In the United States Court of Federal Claims

OFFICE OF SPECIAL MASTERS
No. 18-1946V
Filed: January 14, 2026

CYNTHIA JENKINS,

Petitioner,

v.

SECRETARY OF HEALTH AND HUMAN SERVICES,

Respondent.

Special Master Horner

Phyllis Widman, Widman Law Firm, LLC, Linwood, NJ , for petitioner.
Mitchell Jones, U.S. Department of Justice, Washington, DC, for respondent.

Decision[1]

On December 19, 2018, petitioner filed a petition under the National Childhood Vaccine Injury Act, 42 U.S.C. § 300aa-10-34 (2012),[2] alleging that the influenza ("flu") vaccine she received on December 19, 2016, caused her to suffer injuries, "including, but not limited to: tinnitus, vertigo/dizziness, headaches, diffuse thickening of the dura with enhancement and extension into the internal auditory canals, bilateral hearing loss, facial neuropathy, reactivation of shingles virus and/or a significant aggravation of previous condition(s)." (ECF No. 1, p. 1.) On May 12, 2021, petitioner filed an amended petition to additionally allege meningitis. (ECF No. 41.) On November 26, 2024, petitioner filed a second amended petition additionally alleging that she suffered a cerebrospinal fluid-venous fistula ("CSF-venous fistula"), resulting in a cerebrospinal fluid leak ("CSF leak"). (ECF No. 107, p. 1.) For the reasons discussed below, I now find that petitioner is *not* entitled to compensation.

[1] Because this document contains a reasoned explanation for the special master's action in this case, it will be posted on the United States Court of Federal Claims' website in accordance with the E-Government Act of 2002. *See* 44 U.S.C. § 3501 note (2012) (Federal Management and Promotion of Electronic Government Services). **This means the decision will be available to anyone with access to the Internet.** In accordance with Vaccine Rule 18(b), petitioner has 14 days to identify and move to redact medical or other information the disclosure of which would constitute an unwarranted invasion of privacy. If the special master, upon review, agrees that the identified material fits within this definition, it will be redacted from public access.

[2] Within this decision, all citations to § 300aa will be the relevant sections of the Vaccine Act at 42 U.S.C. § 300aa-10-34.

I. Applicable Statutory Scheme

Under the National Vaccine Injury Compensation Program, compensation awards are made to individuals who have suffered injuries after receiving vaccines. In general, to gain an award, a petitioner must make a number of factual demonstrations, including showing that an individual received a vaccination covered by the statute; received it in the United States; suffered a serious, long-standing injury; and has received no previous award or settlement on account of the injury. Finally – and the key question in most cases under the Program – the petitioner must also establish a *causal link* between the vaccination and the injury. In some cases, the petitioner may simply demonstrate the occurrence of what has been called a "Table Injury." That is, it may be shown that the vaccine recipient suffered an injury of the type enumerated in the "Vaccine Injury Table," corresponding to the vaccination in question, within an applicable time period following the vaccination also specified in the Table. If so, the Table Injury is presumed to have been caused by the vaccination, and the petitioner is automatically entitled to compensation, unless it is affirmatively shown that the injury was caused by some factor other than the vaccination. § 300aa-13(a)(1)(A); § 300 aa-11(c)(1)(C)(i); § 300aa-14(a); § 300aa-13(a)(1)(B).

In many cases, however, the vaccine recipient may have suffered an injury *not* of the type covered in the Vaccine Injury Table. In such instances, an alternative means exists to demonstrate entitlement to a Program award. That is, the petitioner may gain an award by showing that the recipient's injury was "caused-in-fact" by the vaccination in question. § 300aa-13(a)(1)(B); § 300aa-11(c)(1)(C)(ii). In such a situation, of course, the presumptions available under the Vaccine Injury Table are inoperative. The burden is on the petitioner to introduce evidence demonstrating that the vaccination actually caused the injury in question. *Althen v. Sec'y of Health & Human Servs.*, 418 F.3d 1274, 1278 (Fed. Cir. 2005); *Hines ex rel. Sevier v. Sec'y of Health & Human Servs.*, 940 F.2d 1518, 1525 (Fed. Cir. 1991).

