CITATION: Denman v. Radovanovic, 2023 ONSC 1160
COURT FILE NO.: CV-17-574151
DATE: 20230216

ONTARIO
SUPERIOR COURT OF JUSTICE

B E T W E E N:

MICHAEL DENMAN, ANDREA DENMAN, OLIVIA DENMAN and ISABEL DENMAN Plaintiffs	)	*Sloan H. Mandel, Aleks Mladenovic and Deanna Gilbert,* for the Plaintiffs
IVAN RADOVANOVIC, VITOR MENDES PEREIRA, LEE-ANN SLATER, RONIT AGID, KAREL TER BRUGGE, JOHNNY HO YIN WONG, JOHN DOE #1, JOHN DOE #2, and JOHN DOE #3 Defendants	)	*Darryl A. Cruz, Adam Goldenberg and William Rooney,* for the Defendants
	)	**HEARD: March 16-18; 21-25; and March 28 to 31; April 1, 4, 5, 7, 8; and June 10 and 13 to June 22, 2022**

REASONS FOR DECISION

J.E. FERGUSON J.

[1] This was a medical negligence trial. Following the trial, all of the transcripts were obtained. Written submissions of the plaintiffs were received on September 16, 2022, the defendant doctors on October 10, 2022, and reply submissions of the plaintiffs on October 24, 2022. I have checked the transcript references in the submissions and find them to be correct and am not including them in these reasons. I greatly appreciate that counsel have provided transcript and evidence references in their written submissions.

[2] Informed consent is the issue regarding liability. Damages have been settled.

The Decision

[3] On June 23, 2015, at the age of 54, the plaintiff Michael Denman ("Mr. Denman") suffered a catastrophic brain bleed during part three of a multi-step elective course of an anterior ventricle malformation ("AVM"), causing a traumatic brain injury ("TBI"). His AVM was an unruptured, asymptomatic Spetzler – Martin Grade ("SMG") 4.

[4] The multi-step elective medical intervention included:

(a) an embolization performed on August 19, 2014;

(b) an embolization performed on December 9, 2014;

(c) an embolization performed on June 23, 2015;

(d) a surgical resection of the AVM that was to be performed on June 24, 2015.

[5] I find that the defendant doctors failed to meet the standard of care in that they did not obtain Mr. Denman's informed consent to the procedure and that this failure caused his TBI. The reasons behind this finding are set out below.

The Parties

[6] In addition to Mr. Denman, the other plaintiffs are Andrea Denman ("Mrs. Denman"), born August 22, 1962, and their two daughters: Olivia Denman, born July 12, 1993, and Isabel Denman, born February 6, 2000.

[7] The defendant, Dr. Ivan Radovanovic ("Dr. Radovanovic"), is a neurosurgeon.

[8] The defendant, Dr. Vitor Mendes Pereira ("Dr. Pereira"), is a neuroradiologist and neurosurgeon.

[9] The defendant, Dr. Karel ter Brugge ("Dr. ter Brugge"), is a diagnostic radiologist.

[10] The court heard evidence for the plaintiffs from Mrs. Denman; Mark Denman – Mr. Denman's brother; Paul L'Heurex – Mr. Denman's co-worker; Dr. Paul Muller ("Dr. Muller") – Mr. Denman's treating neurosurgeon and participant expert; and Dr. Max Findlay ("Dr. Findlay") – a neurosurgeon and litigation expert.

[11] The court also heard evidence from the three defendant doctors and Dr. Daniel Roy ("Dr. Roy") – a neurosurgeon and litigation expert. Following a *voir dire* on qualifications, Dr. Redekopp, a vascular neurosurgeon and interventional neuroradiologist was excluded from testifying on the basis of bias.

Medical Background

The 2010 Discovery of the Aneurysm and AVM

(i) Diagnosis

[12] On May 10, 2010, Mr. Denman suffered an ictus (stroke or seizure) during sexual intercourse.

[13] Mr. Denman was taken by ambulance to Southlake Regional Health Centre ("SRHC") and upon assessment, he presented as confused and was administered Dilantin (an anti-convulsant drug) intravenously.

[14] Mr. Denman underwent a CT scan of his head, which showed a subarachnoid and intraventricular hemorrhage and an AVM of the occipital lobe of his brain.

[15] Within hours of his admission to SRHC, Mr. Denman was transferred to St. Michael's Hospital ("SMH").

[16] Upon admission to SMH, Mr. Denman came under the care of a neurosurgeon, Dr. Muller. Mr. Denman had a catheter inserted into his right lateral ventricle for cerebrospinal fluid drainage.

[17] On May 10, 2010, Mr. Denman underwent a CT angiogram and a head CT scan which was recorded as follows:

> The CT angiogram shows [a] large arteria venous malformation occupying the right occipital lobe. It is difficult to measure the nidus (\E\R\E\ 3.3 cm x 1.3 cm x 1.5 cm)…

[18] Mr. Denman was diagnosed with an AVM and a flow-related aneurysm. The aneurysm was favoured to be the source of Mr. Denman's hemorrhage.

[19] On the same day, Mr. Denman underwent a further cerebral angiogram, which was recorded as follows:

> 1. Spetzler-Martin grade 4 AVM (size > 3 cm = 2 points, eloquent brain = 1 point, deep venous drainage = 1 point) with large venous ectasias and multiple associated aneurysms…
>
> 2. Bilobed, complex basilar termination aneurysm arising from the basilar artery/right P1 segment junction. This is the likely source of hemorrhage. Endovascular options include a stent-assisted coiling. Management options will be discussed with the neurosurgical service under the direction of Dr. Paul Muller.

(ii) Treatment

[20] On May 11, 2010, Mr. Denman underwent a balloon and stent-assisted coiling procedure, performed by neuroradiologist Dr. Thomas Marotta ("Dr. Marotta"). The ruptured aneurysm was coiled and not the AVM.

[21] In the weeks that followed, Mr. Denman underwent serial imaging of his head to determine the success of the coiled aneurysm intervention and the status of the AVM. The AVM was recorded to be stable, unchanged in extent or configuration, and the imaging did not identify any AVM associated hemorrhage.

[22] On June 9, 2010, Mr. Denman was discharged from SMH. The discharge summary from Dr. Muller recorded the most responsible diagnosis to be a "subarachnoid hemorrhage due to ruptured intra-cranial aneurysm".

Post-Discharge Consultations through SMH

[23] On August 4, 2010, Mr. Denman, accompanied by his wife, was seen in follow-up by Dr. Marotta.

[24] Dr. Marotta wanted to receive Dr. Muller's opinion, from a surgical point of view, before determining the ultimate treatment strategy for Mr. Denman's AVM.

[25] On August 23, 2010, Mr. Denman was seen in follow-up by Dr. Muller to review the treatment options for his AVM. Dr. Muller's intention was to review Mr. Denman's case with Dr. Marotta and his neurovascular colleagues.

[26] On September 22, 2010, Mr. Denman's case was reviewed by a multi-disciplinary group at a SMH neurovascular conference. Dr. Cusimano's consult note to Dr. Muller recorded:

> It was the feeling of our neurovascular group that the patient be considered for gamma knife radiosurgery, if you are in agreement with that… As well, any treatment option for this gentleman is a difficult one and sometimes it requires several stages of treatment as you can appreciate… If you are in agreement with that, we will proceed and I will present him in the conference.

[27] On September 29, 2010, Mr. Denman, accompanied by his wife, was seen in follow-up by Dr. Marotta who recorded:

> The question remains as to what to do with the AVM. I discussed the nature of AVMs again with the patient and his wife today. Options include conservative observation, surgical removal, embolization, and radiosurgery. There can be a combination of these as well. We discussed his situation and the appearance of his AVM at our recent neurovascular conference and decided, like you, that we should take serious consideration of the radiosurgery option.

[28] On October 8, 2010, Mr. Denman's case was reviewed by the gamma knife unit at the Toronto Western Hospital ("TWH").

The 2011 Gamma Knife Radiosurgery and Follow-up Monitoring

[29] On March 2, 2011, Mr. Denman underwent gamma knife stereotactic radiosurgery for treatment of his AVM at the TWH.

[30] Prior to the procedure, an MRI was undertaken for gamma knife planning which showed that "there is evidence for a large occipital lobe AVM with multiple dilated draining veins".

[31] The gamma knife surgery did not resolve Mr. Denman's AVM.

[32] After the gamma knife surgery, Mr. Denman received follow-up neurosurgical care at the TWH.

[33] On June 1, 2011, he saw Dr. Gentili who recorded: "Neurologically today, he has left hemianopia, but otherwise doing very well".

[34] A repeat MRI was performed on September 7, 2011, which showed that "there is no interval change compared to previous… Stable appearance of a previously irradiated brain AVM".

[35] On that date, Mr. Denman was also seen by Dr. Cusimano, who recorded that: "he has no headaches. Apart from the hemianopsia, he remains well… We don't expect any change in the AVM at this stage". Mr. Denman was also seen by Dr. Schwartz, who recorded that:

> Since the treatment, Mr. Denman is basically doing well. He noted some increase of headaches in the recent time, but those headaches do respond very well to painkillers. He denies any changes in cognitive field, and seizures have not yet occurred…he wants to go back for work in the summer of this year. He is also very active, and does a lot of sports, including table tennis, as training for his hemianopsia.

[36] On September 6, 2012, Mr. Denman returned to full-time work.

[37] Two years post-gamma knife surgery, Mr. Denman was seen in follow-up at the TWH. On March 3, 2013, Mr. Denman underwent a repeat MRI which again showed that "there is no interval change compared to previous… Stable appearance of a previously irradiated brain AVM". On March 6, 2013, Mr. Denman was seen by Dr. Tsao who recorded: "The patient feels well. His headaches are very occasional."

[38] Three years post-gamma knife surgery, Mr. Denman was seen in follow-up at the TWH. On February 28, 2014, Mr. Denman underwent a repeat MRI which once again showed "there is no interval change compared to previous… Stable appearance of a previously irradiated brain AVM". On March 5, 2014, Mr. Denman was seen by Dr. Cusimano who recorded:

> He traveled only very short trips in his first year, maybe once a month to Boston or New York, etc., no longer than an hour or so, but in the last year, he has been traveling all over the world with long haul flights quite frequently, 1 or 2 weeks monthly.

> His MRI basically shows no change in his AVM from 3 years ago… So, I discussed this with Dr. Schwartz as well and we felt he would best be reconferenced and then we can decide on whether to just continue to manage him conservatively or whether surgery would be an option for him.

The 2014-2015 Elective Treatment

(i) The 2014 TWH Conference & Plan for Management

[39] On May 8, 2014, Mr. Denman's case was further reviewed at a multidisciplinary AVM conference (including the defendants) at the TWH who recommended a multiple embolization procedure and likely a microsurgical resection after the series of embolization procedures.

