bandaru indeed experienced a change in his baseline status by the time Switala noted this at or around 1:07 p.m. If any such change existed in the morning hours, it was not pronounced enough to prevent Bandaru from participating in the standing orthostatic vitals without difficulty. However, it was pronounced enough by 1:07 p.m. that Switala correctly reported his condition to Spencer.

{¶40} Even though a neurological assessment had been performed earlier that morning, at 9:19 a.m., Switala's notification should have resulted in another neurological assessment of Bandaru, even one as basic as a "push/pull" assessment. In the absence of medical records indicating that a neurological assessment took place, and because neither Spencer nor Blachly were able to testify that they assessed Bandaru at that time, the Court finds that Bandaru was not assessed by a medical provider in response to Switala's notification. The Court makes this determination based on Switala's assessment that there was a change in Bandaru's baseline condition, which she noted at the time, and promptly passed that information along, and the absence in the medical record of any action being taken in response to Switala's assessment.

{¶41} Moreover, the Court finds that the standard of care required that an assessment be made at that time. Blachly's testimony that, if he did respond to such a notification, he only would have documented the assessment if there was a change in Bandaru's status does not affect this finding. The greater weight of the evidence shows that Spencer never conveyed Bandaru's change to Blachly, since there is no medical record of it. Further, given the confirmed medical status through later CT and MRI imaging, it is clear that a neurological assessment would have yielded proof of Bandaru's changing condition. Because Switala correctly noted a change in Bandaru's condition and, per protocol, notified Spencer of it, the failure of Defendant's medical providers to take further action at that time was a violation of the standard of care that was owed to Bandaru.

{¶42} Additionally, the Court notes the medical record entry at 2:13 p.m., when Bandaru was not willing to participate in bathing care because of dizziness. (P. Ex. at 12300). This note was made by Nurse "BA." There is nothing in the medical record that suggests that this was reported to Nurse Switala or to any other medical provider. But

given the situation as it existed at and after 1:07 p.m., it clearly should have been. But once again, the record is void of any evidence that an assessment was either requested or performed. (Plaintiffs' Ex. 1A, p. 12300). For a second time, Bandaru's medical condition was simply not acted upon. Given what occurred (or, more correctly, did not occur) after 1:07 p.m., the Court finds that Defendant, through its medical providers, again breached the standard of care in failing to respond to Bandaru's continued medical condition after 2:13 p.m.

{¶43} For all the criticisms that Plaintiffs level at Switala (most of which this Court disagrees with, for the reasons noted above), there is no question that she took proper, swift, and appropriate action at 5:06 p.m. The main difference between her report at this time, and prior reports, is that Bandaru reported *right-sided* weakness. And one-sided weakness, per all the experts who testified, is definitively a symptom of stroke. Switala clearly recognized this and immediately called for the Stat Nurse, which is exactly what she was required to do.

{¶44} To summarize the Court's findings thus far, the standard of care was not violated when a neurological exam, even a basic one, was not performed or requested by Switala at 11:00 a.m. However, the Court does find that the standard of care was violated when no action was taken after Switala notified Spencer at 1:07 p.m. of the change in Bandaru's baseline, and was repeated by the event of 2:13 p.m. Therefore, this Court finds that Defendant was negligent in its treatment of Bandaru.

{¶45} Having found that Defendant breached the standard of care owed to Bandaru, the Court must determine whether such negligence was the proximate cause of Bandaru's injury. *See* Dobbs, Hayden, and Bublick, *The Law of Torts*, Section 198, 681 (2d Ed.2011) ("proximate cause rules are among those rules that seek to determine the appropriate scope of a negligent defendant's liability"). This Court finds that it was not.

{¶46} Plaintiffs correctly point out that there was no neurological evaluation of Bandaru after the 9:19 a.m. evaluation and before 5:07 p.m. when Switala noted the change in his baseline. Since this Court found that such an evaluation should have taken place after the baseline change at 1:07 p.m., the question becomes whether prompt action at that point would have made a difference in the ultimate outcome.

{¶47} The answer to this question concerns heparin, an anti-coagulant medication. Plaintiffs contend that if heparin was administered earlier in the day, that it would have made a total difference in the outcome. Dr. Fulop (Fulop), who had no objection to the manner in which Defendant handled matters *after* 5:06 p.m., opined that an earlier administration of heparin—or tPA, which this Court finds was clearly *not* a viable option—would have made such a difference.

