SUPREME COURT OF THE STATE OF NEW YORK
NEW YORK COUNTY

PRESENT: **HON. JOHN J. KELLEY** **PART** **IAS MOTION 56EFM**

Justice

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CODY NELSON,

Plaintiff,

- v -

THE NEW YORK and PRESBYTERIAN HOSPITAL, JEFFREY BRUCE, M.D., BRAD ZACHARIA, M.D., ROBERT McGOVERN, M.D., JOHN GREGORY GAUDET, M.D. formerly known as JOHN GREGORY VAN DRIEST, M.D., EUGENE ORNSTEIN, M.D., HEMANT VARMA, M.D., and JEAN PAUL VONSATTEL, M.D.,

Defendants.

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INDEX NO. 805320/2016

MOTION DATE 05/23/2022

MOTION SEQ. NO. 005

DECISION AND ORDER

The following e-filed documents, listed by NYSCEF document number 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123 ,124, 125, 126, and 127 (Motion 005)

were read on this motion to/for SUMMARY JUDGMENT.

I. INTRODUCTION

In this action to recover damages for medical malpractice based on alleged departures from good and accepted medical practice and lack of informed consent, the defendants move pursuant to CPLR 3212 for summary judgment dismissing the complaint. The plaintiff opposes the motion. The motion is granted to the extent that summary judgment is awarded to the defendants Brad Zacharia, M.D., Robert McGovern, M.D., John Gregory Gaudet, M.D., formerly known as John Gregory Van Driest, M.D., Eugene Ornstein, M.D., Hemant Varma, M.D., and Jean Paul Vonsattel, M.D., dismissing the complaint insofar as asserted against them, and to the defendant The New York and Presbyterian Hospital (NYPH) dismissing, insofar as asserted against it, so much of the complaint as was premised upon its vicarious liability for the alleged malpractice of those defendants. The court also summarily dismisses those medical malpractice claims asserted against the defendant Jeffrey Bruce, M.D., that were premised

upon his allegedly improper surgical technique, his failure to undertake intraoperative electrophysiological monitoring, and his failure to administer clot-busting drugs or an angiographic procedure to the plaintiff post-operatively, as well as those claims seeking to hold NYPH vicariously liable for Bruce's malpractice for those alleged departures. The motion is otherwise denied, as there are triable issues of fact in connection with all of the other claims asserted against Bruce alleging departures from good and accepted practice and lack of informed consent, as well as the claims against NYPH seeking to hold it vicariously liable for Bruce's alleged malpractice with respect to those departures and failure to obtain informed consent.

The crux of the plaintiff's claim is that the defendants improperly interpreted magnetic resonance imaging (MRI) scans of his brain, and thus misdiagnosed him with a type of brain tumor known as a right temporal lobe malignant glioma, when he actually was suffering from multiple sclerosis (MS), a demyelinating disease in which the protective coating of the brain known as the myelin sheath sustains damage or disintegrates. The plaintiff claims that, as a consequence, he underwent unnecessary and contraindicated brain surgery that resulted in an infarct, or stroke. He further claims that intraoperative pathology reports reflected the absence of a tumor, and that the surgery should then have been terminated prior to the completion of the surgery, a determination that, if implemented, would have avoided the stroke.

II. FACTUAL BACKGROUND

The defendants allege that, in early February 2014, the plaintiff, who was then 19 years old, began experiencing a "new" cluster of symptoms consisting of fatigue, lethargy, generalized weakness, headache, and vision loss. Although the plaintiff concedes that he was experiencing certain symptoms at that time, he denies several of the specifics of that allegation, except that he concedes that he presented with loss of vision on the left side. On February 18, 2014, the plaintiff presented to Long Island Eye Surgical Care, where he saw his primary care provider, Anthony Guida, M.D., whose initial impression was that the plaintiff's complaints were the result

of a sinus infection. Dr. Guida, however, ruled out that diagnosis and ordered MRI scans of the plaintiff's brain, both with and without contrast.

On February 20, 2014, MRI scans of the plaintiff's brain were performed at Zwanger-Pesiri Radiology, which issued a report signed by Adam Wilner, M.D., stating, among other things, that the scans revealed an "infiltrative cortically-based intraparenchymal mass lesion within the mesial right temporal lobe, centered within the hippocampus and involvement of the subjacent white matter. Conventional and perfusion characteristics favor a mixed glioneuronal neoplasm with dedifferentiation." The plaintiff, however, contends that there was no evidence of a tumor on the MRI scans. The parties agree that the MRI imaging did not reveal any other lesions or masses in the plaintiff's brain. According to the defendants, the MRI scan with contrast did not show an "incomplete ring enhancement," which is characteristic of MS, but the plaintiff expressly challenges that assertion.

On February 21, 2014, neurosurgeon Borimir Darakchiev, M.D., reviewed the MRI scans, reporting that his impression of the mass was "highly suspicious for a high-grade primary brain tumor," although the plaintiff asserts that there was no basis for this concern. As noted by the defendants, Dr. Darakchiev's records made no mention of the possibility of an MS diagnosis and did not include MS as a differential diagnostic consideration. Dr. Darakchiev also wrote that

> "[a]nother differential diagnostic consideration would be an infectious disease etiology such as encephalitis. This, however, cannot be supported by the clinical picture of a patient who is completely clinically and neurologically stable with a single deficit of hemianopsia and the lack of fevers, decreased mental status, seizures, etc."

That same date, neurologist Mark Gudesblatt, M.D., who had treated the plaintiff prior to 2014, reviewed the MRI scans, and determined that the mass "either represented a partially treated brain abscess or a neoplasm." He also made no mention of the possibility of an MS diagnosis. He did, however, recommend that the plaintiff seek a second opinion, noting that a "stereotactic biopsy might be warranted to determine whether or not this is truly abscess or neoplasm." Dr. Gudesblatt thereupon referred the plaintiff to defendant neurosurgeon Jeffrey Bruce, M.D., at

NYPH. As with Dr. Darakchiev's impression, the plaintiff asserts that there was no basis for Dr. Gudesblatt's conclusion that the MRI scans reflected an abscess or a neoplasm. Rather, the plaintiff alleges that the MRI scans actually revealed an incomplete ring of enhancement and the presence of tumefactive demyelinating disease, a locally aggressive form of demyelination, manifesting as a solitary lesion or small number of lesions that sometimes mimic a neoplasm on imaging scans.

When the plaintiff presented to NYPH on February 22, 2014, he was placed under Bruce's care, and complained to Bruce of headaches that were relieved by the administration of acetaminophen in the emergency room, some fatigue relieved by medication, and some vision loss. As he framed it, he was "well appearing, in no apparent distress," with a normal physical exam "except for some visual field vision loss." Specifically, the plaintiff's pre-surgical vision loss consisted of left hemianopsia, sometimes referred to as hemianopia, which describes a loss of vision in one half of a person's visual field. Bruce's first impression was that the MRI scans were "concerning for a primary neoplastic process, favor high grade glioma, vs ganglioglioma. Abscess less likely. Regardless, the patient will require surgery for tissue diagnosis and debulking." Bruce's working assumption was that the mass was a right temporal malignant glioma that caused edema and mass effect, that is, the displacement of other brain tissue, and he formulated a plan to perform a craniotomy to remove the mass.

The defendants contend that, on February 24, 2014, Bruce, the plaintiff, and his family together discussed the plan for a craniotomy and resection of the mass in the plaintiff's brain, along with the risks and benefits of, and alternatives to, the procedure, and that the plaintiff executed a consent form agreeing to proceed with this surgery. The plaintiff, however, generally denies these allegations, testifying at his deposition that the defendants did not fully explain all of the risks and benefits of, or alternatives to, the nonemergency brain surgery that they proposed to perform, or that the surgery was primarily exploratory and diagnostic, rather

than therapeutic. The plaintiff was presented with a boilerplate consent form, reciting that he was informed of

> "1. The nature, purpose, and the reasonably foreseeable risks and benefits of the procedure; the alternatives, including not performing the procedure, as well as the reasonably foreseeable risks and benefits of the alternatives;
>
> "2. That the practice of medicine is not an exact science and the procedure may not result in the intended benefits;
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> "3. That there are risks associated generally with anesthesia, surgery, use of medication, medical procedures and treatments not ordinarily anticipated which can cause adverse consequences to my life or health; and
>
> "4. That other practitioners may assist with the procedure(s) as necessary, and may perform important tasks related to the surgery."

The plaintiff, however, testified at his deposition that this constituted an inaccurate, incorrect, and inadequate consent form, and that he was directed to sign it without actually being presented with an adequate explanation of the surgery and its risks, benefits, and alternatives. Specifically, he asserted that he was told by a resident neurologist that "it would be a cookie-size cut . . . craniotomy," and that the surgery "is like him tying a shoe, quote, unquote." The plaintiff further testified that Bruce simply told him that the purpose of the surgery was to try "to get out any unhealthy tissue as much as he can," but that Bruce never mentioned the possibility that the lesion was a glioblastoma, or that the surgery might be purely exploratory. The plaintiff also contends that, in fact, Bruce misread the MRI scans as favoring a glioneuronal neoplasm.