In this case, none of the conditions alleged by petitioner are listed on the Vaccine Injury Table relative to the flu vaccine. Therefore, petitioner must satisfy the *Althen* test for establishing causation-in-fact.

The showing of "causation-in-fact" must satisfy the "preponderance of the evidence" standard, the same standard ordinarily used in tort litigation. § 300aa-13(a)(1)(A); *see also Althen*, 418 F.3d at 1278-79; *Hines*, 940 F.2d at 1525. Under that standard, petitioner must show that it is "more probable than not" that the vaccination was the cause of the injury. *Althen*, 418 F.3d at 1279. She need not show that the vaccination was the sole cause but must demonstrate that the vaccination was at least a "substantial factor" in causing the condition at issue and was a "but for" cause. *Shyface v. Sec'y of Health & Human Servs.*, 165 F.3d 1344, 1352 (Fed. Cir. 1999). Thus, petitioner must supply "proof of a logical sequence of cause and effect showing that the vaccination was the reason for the injury[.]" *Althen*, 418 F.3d at 1278 (quoting *Grant v. Sec'y of Health & Human Servs.*, 956 F.2d 1144, 1148 (Fed. Cir. 1992)). Ultimately, petitioner must satisfy what has come to be known as the *Althen* test, which

requires: (1) a medical theory causally connecting the vaccination and the injury; (2) a logical sequence of cause and effect showing that the vaccination was the reason for the injury; and (3) a showing of proximate temporal relationship between vaccination and injury. *Id*.

A petitioner may not receive a Vaccine Program award based solely on his or her assertions; rather, the petition must be supported by either medical records or by the opinion of a competent physician. § 300aa-13(a)(1). Medical records are generally viewed as particularly trustworthy evidence because they are created contemporaneously with the treatment of the patient. *Cucuras v. Sec'y of Health & Human Servs.*, 993 F.2d 1525, 1528 (Fed. Cir. 1993). However, medical records and/or statements of a treating physician's views do not *per se* bind the special master to adopt the conclusions of such an individual, even if they must be considered and carefully evaluated. § 300aa-13(b)(1). A petitioner may rely upon circumstantial evidence. *See Althen*, 418 F.3d at 1280. Moreover, the *Althen* court noted that a petitioner need not necessarily supply evidence from medical literature supporting petitioner's causation contention, so long as the petitioner supplies the medical opinion of an expert. *Id*. at 1279-80. While scientific certainty is not required, that expert's opinion must be based on "sound and reliable" medical or scientific explanation. *Boatmon v. Sec'y of Health & Human Servs*., 941 F.3d 1351, 1359 (Fed. Cir. 2019).

Cases in the Vaccine Program are assigned to special masters who are responsible for "conducting all proceedings, including taking such evidence as may be appropriate, making the requisite findings of fact and conclusions of law, preparing a decision, and determining the amount of compensation, if any, to be awarded." Vaccine Rule 3(b)(1). Special masters must ensure each party has had a "full and fair opportunity" to develop the record but are empowered to determine the format for taking evidence based on the circumstances of each case, including having the discretion to decide cases without an evidentiary hearing. Vaccine Rule 3(b)(2); Vaccine Rule 8(a); Vaccine Rule 8(d). Special masters are not bound by common law or statutory rules of evidence but must consider all relevant and reliable evidence in keeping with fundamental fairness to both parties. Vaccine Rule 8(b)(1). The special master is required to consider "all [] relevant medical and scientific evidence contained in the record," including "any diagnosis, conclusion, medical judgment, or autopsy or coroner's report which is contained in the record regarding the nature, causation, and aggravation of the petitioner's illness, disability, injury, condition, or death," as well as the "results of any diagnostic or evaluative test which are contained in the record and the summaries and conclusions." § 300aa-13(b)(1). The special master is required to consider the entirety of the evidentiary record, draw plausible inferences, and articulate a rational basis for the decision. *Winkler v. Sec'y of Health & Human Servs.*, 88 F.4th 958, 963 (Fed. Cir. 2023) (citing *Hines*, 940 F.2d at 1528).

II. Procedural History

This case was initially assigned to another special master. (ECF No. 4.) In January of 2019, petitioner filed an affidavit and medical records as well as her initial statement of completion. (ECF Nos. 7-8; Exs. 1-9.) Petitioner filed additional medical records and a second statement of completion in August of 2019. (ECF Nos. 17-18; Exs. 10-12.) Thereafter, the case was reassigned to the undersigned in August of 2019. (ECF Nos. 22-23.)