{¶48} The greater weight of the evidence establishes that prompt neurological intervention at 1:07 p.m. would have resulted in a finding of CVST. As Blachly testified, a clot that develops as a result of PEG-asparaginase is one that is slow in developing. The Court agrees—although it also agrees with Fulop that the medical events begin to cascade once the clot reaches a certain point. It is appropriate to note that the point of no return, relative to Bandaru and CVST, was at approximately 5 p.m. on January 27. Both Fulop and Blachly testified to this. And, considering the four-hour difference between 1:07 p.m. and 5:06 p.m., the clot would have been detectable at or after 1:07 p.m. by a CT scan and an MRI scan. Fulop agreed that both scans were medically necessary. However, it is not at all clear that heparin, even if administered four hours before it was given at 9:31 p.m., would have made a difference in the outcome.

{¶49} There has been considerable disagreement over the phrase "time equals brain" with regard to the administration of heparin. Indeed, all the experts agree that this phrase applies to arterial strokes, but the disagreement here is whether the phrase applies to venous strokes. The answer, to this Court, is that the phrase certainly can apply to venous strokes, but in a very different context than what occurred in this case. CVST presents a very different medical situation than an arterial stroke, and the testimony regarding that is clear. Because a CVST develops far more slowly than an arterial stroke, at some point nothing of consequence can be done to medically stop the effects of its propagation; and time becomes irrelevant once *that* situation arises. The question becomes, when did that time occur in this case?

{¶50} Fulop and Blachly, among others, agreed that the "point of no return" in this case was approximately 5 p.m. on January 27. It is undisputed that, by the time 5 p.m. was reached, initiating heparin would have not prevented the ultimate outcome. And that is why Fulop was clear that, because Defendant failed to respond at either 11:00 a.m. or

1:07 p.m., by the time Defendant's medical providers did respond, the administration of heparin was not going to be the medical answer for Bandaru's CVST.

{¶51} Fulop testified that CVST, cerebral venous sinus thrombosis, is a condition where the large draining veins become occluded (blocked), either partially or fully, by a clot. The effect of this is to create symptomatic or asymptomatic restrictions in the blood flow. If untreated, various things can occur. For some patients, it can just be a prolonged headache. But if the clot propagates (grows), brain tissue starts to suffer metabolically. This is an ischemic reaction, and it produces dysfunction. This can lead to infarction, which is the cellular death of brain tissue and, once started, can become very dangerous to the patient.

{¶52} Fulop testified that Switala breached the standard of care when she failed to perform a bedside examination, which prevented the necessary care that would have followed and saved Bandaru's brain. He noted that there were clear opportunities to recognize a stroke around either 11 a.m. or just after 1 p.m. Fulop noted that, if the 11 a.m. symptoms were properly understood, heparin could have started around 1 p.m. Given this, Fulop testified that the delay in diagnosis was approximately 6 hours, with a 9-hour delay in administering heparin.

{¶53} Instead, in those hours where heparin was not started, Bandaru went from being "mildly symptomatic" to being "substantially symptomatic." Thus, the ischemic tissue progressed to infarction during those missed opportunities. And heparin cannot undo dead tissue; nothing can. Fulop concluded that the failure to intervene timely resulted in permanent brain damage to Bandaru, which could have been avoided had heparin been administered earlier.

{¶54} Fulop testified regarding the medical records, Joint Ex. 12, p. 10339. Bandaru properly had a CT scan within 25 minutes of Switala reporting Bandaru's right-sided weakness, but his condition was very different from his symptoms at 11 a.m. when he was still able to speak and had no facial droop. Put simply, there was a significant neurological decline, which Fulop noted was probably caused by more of his brain being affected, and to a greater degree. At that time, however, there was no evidence of acute intracranial hemorrhage.

{¶55} The next CT scan (Angio Brain/Neck) is noted at p. 10341 of the same Exhibit. It is similar, yet slightly different, from the previously noted scan. Performed at 5:56 p.m., it shows a complete thrombosis of one of the dominant cortical veins along the left parietal convexity. Blood is "sluggish" as it passes through the affected area.

{¶56} An MRI scan, which takes longer to perform, was done and noted at p. 10351 of the same Exhibit. The scan was ordered at 6:05 p.m., performed by 7:34 p.m., with the impression by Dr. Fritz (Fritz) signed off on at 8:04 p.m. Fulop noted that an MRI, performed as part of the protocol, shows information that a CT scan does not. It can differentiate the amount of fluid within tissue and give greater details of the brain's anatomy. In short, it helps determine the severity of a patient's condition. The Court, in reviewing the Exhibit, and the accompanying testimony, notes that there was also no bleeding within the brain at the time of this MRI.