At the beginning of the surgery on February 26, 2014 at 11:00 a.m., the defendant John Gaudet, M.D., served as the attending anesthesiologist, and remained in that role until 4:00 p.m., when, at 4:30 p.m., the defendant anesthesiologist Eugene Omstein, M.D., took over as the attending anesthesiologist, and remained the attending anesthesiologist until the conclusion of the surgery. Bruce performed the surgery, with assistance from the defendant neurosurgery residents Robert McGovern, M.D., and Brad Zacharia, M.D., using cautery and blunt dissection. The plaintiff was the subject of a protocol pursuant to which he received injections of diagnostic

fluorescein and gadolinium contrast. According to the defendants' interpretation of the surgical records, there was no obvious fluorescent area of tumor seen during the surgery, although there was one small area that appeared to be more fluorescent than others. A section of the latter tissue was sent to the NYPH pathology department for analysis at 4:15 p.m. on February 26, 2014.

Shortly after receiving both the slightly fluorescent section and another non-fluorescent section from the operating room, the defendant pathologists Jean Paul Vonsattel, M.D., and Hemant Varma, M.D., prepared, reviewed, and analyzed the two samples of intraoperative pathology while the surgical procedure remained ongoing, and reported that, with regard to Sample A, there was "no-diagnostic abnormality detected," while, with regard to Sample B, they noted "focal perivascular hemosiderin [a yellowish-brown, iron-containing, granular pigment] and macrophages." The plaintiff thus argues that the pathology report demonstrated that there was no tumor, but instead revealed the presence of demyelinating disease. He also asserts that the frozen section pathology report was inaccurate and misleading in any event, and that it expressly should have stated that there was no evidence of tumor. The surgery was completed at 7:20 p.m. on February 26, 2014, at which time two additional tissue samples were sent to the NYPH pathology department for permanent section analysis.

According to the defendants, following the surgery, but before the plaintiff left the operating room, they recognized the presence of hemiparalysis on the left side of the plaintiff's body, as he was unable to move his left arm or leg.

On February 26, 2021 at 7:24 p.m., the plaintiff underwent a computed tomography (CT) scan of the brain. According to the defendants, there was no evidence of stroke seen on that CT scan. After that CT was completed, the plaintiff was transferred to the surgical intensive care unit, and, according to the defendants, he had already begun to regain some mobility in his left leg, although the plaintiff asserts that he did not regain mobility at that time. Rather, he alleges that, throughout his postoperative course at NYPH, he regained only extremely limited

use of his left leg. At 11:04 p.m. on February 26, 2021, the plaintiff underwent another CT scan of the brain that, according to the defendants, identified an acute right lateral lenticulostriate infarct, that is, cerebral ischemia or stroke involving the territory supplied by the deep perforating branches of the middle cerebral artery, which was located within the right corona radiata/right posterior internal capsule, near the area where the surgery was performed.

On March 10, 2014, the surgical pathology results from the two permanent sections reported that the mass was not, in fact, a tumor, but instead constituted evidence of a demyelinating process such as MS. The plaintiff thus was diagnosed with MS as of that date. He has been undergoing treatment for that condition since that time.

III. THE PLAINTIFF'S ALLEGATIONS

In his complaint, the plaintiff alleged that he was admitted to NYPH on February 22, 2014, and underwent surgery on February 26, 2014, during which the defendants performed a stereotactic guided right frontal craniotomy, with radical subtotal resection of a mass that was allegedly identified in the plaintiff's brain. He further alleged that the defendants departed from good and accepted medical practice in diagnosing his true condition, determining to perform unnecessary surgery, and improperly performing the surgery. The plaintiff asserted that, as a consequence, he sustained severe and permanent injuries, arising from unnecessary brain surgery after an intraoperative frozen section sample revealed the absence of a tumor, the unnecessary removal of normal brain tissue, the increased risk of surgical complications, left side hemiplegia, and a brain infarct, with concomitant brain injury, neurological injury, cognitive impairment, impairment of vision, and pain. In addition, the plaintiff asserted that the defendants did not fully inform him of the alternatives to brain surgery or the reasonably foreseeable risks of such a procedure, and that, had he known of those risks, he would not have elected to proceed with the surgery. The plaintiff thus contended that the defendants failed to obtain his fully informed consent to the procedure.

In his bills of particulars, the plaintiff alleged that the defendants departed from good and accepted practice in misinterpreting the February 22, 2014 brain MRI scans, in failing to perform a magnetic resonance (MR) spectroscopy to ascertain the nature of the lesion shown on the MRI scans, and in misdiagnosing that lesion as right temporal malignant glioma. In addition, the plaintiff alleged that the defendants failed to perform necessary and appropriate tests and failed to correlate his medical history, laboratory studies, and physical findings, leading to their failure appropriately to engage in the required process of differential diagnosis, arrive at a correct diagnosis, and avoid arriving at an erroneous diagnosis.

The plaintiff further asserted in his bills of particulars that the defendants did not appropriately monitor his charts or be cognizant of the progress, course, symptoms, and signs that he presented, and were not fully aware of the pathology and physiology of his underlying medical condition or conditions. In this regard, the plaintiff contended that the defendants failed to recognize, obtain, and record his medical history, review his symptoms, complaints, and past medical history, and properly interpret the results of physical examinations, and that they arrived at incorrect impressions and did not properly undertake a differential diagnosis. Nor, according to the plaintiff, did the defendants formulate a proper, appropriate, and reasonable plan to manage and treat him. He averred that the defendants also failed to recommend and prescribe an appropriate, correct, and indicated method of treatment, and failed to administer or prescribe proper medications.

The plaintiff further alleged that the defendants were negligent in failing to perform a pre-operative lumbar puncture, failing pre-operatively to consider MS as a diagnosis, unnecessarily resecting brain tissue from the right temporal lobe of his brain, disturbing the blood vessels so as to cause a spasm and infarct, causing blood-vessel plaque to break off and cause an infarct, and allowing surgical debris to enter the blood vessels so as to cause an infarct. In addition, the plaintiff contended that defendants departed from good practice in performing the surgery via blunt dissection rather than sharp dissection, in failing to take the appropriate amount of time

necessary to perform the brain surgery in a proper manner, in failing to terminate the brain surgery after the frozen section analysis of the resected brain tissue failed to reveal the presence of a malignant tumor, in continuing with the surgery despite an intraoperative frozen section analysis that revealed no tumor, and in continuing with the brain surgery in the absence of fluorescence despite the use of sodium fluorescein dye. The plaintiff alleged that it also was a departure from good and accepted practice for the defendants to continue the surgery despite the presence of macrophages. Additionally, the plaintiff faulted the defendants for failing to perform intraoperative electrophysiological monitoring, including the use of a somatosensory evoked potention (SEP) test or a motor evoked potentials (MEP) test during the surgery.

The plaintiff further alleged that the defendants negligently failed to diagnose a brain infarct in a timely fashion, interpret the post-surgery brain CT scan in a proper manner, administer clot-busting drugs in a seasonable fashion, inject tissue plasminogen activator intravenously into the clot, or perform an angiographic procedure to open the infarct area.

IV. THE SUMMARY JUDGMENT MOTION

In support of their motion, the defendants submitted the pleadings, the plaintiff's bills of particulars, the parties' deposition transcripts, medical and hospital records, their attorneys' affirmation, and the expert affirmations of neurosurgeon E. Antonio Chiocca, M.D., Ph.D., neurologist Jeffrey L. Gross, M.D., pathologist Charles G. Eberhart, M.D., Ph.D., and anesthesiologist Dr. Adam I. Levine, M.D.

Dr. Chiocca, who is board certified in neurosurgery, opined that that the care provided to the plaintiff by the defendants met or exceeded the standard of care in all respects, that the surgery performed to remove the mass from the plaintiff's brain on February 26, 2014 was indicated by the plaintiff's presenting symptoms and imaging, that the surgery was properly performed, that there was no intraoperative indication to terminate the surgery early, and that the small stroke that occurred during the surgery was a risk of the procedure that did not result from any departure from the standard of care.

As Dr. Chiocca summarized it, Bruce appropriately assessed the diagnostic evidence of the plaintiff's presentation and imaging and, based on that evidence, reaching an appropriate conclusion of a glioma. He further asserted that this conclusion was shared by Dr. Wilner, by Dr. Darakchiev during the plaintiff's first neurosurgical consultation, and by the plaintiff's prior treating neurologist, Dr. Gudesblatt. According to Dr. Chiocca, Bruce then proceeded with an appropriate surgery based on that conclusion and, consequently, met the standard of care.