[40] In his consultation note following the conference, Dr. Radovanovic wrote:

> He is known for a large right occipital arteriovenous malformation which was treated in 2011 with gamma knife.
>
> …
>
> We think that further management might be done in the way of embolization that might potentially eliminate the shunt or if that is not achieved this AVM, once the flow is reduced from preoperative embolization, can be removed with microsurgical resection.
>
> We will discuss this option and plan further management with the patient once we see him back in our clinic.

(ii) Mr. Denman's Consultation with Dr. ter Brugge Following the Conference

[41] On June 5, 2014, Mr. Denman was seen in consultation by Dr. ter Brugge, whose note states the following:

> Our group had recommended embolization of the high flow component of the AVM and I discussed this with him. He made many notes and is going to discuss it with his wife and they will probably come back for a follow-up meeting to discuss the final decision.

[42] On June 29, 2014, Mr. Denman sent an email to Dr. ter Brugge, stating that: "I would like to proceed with your recommended embolization treatment".

(iii) Mr. Denman's Pre-Operative Consultations

[43] On August 5, 2014, Mr. Denman was seen in preparation for his upcoming procedure.

[44] Dr. ter Brugge was identified as the physician who would be performing the embolization.

[45] During this visit, Mr. Denman signed a TWH Consent to Treatment for "embolization brain AVM with MBCA". Dr. ter Brugge was identified as the surgeon on the Consent to Treatment form.

[46] Dr. ter Brugge dictated a note identifying the nature of the August 5, 2014 meeting. The note reads:

> Today I saw in my office for the purpose of preadmission your patient Mr. Denman… Follow-up imaging has shown limited response to the radiosurgery and in view of the high flow of the vascular malformation as well as decided to proceed with embolize Haitian therapy [all sic]. We had a long discussion about the risks involved and the patient understood very well the discussion and accepted the risk of 3-5% of stroke or death.

(iv) The First Embolization and Follow-up Thereafter

[47] On August 19, 2014, Mr. Denman was admitted to the TWH under the care of Drs. Radovanovic and ter Brugge, to undergo embolization of his AVM.

[48] The pre- and intra-operative records continued to identify Dr. ter Brugge as the assigned surgeon.

[49] On August 19, 2014, Mr. Denman underwent the first embolization of his AVM which was performed by Dr. Pereira.

[50] Dr. Pereira documented the first embolization in a procedure note dictated on August 22, 2014, which recorded that the AVM was partially embolized and that the aim would be to repeat the angiogram in approximately three months and perform further treatment at that time.

[51] On November 15, 2014, Mr. Denman sent an email to Dr. ter Brugge, in which he stated:

> As a follow up to the embolization treatment that I underwent back in July and understanding that a further embolization surgery is required to plug the remaining artery in my AVM, please note that I have deferred any international travel between the 26th [of] November 2014 and 6th of January 2015 for this purpose.

[52] On November 27, 2014, Mr. Denman underwent a pre-operative consultation at the TWH. No consent form was executed as part of that pre-admission work-up.

(v) The Second Embolization & Follow-up Thereafter

[53] On December 9, 2014, Mr. Denman was admitted to the TWH under the care of Dr. Radovanovic.

[54] Mr. Denman signed a Consent to Treatment.

[55] On that date, Mr. Denman underwent the second embolization of his AVM, performed by Dr. Pereira with the assistance of Dr. Slater. Only partial embolization was achieved.

[56] Dr. Pereira documented the second embolization in a procedure note dictated on December 16, 2014, which stated that:

> The patient will be booked for repeat angiography early next year with view to embolise the final fistulous components and discussion will be had with neurosurgery regarding excision post endovascular cure [all sic].

[57] On December 29, 2014, Mr. Denman sent an email to Dr. ter Brugge, copying Dr. Pereira, in which he stated:

> As follow up to the embolization procedure of the 9th of December and subsequent discussions with your colleague Vitor Mendes Pereira we would like to arrange a meeting with your team & the Neurological Surgeons to gain a clearer understanding of the follow up procedure (i.e. combined embolization and surgical vein removal).

[58] On January 29, 2015, Mr. Denman, accompanied by his wife, met with Drs. Radovanovic and Pereira. Drs. Radovanovic and Pereira proposed that Mr. Denman undergo further intervention of his AVM consisting of a session of presurgical embolization with glue followed by surgical resection during the same hospital stay.

[59] Following the meeting, Dr. Pereira (but not Dr. Radovanovic) prepared a consultation note.

[60] On January 29, 2015, Mr. Denman and Dr. Radovanovic signed a Consent to Treatment.

[61] On June 1, 2015, Mr. Denman attended at the TWH for a pre-operative assessment.

(vi) The Third Embolization and Emergent Resection

[62] On June 22, 2015, Mr. Denman was admitted to the TWH under the care of Dr. Radovanovic for purposes of undergoing the third embolization and surgical resection.

[63] On June 23, 2015, Mr. Denman underwent the third embolization, performed by Dr. Pereira with the assistance of Dr. Slater.

[64] Prior to the commencement of the third embolization, the plan was for Dr. Radovanovic to operate upon Mr. Denman the following day, on June 24, 2015.

[65] Dr. Pereira documented the third embolization in a procedure note dictated on June 30, 2015, which recorded how the third embolization procedure concluded, as follows:

> Following the discussion with neurosurgery we decided that because of the risk of bleeding from the venous component, we would proceed with surgery on the same day.

[66] Dr. Pereira live-broadcasted the third embolization to an audience of physicians around the world. That broadcast was not available for review at the trial.

[67] Post-operatively on June 23, 2015, Mr. Denman was not obeying commands. The CT scan of his brain showed:

> CLINICAL HISTORY: Post AVM embo ? Bleed.
>
> …
>
> FINDINGS: Interval embolization of the previously seen AVM in the right parietal - occipital region. There is now a large (8.1 x 4.6 x 5.7 cm) acute intraparenchymal hematoma in the right parieto-occipital-temporal region…
>
> OPINION: Post-embolization of a right occipital AVM, there is a very large acute intraparenchymal hematoma with 1.4 cm leftward midline shift.

[68] Shortly after the CT, Mr. Denman's pupils were dilated and a decision was made to rush him back to the operating room.

[69] In that surgery, Mr. Denman underwent an emergent right craniotomy for drainage of a hematoma and a resection of the AVM, performed by Dr. Radovanovic. Dr. Radovanovic's operative note reads:

> PROCEDURE: Right-sided occipital craniotomy, evacuation of intracerebral hematoma and resection of a Spetzler-Martin grade IV arteriovenous malformation…
>
> CLINIC NOTE: …He underwent a third embolization of his AVM with ONYX on June 22, 2015, and postoperatively first woke up well from that procedure, but then secondarily developed left-sided weakness and then decreased level of consciousness. A CT revealed large deep occipital parietal temporal hematoma with significant mass effect….
>
> OPERATIVE NOTE: On June 23, the patient was brought emergently to the Operating Room.

[70] On November 9, 2015, Mr. Denman was transferred to Bridgepoint Rehabilitation Centre. Upon his transfer, Mr. Denman was densely hemiplegic on his left side; fully dependent for all care; and communicating only by writing and gesturing.

The Law – Informed Consent

[71] As the Supreme Court of Canada observed in *Hollis v. Birch*, [1995] 4 S.C.R. 634, at para. 24, citing its earlier decisions in *Hopp v. Lepp*, [1980] 2 S.C.R. 192 and *Reibl v. Hughes*, [1980] 2 S.C.R. 880:

> [P]hysicians have a duty, without being questioned, to disclose to a patient the material risks of a proposed procedure, its gravity, and any special or unusual risks, including risks with a low probability of occurrence, attendant upon the performance of the procedure.

[72] The court in *Hollis*, at para. 24, goes on to explain that the principle underlying "informed consent" is:

> [T]he "right of a patient to decide what, if anything, should be done with his body" … The doctrine of "informed consent" dictates that every individual has a right to know what risks are involved in undergoing or foregoing medical treatment and a concomitant right to make meaningful decisions based on a full understanding of those risks.

[73] The case law is clear that informed consent is a distinct cause of action, which is separate from a breach of the standard of care: *Watson v. Soon*, 2018 ONSC 3809, 50 C.C.L.T. (4th) 83, at para. 82; *Bollman v. Soenen*, 2014 ONCA 36, 315 O.A.C. 90, at paras. 18-19; *Reibl*, at pp. 890-892.

[74] To establish a claim on the basis of a failure to obtain informed consent, the plaintiff must satisfy the two-part test established in *Reibl*, at p. 884: *Watson*, at para. 82; *Bollman*, at para. 20. The test requires the plaintiff to prove the following (*Watson*, at para. 82):

(a) the physician failed to disclose the nature of the procedure or its material risks such that the patient was uninformed when undergoing the procedure in question;

(b) the patient herself would not have undergone the procedure in question had she been properly informed; and

(c) a reasonable person in the patient's position would not have undergone the procedure in question if fully apprised of the material risks.

[75] The first step of the test relates to adequate disclosure, and the latter two parts of the test relate to causation and contain a subjective and a modified objective component: *Coffey v. Cyriac*, 2020 ONSC 6411, at para. 111.

[76] In the result, after establishing a failure to disclose material information, the plaintiff must demonstrate on a balance of probabilities that they would not have gone ahead with the operation on the "modified objective test" set out above: *Coffey*, at para. 111.

[77] This analysis, on both steps of the informed consent test, turns on the particular facts of each case: *Brown v. Baum*, 2020 ONSC 1541, at para. 10.

Step 1: Adequate Disclosure

[78] According to the *Health Care Consent Act*, 1996, S.O. 1996, c. 2, Sched. A, s. 11(3) ("*HCCA*"), a physician is required to disclose the nature of the treatment, the expected benefits of the treatment, the material risks of the treatment, the material side effects of the treatment, alternative courses of action, and the likely consequences of not having the treatment.

[79] Furthermore, s. 11(2) of the *HCCA* is clear that a consent to treatment is informed if, before giving it:

(a) the person received the information about the matters set out in subsection (3) that a reasonable person in the same circumstances would require in order to make a decision about the treatment; and

(b) the person received responses to his or her requests for additional information about those matters.

[80] In addition to the *HCCA*, the common law has developed a set of principles with respect to a physician's duty of disclosure. Without being questioned, a physician must disclose the nature of the proposed treatment, its gravity, any material risks, and any special or unusual risks attending upon the treatment: *Hopp*, at p. 210; *Coffey*, at para. 112. Where the proposed medical treatment is elective rather than medically necessary, information is much more likely to be classified as material: *Coffey*, at para. 110; *Jesperson v. Karas*, 2019 ONSC 5841, 60 C.C.L.T. (4th) 224, at para. 48. Similarly, where the proposed medical treatment is elective rather than medically necessary, the duty to disclose alternatives is enhanced: *Ross v. Welsh* (2003), 18 C.C.L.T. (3d) 107, at paras. 134-135. A "material risk" is one that a reasonable person in the patient's position would want to know before deciding whether to proceed with the proposed treatment: *Van Dyke v. Grey Bruce Regional Health Centre* (2005), 197 O.A.C. 336 (C.A.), at para. 63, leave to appeal refused [2005] S.C.C.A. No. 335. Probable risks must be disclosed: *Hopp*, at p. 209; *Coffey*, at para. 112. Possible, remote, and rare risks must also be disclosed where the consequence of the risk, should it materialize, would be serious: *Hopp*, at p. 209; *Videto et al. v. Kennedy*, 33 O.R. (2d) 497; *Van Dyke*, at para. 63. The frequency or likelihood of the risk materializing must also be disclosed: *Matuzich v. Lieberman*, [2002] O.J. No. 2811 (S.C.), at para. 53.