{¶57} Fulop found no fault with the procedures, the CT scans, or the MRI that were performed during this time. He testified, too, that the findings noted in these scans did not change the treatment needed.

{¶58} But what is missing from Fulop's analysis of this case is that, if one posits the time it took to do the necessary CT scans and the MRI, and to assess them, literally hours have passed before heparin could start to be administered. In this instance, it was 2 hours and 58 minutes from 5:06 p.m. to 8:04 p.m.—which Fulop took no issue with—for the MRI to be completed and analyzed. And, of course, it took additional time for heparin to be ordered and then administered.

{¶59} This Court has already determined that there was no breach of the standard of care based on the events that took place around 11:00 a.m. With that in mind, the following chart represents what the timeline of events *would* be if the symptom of stroke was suspected at 1:07 p.m. instead of at 5:06 p.m. In other words, the clock is moved back 3 hours and 59 minutes from the timeline of events noted on p. 8, *supra*, to when the Court found the negligence took place at 1:07 p.m.

Time	**Event**	**Change from 1:07 p.m.**	**Cf. Ex. p.**
1:07 p.m.	Switala at bedside	0 minutes	p. 9025
1:11 p.m.	Stat Nurse at bedside	+ 4 minutes	*Id.*

1:27 p.m.	Stroke Code Alert	+ 20 minutes	p. 10339
1:31 p.m.	CT Angio Brain/Neck ordered	+ 24 minutes	p. 10342
1:32 p.m.	CT Scan start	+ 25 minutes	*Id.*
2:05 p.m.	MRI ordered	+ 58 minutes	p. 10351
2:40 p.m.	Note from Dr. Blachly (re: MRI)	+ 93 minutes	p. 8722
2:56 p.m.	Findings from CT scan Discussed w/ Dr. Jordan	+ 109 minutes	p. 10340
3:15 p.m.	Heparin ordered by Dr. Story	+ 128 minutes	p. 10480
3:16 p.m.	Heparin order canceled/Wilkie	+ 129 minutes	*Id.*
3:35 p.m.	MRI done	+ 148 minutes	p. 10351
3:46 p.m.	CT intracranial scan discussed	+ 159 minutes	p. 10344
3:57 p.m.	CT Angio Brain/neck completed	+ 170 minutes	p. 10342
4:05 p.m.	MRI impression complete	+ 178 minutes	p. 10351
5:04 p.m.	Heparin ordered	+ 237 minutes	
5:22 p.m.	Heparin started	+ 255 minutes	

From the foregoing, the Court finds that, even if Switala had called the Stat Nurse instead of notifying Spencer, the timeline of events would have gone beyond the 5 p.m. "point of no return" agreed to by Fulop and Blachly.[4]

{¶60} Additionally, the Court must also note that heparin does not yield immediate results. Plaintiffs' experts did not adequately cover this salient point: once the heparin drip begins, relief is not instantaneous. Dr. Hicks, who spoke in terms of the half-life lifespan of heparin, testified that it took up to six hours for an ideal amount of heparin to be administered. To counter that, Plaintiffs argue:

> Dr. Powers, a surgeon who does not manage heparin therapy, testified it takes 6 hours to for (sic) heparin to reach its full potential, contradicting his own colleague Dr. Green-Chandos, who manages heparin therapy, and

[4] The 2:13 p.m. timeline would add 56 minutes for each entry in the above chart. Since that involves even later times, further discussion on it is unnecessary.

testified it only takes 1 to 2 hours for heparin to achieve full therapeutic level.

TOP 1503, Green, 68: 12-18.[5]

{¶61} However, what Dr. Green-Chandos (Green-Chandos) actually said in her deposition was: **"**I would want to get it started as soon as we can, but in my experience, you know, hour…couple of hours here or there, I mean, does not make a big difference in this particular scenario." (Depo. Trans., p.68). Plaintiffs argue that this statement stands for the idea that it only takes one to two hours for heparin to achieve full therapeutic level. While that is a possible (although to this Court, doubtful) inference, it is not her actual testimony. Moreover, it cannot be taken without considering Green-Chandos' qualification that there was no significant difference regarding the outcome in this case.

{¶62} This is not to say that the heparin would be ineffectual. If, at some earlier point, heparin had been administered, even if the amount administered was not "ideal", there would be some benefit from it and that benefit could increase over time. In other words, although heparin is not instantaneous in its results, it would be wrong to presume that the *ideal* dosage must be reached before *any* benefit is obtained.

{¶63} But "any" benefit is not the same thing as any "meaningful" benefit. Even if the Court added an additional hour to the timeline noted above, the "beneficial" amount of heparin would still not be reached until at least 6:22 p.m., which is far outside the "point of no return" noted by both Fulop and Blachly.