Dr. Chiocca concluded that the pre-operative MRI report "is accurate and the interpretation was consistent with the standard of care," as it showed "a single large mass located in the mesial right temporal lobe" that exhibited "T2 and FL[uid] A[ttenuated] I[nversion] R[ecovery] hyperintensity," that is, bright images of white brain matter. He asserted that the gadolinium contrast showed "some enhancement with some uptake in different areas of the mass, but most of the mass does not actually uptake the contrast," but that the scan with contrast did not reveal "characteristic 'incomplete ring enhancement,'" which he stated "can be seen sometimes in multiple sclerosis but also with tumors." Dr. Chiocca thus opined that, based on his review of pre-operative MRI scans, and his consideration of the plaintiff's clinical history and demographics, "the most likely impression is that this mass is consistent with a low grade glioma (tumor) with the areas of enhancement inside of it being highly suspicious for transformation to a higher grade glioma. or possibly an abscess." Consequently, Dr. Chiocca concluded that Bruce's initial impression was correct at the time, and he agreed with both Bruce in this regard, as well as with Drs. Wilner, Darakchiev, and Gudesblatt.

Dr Chiocca, citing to a peer-reviewed article, opined that "the imaging is not consistent with a typical presentation of MS. In hindsight it is clear that this mass was actually a rare form of MS called tumefactive MS which appears in 1-3 out of every 1000 MS cases," and that the imaging was even "more unusual," in that it "did not even resemble a typical presentation of tumefactive MS." As he explained it,

> "[f]irst and most importantly, the Plaintiff's MRI showed only one lesion in the brain. This is almost unheard of in cases of multiple sclerosis, where the 'multiple' refers to the multiple relatively small lesions it presents with. Also important is the location of the mass in the mesial right temporal lobe. This is an unusual location for MS (including tumefactive) to present. Most MS lesions are found deeper in the brain in the gray matter, rather than on the surface. Finally, the enhancement pattern seen on the contrast imaging is not consistent with typical presentations of MS. One would expect to see an incomplete ring pattern and not the heterogeneous enhancement that was actually observed."

He thus concluded that the MRI scans were "wholly inconsistent with MS and gave the Plaintiff's doctors no reason to consider it as a diagnosis," and that the scans were, in fact, consistent with a tumor. Hence, Dr. Chiocca asserted that Bruce's impression "met the standard of care for the diagnosis of tumor to be the primary diagnosis in the differential."

Dr. Chiocca further concluded that the plaintiff's symptomology also was inconsistent with a diagnosis of MS, as he presented with "a primary complaint of hemianopsia that was ongoing for several weeks." He explained that, while it was "possible" for MS to cause hemianopsia, "it is very unusual and practically unheard of for that condition to be the presenting symptom," while hemianopsia is "not nearly as uncommon in brain tumors or abscess." He continued that, while some of the plaintiff's symptoms, such as transient blurry vision, low-grade fever, and vomiting, also were not consistent with an MS diagnosis, other symptoms that the plaintiff presented, such as lethargy and fatigue, "were equivocal as between tumor, abscess, and MS," that is, they could be present in more than one of these conditions. Despite that concession, he asserted that, in the absence of a "primary diagnostic indicator," such as multiple lesions or a tumefactive mass that showed an image enhancement typical of MS, these equivocal symptoms were insufficient to suggest that MS should have been included in Bruce's differential diagnosis.

In addition to concluding that Bruce properly rated the presence of a tumor as the most likely diagnosis, with abscess a "distant" second, Dr. Cioccha explained that there was also evidence that the mass was increasing cranial pressure and causing mass effect, that, in turn,

necessitated surgery regardless of the diagnosis. Hence, he concluded that the standard of care was the same whether the diagnosis was tumor, abscess, or MS, and that the standard of care mandated a craniotomy and resection of the mass under any of those circumstances. Since Bruce recommended and performed such surgery, Dr. Chiocca opined that Bruce satisfied the standard of care with respect to his treatment plan.

Dr. Chiocca stated that the standard of care did not require Bruce to have performed a pre-operative lumbar puncture, also known as a spinal tap, to rule out MS before proceeding with the surgery. He explained that, even though a lumbar puncture is a primary diagnostic tool in the diagnosis of MS, the defendant had no reason to believe that the plaintiff was suffering from MS, and the absence multiple lesions constituted “substantial” evidence to rule it out.

In addition, Dr. Chiocca averred that, given the increased pressure of the cerebral spinal fluid caused by the mass itself, a lumbar puncture was “likely contraindicated” until after the mass had been resected or otherwise reduced, and the defendants’ failure to perform one thus was not a departure from good practice. He also asserted that Bruce did not deviate from accepted practice by declining to perform an MR spectroscopy prior to surgery, and that, even had he or his colleagues done so, that test would not have identified MS. Dr. Chiocca opined that there was no indication for the test in the context of a tumor or abscess, and that MR spectroscopy was not within the standard of care for diagnosis of MS in any event, having been “tried experimentally for that purpose but . . . not widely utilized.”

Dr. Chiocca rejected the plaintiff’s contention that Bruce and his team improperly performed the surgery and thereby caused his stroke. The doctor explained that stroke is a risk of the procedure in any brain surgery. He further rejected the plaintiff’s claim that Bruce negligently used blunt dissection instead of sharp dissection or caused debris to enter a blood vessel, concluding that there is no evidence that one method of dissection was superior to the other in minimizing such risks, that both methods were acceptable methods, that the method chosen is merely a preference based on the surgeon’s training and comfort level, and that the

employment of either method could result in inadvertent damage to blood vessels. In addition, Dr. Chiocca disagreed with the plaintiff that Bruce should have employed electrophysiological monitoring such as SEP or MEP during the surgery. As he explained it, such monitoring is generally used in brain surgery where the target area is in close proximity to known specific motor pathways that could be disrupted by the surgery, or in other special cases, and that neither situation obtained in the plaintiff's case. He concluded that, in any event, such monitoring "likely would not have identified the stroke at issue because of how the devices function," and that even if the monitoring identified a loss of motor response resulting from the stroke, it would have been too late to intervene because there was no effective treatment for the stroke once it occurred.

Dr. Chiocca concluded that it was not a departure for Bruce and his team to decline to terminate the surgery in the course of resection, as the intraoperative pathology and the fluorescein protocol did not warrant that approach. He averred that it was irrelevant that the results of those diagnostic tests did not definitively confirm the presence of a tumor. As he described it, "not all brain tumors absorb fluorescein effectively, meaning that the absence of fluorescein accumulation in a mass does not indicate that it is not a tumor." Dr. Chiocca further opined that "frozen sections have their limits and are notoriously unreliable as a diagnostic tool." Accordingly, he concluded that, even though the particular frozen sections obtained from the plaintiff did not expressly reveal cancerous tissue, that result may have reflected a false negative and, hence, not an indication to terminate the surgery after five hours. He posited that, while Sample A showed normal brain tissue with no diagnostic abnormality detected, and Sample B showed normal brain tissue with focal perivascular hemosiderin and macrophages, such findings may sometimes be seen in cases where tumors, and specifically, gliomas, are present, as gliomas often contain macrophages and hemosiderin. Dr. Chiocca further stated that, while the presence of macrophages might indicate the presence of MS, the lack of tumor tissue on the frozen sections only indicated a lack of tumor in the sample, and not the absence

of tumor in the entire mass. He thus asserted that these findings were, in fact, indicia that the surgery should continue "so that additional material could be gathered to ensure that there was tissue that that could aid in a subsequent diagnosis on post-surgical 'permanent section' pathology."

Dr. Chiocca also rejected the plaintiff's contention that, subsequent to the surgery, the diagnosis of stroke was delayed, that the first post-operative CT was misinterpreted, and that additional interventions in the form of the thrombolytic drug Alteplase (t-PA) or other unspecified clot-busting drugs and/or an angiographic procedure should have been performed to alleviate the stroke. He averred that, as soon as the plaintiff awoke from surgery, and the signs of the stroke were observed, the plaintiff immediately was sent directly from the operating room for a CT scan. He further asserted that the CT scan did not identify the stroke and only showed post-operative changes caused by the surgery. Dr. Chiocca conceded that a subsequent CT scan performed several hours later identified the small stroke in the right temporal lobe, but that, in light of the results of the prior CT scan, the stroke was timely diagnosed. He opined that neither the administration of t-PA or other clot-busting drugs, nor the administration of an angiographic procedure, were necessary to satisfy the standard of care, as t-PA is "absolutely contraindicated so soon after brain surgery because of the risk that it will cause a hemorrhage and result in even more damage," and no other clot-busting drugs existed that did not pose the same risks as tPA; he opined that angiographic procedures were not indicated for small vessel strokes, as they are not effective at relieving such strokes and carry substantial risks of further damage in and of themselves. Since Dr. Chiocca concluded that there was no effective method of treating the stroke once it occurred, he asserted that the only proper treatment of the stroke included medical management, followed up with rehabilitation therapy to treat the symptoms and assist the patient in regaining function, which was what the defendants did in this case.