[81] Where statistics are generally known and have been published in the medical literature, those statistics should be disclosed: *Ross*, at para. 125. The consequences of the injury should it occur must be disclosed, including warning the patient that it could be life-threatening: *Matuzich*, at paras. 53-54. Disclosure of material information should not be dependent upon the patient asking "the right" questions: *Ross*, at para. 114. If a patient does ask questions, however, the physician must answer them: *Jesperson*, at para. 46. A physician has a duty to disclose available alternatives to the proposed treatment if the alternative is something that a reasonable person in the patient's position would want to know about: *Watson*, at para. 90.

[82] Physicians do not have an obligation to disclose alternative treatment options unless they are clinically indicated or they would, in the view of the physician, be of some benefit to the patient: *Stepita v. Dibble*, 2020 ONSC 3041, at para. 83; *Bafaro v. Dowd*, 2008 CarswellOnt 5246, at para. 41, aff'd 2010 ONCA 188; *Watson*, at para. 90. Furthermore, a plaintiff generally requires expert evidence to prove that those alternative treatment options were medically reasonable alternatives: *Stepita*, at para. 83; *Bollman*, at para. 27.

[83] As the Court of Appeal for Ontario stated in *Van Dyke*, at para. 67, with respect to situations in which there is more than one medically reasonable treatment, and the risk/benefit analysis engaged by the alternative involves different considerations:

> [A] reasonable person would want to know about the alternatives and would want the assistance of the doctor's risk/benefit analysis of the various possible treatments before deciding whether to proceed with a specific treatment… a reasonable person could not make an informed decision to proceed with treatment "A" if that patient

> was unaware of the risks and benefits associated with treatment "B", a medically appropriate alternative treatment.

[84] With respect to the existence of a signed consent form, Ontario courts have been clear that the signing of a consent to treatment form will not protect a doctor from liability unless the consent is an informed consent: *Pridham v. Nash Estate* (1986), 57 O.R. (2d) 347 (S.C.), at para. 23.

Step 2: Causation

[85] According to the court in *Stepita*, at paras. 84-85, even if a plaintiff establishes that a physician failed to adequately disclose a material risk or treatment alternative, the informed consent claim will still fail if the plaintiff cannot establish causation on both a subjective and modified objective basis. Both the subjective and the modified objective criteria must be established for the patient to prove on a balance of probabilities that the patient is entitled to damages for a lack of informed consent: *Watson*, at para. 85.

Subjective Test Component

[86] The subjective component of the test is based on what the particular patient would have agreed to if the risks were known. It will of necessity vary from patient to patient and take into account factors unique to the individual: *Bollman*, at para. 21. The courts in *Bollman*, at para. 22, and *Reibl*, at p. 898, have been clear that the subjective test alone cannot be relied upon, for it imports an element of hindsight reasoning. A patient could be inclined to say that he or she would not have undergone the procedure if the risks that in fact materialized and that form the basis of the action has been known. According to the court in *Reibl*, at p. 898:

> [T]o apply a subjective test to causation would, correlatively, put a premium on hindsight, even more of a premium than would be put on medical evidence in assessing causation by an objective one.

[87] To meet the subjective test, the plaintiff must establish that the material risks or treatment alternatives were not adequately disclosed and that, had they been disclosed, consent would not have been given: *Bollman*, at para. 25.

Modified Objective Test Component

[88] As a result of the concern outlined above, the plaintiff must also satisfy the modified objective component of the test on a balance of probabilities. The modified objective test is based on what a reasonable person in the plaintiff's position would have done: *Bollman*, at paras. 21, 23. Put differently, this modified objective test requires the trial judge to determine whether the reasonable person in the plaintiff's circumstances, if adequately informed of the attendant risks, would have proceeded with the procedure: *Revell v. Heartwell*, 2010 ONCA 353, 266 O.A.C. 184, at para. 56.

[89] As stated in *Reibl* and reaffirmed by the Supreme Court of Canada in *Arndt v. Smith*, [1997] 2 S.C.R. 539, at para. 6:

> The test enunciated relies on a combination of objective and subjective factors in order to determine whether the failure to disclose <u>actually</u> caused the harm of which

> the plaintiff complains. It requires that the court consider what the reasonable patient in the circumstances of the plaintiff would have done if faced with the same situation. The trier of fact must take into consideration any "particular concerns" of the patient and any "special considerations affecting the particular patient" in determining whether the patient would have refused treatment if given all the information about the possible risks. [emphasis in original].

[90] With respect to the relationship between timing and causation, the Court of Appeal for Ontario in *Felde v. Vein & Laser Medical Centre* (2003), 68 O.R. (3d) 97, at para. 14, stated the following:

> Timing of the surgical procedure may or may not be a significant factor with respect to the issue of causation. Whether it is or not will depend on the particular circumstances of the case … [I]n *Reibl v. Hughes* (citations omitted), the timing of the surgery was central to the issue of causation because the plaintiff maintained that had he been informed of the material risks associated with the surgery, he would have postponed the operation for a period of about 18 months in order to solidify his financial position.

[91] As a result, it is clear that a trial judge may take timing into account as a factor in determining whether a reasonable person, in the plaintiff's position, would have refused the procedure had the physician made them aware of the material risks: *Felde*, at para. 15; *Reibl*, at p. 928.

[92] Considering *Reibl*, the court in *Martin v. Capital Health Authority*, 2007 ABQB 260, 74 Alta. L.R. (4th) 206, rev'd on other grounds 2008 ABCA 161, 88 Alta. L.R. (4th) 207, at para. 117, stated, with respect to temporal causation:

> I agree with the submission that it is not upon the Plaintiffs to prove anything more than that he would not have the operation at that particular time. To say that he must establish that he would never have the operation is in direct contradiction to *Reibl v. Hughes*.

Physician's Record-Keeping Duty

[93] Pursuant to *General*, O. Reg. 114/94, s. 18(1) (regulations under the *Medicine Act, 1991*, S.O. 1991, c. 30), a physician is obligated to make records for each patient containing the date of each professional encounter (s. 18(1)(5)) and a record of the professional advice given to the patient (s. 18(1)(7)).

[94] The court in *Watson*, at para. 76, explained that the importance of record-keeping has been recognized as part of the standard of care, citing *Adams v. Taylor*, 2012 ONSC 4208, 94 C.C.L.T. (3d) 144 for the following:

> The clinical reason for record-keeping is the basic duty to provide average, reasonable and prudent care … in order to carry out this care, two essentials are required. The first is to remind the person providing care of the past and present

> condition of the patient and the treatment already given. The second is to communicate this information to others who may also be caring for the patient.

[95] A negative inference can be drawn when a physician's record-keeping is lacking: *Watson*, at para. 77. However, as noted in *Lennox v. Burns*, 2016 ONSC 2993, at para. 139, even where a record-keeping failure does not justify an adverse inference, it may invite a more searching evaluation of the physician's testimony on matters that the records do not adequately address.

[96] A physician's failure to comply with the regulatory requirement for the maintenance of proper records can and has amounted to a breach of a reasonable standard of care: *Watson*, at para. 78.

Hearsay

[97] As observed by the Supreme Court of Canada in *R. v. Khelawon*, 2006 SCC 57, [2006] 2 S.C.R. 787, at paras. 35 – 36, a hearsay statement is an out-of-court statement (such that it lacks a contemporaneous opportunity to cross-examine the declarant) adduced to prove the truth of its contents.

[98] The court in *Khelawon*, at para. 42, citing *R. v. Starr*, 2000 SCC 40, [2000] S.C.R. 144 and *R. v. Mapara*, 2005 SCC 23, [2005] 1 S.C.R. 358, laid out the governing framework:

> (a) hearsay evidence is presumptively inadmissible unless it falls under an exception to the hearsay rule. The traditional exceptions to the hearsay rule remain presumptively in place.
>
> (b) a hearsay exception can be challenged to determine whether it is supported by indicia of necessity and reliability, required by the principled approach. The exception can be modified as necessary to bring it into compliance.
>
> (c) in "rare cases", evidence falling within an existing exception may be excluded because the indicia of necessity and reliability are lacking in the particular circumstances of the case.
>
> (d) if hearsay evidence does not fall under a hearsay exception, it may still be admitted if indicia of reliability and necessity are established on a *voir dire*.

[99] The Supreme Court of Canada has adopted a "flexible approach" to hearsay: *Khelawon*, at para. 45. This means that hearsay evidence may be admitted either where the evidence falls under an existing exception or falls under the "principled approach", which requires the trial judge to determined that the indicia of necessity and reliability have been established: *Khelawon*, at para. 47. As stated by the court in *Khelawon*, at para. 2:

> When it is necessary to resort to evidence in this form, a hearsay statement may be admitted if, because of the way in which it came about, its contents are trustworthy, or if circumstances permit the ultimate trier of fact to sufficiently assess its worth. If the proponent of the evidence cannot meet the twin criteria of necessity and reliability, the general exclusionary rule prevails. The trial judge acts as a gatekeeper

> in making this preliminary assessment of the "threshold reliability" of the hearsay statement and leaves the ultimate determination of its worth to the fact finder.

[100] The principled approach is founded upon a concern for trial fairness, and indeed, trial fairness is reflected in the twin principles of necessity and reliability: *Khelawon*, at para. 49.

[101] According to the court in *Khelawon*, at para. 47, the onus is on the person who seeks to adduce the evidence to establish these criteria (necessity and reliability) on a balance of probabilities.

[102] Finally, even where the proponent of hearsay evidence satisfies the necessity and reliability requirements of the principled approach to hearsay, it does not follow that the hearsay statement will be admitted. The trial judge retains discretion to exclude otherwise admissible hearsay where its probative value is outweighed by its prejudicial effect: *R. v. Srun*, 2019 ONCA 453, 146 O.R. (3d) 307, at para. 128.

The Criterion of Necessity

[103] As the court stated in *Khelawon*, at para. 49:

> The criterion of necessity is founded on society's interest in getting at the truth. Because it is not always possible to meet the optimal test of contemporaneous cross-examination, rather than simply losing the value of the evidence, it becomes necessary in the interests of justice to consider whether it should nonetheless be admitted in its hearsay form. The criterion of reliability is about ensuring the integrity of the trial process.