{¶64} Thus, based on this Court's review of the entire record, Plaintiffs' argument[6] that heparin works "when timely administered" is, regrettably, not applicable to the facts of this case. Under the facts presented and shown by a preponderance of the evidence, heparin could not have been "timely administered" such that the outcome here would have been different. Given the limited window of opportunity, any meaningful benefit from the administration of heparin passed before it could have been started. More to the point, the window of opportunity was closed well before the heparin could have taken effect, even after positing the evidence in a view favorable to Plaintiffs.

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[5] Plaintiffs' Closing Brief, at 31.

[6] Reply Brief, at p. 9.

{¶65} Although the administration of heparin would not have stopped the CVST because the "point of no return" had been reached, that does not mean that the inquiry has ended. Indeed, the goal of administering heparin in the first place is to minimize the damage to Bandaru's brain. In short, this is not an "all or nothing" scenario, and there are degrees of saving that must be addressed.

{¶66} First, the Court notes that heparin is limited in effectiveness in another way: it does not dissolve an existing clot. Instead, heparin optimally slows or halts the growth of an existing clot, to allow the body's defenses themselves to work on weakening or dissolving the clot.

{¶67} Plaintiffs claim that the effect of the heparin was immediate, and that the CT scan at 1:37 a.m. on January 28 mirrored the CT scan at 10:17 p.m. on January 27.[7] The Court examined the three relevant CT scans, starting with the first CT scan ordered at 5:26 p.m. on January 27. Each scan triggered the authoring of a report and impression from the attending radiologist.[8]

{¶68} The radiologist reported, in pertinent part, of the 5:26 p.m. CT scan:

> There is an area of abnormal low density and loss of gray-white matter differentiation in the posterior left frontal lobe and parietal lobe. Curvilinear, cordlike hyperdensity is present within the adjacent dominant cortical vein which extends into the sagittal sinus which is highly suspicious for venous thrombosis. There is no obvious evidence of acute intracranial hemorrhage within the brain. No mass effect is present in the left frontal parietal region including asymmetric sulcal effacement. There is no midline shift. (P. Ex. 12, at p. 10340).

After the Findings, there is a section that gives the "Impression" of the scan. For this CT scan, Dr. Luttrull wrote the following: "Area of edema and loss of gray-white matter differentiation in the left frontal parietal region suspicious for a venous infarct. Edema related to venous congestion could have a similar appearance. *Findings may be further*

[7] Plaintiffs' Reply Brief, at p. 8.

[8] The Court will keep the original times of the reports here, and will transpose them in commentary later on.

evaluated with a noncontrast MRI of the brain." Additionally, it was noted: "Cordlike hyperdensity within one of the adjacent cortical veins extending into the sagittal sinus highly suspicious for venous thrombosis. No evidence of acute intracranial hemorrhage." (Emphasis added.) (P. Ex. 12, p. 10340).

{¶69} Next is the finding, in pertinent part, of the 10:27 p.m. CT scan:

> Redemonstration of the hyperdense, thrombosed cortical vein overlying the left parietal lobe with low-attenuation in the right parietal and posterior frontal lobes. There is intervertebral parenchymal hemorrhage within the posterior frontal and right parietal lobe. The region of hemorrhage measures up to 5.3 cm in AP. There is mild mass effect related to this hemorrhage on the left lateral ventricle with mild bowing of the falx. No midline shift or basal cistern effacement. No new or progressive hydrocephalus.

(P. Ex. 12, at p. 10355). This interpretation of the CT scan followed: "Redemonstration of the hyperdense, thrombosed left cortical vein. New parenchymal hemorrhage in the underlying left posterior frontal and parietal lobes, compatible with hemorrhagic venous infarct. At the time of dictation a follow up exam has been performed." (P. Ex. 12, at 10356).

{¶70} This is the finding, in pertinent part, of the 1:37 a.m. CT scan:

> Increase in size of the frontoparietal parenchymal hematoma, compatible with hemorrhagic venous infarct. On similar axial images, the parenchymal hemorrhage measures 7.9 x 5.5 cm, previously 4.8 x 4.3 cm. on similar coronal images, the hemorrhage measures 5.5 cm craniocaudal, previously 4.2 cm. There is markedly increased mass effect on the left lateral ventricle, with shift of the midline structures measuring 7 mm at the septum pellucidum. There is slight uncal herniation, measuring 3 mm on axial images.