Dr. Gross, the defendants' retained neurologist, opined that the surgery was indicated because of "the unique and unusual presentation that was inconsistent with MS and was

consistent with a tumor," and that a definitive diagnosis required the defendants to obtain tissue taken during surgery in any event. Dr. Gross agreed with Dr. Chiocca that the plaintiff's contentions "are wholly founded upon hindsight based on the multiple sclerosis diagnosis that was reached after the surgery at issue in this case." Dr. Gross asserted that Bruce's conclusion that the mass seen on the MRI scans "was consistent with a tumor" could not be characterized as a misdiagnosis of MS. He thus concluded, as did Dr. Chiocca, that Bruce appropriately assessed the diagnostic evidence, reached an appropriate conclusion based on that evidence, and proceeded with appropriate surgery.

Dr. Gross explained that common early signs of MS include tingling and numbness, pains and spasms, weakness or fatigue, balance problems or dizziness, bladder issues, sexual dysfunction, and cognitive problems. He stated that, although vision problems, including optic neuritis, nystagmus, and diplopia, are common early signs of MS, "it is very rare for MS to present with hemianopsia." Dr. Gross asserted that, as there are no specific tests for MS, an MS diagnosis often relies on ruling out other conditions that might produce similar signs and symptoms, pursuant to the accepted process is known as differential diagnosis. Although he noted that additional testing for MS could have been performed, including an MRI that may have shown lesions on the brain and spinal cord, or a spinal tap in which a small sample of cerebrospinal fluid was taken, upon reviewing the pre-surgical work-up, Dr. Gross determined that an MS diagnosis was "very unlikely" at that juncture, as the plaintiff's presentation was "very, very unusual and is nearly unique among the thousands of MS patients I have diagnosed during my career."

Dr. Gross explained that plaintiff's presentation of a cluster of symptoms, consisting of fatigue, lethargy, generalized weakness, and headache, were "non-specific symptoms," inasmuch as they could be caused by MS but, on their own, were not sufficient to suggest MS as a diagnosis until many other causes had been ruled out, while the plaintiff's vision loss, in the form left hemianopsia, did not commonly result from MS. Referring to a 2015 survey of 5,463

MS patients, Gross asserted that the study identified only 12 who suffered from hemianopsia as a symptom. He opined that hemianopsia is much more likely to be the result of a stroke, tumor, or trauma and, hence, the presence of hemianopsia militated against an initial diagnosis of MS.

In any event, Dr. Gross concluded that the February 20, 2014 MRI scans of the plaintiff's brain did not show any indications of MS, as the mass that was seen in the right temporal lobe resembled a typical presentation of a tumor or abscess, the imaging with contrast showed T2 hyperintensity and heterogeneous enhancement with stippling that also were consistent with a tumor or abscess, and the mass was much larger than is typically seen with MS. Although Dr. Gross noted that there is an unusual form of MS that presents with lesions resembling a tumor, known as tumefactive MS, that condition is found in only 1 or 2 out of every 1,000 MS cases. He concluded that, only in retrospect, and based on the pathology undertaken subsequent to the surgery, could it be concluded that the plaintiff suffered from that condition, but that the pre-operative imaging remained inconsistent with tumefactive MS. He agreed with Dr. Chiocca that MS was an unlikely initial diagnosis in the absence of multiple lesions, which he asserted "are seen in nearly every case of MS diagnosable on imaging." As Dr. Gross further explained:

> "the contrast taken up by the mass seen on the MRI is not consistent with an MS diagnosis either. The contrast shows a heterogeneous enhancement with stippling. This too is an unusual presentation. MS most often appears with an 'incomplete ring enhancement' or diffuse enhancement not heterogeneous enhancement. Contrary to Plaintiffs implications in depositions, there is no incomplete ring seen on this image. Nor is there diffuse enhancement. As a result, the pattern of contrast also was further evidence in favor of tumor or abscess diagnosis which would be far more consistent with the enhancement seen."

Hence, Dr. Gross concluded that Bruce's differential diagnosis of tumor or abscess was entirely appropriate and met the standard of care, while the absence of MS from the differential diagnosis was fully justified, rendering Bruce's decision to proceed with surgery as warranted and within the standard of care. Dr. Gross opined that, conversely, a failure to open the brain and biopsy the lesion would have a been a departure from the standard of care.

Dr. Gross also supported Bruce's determination to forego a spinal tap or MR spectroscopy before proceeding with surgery, as neither of these procedures was indicated. Although he conceded that a spinal tap is often used in the diagnosis of MS, he characterized a spinal tap as a high-risk procedure not to be undertaken lightly, "particularly when there is a mass lesion," and that, in the absence of any other evidence of MS, there was no indication for that procedure to be performed. Dr. Gross expressly asserted that an MR spectroscopy "is clearly not the standard of care," as it is generally employed to ascertain the presence and concentration of various metabolites, but not used routinely to diagnose MS.

In his affirmation, the defendants' expert pathologist, Dr. Eberhart, asserted that "[n]owhere has Plaintiff alleged that the pathology specimens were improperly prepared, analyzed, or reported. Nowhere does he allege that the defendant pathologists reached the wrong conclusions regarding the pathological samples." As Dr. Eberhart explained it, the plaintiff's bills of particulars, as directed to the defendant pathologists Vonsattel and Varma, alleged only that they failed to terminate the surgery following the results of the frozen section analysis, continuing the surgery despite the lack of fluorescence arising from the fluorescein protocol employed during the surgery, and continuing the surgery despite the presence of macrophages on the frozen section. Dr. Eberhard asserted that

> "these allegations are all directed to the responsibilities of the surgeon and clearly misconstrue the role of the pathologists in connection with this surgery. In short, pathologists have no say whatsoever in whether surgery such as the one at issue should be started or stopped based on the pathological information they provide to the surgery team."

He stated that the only role of the defendant pathologists was the preparation, analysis, and reporting of two pathological samples provided intraoperatively by Bruce for frozen section analysis. Specifically, Dr. Eberhart alleged that

> "the role of a pathologist is to provide information to other specialists. As pathologists, we describe what we see in the pathological specimens and sometimes provide interpretations of our findings. But how that information is used by the physicians who request that information is beyond the scope of our expertise and not within our control. As a result, surgical decisions, if any, based

> on the pathological findings are outside of the scope of pathologists' expertise or role."

Notwithstanding Dr. Eberhard's characterization of the plaintiff's allegations against Vonsattel and Varma, he nonetheless provided, in detail, a description of how they processed, analyzed, and reported the results of the pathology studies, and concluded that they were all properly prepared and contained sufficient material for analysis. In light of the length of time that it usually takes to perform and obtain results of tests involving certain staining techniques applicable to tissue samples, Dr. Eberhard asserted that it was not within the standard of care for the pathologists to perform myelin staining with stains such as Luxol Fast Blue or other unspecified stains as part of intraoperative pathologic analysis of brain specimens.

Dr. Eberhard essentially adopted the explanations concerning the presence of macrophages that Drs. Chiocca and Gross set forth in their respective affirmations, and concluded that, despite the presence of those cells, the diagnosis of MS "would most likely not have been made microscopically unless additional tissue was obtained" in the course of continued surgery.

Dr. Levine, the defendants' expert anesthesiologist, rejected the plaintiff's allegations that the defendant anesthesiologists Gaudet and Ornstein failed properly to monitor the plaintiff intraoperatively, failed properly to monitor the plaintiff post-operatively, and failed to diagnose the stroke. As Dr. Levine explained it,

> "[t]he role of the anesthesiologist during surgery is to administer appropriate anesthetics and other drugs, monitor the patient's medical condition, make adjustments to any medications in order to maintain the patient's vital signs within appropriate limits, and communicate any problems with regard to the foregoing to the members of the surgical team."

In Dr. Levine's view, the vital signs that must be monitored consist of, but are not limited to, blood oxygenation (oxygen saturations) levels, respiratory rate, pulse, urine output, body temperature, blood pressure, and the so-called "train of four" nerve response. As he described

it, "[e]ach of these [is] monitored during the procedure and changes to the anesthesia medications may be made as variations are observed."

Based on Dr. Levine's review of the relevant hospital records, he noted that the plaintiff's oxygen saturation level varied between 97.3% and 99.7%, which was within normal limits and, during the entirety of the surgery, the plaintiff was mechanically ventilated, with his respiratory rate measuring between 15 and 19 breaths per minute until the end of the procedure. He noted that, when the plaintiff was awoken from anesthesia, breathing on his own, and extubated, his respiratory rate rose to over 21 breaths per minute, which was still within normal limits and reflected only that he had been extubated. The plaintiff's pulse varied between 55 and 85 beats per minute (BPM) until just prior to the end of the surgery, when it rose to about 109 BPM, which Dr. Levine characterized as slightly over the normal limit of 100 BPM, and that the measurement reflected the fact that the plaintiff was awakening from anesthesia and extubated. The plaintiff's body temperature varied between 35.1 and 36.4 degrees centigrade, which Dr. Levine asserted was within normal limits, as was the plaintiff's urine output.