[104] The necessity criterion is to be given a flexible definition, and it is not to be equated with the unavailability of the witness: *Khelawon*, at para. 78.

[105] As the Court of Appeal for Ontario stated in *R. v. Y.(N.)*, 2012 ONCA 745, 113 O.R. (3d) 347, at para. 77, "necessity is broader than unavailability of the declarant and extends to the nature and quality of the evidence."

[106] Further, as Wilson J. explained in *R. v. Burrows*, 2005 CanLII 18721 (Ont. S.C.), at paras. 199-201:

> [199] Where a declarant is unavailable to testify at trial and where the party seeking to tender the hearsay evidence is unable to obtain evidence of the same quality from another source, that hearsay evidence will meet the test of necessity. (R. v. Hawkins (1996), 1996 CanLII 154 (SCC), 111 C.C.C. (3d) 129 at 156 (S.C.C.)).
>
> [200] In R. v. F. (W.J.) (1999), 1999 CanLII 667 (SCC), 138 C.C.C. (3d) 1 at 17 (S.C.C.) McLachlin C.J.C. held that necessity can be established where "on the facts before the trial judge, direct evidence is not forthcoming with reasonable effort. The reasons for the necessity may be diverse – ranging from total testimonial incompetence to traumatic consequences to the witness of testifying."

> [201] In R. v. Moore (1990), 1990 CanLII 10977 (ON SC), 63 C.C.C. (3d) 85 (Ont. Gen. Div.) Moldaver J. (as he then was) held that it was reasonably necessary to admit hearsay evidence where the declarant could not, from her own memory, give evidence… In R. v. Smith, supra the necessity component was met because only the deceased declarant could have provided the evidence.

[107] However, in *R. v. Rhayel*, 2015 ONCA 377, 334 O.A.C. 181, at para. 73, the Court of Appeal for Ontario declined to admit a videotaped statement of the complainant (who had died following the preliminary inquiry), stating the following:

> In my view, in the circumstances here, the necessity element was not met. Simply put, what the complainant said in her videotaped statement was not necessary as that evidence was, at the time the trial judge was considering the admissibility of the videotaped statement, already before the court through her testimony at the preliminary inquiry.

[108] The Court of Appeal determined that while some of the information in the videotaped statement was not contained in the complainant's evidence at the preliminary inquiry, it held at para. 70 that "that information was … peripheral".

[109] The Court of Appeal for Ontario in *Khan v. College of Physicians & Surgeons* (1992), 9 O.R. (3d) 641 (C.A.), at paras. 71-73, refused to admit multiple statements concerning the same events, holding that it was not reasonably necessary:

> [71] The sister-in-law testified that shortly after Ms. O. and Tanya arrived at her home, she spoke to Tanya alone and Tanya repeated, with some slight differences, the statement she had made to her mother after they left Dr. Khan's office. The committee admitted the sister-in-law's evidence relying on the principles set down by this court in *Khan*.
>
> …
>
> [73] The statement to the sister-in-law was essentially a repetition of the statement Tanya had made to her mother. As I have held that the statement to Ms. O. was admissible, it was not reasonably necessary to admit the statement of the sister-in-law in order to place a full and frank version of Tanya's recollection of events before the tribunal. Ms. O.'s evidence accomplished that purpose. As the statement made to the sister-in-law fails the necessity test, it should not have been received.

The Criterion of Reliability

[110] The court in *Khelawon* drew a distinction between "threshold reliability" and "ultimate reliability", and clarified as follows, at para. 50:

> [T]he trial judge only decides whether hearsay evidence is admissible. Whether the hearsay statement will or will not be ultimately relied upon in deciding the issues in the case is a matter for the trier of fact to determine at the conclusion of the trial based on a consideration of the statement in the context of the entirety of the evidence. It is

> important that the trier of fact's domain not be encroached upon at the admissibility stage… If the judge sits without a jury, it is equally important that he or she not prejudge the ultimate reliability of the evidence before having heard all of the evidence in the case. Hence, a distinction must be made between "ultimate reliability" and "threshold reliability". Only the latter is inquired into on the admissibility *voir dire*.

[111] As the Court of Appeal for Ontario made clear in *Srun*, at paras. 125-127, the threshold reliability requirement can be established in either or both of two ways:

> [125] *Procedural reliability* is established when there are adequate safeguards for testing the evidence despite the fact that the declarant has not given the evidence in court, under oath or its equivalent and under the scrutiny of contemporaneous cross-examination… These substitutes must provide a satisfactory basis for the trier of fact to rationally evaluate the truth and accuracy of the hearsay statement… Among the substitutes for traditional safeguards are video recording the statement, administration of an oath and warning the declarant about the consequences of lying… However, some form of cross-examination, as for example of a recanting witness at trial, is usually required…
>
> [126] *Substantive reliability* is established where the hearsay statement is inherently trustworthy. To determine whether the statement is inherently trustworthy, a trial judge considers the circumstances in which the statement was made and any evidence that corroborates or conflicts with the statement… The standard for substantive reliability is high: the judge must be satisfied that the statement is so reliable that contemporaneous cross-examination on it would add little if anything to the process…
>
> [127] Procedural and substantive reliability are not mutually exclusive. They may work in tandem in that elements of both can combine to overcome the specific hearsay dangers a statement might present even where each, on its own, would be insufficient to establish reliability. [Emphasis in original.]

[112] Indicia of substantive reliability, at issue in this case, include: the statement was made in the context where there was no obvious motive for the declarant to lie: *R. v. Blackman*, 2008 SCC 37, [2008] 2 S.C.R. 298; *Khelawon*, at para. 71; *Brisco Estate v. Canadian Premier Life Insurance Company*, 2012 ONCA 854, 113 O.R. (3d) 161, at para. 55. The substance of the statement is not something that the declarant was likely to forget: *Brisco Estate*, at para. 55. The statement was made spontaneously and/or immediately after the subject event: *Khelawon*, at paras. 98 and 100; *Burrows*, at paras. 222 and 270. There is other evidence that corroborates the statement: *Burrows*, at paras. 54, 67, 98-100; *Khelawon*, at para. 98. The statement was made in circumstances of some solemnity: *Brisco Estate*, at para. 55. The statement has been consistent in that it has remained the same, despite being said to multiple people over a period of time: *Brisco Estate*, at para. 55. The statement has a striking similarity to other witness statements: *R. v. U. (F.J.)*, [1995] 3 S.C.R. 764, at para. 40; *Khelawon*, at para. 44). The statement was made with an awareness of the consequences of lying or the importance of telling the truth: *Khelawon*, at para. 39.

[113] The Court of Appeal for Ontario in *R. v. Blackman* (2006), 84 O.R. (3d) 292 (C.A.), at para. 55, however also noted that:

> In some cases, evidence of the presence or absence of a motive by the declarant to fabricate plays a critical role in the determination of threshold reliability. In *Starr*, Iacobucci J. indicated at para. 215 that indicators of the trustworthiness of a hearsay statement could be furnished where the declarant had "no motive to lie." At para. 216 he elaborated, "[L]ower courts have recognized that the absence of a motive to lie is a relevant factor in admitting evidence under the principled approach." …Conversely, the presence of a motive to lie may be grounds for exclusion of evidence under the principled approach… Thus, evidence regarding motive to fabricate remains an important consideration in testing the truth and accuracy of a hearsay statement.

[114] In *R. v. Czibulka* (2004), 190 O.A.C. 1 (C.A.), at paras. 54 and 56, the Ontario Court of Appeal held that the trial judge erred in admitting a letter into evidence. This was because (in the letter):

> The fact that the deceased mentioned that the appellant accused her of theft, whether true or not, raised the spectre that the deceased may have been motivated to lie. The question was not whether there was extrinsic evidence to support this allegation but whether there were circumstances in the making of the statement to negate the possibility that the statement was false. Since there was no evidence of the circumstances under which the letter was written, the Crown could not meet that burden.

Analysis

[115] I accept and rely on the following submissions made by the plaintiffs.

[116] Mr. and Mrs. Denman were misled by the defendant physicians about the scope, efficacy, risk and need for medical intervention. This misleading and inaccurate information was highlighted by reference to formal admissions contained in their Amended Statement of Defence; their literature; their outcome statistics; and the opinion provided by their litigation expert.

[117] I agree that, had appropriate disclosure been made, neither Mr. Denman nor a reasonable patient in his circumstances would have elected to proceed with any of the medical interventions recommended by the defendants at the time the recommendations were made. I agree that any decision to treat, or not to treat, would have been deferred by Mr. Denman until after his retirement so he could amass savings, with the full support of his family and his employer.

[118] The risks and benefits of the options should have been presented to Mr. Denman by the defendants, regarding the management of his brain AVM. Because they were not, Mr. Denman was not given the chance to make a decision about treatment options. The court must determine what a reasonable person in Mr. Denman's circumstances would likely have done, had they received adequate disclosure. This requires consideration of the risks relating to the option to treat Mr. Denman's AVM (now or later) versus the risks relating to the option of conservative/watchful management.

[119] Dr. Radovanovic confirmed in his evidence that nobody wants to front-end a bunch of treatment risk if it is disproportionate to a lifetime risk amortized over time, without treatment.

[120] Dr. Findlay has extensive experience treating AVMs and testified that if Mr. Denman were to undergo a series of embolizations, followed by a surgical resection, then he would be subject to a cumulative, upfront risk of 30 to 50% of suffering a permanent neurological deficit. Dr. Findlay testified that if Mr. Denman were to continue with conservative management, his lifetime risk for a spontaneous bleed would be in the range of 40 to 60%, and that should any such future bleed occur, only a portion of such bleeds result in serious and permanent disability or death. Given this risk analysis, Dr. Findlay indicated that he would not have offered the option of medical intervention to Mr. Denman because "it was too high risk". When testifying about Mr. Denman's AVM options in 2010/11, Dr. Findlay stated: "I felt that intervention that required either surgical manipulation or endovascular treatment, in this particular patient, was likely more dangerous than the natural history of the disease".

[121] Dr. Muller was called as a participant expert on behalf of the Denmans. He was Mr. Denman's former treating neurosurgeon at SMH and was involved in Mr. Denman's decision to have his AVM treated by way of low risk, non-invasive gamma knife radiation therapy in 2011.

[122] The Amended Statement of Defence confirms that the option to treat Mr. Denman's AVM would include a series of medical interventions. I agree that in order to make an informed decision, Mr. Denman would have to have been informed of the cumulative upfront risk or range of upfront risk associated with what was known to be a multi-step elective course of treatment, versus the lifetime risk to which he would be subject without treatment.

[123] Following a May 8, 2014, multidisciplinary AVM conference at the TWH, Dr. ter Brugge was tasked with conveying the necessary information about the risks and benefits of the available options to Mr. Denman so that he could make an informed decision. He met with Mr. Denman on June 5, 2014.