Respondent filed his Rule 4(c) Report in November of 2019, recommending against compensation. (ECF No. 26.) Respondent initially agreed that petitioner suffered an aseptic meningitis about three to four days post-vaccination and further agreed that this explained her symptoms of headache, tinnitus, vestibular symptoms, and paresthesia. (*Id*. at 6.) However, he contended that no connection between petitioner's meningitis and her vaccination had been demonstrated. (*Id*. at 6-8.)

In April of 2020, petitioner filed an expert report by neurologist Georges A. Ghacibeh, M.D., with supporting medical literature. (ECF No. 29; Exs. 12-18.[3]) Dr. Ghacibeh opined that petitioner's meningitis resulted from an autoimmune reaction to her vaccination. (Ex. 12.) Respondent filed a responsive expert report by neuroimmunologist Michael Wilson, M.D., in June of 2020. (ECF No. 31; Exs. A-E.) Dr. Wilson opined that petitioner had suffered a specific form of meningitis, pachymeningitis (affecting the dura mater), that cannot be associated with her flu vaccination. (Ex. A, pp. 3-4.) Petitioner then filed a brief report by Dr. Ghacibeh responding to Dr. Wilson. (ECF No. 33; Ex. 19.) Dr. Ghacibeh agreed that it would be a significant distinction if petitioner suffered pachymeningitis, but he disagreed that the medical record was sufficient to conclude that petitioner's meningitis was pachymeningitis rather than leptomeningitis (generally synonymous with meningitis), which affects the subarachnoid space. (Ex. 19.)

The undersigned held a Rule 5 conference on January 5, 2021. (ECF No. 36.) During the status conference, the undersigned noted that there were likely outstanding medical records that petitioner had yet to file. (*Id.* at 1.) In addition, it was observed that Dr. Ghacibeh's theory of causation was "vague" and "conclusory" and it was noted that petitioner may benefit from presenting an expert opinion by an immunologist. (*Id*. at 2.) Thereafter, petitioner submitted additional medical records in May of 2021. (ECF No. 39; Exs. 20-21.) She also filed an amended petition adding meningitis to the injuries she alleged to have sustained as a result of her flu vaccine. (ECF No. 41.) Petitioner then filed a report by immunologist Omid Akbari, Ph.D. (ECF No. 43; Exs. 22-71.) However, Dr. Akbari did not directly support Dr. Ghacibeh's opinion. (Ex. 22.) Instead, Dr. Akbari opined that molecular mimicry between components of the flu vaccine and myelin protein can lead to a demyelinating disease that can explain petitioner's neuropathy, tinnitus, and meningitis. (*Id*.)

[3] Petitioner filed two documents marked as Exhibit 12: a letter from Dr. Matarese (ECF No. 17) and Dr. Ghacibeh's initial expert report (ECF No. 29). For the purposes of this decision, all references to Exhibit 12 refer to Dr. Ghacibeh's initial expert report.

Respondent then filed an additional expert report by Dr. Wilson responding to both Dr. Akbari's report and Dr. Ghacibeh's second report. (ECF No. 46, Exs. F-I.) Petitioner filed a third expert report by Dr. Ghacibeh. (ECF No. 51; Ex. 72-75.) Dr. Ghacibeh continued to opine based on a diagnosis of meningitis, now opining that the difference between pachymeningitis and leptomeningitis was not material. (Ex. 72.)

Thereafter, in June of 2022, the undersigned scheduled an entitlement hearing to be held in December of 2023. (ECF No. 59; ECF No. 63.) Petitioner filed additional medical records and a supplemental affidavit in November of 2023. (ECF No. 65; Exs. 76-81.) However, days before the scheduled hearing, respondent advised that Dr. Wilson had developed a conflict with the existing hearing dates. (ECF No. 69, p. 1.) Petitioner ultimately agreed to reschedule the hearing, because she also wanted to seek an adjournment to pursue an evaluation with a new specialist. (ECF No. 75.) The hearing was rescheduled for August of 2024 (ECF No. 77) and petitioner filed the medical record for her specialist evaluation (by personalized medicine provider Lawrence Afrin, M.D.) in May of 2024 (ECF No. 80; Ex. 82). Dr. Afrin suspected petitioner suffered from a longstanding mast cell activation syndrome ("MCAS").[4] (Ex. 82.) Petitioner filed additional medical records in July of 2024. (ECF No. 89; Exs. 83-85.)