According to Dr. Levine, the defendant anesthesiologists also were monitoring the "train of four" nerve response, a protocol that is employed to assess neuromuscular transmission when neuromuscular blocking agents are given to block musculoskeletal activity. As he explained it, the protocol involves hooking a device to a peripheral nerve, usually in an arm and a leg, while the anesthesiologist periodically activates a device to determine how many twitches of the limb resulted from four pulses from the device. Inasmuch as Dr. Levine asserted that this system cannot be used to detect interruptions in neuromuscular function in the brain and, therefore, could not be used to detect a stroke, he concluded that there could have been no departure in monitoring "train of four" nerve responses. He continued that, in any event, the plaintiff's response was four out of four with respect to each of the eight trains of four interrogations that occurred during the surgery, which Dr. Levine characterized as normal and

expected. For this reason, among others, Dr. Levine explicitly rejected the plaintiff's allegations that the stroke should have been identified intraoperatively,

Although Dr. Levine recognized the presence of unexplained intraoperative spikes in the plaintiff's blood pressure, which he defined as anything over a systolic blood pressure of 140 (i.e., the maximum pressure between two heartbeats, as measured in milligrams of mercury per heartbeat), he opined that the spikes could be indicative of many things in the perioperative period, and are not specific to any one diagnosis. even though it could "include" a stroke. Since the plaintiff's systolic blood pressure mostly remained at between 90 and 135 mm/Hg during the procedure, which was within normal limits, Dr. Levine concluded that the plaintiff's spikes in systolic blood pressure, including at least one spike to 150 mm/Hg, were not indicative of stroke, and that other events, such as endotracheal intubation, laryngoscopy, and the administration of phenylephrine and ephedrine, likely caused the spikes.

Dr. Levine opined that there was no reason for the defendant anesthesiologists to undertake electrophysiological monitoring during the surgery, as that determination "is a surgical decision not related to anesthesiology." He further asserted that the records memorializing the actions taken by Ornstein, the post-surgical anesthesiologist, reflected that he continued to monitor the plaintiff during the immediate post-operative period. Dr. Levine noted that, when the plaintiff's hemiparalysis was discovered, the plaintiff was transferred from Ornstein's care for a post-operative CT scan, and then transported to the post-surgical intensive care unit, at which point "the stroke had already occurred, the symptoms had been recognized, and treating the problem was not the responsibility of the anesthesia team," but instead within the bailiwick of the surgical and post-surgical teams.

Similarly, Dr. Levine opined that the plaintiff's allegations against Gaudet and Ornstein regarding the pre-surgical work-up, the decision to proceed with surgery in the first instance, the failure to diagnose MS, the purported improper surgical technique, the failure to stop the surgery based on certain pathology, and the failure to properly treat the plaintiff's stroke, were

completely misplaced and unfounded, as all of those decisions were medical or surgical decisions that were outside the discretion or control of the anesthesiologists.

In opposition to the motion, the plaintiff relied upon the same pleadings, bills of particulars, deposition transcripts, and medical records as did the defendants, and also submitted the affirmation of a board-certified neurosurgeon with an active practice in that specialty. The plaintiff's expert asserted:

> "I performed brain surgery as a neurosurgeon throughout my career and evaluating, diagnosing and treating brain lesions and masses [have] been a part of my practice of neurosurgery throughout my career. Based on my training and experience as a neurosurgeon, I am fully familiar with the applicable standard of care for the diagnosis and treatment of brain lesions, masses and multiple sclerosis. I also review and interpret imaging studies of the brain, such as MRI and CT studies, daily as part of my practice of neurosurgery, and I work with pathologists who perform both frozen section intraoperative pathology reviews and final pathology reports for the surgeries I perform. As a result of this experience as well as my medical and neurosurgical training, I am familiar with the standards of care concerning intraoperative interpretation and reports of frozen section pathology."

The plaintiff's expert opined that Bruce and his surgical team departed from good and accepted medical care in misdiagnosing the plaintiff, determining to perform surgery, and failing to terminate the surgery when intraoperative pathology studies were negative for tumor, and that these departures caused an unnecessary loss of brain tissue and a stroke. In this regard, the expert opined that residents Zacharia and McGovern departed from proper and accepted medical practice in the same fashion as Bruce, and that pathologists Vonsattel and Varma departed from accepted practice by failing to speak to the surgeons directly and more clearly advise the surgeons of their diagnosis that there was no tumor present.

The plaintiff's expert asserted that, based on a misreading of the pre-operative MRIs, Bruce "negligently and reflexively determined" that the plaintiff had a malignant brain tumor, "without having performed any diagnostic work-up whatsoever before committing to brain surgery," and that he performed only standard pre-operative laboratory studies, as opposed to an actual diagnostic work-up. With respect to Bruce's diagnosis, the expert opined that Bruce

departed from proper and accepted practice in his interpretations of the brain MRIs, which the expert concluded revealed a right temporal lesion that is "not consistent with a glioma, a malignant tumor of the glial tissue of the brain." Rather, the expert asserted that the characteristics of the brain lesion demonstrated a right temporal lobe tumefactive demyelinating lesion, warranting an appropriate diagnostic work-up to rule in or rule out demyelinating disease. As the expert explained it, a tumefactive demyelinating lesion is a form of demyelination, usually manifesting as a single lesion greater than 2 cm and sometimes with a mass effect and edema that may mimic a neoplasm or tumor on imaging. The expert asserted that several characteristics visible on the MRI scans suggested the presence of a tumefactive demyelinating lesion, including the fact that the Axial T1 imaging on the scans revealed a lesion of greater than 4 cm in greatest dimension, with incomplete ring enhancement, otherwise known as an open ring enhancement, which depicts the absence of a complete ring around the central necrosis, or collection of dead cells. In addition, the expert asserted that the lesion, despite being greater than 4 cm in its greatest dimension, was not shaped like a tumor, and evinced no edema or swelling and no mass effect, including on T2 FLAIR images, explaining that this absence of swelling and mass effect was characteristic of tumefactive demyelinating lesions.

Moreover, with respect to Bruce's note recording his impression of "right temporal malignant Glioma," the plaintiff's expert explained that the note did not contain a differential diagnosis or any other possible diagnoses to be considered and worked up. The expert faulted Bruce for failing to order a neurology consult or a neuroradiology consult to review the MRI scans, and for failing to develop any plan for a follow-up MRI or other diagnostic testing, and concluded that Bruce proceeded to surgery based on a negligent interpretation of the scans. According to the expert,

> "at minimum, a follow-up brain MRI, MRI spectroscopy, and a spinal MRI should have been done to evaluate Cody for demyelinating disease. Dr. Bruce and his hospital team failed to order a spinal tap of cerebrospinal fluid ("CSF"), CSF oligoclonal bonding, IGg Index, cell count, total protein and glucose ratio, part of the work-up for demyelinating disease. He also failed to order evoked

> potential neurologic testing, another critical part of the work-up for demyelinating disease, as Dr. McGovern admitted at his deposition. Dr. Bruce also failed to order additional lab tests that are part of the work-up for demyelinating disease, including ANA, ESR, RF, anticardiolipin antibody testing, and angiotensin converting enzyme. Most important, a key part of the work-up that Dr. Bruce neglected to order was a neurology consultation, inasmuch as the diagnosis and treatment of demyelinating disease is the specialty of neurologists and their input is integral to the diagnosis and treatment of demyelinating disease."

The plaintiff's expert asserted that surgery was not indicated and should not have been performed. Moreover, in addition to Bruce's failure to perform the described work-up, the expert concluded that Bruce departed from accepted medical practice by failing to require an MR spectroscopy study, explaining that, when tumefactive demyelinating disease is suspected, as it should have been here, the evaluation of glutamate/glutamine peaks in MR spectroscopy are quite valuable in distinguishing demyelinating disease from neoplastic tumors. The expert neurosurgeon rejected the defendants' contention that a spinal tap was contraindicated as a diagnostic tool for possible MS because of the risk of increased cranial pressure, asserting that there was nothing in the plaintiff's presentation or MRI findings that indicated any level of increased cranial pressure, and that the plaintiff had been placed on steroids, thereby reducing inflammation and edema in the brain and mitigating any risks associated with cranial pressure. The expert opined that, in the "rare instance" in which a full work-up was inconclusive in diagnosing demyelinating disease, a brain biopsy would have presented far less risk to the plaintiff than the craniotomy that was actually performed, and would not have resulted in brain infarct or other complications.