[124] Dr. ter Brugge withheld the details of that plan from Mr. Denman, which was confirmed in his testimony as follows:

> (In Direct Examination)
>
> Q. Would you have discussed with Mr. Denman the total number of embolization treatments that might be required to eliminate his AVM?
>
> A. No, I wouldn't.
>
> Q. Why not?
>
> A. Because it's unpredictable. There is, as I said before, we will do one step at a time, one embolization at a time. If Mr. Denman and ourselves are lucky, then the embolization will result in a cure right away and there's no need for any other treatment.
>
> …

Q. Just to be clear, how many embolization treatments would you have recommended to Mr. Denman on the June 5th, 2014 meeting?

A. I would have recommended one.

A. It's certainly possible to cure the patient in one shot.

…

(In Cross Examination)

Q. I will repeat it. It was certainly known to you, Doctor, that there was a significant prospect that embolization would not be curative, and that microsurgical resection of the AVM would be required if a cure was the ultimate goal, right?

A. In my opinion the embolization - one embolization only was likely to be curative.

[125] Dr. ter Brugge's belief that a single embolization would likely be curative was not an opinion shared by Drs. Pereira and Radovanovic. Both of these doctors believed that in order to effect a cure of Mr. Denman's AVM, a series of embolizations would be required, likely to be followed by a surgical resection.

[126] Dr. Radovanovic testified that it was his expectation that Dr. ter Brugge would inform Mr. Denman: (i) that he was likely to require a series of embolizations, followed by a surgical resection to eliminate his AVM; and (ii) of the cumulative risk of that treatment plan, which could be given as a range. I agree that Dr. ter Brugge did neither.

[127] On June 5, 2014, Dr. ter Brugge referred Mr. Denman to a TWH website that advised, "there is a small chance of a stroke in about 1 to 3% occurring as the result of the treatment". (This was not correct.)

[128] Dr. ter Brugge testified that he informed Mr. Denman on June 5, 2014 (uncharted) and August 5, 2014 (late charted), of a 3 to 5% risk of stroke or death for a single embolization procedure. In published literature that Dr. ter Brugge co-authored in 2015, he reported that the rate of permanent neurological deficit and death was 3 to 7% when embolizing with glue and 8 to 15% when embolizing with Onyx.

[129] Dr. ter Brugge directed Mr. Denman to a misleading website and provided an adverse outcome estimate for a single embolization procedure that was less than what he reported in his published literature. He also failed to provide Mr. Denman an estimate of the cumulative upfront risk or range of upfront risk associated with what was known to be a multi-step elective course of medical intervention. Dr. ter Brugge also failed to provide to Mr. Denman an estimate of the lifetime risk, or range of risk, to which he would be subject without treatment.

[130] On August 5, 2014, Mr. Denman was seen by Dr. ter Brugge who in his note did not reference the disclosure of risk associated with a single embolization procedure. Dr. ter Brugge's

typed consult note (dictated 2 ½ days later) indicates that he provided to Mr. Denman a risk estimate of 3 to 5% of stroke or death associated with a single embolization.

[131] I agree that any understatement of risk associated with a single embolization procedure is compounded by the fact that the Amended Statement of Defence confirmed that multiple embolization procedures would be required. I agree that the reality is that the cumulative risk associated with elective treatment was significantly higher than what Dr. ter Brugge disclosed to Mr. Denman.

[132] I set out the evidence from the cross-examination of Dr. Roy, the litigation expert retained by the defence, below:

> Q. So apparently in the transcripts of Dr. Radovanovic and in the transcripts of Dr. Pereira, there's at least some reference to the notion that the plan from the outset, or the belief from the outset, of the two physicians that were truly doing the procedures was that Mr. Denman was likely to require a series of embolizations followed by a resection, two or three embolization procedures followed by a resection. That testimony, sworn testimony, is in the discovery transcripts of the defendants, and you didn't reference those important exchanges in your report, true or false?
>
> A. True.
>
> Q. Right. And so, the plan about which you speak and upon which you base your opinion is different than the evidence in the pleading, in Dr. Radovanovic's read-ins, and Dr. Pereira's answers in his discovery transcript, true?
>
> A. True.
>
> Q. Okay. Patients like Mr. Denman are entitled to know not only what's likely to be required, but what may be required, right?
>
> A. Yes.
>
> Q. Patients like Mr. Denman are entitled to know the range of cumulative risk for the treatment that might be required, right?
>
> A. Right.
>
> Q. Patients like Mr. Denman are entitled to know the range of cumulative risk for the treatment that is likely to be required, right?
>
> A. Right.
>
> Q. If Dr. Ter Brugge failed to provide those cumulative risk estimates, then he did not meet the standard of care, true or false?

A. Well, I'm not in Dr. Ter Brugge's head, but I think that he was proposing a single embolization to start with and re-discuss after. So, this is the reason he gave one, one risk.

Q. Right. He was proposing something different than what's in the pleading, what Dr. Radovanovic's expectation was and what Dr. Pereira testified to in a portion of his examination for discovery transcript, right? He was proposing something different, right?

A. Yes.

Q. And because he proposed something different, he didn't tell Mike about what the others were thinking, are you aware of that? Are you aware of that?

A. Yeah, from that...

Q. Yeah, right.

A. From that evidence.

Q. And so, let's say Dr. Ter Brugge had this honest belief that is different than what's been pled in a defence, that's different than what the two physicians responsible for the procedures indicated in their sworn testimony. What it would indicate to you is that there was a miscommunication between these three physicians, true?

A. True.

Q. Right. And if there's miscommunication between co-defendants, it increases the likelihood that important information isn't going to be conveyed to the patient, right?

A. Maybe.

Q. Right. Yeah. And the standard of disclosure in an informed consent case for an elective procedure, an elective procedure, is higher than the disclosure that would be required for a necessary procedure, right?

A. Sure.

Q. It's true, isn't it?

A. It's true.

Q. Right. And the standard of disclosure for a treatment regime that is likely to involve a multi-step series of interventions, each with their own distinct risk, requires a greater level of disclosure about the risks and benefits of that treatment path, true?

A. True.

Q. Right. And so, Dr. Ter Brugge, if the pleading is accurate, the Statement of Defence, if Dr. Radovanovic's evidence is believed, then Dr. Ter Brugge had a far greater disclosure obligation than what you understand he provided to Mr. Denman, true?

A. Yeah. Yes.

[133] Dr. Pereira testified that he attended the August 5, 2014 meeting, and provided all of the necessary information. I note that Dr. Pereira's trial testimony on this part was contrary to his sworn discovery evidence. Further he was not licenced to practice medicine in the province of Ontario as of that date.

[134] Dr. Pereira also testified as follows:

Q. If a patient is not properly informed, the consent is not valid, right?

A. Yes.

…

Q. And you're taught that the physician has to explain the proposed investigations or treatments that might be necessary to effect a cure, right?

A. Yes.

Q. Not just single treatment, but the various treatments that might be necessary to effect a cure, right?

A. Yes.

Q. And you're aware that not only are you supposed to disclose the extent of the treatments that might be required, you have to indicate the chances of success or the anticipated outcome, right?

A. Yes, the risks.

Q. What's that?

A. Risks.

Q. Yes, not just risks but chances of success. I mean, I guess, you know, maybe one bleeds into the other, pardon the pun, but you know, whether, whether one procedure is going to be curative or whether the overwhelming literature, which suggested multiple procedures will be required, right?

A. Yes.

Q. Right. And you don't have to just discuss risks, you have to discuss material risks and you have to discuss special risks, right?

A. Yes.

Q. You also have to inform the patient about the available alternative treatments and their risks?

A. Yes.

Q. It's important not to neglect addressing the possibility of not treating the associated risks, right?

A. Yes.

Q. That's a very important part of the informed consent discussions explaining to the patient, certainly in an elective scenario, the treatment isn't necessary, right?

A. Yes.

Q. It's something that can be deferred, it's something that maybe you'd have, maybe you don't have, right?

A. Adapted to the context that you are discussing, yes.

Q. Right. And so would a, a material and special risk have been to tell Mr. Denman that without treatment, he was subject to about a one percent per year risk of serious adverse outcome without treatment?

A. Yeah, that was communicated for him, not on that specific way, but was communicated with what we discussed before.

Q. Whether it was or wasn't communicated, you would agree that it's something that should have been communicated, right?

A. Yes.

Q. Sometimes it's appropriate to offer up print material as an adjunct to what the physician has said about the risks to treat or not to treat, right?

A. Yes.

Q. And if you're going to provide materials, they've got to be accurate, right?

A. Yes.

Q. I mean, it, it defeats the purpose of giving a patient material or referring them to material if that material is inaccurate, right?

A. Yes.

Q. It, it creates confusion and misleads the patient if they're given inaccurate information, right?

A. Yes.

[135] Dr. Pereira also agreed that not every spontaneous bleed without treatment results in a serious adverse outcome for a patient. He agreed that Mr. Denman, without treatment, would have been subject to about a 1% per year risk of serious adverse outcome. This information was not disclosed to Mr. Denman by any of the defendants.

[136] On August 19, 2014, and December 9, 2014, Dr. Pereira performed the 1st and 2nd embolizations.

[137] There is no record of any kind that would indicate that any informed consent discussion took place after August 19, 2014, and before December 9, 2014. Dr. Pereira's explanations for this failure were not believable.

[138] On January 29, 2015, a meeting was held between Drs. Pereira and Radovanovic, and the Denmans. On that day, the two doctors recommended that Mr. Denman undergo a combined embolization and surgical resection on June 23 and 24, 2015, respectively.

[139] At trial, Dr. Radovanovic testified that he advised the Denmans that the risk of the combined procedure was around 10%, such risk including transient or permanent neurological deficit, and such deficits ranging from minor, moderate, to disabling. His testimony was as follows:

Q. And what would you have [told] them was the risk of the two procedures combined?

A. Yeah. Something in the order of ten percent.

Q. And would you have discussed with them what that ten percent involved? What those risks were?

A. Again, I don't remember specific words, but when I qualify risk, I would always say the risk will include either transient or permanent neurological deficits, and neurological deficit can be either minor, moderate, or disabling.

Q. A few times, just in your last couple of answers, you spoke about what your estimate would be. Just to be clear, would you have provided that estimate to the Denmans?

A. Yes.

[140] Similar to Dr. Radovanovic's trial testimony, Dr. Pereira testified that he advised the Denmans that the risk for the combined procedure was 10-15% for any adverse outcome, and 3-5% for significant morbidity or mortality. His evidence was as follows:

Q. Alright. And you in chief on Friday described this combined procedure that would require an embolization with Onyx and cutting open Mr. Denman's skull

as having a three to five percent risk for significant morbidity or death, right? That's what you said on Friday, right?

A. I said that the overall risk is ten to fifteen percent, and one third of that ten to fifteen percent is severe morbidity and mortality.