(P. Ex. 12, at p. 10358). It is apparent to this Court that there are significant differences between these scans, which Fritz's impression confirms. He wrote: "*Increase in size* of the parenchymal hemorrhage involving the left frontal parietal lobe, with mild increased

surrounding edema. New midline shift, measuring up to 7 mm, with mild herniation into the basal cisterns." (Emphasis added.) (P. Ex. 12, at p. 10358).

{¶71} The only thing that did not change from scan to scan was water on the brain that was noted by Fritz: "There was no new or progressive hydrocephalus." (*Id*.) That has not been shown to have any particular relevance in this case.

{¶72} While one would expect some change from 5:26 to 10:27 p.m., insofar as the administration of the heparin drip was not started until 9:31 p.m., the Court cannot infer that the heparin would have immediately slowed the rate of growth, for the reasons that have been discussed above: heparin does not start to work immediately; at *best*, it would take one to two hours to reach therapeutic levels. Additionally, Green-Chandos noted the following as the early morning hours of January 28 progressed:

> Patient then with change at 02:25 at 1/28/17 with worsening aphasia-head CT then with increasing edema, ICH and mass effect with shift. Hypertonic saline started and neurosurgery consulted for possible hemicraniectomy. 8am head CT with further increase in edema and mass effect. Heparin stopped and platelets/fibrinogen reasonably optimized for surgery.

(Def. Ex. R, at 9036). In short, Bandaru's condition continued to worsen despite the administration of heparin. As the clot continued to grow, it shifted position. It was this shifting that led to the necessity for surgical intervention because, by this time, Bandaru's very life was in danger.

{¶73} Based on the foregoing, the Court concludes that the administration of heparin, although it did have some effect, regrettably did not have any more than that. In short, the "point of no return" tragically turned out to be precisely that, in every sense of that phrase, relative to Bandaru. This Court, along with every person associated with this case, is very distressed that Kiran Bandaru, a thoroughly admirable and conscientious person, should have his life so drastically altered by the events that took place before and while he was a patient at OSUWMC. But the negligence of Defendant was not the proximate cause of this terrible ending.

{¶74} Based on the foregoing, this Court must render a verdict on liability in favor of the Defendant as to the first cause of action. Because no liability has been found on Plaintiffs' claim for medical negligence, there can be no recovery for loss of consortium—

Plaintiffs' fourth cause of action. Additionally, Plaintiffs' claim that Bandaru sustained an increased risk of harm due to Defendant's negligence—Plaintiffs' third cause of action—must also result in a verdict for Defendant, as Defendant's negligence was not the proximate cause of harm to Bandaru.

{¶75} The remaining cause of action involves failure to obtain informed consent. Very little evidence was elicited as to this cause of action, and Plaintiffs did not address it in their closing briefs. However, this Court notes that Kumchala testified that on the morning of January 28, 2018, after the shift change, she was told by "new doctors" that the treatment given to Bandaru to that point was not working, and that an emergency craniotomy was needed to give Bandaru's brain "more space." Kumchala testified that she was told that the outcome was uncertain as to whether Bandaru would survive or not. She testified that she signed the consent forms to allow the surgery. She then passed out. Kumchala testified that until January 27, 2018, at 11:00 a.m., she had no complaints about the treatment rendered to her husband. The basis for this claim, therefore, is limited to the events of January 27 after 11 a.m. and January 28, 2018. Kumchala's own testimony rebuts the claim that she was not notified of the risks and benefits of that procedure. No other relevant evidence was offered relative to this. Based on the foregoing, a verdict for Defendant will be entered as to this cause of action.

{¶76} After due and careful consideration, therefore, a verdict is hereby entered in favor of Defendant as to all four causes of action.

It is so Ordered.

PATRICK E. SHEERAN
Judge

[Cite as *Bandaru v. Ohio State Univ. Wexner Med. Ctr.*, 2023-Ohio-2840.]

KIRAN KUMAR BANDARU, et al. Plaintiffs v. THE OHIO STATE UNIVERSITY WEXNER MEDICAL CENTER Defendant	Case No. 2019-00852JD Judge Patrick E. Sheeran JUDGMENT ENTRY

IN THE COURT OF CLAIMS OF OHIO

{¶77} This case came to trial before the Court on the issue of liability. The Court has considered the evidence and, for the reasons set forth in the decision filed concurrently herewith, judgment is rendered in favor of Defendant. Court costs are assessed against Plaintiffs. The Clerk shall serve upon all parties notice of this judgment and its date of entry upon the journal.

PATRICK E. SHEERAN
Judge

Filed July 28, 2023
Sent to S.C. Reporter 8/15/23