The plaintiff's expert asserted that the plaintiff presented with no symptoms that required immediate, emergent surgery, but that he required only a proper, comprehensive diagnostic work-up to arrive at the correct diagnosis and course of treatment, as his symptomatology, primarily headaches and reduced field of vision, had been of short duration. The expert noted that, based on Bruce's review of the MRI scans and MRI report, Bruce himself admitted that, pre-operatively, he was aware of the possibility that the brain lesion was inflammatory tissue,

and not a tumor. According to the plaintiff's expert, the diagnostic tests and lab studies that he or she identified in the expert affirmation "would have plainly led to the diagnosis of demyelinating disease without a craniectomy, brain surgery and without the resulting brain infarct." Although the expert conceded that stroke is a risk of brain surgery, he or she concluded that, had additional studies and testing had been done, demyelinating disease certainly would have been diagnosed, the brain surgery never would have been performed, and the plaintiff's brain infarct would never have occurred.

The plaintiff's expert explained that demyelinating diseases are treated with medication and rehabilitation therapies, and not with brain surgery, and that "[t]he fact that gliomas occur more frequently than tumefactive demyelinating disease in no way obviates the duty to be informed regarding both diseases and to be able to differentiate between them." He rejected the defendants' suggestions that Bruce and the resident neurosurgeons should be able to rely on the ultimately mistaken impressions of the pre-operative MRI scans articulated by Drs. Wilner and Guidesblatt, not only because the defendants had an independent duty to interpret the MRI scans in a proper fashion, but also because Dr. Guidesblatt had recommended a complete work-up for the inflammation, including an infectious disease consult, another MRI, laboratory tests, intravenous antibiotics, and even a biopsy that, according to the expert, would have ultimately ruled out a glioma and ruled in MS.

The plaintiff's expert further asserted that Bruce departed from proper and accepted practice by failing immediately to terminate surgery after the intraoperative frozen sections proved that there was no evidence of tumor or abnormality at all, as the handwritten frozen section pathology report revealed that the one sample of the subject tissue was cortex and white matter, with "no diagnostic abnormality detected," while the other was reported as showing "focal hemosiderin and macrophages," with no mention of tumor. As the expert explained it, macrophages are a type of white blood cell that is present with demyelinating disease, inflammation, or infection, which surround and kill microorganisms, remove dead cells,

and stimulate the action of other immune system cells. The expert opined that macrophages "are in no way suggestive of tumor alone," while hemosiderin is "merely a by-product of the breakdown of red blood cells and can be present in a number of different conditions, including demyelinating disease and infection." The expert thus opined that, by continuing the surgery, which took an additional 90 minutes and entailed the removal of additional, larger amounts of brain tissue than previously had been removed, Bruce substantially increased the risk of complication without any benefit to the plaintiff, and thereupon caused the infarct.

The expert contended that McGovern, a fourth-year neurology resident, departed from accepted standards of medical practice by failing to develop or memorialize any plan for pre-operative consultations or additional testing or diagnostic studies, neglecting to include any interpretation of the MRI scans in his notes, and neglecting to develop a differential diagnosis, all of which were substantial factors in causing the plaintiff's injuries. The expert further asserted that Zacharia, a seventh-year chief neurosurgery resident, departed from good practice by failing to make any notes in the plaintiff's chart. The expert faulted both McGovern and Zacharia for failing to suggest to Bruce that a demyelinating disease should have been considered in the differential diagnosis, as they should have had sufficient knowledge and experience to evaluate patients, properly interpret imaging studies, including brain MRIs, and arrive at a plan of care and discuss it with the attending physician. The expert essentially opined that Zacharia and McGovern should have recommended to Bruce that he implement a proper and comprehensive diagnostic work-up for demyelinating disease and that he terminate the surgery after the frozen section pathology was negative for tumor.

The plaintiff's expert also opined that Bruce failed fully to inform the plaintiff of the risks and benefits of, and alternatives to, proceeding with the craniotomy. Specifically, the expert asserted that this required the plaintiff to have been informed that he might not have a brain tumor and that a diagnostic work-up could obviate the need for a craniotomy. According to the expert's interpretation of the records, there is documentation reflecting that this information was

never provided to the plaintiff by Bruce or anyone else, as the Surgical Consent Form presented to the plaintiff recited only "Craniotomy for resection of brain tumor, stereotactic guidance," while the remainder of the form set forth only boilerplate recitals that the plaintiff was fully informed of all relevant information. As the expert framed it, the form did not indicate that the craniotomy was undertaken as an exploratory surgery for a possible brain tumor, as opposed to a necessary surgery to remove a tumor that had actually been identified.

The expert noted that Bruce himself testified that the only alternatives to surgery that he presented to the plaintiff were radiation, chemotherapy, or doing nothing, which the expert opined were not the only other options, as, despite Bruce's testimony to the contrary, there were in fact other imaging studies and diagnostic procedures that could have been performed to determine the nature of the brain lesion. Hence, the expert concluded that the consent obtained from the plaintiff was qualitatively insufficient, and that Bruce departed from proper and accepted medical practice in this regard by failing to inform the plaintiff that the MRIs indicated a possible demyelinating disease and that a diagnostic work-up, including neurology consultation, bone marrow biopsy, evoked potentials, labs, and diagnostic imaging, could have been undertaken to diagnose his condition and obviate the need for surgery. The expert concluded that Bruce also departed from proper and accepted medical practice in failing to inform the plaintiff that, if non-invasive testing did not establish a diagnosis, a biopsy of the brain lesion could be performed to obtain a diagnosis, at substantially less risk than the proposed craniotomy or craniectomy. The expert opined, and the plaintiff himself corroborated in his own affidavit, that, had an appropriate discussion of these options been discussed, no reasonable person would have consented to the craniotomy.

The plaintiff's expert asserted that Bruce also departed from accepted standards of care when, after the surgery was completed, he was told that there was no malignancy and no tumor, but nonetheless recorded his post-surgical diagnosis "malignant glioma."

The expert did not address the claims asserted against the anesthesiologists, nor did he or she address the plaintiff's contention that the surgery was improperly performed with blunt dissection. In addition, the expert did not discuss whether Bruce departed from good and accepted practice in his surgical technique, or whether that technique itself caused or contributed to the plaintiff's stroke. Neither did the plaintiff's expert analyze the implication of failing to implement intraoperative electrophysiological monitoring or failing to administer clot-busting drugs or an angiographic procedure to the plaintiff immediately upon the conclusion of surgery.

A. SUMMARY JUDGMENT STANDARDS

It is well settled that the movant on a summary judgment motion "must make a prima facie showing of entitlement to judgment as a matter of law, tendering sufficient evidence to eliminate any material issues of fact from the case" (*Winegrad v New York Univ. Med. Ctr.*, 64 NY2d 851, 853 [1985] [citations omitted]). The motion must be supported by evidence in admissible form (*see Zuckerman v City of New York*, 49 NY2d 557, 562 [1980]), as well as the pleadings and other proof such as affidavits, depositions, and written admissions (*see* CPLR 3212). The facts must be viewed in the light most favorable to the non-moving party (*see Vega v Restani Constr. Corp.*, 18 NY3d 499, 503 [2012]). In other words, "[i]n determining whether summary judgment is appropriate, the motion court should draw all reasonable inferences in favor of the nonmoving party and should not pass on issues of credibility" (*Garcia v J.C. Duggan, Inc.*, 180 AD2d 579, 580 [1st Dept 1992]). Once the movant meets its burden, it is incumbent upon the non-moving party to establish the existence of material issues of fact (*see Vega v Restani Constr. Corp.*, 18 NY3d at 503). A movant's failure to make a prima facie showing requires denial of the motion, regardless of the sufficiency of the opposing papers (s*ee id.*; *Medina v Fischer Mills Condo Assn.,* 181 AD3d 448, 449 [1st Dept 2020]).

"The drastic remedy of summary judgment, which deprives a party of his [or her] day in court, should not be granted where there is any doubt as to the existence of triable issues or the

issue is even 'arguable'" (*De Paris v Women's Natl. Republican Club, Inc*., 148 AD3d 401, 403-404 [1st Dept 2017]; *see Bronx-Lebanon Hosp. Ctr. v Mount Eden Ctr*., 161 AD2d 480, 480 [1st Dept 1990]). Thus, a moving defendant does not meet its burden of affirmatively establishing entitlement to judgment as a matter of law merely by pointing to gaps in the plaintiff's case. It must affirmatively demonstrate the merit of its defense (see *Koulermos v A.O. Smith Water Prods*., 137 AD3d 575, 576 [1st Dept 2016]; *Katz v United Synagogue of Conservative Judaism,* 135 AD3d 458, 462 [1st Dept 2016]).