Q. Okay. And one third of ten to fifteen percent is what, Doctor?

A. Three to five percent.

[141] Dr. Roy testified against these defendants in relation to the disclosure that they said was provided to the Denmans on January 29, 2015. During cross-examination, he stated that it would be "absurd" to tell the Denmans there was anything less than a 10-15% risk for significant morbidity or mortality for the combined procedure. I agree that if the Denmans were told that the risk of significant morbidity or mortality was 3-5%, not only would that estimate of risk be absurd, but he might be testifying on behalf of the plaintiffs rather than the defence. His evidence on this point was as follows:

Q. Your report – the only reference that you make to Dr. Pereira's standard practice is the reference to his having allegedly told the Denmans that Mr. Denman would be subject to a 10-15% risk of adverse outcome should he elect to proceed with combined embolization and surgical resection procedure, right, that is the only piece of evidence from Dr. Pereira that you have quoted in your report that we don't otherwise find [in] the chart, right?

A. Yes.

Q. And again, I just want to be clear about this, that 10-15% risk that was quoted to the Denman's, that was for significant morbidity or mortality, right?

A. Yes.

Q. Okay. And if he told Ms. Denman that there was a 2% risk of a very severe outcome, that would be absurd, right?

A. Yes.

Q. If he told her there would be a three percent risk of a very bad outcome, that would be absurd, right?

A. Yes.

Q. If he told her that there was a five percent risk of a very bad outcome, that too would be absurd because it is at least ten to 15%, right?

A. I believe so.

…

Q. And notwithstanding that, and notwithstanding the absence of charting in keeping with what you've been taught, what you've done is you've assumed that Andrea's evidence is inaccurate, right? That's what you've done?

A. I assumed that because as we discussed that it would be absurd to, to tell a, to give a two percent risk.

Q. It would be absurd to tell Andrea Denman that with this combined procedure there was only a two percent chance of significant morbidity or mortality, right?

A. Right.

Q. It would be absurd to say anything less than ten to fifteen percent for significant morbidity and mortality, right?

A. Yes.

Q. So, what if Andrea Denman and Michael Denman were told that the risk of significant morbidity or mortality as a consequence of this combined procedure was two percent, that would be absurd, right?

A. Yeah.

Q. It would be absurd at three to 5%, too, right?

A. I would not be sitting here.

Q. What's that?

A. I would not be sitting here.

Q. You wouldn't be sitting here, right, because if Andrea Denman and Michael Denman were told that there was a 3-5% risk of significant mortality or death associated with this combined procedure, you might be sitting here for me, as opposed to for them, right? Right?

A. Right.

Q. So, what we can agree on, you and I haven't agreed a tremendous amount of stuff today. But if Michael Denman and Andrea Denman were told the risk of the combined procedure was 3-5% for significant mortality or death from this combined procedure, then they were misled by their physicians, right?

A. Well, it would be too low for a combined procedure.

Q. It would be too low for a combined procedure?

A. Yes.

Q. Yeah. It would be misleading, right?

A. Yes.

Q. Okay. It would be the type of information that would impair a patient from giving his informed consent to the combined procedure, right?

A. Yes. But if I can add this is the same for all this chart, and it is the same for the 2010 episode that there's no numbers in any, no quoting numbers in any risk of radiosurgery or things like that. So, it is the way it is.

Q. But the only people that were recommending a combined procedure to the Denmans were Drs. Pereira and Radanovich, right?

A. Yes.

Q. And so, they're the ones on January 29, 2015, who have to be clear and accurate in their statement of risk, right?

A. Yes.

Q. Clear and accurate not only in the statement of risk, but clear and accurate in the statement of risk for significant morbidity and mortality, right?

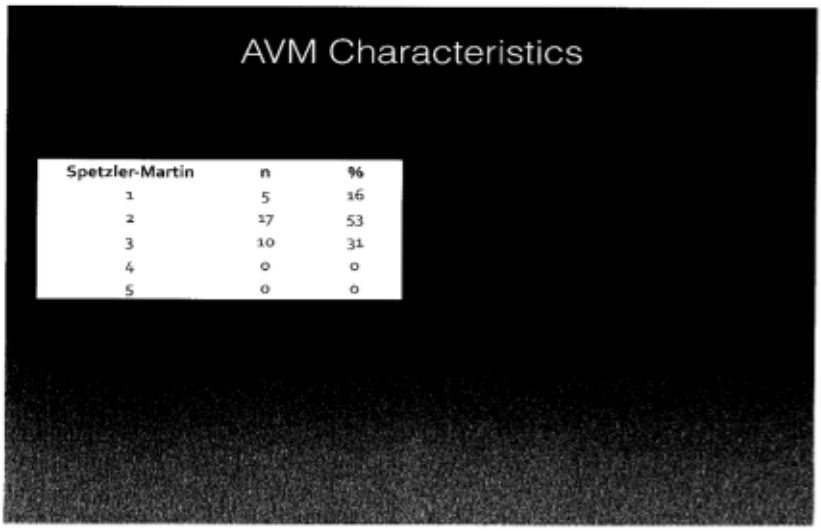
A. Yes.

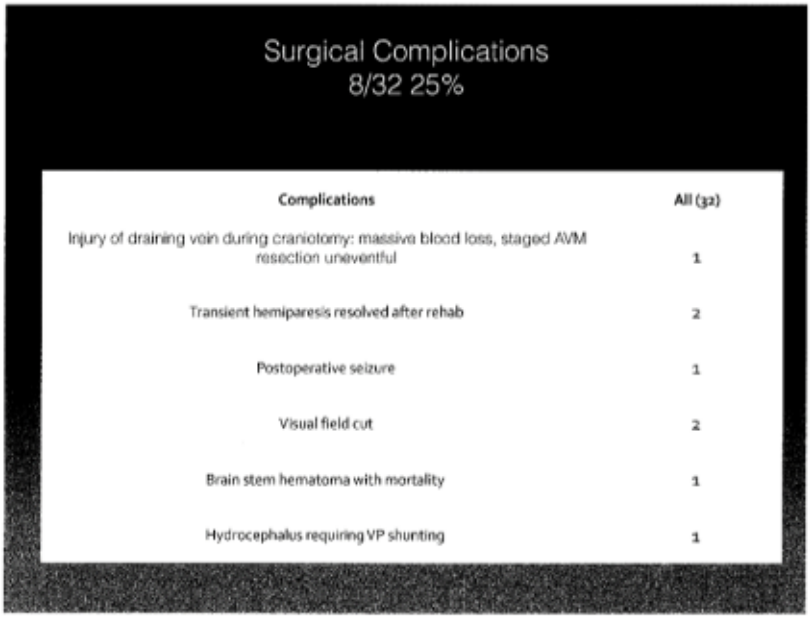
Q. Okay. And if they aren't clear, and if they gave an inappropriate assessment for significant mortality or death, or sorry significant morbidity or mortality then it's misleading to the patients, right?

A. Yes.

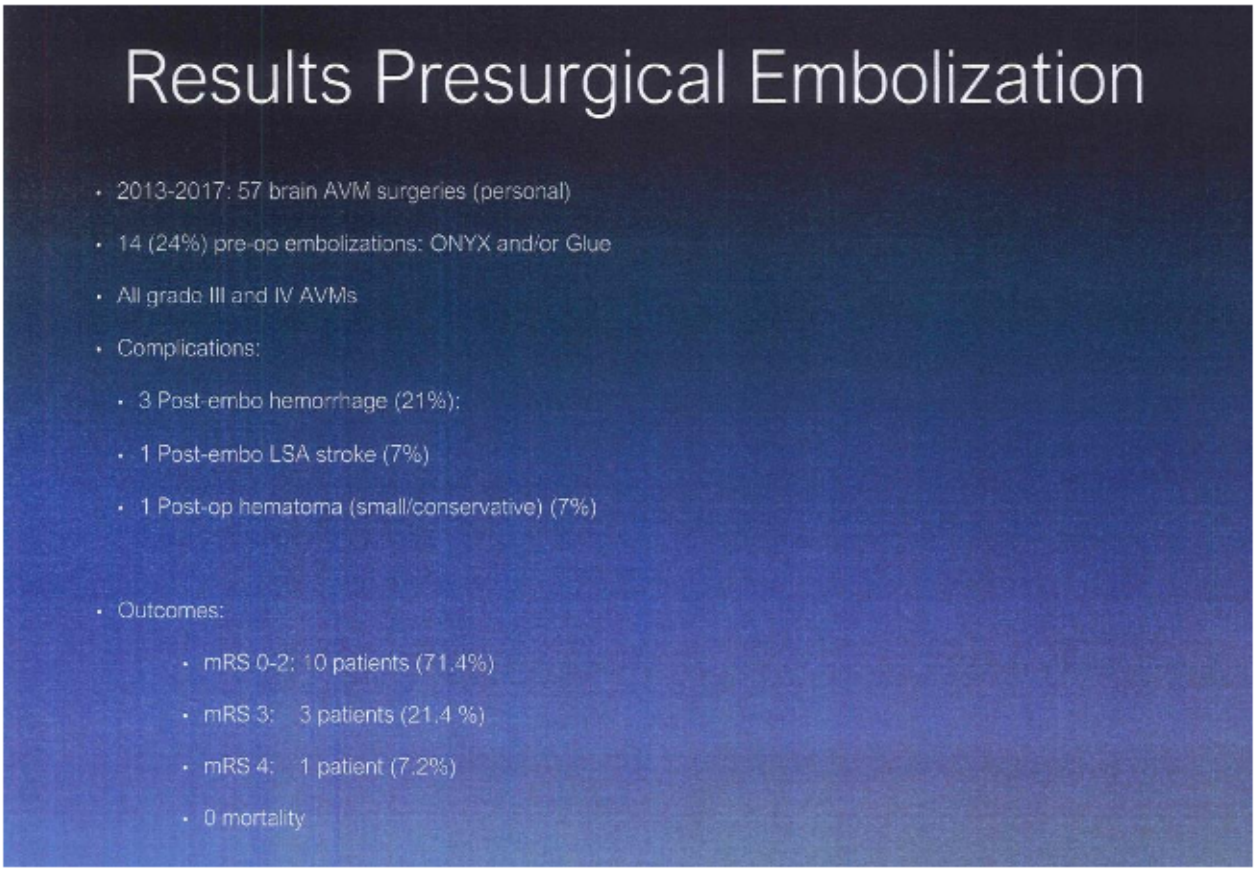
[142] Dr. Pereira acknowledged that he was unaware of Dr. Radovanovic's known 25% adverse outcome statistic regarding AVM surgical resections and that, had he known of this statistic, he would have at least doubled the estimate of risk for adverse outcome for the combined procedure. He was also unaware that Dr. Radovanovic had never before resected a SMG 4 AVM.