B. MEDICAL MALPRACTICE BASED ON DEPARTURE FROM ACCEPTED PRACTICE

"To sustain a cause of action for medical malpractice, a plaintiff must prove two essential elements: (1) a deviation or departure from accepted practice, and (2) evidence that such departure was a proximate cause of plaintiff's injury" (*Frye v Montefiore Med. Ctr.*, 70 AD3d 15, 24 [1st Dept 2009]; *see Roques v Noble*, 73 AD3d 204, 206 [1st Dept 2010]; *Elias v Bash*, 54 AD3d 354, 357 [2d Dept 2008]; *DeFilippo v New York Downtown Hosp*., 10 AD3d 521, 522 [1st Dept 2004]). Where a physician fails properly to diagnose a patient's condition, thus providing less than optimal treatment or delaying appropriate treatment proximately causing injury, he or she will be deemed to have departed from good and accepted medical practice (*see Zabary v North Shore Hosp. in Plainview,* 190 AD3d 790, 795 [2d Dept 2021]; *see Lewis v Rutkovsky*, 153 AD3d 450, 451 [1st Dept 2017]; *Monzon v Chiaramonte*, 140 AD3d 1126, 1128 [2d Dept 2016] ["(c)ases . . . which allege medical malpractice for failure to diagnose a condition . . . pertain to the level or standard of care expected of a physician in the community"]; *O'Sullivan v Presbyterian Hosp. at Columbia Presbyterian Medical Ctr.*, 217 AD2d 98, 101 [1st Dept 1995]).

A defendant physician moving for summary judgment must make a prima facie showing of entitlement to judgment as a matter of law by establishing the absence of a triable issue of fact as to his or her alleged departure from accepted standards of medical practice (*Alvarez v Prospect Hosp.,* 68 NY2d 320, 324 [1986]; *Frye v Montefiore Med. Ctr*., 70 AD3d at 24) or by

establishing that the plaintiff was not injured by such treatment (*see McGuigan v Centereach Mgt. Group, Inc.*, 94 AD3d 955 [2d Dept 2012]; *Sharp v Weber*, 77 AD3d 812 [2d Dept 2010]; *see generally Stukas v Streiter*, 83 AD3d 18 [2d Dept 2011]).

To satisfy the burden, a defendant must present expert opinion testimony that is supported by the facts in the record, addresses the essential allegations in the complaint or the bill of particulars, and is detailed, specific, and factual in nature (*see Roques v Noble*, 73 AD3d at 206; *Joyner-Pack v. Sykes*, 54 AD3d 727, 729 [2d Dept 2008]; *Koi Hou Chan v Yeung*, 66 AD3d 642 [2d Dept 2009]; *Jones v Ricciardelli*, 40 AD3d 935 [2d Dept 2007]). If the expert's opinion is not based on facts in the record, the facts must be personally known to the expert and, in any event, the opinion of a defendant's expert should specify "in what way" the patient's treatment was proper and "elucidate the standard of care" (*Ocasio-Gary v Lawrence Hospital*, 69 AD3d 403, 404 [1st Dept 2010]). Stated another way, the defendant's expert's opinion must "explain 'what defendant did and why'" (*id.*, quoting *Wasserman v Carella*, 307 AD2d 225, 226, [1st Dept 2003]). Furthermore, to satisfy his or her burden on a motion for summary judgment, a defendant must address and rebut specific allegations of malpractice set forth in the plaintiff's bill of particulars (*see Wall v Flushing Hosp. Med. Ctr.*, 78 AD3d 1043 [2d Dept 2010]; *Grant v Hudson Val. Hosp. Ctr.*, 55 AD3d 874 [2d Dept 2008]; *Terranova v Finklea*, 45 AD3d 572 [2d Dept 2007]).

Once satisfied by the defendant, the burden shifts to the plaintiff to demonstrate the existence of a triable issue of fact by submitting an expert's affidavit or affirmation attesting to a departure from accepted medical practice and opining that the defendant's acts or omissions were a competent producing cause of the plaintiff's injuries (*see Roques v Noble*, 73 AD3d at 207; *Landry v Jakubowitz*, 68 AD3d 728 [2d Dept 2009]; *Luu v Paskowski*, 57 AD3d 856 [2d Dept 2008]). Thus, to defeat a defendant's prima facie showing of entitlement to judgment as a matter of law, a plaintiff must produce expert testimony regarding specific acts of malpractice, and not just testimony that contains "[g]eneral allegations of medical malpractice, merely

conclusory and unsupported by competent evidence tending to establish the essential elements of medical malpractice" (*Alvarez v Prospect Hosp*., 68 NY2d at 325; *see Frye v Montefiore Med. Ctr*., 70 AD3d at 24). In most instances, the opinion of a qualified expert that the plaintiff's injuries resulted from a deviation from relevant industry or medical standards is sufficient to preclude an award of summary judgment in a defendant's favor (*see Murphy v Conner*, 84 NY2d 969, 972 [1994]; *Frye v Montefiore Med. Ctr*., 70 AD3d at 24). Where the expert's "ultimate assertions are speculative or unsupported by any evidentiary foundation, however, the opinion should be given no probative force and is insufficient to withstand summary judgment" (*Diaz v New York Downtown Hosp*., 99 NY2d 542, 544 [2002]; *see Frye v Montefiore Med. Ctr*., 70 AD3d at 24).

1. Claims Against Bruce and NYPH

The defendants established Bruce's prima facie entitlement to judgment as a matter of law in connection with the allegations of medical malpractice against him. The defendants' submissions included expert affirmations, in which several physicians opined that Bruce did not depart from good practice in interpreting the preoperative MRIs, diagnosing a tumor, declining to include MS in his differential diagnosis, declining to order the full work-up or diagnostic tests suggested by the plaintiff, determining to proceed with surgery, declining to terminate the surgery after the intraoperative pathology studies were negative for tumor or abscess, employing blunt dissection, declining to implement intraoperative electrophysiological monitoring, and declining to administer the plaintiff clot-busting drugs or an angiographic procedure immediately after surgery. They also established, prima facie, that Bruce's conduct did not cause or contribute to the plaintiff's stroke, although they conceded that he lost brain tissue as a consequence of the surgery.

The plaintiff, however, raised triable issues of fact with his own expert's affirmation as to whether Bruce departed from good practice in connection with the interpretation of the MRIs, his omission of MS from his differential diagnosis, his actual diagnosis of tumor or abscess, his

determination to proceed with surgery, and his determination to continue the surgery after the intraoperative pathology studies were negative for tumor or abscess. The plaintiff also raised triable issues of fact as to whether those departures caused or contributed to his loss of brain tissue and stroke. In this regard, the court notes that Bruce's own expert conceded that stroke was a risk of both initiating and continuing brain surgery, regardless of whether Bruce met the standard of care applicable to his surgical technique. Inasmuch as the plaintiff's expert did not address surgical technique, the failure to implement intraoperative electrophysiological monitoring, or the failure to administer clot-busting drugs or an angiographic procedure, any claim of departure premised on those issues must be summarily dismissed. Inasmuch as NYPH has not denied that it was Bruce's employer, and a hospital that employs a physician may be held vicariously liable for the physician's malpractice (*see Hill v St. Clare's Hosp.*, 67 NY2d 72, 79 [1986]), the defendants' motion must be denied insofar as it seeks summary judgment dismissing the claims against NYPH that are based upon its vicarious liability for the viable claims alleging malpractice against Bruce.

2. Claims Against Zacharia and McGovern

With respect to the claims against Zacharia and McGovern,

> "[a] resident who assists a doctor during a medical procedure, and who does not exercise any independent medical judgment, cannot be held liable for malpractice so long as the doctor's directions did not *so greatly deviate from normal practice* that the resident should be held liable for failing to intervene"

(*Soto v Andaz*, 8 AD3d 470, 471 [2d Dept 2004] [emphasis added]; *see Sklarova v Coopersmith*, 180 AD3d 510, 510 [1st Dept 2020]; *Nasima v Dolan*, 149 AD3d 759, 760 [2d Dept 2017]; *Leavy v Merriam* 133 AD3d 636, 638 [2d Dept 2015]; *Poter v Adams*, 104 AD3d 925, 927 [2d Dept 2013]; *Bellafiore v Ricotta*, 83 AD3d 632, 633 [2d Dept 2011]; *Crawford v Sorkin*, 41 AD3d 278, 280 [1st Dept 2007]; *Buchheim v Sanghavi*, 299 AD2d 229, 240 [1st Dept 2002]). This rule is applicable even where the resident "actively participated" in performing a procedure (*see Sklarova v Coopersmith*, 180 AD3d at 510).

The defendants established their prima facie entitlement to judgment as a matter of law dismissing the complaint against Zacharia and McGovern, both with their own testimony that they exercised no independent medical judgment and were acting under Bruce's directions, and with their experts' affirmations opining that they did not depart from good and accepted practice. The plaintiff's expert essentially countered that these two residents had the training, experience, knowledge, and skill to permit them to arrive at conclusions different than those of Bruce, and that they departed from good practice by failing to inform Bruce about the concerns that they should have had about the diagnosis, the intraoperative pathology, the presence of macrophages, and the need to terminate the surgery based on the negative pathology. That opinion, however, is insufficient to raise a triable issue of fact. Although the expert may have raised a triable issue as to whether those failures to act constituted simple departures by the attending surgeon, the expert failed to articulate why or how the attending surgeon's approach "so greatly deviated from normal practice" that the residents were legally obligated to intervene and countermand the attending surgeon's diagnosis, directives, and course of treatment. Consequently, summary judgment must be awarded to Zacharia and McGovern dismissing the complaint insofar as asserted against them.