[143] Dr. Radovanovic confirmed his inexperience and the high surgical complication rate in his October 2015 presentation entitled, "Building an AVM Surgery Practice in the ARUBA Era: Early Career Experience with 32 Cases" as follows from that presentation:





[144] In another presentation delivered by Dr. Radovanovic, he summarized adverse outcome statistics for presurgical embolization procedures at the TWH between 2013 and 2017 and confirmed that patients with SMG 3 or 4 AVMs suffered intra-procedural complications 35% of the time (21%+7%+7%) and were left with significantly disabling outcomes (mRS 3 or 4) 28.6% of the time (21.4% + 7.2%).



[145] The June 2015 combined procedure involved not only presurgical embolization (Exhibit 60 – confirming a presurgical embolization complication rate of 35% for patients with SMG 3 or 4 AVMs), but also a surgical resection (Exhibit 55 – confirming a further surgical complication rate of 25% and Dr. Radovanovic's inexperience resecting high-risk SMG 4 AVMs).

[146] Further to the evidence of Drs. Roy, Pereira and Radovanovic, in the 13½ years prior to Mr. Denman's case being considered by the defendants, no patient at the TWH with Mr. Denman's clinical presentation and pre-history had ever undergone the elective plan of medical intervention that was proposed by the defendants. Specifically, no one with a residual AVM, confirmed on imaging, three years post-gamma knife, had ever undergone a series of embolizations to cure an AVM, or a series of embolizations followed by a surgical resection.

[147] Dr. Roy, an interventional radiologist, was the only expert to testify on behalf of the defence (as Dr. Redekop was excluded) and his testimony effectively supported the Denmans.

[148] Dr. Roy also did not deliver an updated report before trial despite having considered volumes of additional documentation after he provided his one report.

[149] At trial, Dr. Roy testified as follows:

> Q. Okay. Let's talk about Dr. Radovanovic. He didn't discuss the risks and benefits of the various options with Mr. Denman prior to August 19th, 2014. True?

A. True.

Q. He didn't discuss the risks and benefits and the various options of Mr. Denman prior to December 9th, 2014. True?

A. True.

Q. Nowhere in your report, have you indicated his having spoken with Mr. Denman on January 29th, 2015, true?

A. True, but we know that he did.

Q. Nowhere in your report, have you referenced his, having spoken to Mr. Denman at any point in time prior to Mr. Denman's catastrophic brain bleed, right?

A. Right.

Q. Okay. So the state-of-the-art medical practice that you're talking about for the defendants involves no discussion between Dr. Radovanovic and Mr. Denman at any point at any time, until after his catastrophe. So for, is his, is his informed consent discussion, still state-of-the-art with Mr. Denman?

A. It is not in my report and we, I admitted that it was an omission because he was there in January.

Q. Oh, he had state-of-the-art discussions in January, I see what your evidence is now, that, that Dr. Radovanovic had state-of-the-art informed consent discussions with Mr. Denman in January. Is that your evidence now?

A. My evidence is that I would assume that he was informed of what was the plan and what were the risks [all sic].

Q. There we go, you have an assumption...

A. Appropriately yeah.

Q. There we go, you have an assumption. Okay. Let's move on to Dr. ter Brugge.

A. Okay.

Q. He has no independent recollection of what he discussed, right?

A. Right.

Q. If his notes indicate the sum and substance of what he discussed, then you've already agreed with me. He didn't provide to the patient enough information for the patient to give his informed consent, right? On the basis of the notes?

A. ...of the notes?

Q. Correct?

A. Yes.

Q. He wasn't the physician who performed any of the investigations, right?

A. The treatments you mean?

Q. Yeah. He's the only physician who believed a single embolization would be curative, right?

A. Well, yes and uh...

Q. He's the only physician who believed that surgical resection was unlikely to be necessary to affect the cure. Right?

A. Right.

Q. He was the physician charged with the obligation to discuss what transpired at the May 8th, 2014 AVM conference, right?

A. Right.

Q. There's no reference to any risk discussion whatsoever within his June 5th, 2014, consult note, right?

A. Right.

Q. In his August 5th, 2014, consult note, he did make reference to a risk of stroke or death of three to five percent. Right?

A. Right.

Q. That's lower than the risk estimate that he's published in his authoritative literature, right?

A. Well, that that's, uh, that has to be qualified because in the meta-analysis, as I said, yours, you, you would take the, the one with the lower risk and you would take in, you say three to seven percent, but this is, uh, this is questionable in terms of the range.

Q. Given that Dr. Ter Brugge believed that a single embolization would be curative. And given that he did not believe that a surgical resection would likely be required, then he didn't obtain Mr. Denman's informed consent to a multi-step course of medical intervention that would require multiple embolizations followed by a surgical resection. True?

A. True.

Q. And given what was recorded apart from his self-professed standard practice, that in many ways was in conflict with what the co-defendant [sic] said they expected him to do. There's no evidence upon which you rely in supported [sic] of the notion that he obtained Mr. Denman's informed consent at the June 5th, 2014, meeting, right?

A. I'm sorry. I, I, didn't...

Q. The only thing that you could have relied upon to come to a conclusion that he met the standard of care on June 5, is having found his evidence reliable and credible about his standard practice, right?

A. Yes.

Q. And his standard practice apparently conflicts with the expectations of Dr. Radovanovic and perhaps Dr. Pereira as well, right?

A. Yes.

Q. Okay. Dr. Pereira already, you already indicated you're not here today to talk about whether he got Mr. Denman's informed consent prior to January 29th, 2015, right?

A. Right.

Q. No evidence that he did, right?

A. Right.

Q. So we've got his note that we just reviewed at page 231, right?

A. Right.

Q. And you've assumed discussions that aren't included in the note, right?

A. Right.

Q. Because the note has no reference to numbers for either part of the decision treat [sic – should be “tree”] - treatment or no treatment, right? Correct?

A. Right, correct.

Q. The note certainly doesn't indicate that Mr. Denman could defer the decision to proceed with intervention, right?

A. Defer decision?

Q. Defer it to a later date, right? It doesn't say that, right?

A. No.

…

Q. Yeah. And so, like you said, the January 29th, 2015, note of Dr. Pereira is not comprehensive, right?

A. Well, there's no numbers again.

Q. And so in order to come to the conclusion that informed consent was provided, you've assumed certain discussions happen, right?

A. Right.

Q. And to the extent that you've relied on any of Dr. Pereira's discovery testimony, you found his evidence to be credible and reliable. And that's why you indicated he met the standard, right?

A. Right.

Q. If he's not credible and reliable, then you would have to revisit that opinion of yours, right?

A. Right. That's, it's not me to judge.

Q. It's not for you to judge, I agree.

[150] Dr. Roy's evidence was clearly problematic.

[151] I agree that Mrs. Denman was a credible witness and I accept her evidence. Her evidence was that she and her husband made significant medical decisions about the treatment of his AVM jointly. She testified that they were not provided with the risk analysis that Drs. Radovanovic and Pereira testified that they provided on January 29, 2015, regarding the combined procedure. She also denied having been told by Mr. Denman of the risk analysis that Drs. ter Brugge and Pereira purport to have provided to him prior to the first and/or second embolizations. She denied ever having been told that in order to successfully treat her husband's AVM, a series of interventions would likely be required. She confirmed that the standard practice in her household would be for Mr. Denman to accurately disclose the substance of the discussions that he had with his physician(s) after his medical consultations, and that joint decisions would then be made.

[152] Mrs. Denman confirmed that, had she known of a risk analysis in keeping with what Dr. Findlay had suggested, she would have advised Mr. Denman against proceeding with medical intervention. She believes that her husband would have chosen to continue with conservative/watchful management.

[153] On May 8, 2014, Drs. ter Brugge and Radovanovic participated in a multidisciplinary AVM conference at TWH at which Mr. Denman's case was discussed. The purpose of the conference was to build a consensus so that a joint recommendation could be made to Mr. Denman.

[154] There was significant disagreement between these two physicians about the course of treatment that Mr. Denman would require in order to effect a cure of his AVM. Dr. ter Brugge

believed that a single embolization procedure would likely result in a cure, however, Dr. Radovanovic believed that Mr. Denman would likely require a series of embolization procedures followed by a surgical resection.

[155] At trial, Dr. Radovanovic testified that if the recommended treatment plan might include a series of embolizations followed by surgical resection, this was important information for Mr. Denman to know. He further testified that it was implicit that Dr. ter Brugge would let Mr. Denman know of his opinion that a surgical resection would likely be necessary.

[156] Admissions secured from Dr. Radovanovic at his examination for discovery were read into the record at trial as follows:

> Q. Your expectation was though as at May of 2014 surgery was likely to be necessary; resection was likely to be necessary? Correct?
>
> A. Yes.
>
> Q. Your expectation was that Mr. Denman be informed of your opinion; correct?
>
> A. Yes.
>
> Q. And your expectation was that somebody would have provided to Mr. Denman the cumulative risk to which he would be subject if he were to undergo a series of embolization procedures followed by the surgical resection that you felt to be likely?
>
> A. Yes, discussed about the cumulative risk without necessarily having a strict number.
>
> Q. Yes, it could be a range; correct?
>
> A. Yes.

[157] Dr. Radovanovic did not communicate this expectation to Dr. ter Brugge.

[158] The plan of medical intervention devised at the May 8, 2014 AVM conference was formally admitted at paragraph 12 of the Amended Statement of Defence.

[159] Despite this plan of medical intervention, at neither of the June 5, 2014 or August 5, 2014 consultations, did Dr. ter Brugge inform Mr. Denman that he was likely to require a series of embolization procedures, after which he would possibly and/or likely require a surgical resection in order to effect a cure of his AVM.

[160] I agree that Dr. ter Brugge misled Mr. Denman to believe that a single embolization procedure was likely to be curative. Dr. ter Brugge testified that he did not believe that Mr. Denman had the right to know that there was a disagreement between he and Dr. Radovanovic about what would likely be necessary to effect a cure of his AVM. This was ridiculous evidence.

[161] I agree that Dr. ter Brugge's failure to disclose to Mr. Denman the nature of the multistep course of elective medical intervention that would be required to effect a cure of his AVM is not defensible. Any reasonable patient in Mr. Denman's circumstances would want to know what intervention would likely and/or possibly be required to effect a cure, and the risks or range of risk associated therewith.

[162] Despite being Mr. Denman's Most Responsible Physician ("MRP") and treating neurosurgeon, Dr. Radovanovic did not meet with Mr. Denman until after the second embolization procedure had been completed. Dr. Radovanovic agreed that he did not obtain Mr. Denman's informed consent to proceed with a course of treatment that was likely to require a series of embolizations followed by surgical resection. Given the miscommunication between he and Dr. ter Brugge, he shares responsibility for the failure to obtain Mr. Denman's informed consent to a multi-step course of elective medical intervention.

[163] At trial, Dr. Pereira testified that he met with Mr. Denman on August 5, 2014, and that he provided sufficient information and disclosure for Mr. Denman to have made an informed decision to proceed with a multi-step course of elective medical intervention that was to involve a series of embolization procedures, over a period of months, possibly and/or likely to be followed by a surgical resection.