3. Claims Against Vonsattel and Varma

The defendants also established, prima facie, that pathologists Vonsattel and Varma did not depart from good and accepted practice by submitting an expert opinion that they timely accepted two intraoperative frozen samples of the plaintiff's brain tissue, performed the proper staining and other preparation of the samples, properly analyzed the samples in a seasonable manner, and timely and expeditiously submitted a report accurately describing the results of their analysis. The plaintiff failed to raise a triable issue of fact in opposition to the defendants' showing in this regard.

An expert affidavit employed to oppose a summary judgment motion in a medical malpractice action "must be by a qualified expert who 'profess[es] personal knowledge of the

standard of care in the field of . . . medicine [at issue], whether acquired through his practice or studies or in some other way'" (*Bartolacci-Meir v Sassoon*, 149 AD3d 567, 571 [1st Dept 2017] [general surgeon not qualified to render opinion as to whether defendant gastroenterologist deviated from accepted practice], quoting *Nguyen v Dorce*, 125 AD3d 571, 572 [1st Dept 2015] [pathologist not qualified to render opinion as to whether defendant deviated from standard of care in field of emergency medicine]). To the extent that the plaintiff's expert neurosurgeon is qualified to render an opinion with respect to the proper practice of pathology on the basis of his or her statement that he or she was "familiar with the standards of care concerning . . . reports of frozen section pathology," the actual pathology report stated that there was "no-diagnostic abnormality detected" in one sample and "focal perivascular hemosiderin and macrophages" in the other sample; thus, the report clearly articulated that there was no evidence of tumor or abscess. There was no need for a telephone call to confirm such unambiguous findings. In any event, in light of the fact that Bruce and his experts insisted that it was appropriate to continue the surgery regardless of whether there was a tumor or not, the plaintiff failed to raise a triable of fact as to whether the pathologists' failure to telephone the neurosurgical team mid-surgery and intone the words "there is no tumor" caused or contributed to the continued surgery or the concomitant stroke. Hence, summary judgment must be awarded to Vonsattel and Varma.

4. Claims Against Gaudet and Ornstein

Inasmuch as the defendants established, prima facie, that anesthesiologists Gaudet and Ornstein did not depart from good practice in administering and monitoring anesthesia during and after the plaintiff's surgery, and the plaintiff's expert did not address the claims against those defendants, the plaintiff failed to raise a triable issue of fact, and they must be awarded summary judgment dismissing the complaint insofar as asserted against them.

C. LACK OF INFORMED CONSENT

The elements of a cause of action for lack of informed consent are

> "(1) that the person providing the professional treatment failed to disclose alternatives thereto and failed to inform the patient of reasonably foreseeable risks associated with the treatment, and the alternatives, that a reasonable medical practitioner would have disclosed in the same circumstances, (2) that a reasonably prudent patient in the same position would not have undergone the treatment if he or she had been fully informed, and (3) that the lack of informed consent is a proximate cause of the injury"

(*Spano v Bertocci*, 299 AD2d 335, 337-338 [2d Dept 2002]; *see Zapata v Buitriago*, 107 AD3d 977, 979 [2d Dept. 2013]). For a statutory claim of lack of informed consent to be actionable, a defendant must have engaged in a "non-emergency treatment, procedure or surgery" or "a diagnostic procedure which involved invasion or disruption of the integrity of the body" (Public Health Law § 2805-d[2]). "'The mere fact that the plaintiff signed a consent form does not establish the defendants' prima facie entitlement to judgment as a matter of law'" (*Huichun Feng v. Accord Physicians*, 194 AD3d 795, 797 [2d Dept 2021], quoting *Schussheim v Barazani*, 136 AD3d 787, 789 [2d Dept 2016]). Nonetheless. a defendant may satisfy his or her burden of demonstrating his or her prima facie entitlement to judgment as a matter of law in connection with such a cause of action where a patient signs a detailed consent form, and there is also evidence that the necessity of the procedure, along with known risks and dangers, was discussed prior to the surgery (*see Bamberg-Taylor v Strauch*, 192 AD3d 401, 401-402 [1st Dept 2021]).

The defendants established their prima facie entitlement to judgment as a matter of law dismissing the lack of informed consent cause of action against NYPH and Bruce with their own affidavits, deposition testimony, expert affirmation, and a copy of the consent form. The plaintiff, however, raised a triable issue of fact, with his own testimony and his expert's affirmation, as to whether Bruce or anyone else on Bruce's surgical team fully informed him that the surgery was likely exploratory and diagnostic only, rather than therapeutic, whether less risky, alternative diagnostic measures could have been undertaken that would have avoided surgery, and whether it was actually necessary to remove the entire mass in his brain to ascertain a further course of treatment and care. He also raised a triable issue of fact as to whether he would be

required to undergo a full course of surgery even if intraoperative pathology were negative for tumors. In addition, he raised a triable issue of fact as to whether a reasonable patient in his position would have consented to the surgery if he or she had been provided with all of the information he now claims was necessary and relevant.

The court notes that "[a] failure to diagnose cannot be the basis of a cause of action for lack of informed consent unless associated with a diagnostic procedure that 'involve[s] invasion or disruption of the integrity of the body'" (*Janeczko v Russell*, 46 AD3d 324, 325 [1st Dept 2007], quoting Public Health Law § 2805-d[2][b]; *see Lewis v Rutkovsky*, 153 AD3d at 456), and that invasion or disruption is claimed to have caused the injury. Here, however, the failure to diagnose MS was indeed associated with what turned out to be a diagnostic procedure that involved brain surgery, clearly an invasion of bodily integrity. Hence, that general rule provides no basis upon which to award summary judgment to NYPH or Bruce dismissing the lack of informed consent cause of action against them.

V. CONCLUSION

Although the affirmation of the plaintiff's expert was executed in Florida, it does not include the certificate of conformity required by CPLR 2309, which is a written instrument pursuant to which a person qualified by the laws of the country or state in which an affidavit or affirmation is executed and notarized, or by the laws of New York, certifies that the out-of-state affidavit or affirmation has indeed been drafted, executed, and notarized in conformity with the laws of that country or state. This defect does not require the court to disregard the affirmation or reject the plaintiff's opposition papers, as the defect may be cured by the submission of the proper certificate nunc pro tunc (*see Bank of New York v Singh*, 139 AD3d 486 [1st Dept 2016]).

In light of the foregoing, it is

ORDERED that the defendants' motion is granted to the extent that summary judgment is awarded to

(a) the defendants Brad Zacharia, M.D., Robert McGovern, M.D., John Gregory Gaudet, M.D., formerly known as John Gregory Van Driest, M.D., Eugene Ornstein, M.D., Hemant Varma, M.D., and Jean Paul Vonsattel, M.D., dismissing the complaint insofar as asserted against them;

(b) the defendant The New York and Presbyterian Hospital dismissing, insofar as asserted against it, so much of the complaint as was premised upon its vicarious liability for the alleged malpractice of Brad Zacharia, M.D., Robert McGovern, M.D., John Gregory Gaudet, M.D., formerly known as John Gregory Van Driest, M.D., Eugene Ornstein, M.D., Hemant Varma, M.D., and Jean Paul Vonsattel, M.D.,

(c) the defendant Jeffrey Bruce, M.D., dismissing, insofar as asserted against him, so much of the medical malpractice cause of action as asserted that he departed from good medical practice in connection with his surgical technique, his failure to implement intraoperative electrophysiological monitoring, and his failure to administer clot-busting drugs or an angiographic procedure to the plaintiff post-operatively, and

(d) the defendant The New York and Presbyterian Hospital dismissing, insofar as asserted against it, so much of the medical malpractice cause of action as asserted that it is vicariously liable for the alleged malpractice of Jeffrey Bruce, M.D., in connection with his surgical technique, his failure to implement intraoperative electrophysiological monitoring, and his failure to administer clot-busting drugs or an angiographic procedure to the plaintiff post-operatively;

and the motion is otherwise denied.

This constitutes the Decision and Order of the court.

8/15/2022
DATE

JOHN J. KELLEY, J.S.C.

CHECK ONE:		CASE DISPOSED			X	NON-FINAL DISPOSITION	
		GRANTED		DENIED	X	GRANTED IN PART	OTHER
APPLICATION:		SETTLE ORDER				SUBMIT ORDER	
CHECK IF APPROPRIATE:		INCLUDES TRANSFER/REASSIGN				FIDUCIARY APPOINTMENT	REFERENCE