[164] I agree that Dr. Pereira's evidence was not credible or reliable. I further agree that, despite his evidence, he did not meet with Mr. Denman on August 5, 2014 (at a time when he had yet to receive his licence to practice medicine in the province of Ontario from the College of Physicians and Surgeons of Ontario ("CPSO")). Even if he did meet with Mr. Denman before the August 19, 2014 procedure, and even if he did have a brief discussion with him about the procedure, it would have been neither the time nor the place to correct all of the incorrect and misleading information that was provided to Mr. Denman by Dr. ter Brugge on June 5, 2014 and August 5, 2014.

[165] I find that the risk assessment for significant morbidity or mortality that Dr. Pereira testified he provided to Mr. Denman was understated. At trial, he purported to have effectively informed Mr. Denman that should he agree to the multi-step course of elective intervention that was being recommended by the defendants, then he would be subject to an 8-12% risk for significant morbidity or mortality. I accept that Dr. Roy's evidence that it would be absurd and misleading to quote less than a 10-15% risk of significant morbidity or mortality for the combined procedure, in isolation (i.e., the final step in the multi-step course of elective medical intervention, to which the risk of the preceding embolization procedures would have to be added).

[166] I agree that had appropriate disclosure been made, neither Mr. Denman nor a reasonable patient in his circumstances would have elected to proceed with medical intervention that was to involve a series of embolizations, possibly and/or likely to be followed by a surgical resection.

[167] I agree that a physician cannot obtain a patient's informed consent to an isolated procedure if there has been a failure to disclose that the elective course of medical intervention will likely require multiple procedures. None of the defendants obtained Mr. Denman's informed consent to a multi-step course of elective medical intervention.

[168] I agree that the disclosure provided by the defendants to Mr. Denman, in isolation, was grossly inadequate.

[169] At trial, a study published in 2018 in the Journal World Neurosurgery (a peer-reviewed neurosurgical journal) was reviewed (the "Residual AVM Study"). All the authors are, or once were, specialist physicians working in TWH's AVM group. Drs. Radovanovic and Pereira were co-authors of the journal.

[170] The study considered every one of the 705 TWH patients who had their AVMs managed by the TWH AVM group between January 2000 and April 2014. The results of the study showed that of the 87 TWH patients who had received radiosurgery/gamma knife therapy and still had an AVM three years later:

(a) 60 (69%) were managed conservatively (i.e., received no treatment);

(b) 27 (31%) received treatment of some kind which consisted of the following:

(i) 23 patients received more radiosurgery;

(ii) 3 patients received microsurgery; and

(iii) 1 patient received embolization.

[171] The results of this study showed that of the 87 patients:

(a) Only one patient underwent embolization; and

(b) Not a single patient ever underwent:

(i) A series of embolizations; or

(ii) A series of embolizations followed by surgical resection.

[172] The testimony confirmed that although this study was not published until 2018, the purpose for holding multidisciplinary AVM conferences at the TWH was that patients could benefit from the collective wisdom and experience of the TWH multidisciplinary AVM team.

[173] I find that none of the defendants disclosed to Mr. Denman the unique and unprecedented nature of the treatment that was being proposed to him. I further agree that any reasonable patient in Mr. Denman circumstances would have wanted to know this important information.

[174] In addition to the defendants' failure to provide to Mr. Denman sufficient information prior to the August 19, 2014 procedure, Dr. ter Brugge failed to do so for reasons including, but not limited to:

(a) He directed Mr. Denman to a misleading website that understated the risk of adverse outcome for a single embolization;

(b) He purportedly provided to Mr. Denman an adverse outcome estimate for a single embolization procedure that was lower than what he reported in his published literature;

(c) Despite the fact that it was known (and admitted in the Amended Statement of Defence) that a series of embolizations would be required, he misled Mr. Denman by suggesting that a single embolization would be curative;

(d) He failed to provide to Mr. Denman an estimate of the cumulative upfront risk or range of upfront risk associated with what was known to be a multi-step elective course of medical intervention; and

(e) He failed to provide to Mr. Denman an estimate of the lifetime risk, or range of risk, to which he would be subject, without treatment.

[175] Despite being Mr. Denman's MRP and treating neurosurgeon, Dr. Radovanovic did not meet with Mr. Denman until after the second embolization procedure had been completed. He admitted that he was not involved in obtaining Mr. Denman's informed consent to the August 19, 2014 procedure.

[176] Dr. Pereira did not obtain Mr. Denman's informed consent to the August 19, 2014 procedure, for the following reasons:

(a) He admitted that he did not obtain Mr. Denman's informed consent on August 5, 2014;

(b) Despite his trial evidence to the contrary (and in conflict with his sworn examination for discovery testimony), he did not meet with Mr. Denman on August 5, 2014 (at a time when he had yet to receive his licence to practice medicine in the province of Ontario from the CPSO); and

(c) Even if he did meet with Mr. Denman on the morning of the procedure, and even if he did have a brief discussion with him about the procedure, it would have neither been the time nor the place to correct all of the incorrect and misleading information that was provided to Mr. Denman by Dr. ter Brugge on August 5, 2014.

[177] I agree that had appropriate disclosure been made, neither Mr. Denman nor a reasonable patient in his circumstances would have elected to proceed with the August 19, 2014 embolization procedure.

[178] A physician cannot obtain a patient's informed consent to an isolated procedure if there has been a failure to disclose that the elective course of medical intervention will likely require multiple procedures.

[179] Given the inadequate information initially provided to Mr. Denman by Dr. ter Brugge, I agree that it was necessary for one or more of the defendants to correct these errors so that Mr. Denman was not equally misled/misinformed about the scope and nature of the treatment that was being proposed.

[180] Although Dr. ter Brugge was no longer actively involved in Mr. Denman's medical care, he did remain a point of contact between Mr. Denman and the treatment team.

[181] Despite being Mr. Denman's MRP and treating neurosurgeon, and despite the failure to adequately ensure that appropriate disclosure was made to Mr. Denman prior to the August 19, 2014 embolization procedure, Dr. Radovanovic did not meet with Mr. Denman until after the December 9, 2014 embolization procedure.

[182] Despite Dr. Pereira's evidence that he did provide to Mr. Denman the required information and disclosure for Mr. Denman to have made an informed decision regarding the December 9, 2014 embolization procedure, and despite Dr. Pereira's self-professed standard/invariable practice to chart the details of the informed consent discussions that he purports to have, there is no record of any such discussion in the medical chart.

[183] I agree that Dr. Pereira's testimony was unreliable and that he was not credible. Further, for Mr. Denman to have provided his informed consent for the December 9, 2014 procedure, he would also had to have been informed that notwithstanding that procedure, a subsequent surgical resection would likely be necessary to effect a cure of his AVM and there is nothing in the medical chart to indicate that Dr. Pereira (or anyone else) informed Mr. Denman that a subsequent surgical resection would likely be necessary to effect a cure of his AVM.

[184] I agree that no patient at the TWH with Mr. Denman's presentation and clinical history in the preceding 13½ years (i.e., January 2000 through April 2014) had ever undergone multiple embolization procedures to treat a brain AVM.

[185] I further agree that had appropriate disclosure been made, neither Mr. Denman nor a reasonable patient in his circumstances would have elected to proceed with the December 9, 2014 embolization procedure.

[186] Although Dr. ter Brugge was no longer actively involved in Mr. Denman's medical care, he did remain a point of contact between Mr. Denman and the treatment team.

[187] The misinformation and inadequate information that Dr. ter Brugge provided to Mr. Denman from the outset led to the circumstances in which Mr. Denman found himself following a second unsuccessful embolization procedure; namely, the need for a pre-surgical embolization followed by a surgical resection if a cure of his AVM was to be achieved.

[188] On January 29, 2015, Drs. Radovanovic and Pereira met with Mr. and Mrs. Denman to discuss their joint recommendation that Mr. Denman proceed with the combined procedure.

[189] The disclosure deficiencies from this meeting include the following:

(a) These defendants provided grossly misleading and underestimated assessments of risk for significant morbidity or mortality, as confirmed by defence expert, Dr. Roy;

(b) These defendants failed to disclose Dr. Radovanovic's known surgical resection complication rate; and

(c) These defendants failed to accurately disclose reasonably available complication and adverse outcome rates associated with presurgical embolizations performed at TWH.

[190] All of the defendants failed to disclose to Mr. Denman that no patient at TWH, with Mr. Denman's clinical presentation and medical pre-history, had received the treatment being proposed in the preceding 13½ years.

[191] Had appropriate disclosure been made, neither Mr. Denman nor a reasonable patient in his circumstances would have elected to proceed with the June 23 and 24, 2015 combined procedure.

[192] This case is indefensible. All three defendants failed to disclose to Mr. Denman the information to which he was entitled, and upon which any informed decision could be made.

[193] Had appropriate disclosure been made, neither Mr. Denman nor a reasonable patient in his circumstances would have elected to proceed with:

(a) The multi-step course of elective medical intervention that was to involve a series of embolization procedures, over a period of months, possibly and/or likely to be followed by a surgical resection;

(b) The June 23 and 24, 2015 combined procedure; and/or

(c) The August 19, 2014 and/or December 9, 2014 embolization procedures.

[194] I further agree that, had appropriate disclosure been made, neither Mr. Denman nor a reasonable patient in his circumstances would have elected to proceed with any of the medical interventions proposed by the defendants at the time they were recommended. The decision would have been deferred by Mr. Denman until after his retirement, with the full support of his family and his employer (so that he could continue to earn significant income to support his family, including his wife and two daughters, one of whom is profoundly disabled).

[195] The plaintiffs' case is made out. The defendant doctors are responsible for causing his injuries and significant disability.

Jane E Ferguson

J.E. Ferguson J.

Released: February 16, 2023

Corrections

After these reasons were provided to counsel for the parties, counsel for the plaintiffs requested the following corrections. Defence counsel agree with the corrections (the factual content).

At paragraph 3, it should read "arteriovenous malformation".
At paragraph 11, Dr. Roy is an "interventional radiologist", not a neurosurgeon.

At paragraph 17, it should read “arterio”

At paragraph 120, when testifying about Mr. Denman's AVM options in 2010/11, the evidence quoted was from treating physician and participant expert, Dr. Muller, not Dr. Findlay.

CITATION: Denman v. Radovanovic, 2022 ONSC 1160
COURT FILE NO.: CV-17-574151
DATE: 20230216

ONTARIO
SUPERIOR COURT OF JUSTICE

B E T W E E N:

MICHAEL DENMAN, ANDREA DENMAN, OLIVIA DENMAN and ISABEL DENMAN

Plaintiffs

AND

IVAN RADOVANOVIC, VITOR MENDES PEREIRA, LEE-ANN SLATER, RONIT AGID, KAREL TER BRUGGE, JOHNNY HO YIN WONG, JOHN DOE #1, JOHN DOE #2, and JOHN DOE #3

Defendants

REASONS FOR DECISION

J.E. Ferguson J.

Released: February 16, 2023