However, on July 11, 2024, respondent again advised that Dr. Wilson had developed a conflict with the hearing as re-scheduled. (ECF No. 86.) Respondent requested that the upcoming hearing be limited to a fact hearing and that the case otherwise be resolved pursuant to Vaccine Rule 8(d) without expert testimony. (*Id*.) The undersigned advised that the hearing would not be cancelled absent a showing of good cause and, ultimately, concluded that respondent had not shown good cause for the relief he sought. (Non-PDF Scheduling Order, filed July 12, 2024; ECF No. 94.) Thus, it was ordered that "the hearing will go forward as scheduled so that petitioner may present her witnesses completely and in a timely manner . . . [and] it falls to respondent to manage and bear the consequences of Dr. Wilson's non-appearance." (ECF No. 94, p. 2.) Despite this, petitioner subsequently joined respondent in requesting that the case proceed in the manner proposed by respondent, so long as the parties were permitted to file a final round of expert reports. (ECF No. 95.) Accordingly, the parties' joint proposal was adopted. (ECF No. 96.)

A fact hearing was held on August 29, 2024, with petitioner as the sole witness. (ECF No. 96; *see* Transcript of Proceedings ("Tr."), at ECF No. 113.) Petitioner filed a final report by Dr. Ghacibeh in August of 2024 and respondent filed a responsive report by Dr. Wilson in September of 2024. (ECF Nos. 97, 101; Exs. 86, J.) Dr. Ghacibeh did not endorse Dr. Afrin's MCAS diagnosis, but he did supplement his opinion by opining

[4] During a follow up status conference, the undersigned cautioned petitioner that pursuit of compensation based on Dr. Afrin's MCAS diagnosis, which represented a new and very different understanding of petitioner's condition, would jeopardize the then-existing hearing date. (ECF No. 82.) However, petitioner's counsel indicated that based on her preliminary discussions with petitioner's expert, his opinion would remain unchanged. (*Id*.) And, indeed, in his later-filed final report, Dr. Ghacibeh did maintain his diagnostic assessment despite Dr. Afrin's diagnosis. (Ex. 86.)

that petitioner suffered a cerebrospinal fluid-venous fistula and cerebrospinal fluid leak as a further consequence of her condition. (Ex. 86, pp. 4-7.) Petitioner then filed a motion for a ruling on the written record in November of 2024, accompanied by her second amended petition, which added allegations pertaining to a CSF-venous fistula and CSF leak. (ECF Nos. 106-07.) The motion is fully briefed as of February of 2025. (ECF Nos. 109-111.)

In light of the above, the parties have had a full and fair opportunity to develop the record, and it is appropriate to resolve this case without an entitlement hearing. S*ee Kreizenbeck v. Sec'y of Health & Human Servs*., 945 F.3d 1362, 1366 (Fed. Cir. 2020) (citing *Simanski v. Sec'y of Health & Human Servs*., 671 F.3d 1368, 1385 (Fed. Cir. 2012)); *see also* Vaccine Rule 8(d); Vaccine Rule 3(b)(2).

III. Factual History

Petitioner is a retired school nurse from West Windsor, New Jersey. (Tr. 9-10.) She retired in 2020 at the age of 59 in large part due to the symptoms related to the injury at issue in this case. (*Id.* at 10-11.) As of the point she first sought care for the symptoms at issue, her primary care medical records recorded ongoing chronic medical problems of osteopenia, hyperlipidemia, thyroid nodule, and venous insufficiency. (Ex. 3, p. 80.) Petitioner had routinely received the flu vaccination in prior years without issue. (Tr. 11.) However, in 2016, petitioner inadvertently received two doses of the flu vaccine. (*Id.* at 11-17.) She received her annual flu vaccine at a school health fair on September 21, 2016. (*Id.* at 11-12; Ex. 2, p. 1; Ex. 11.) Petitioner testified that she did not have any adverse reaction to that vaccination, apart from a temporarily sore arm. (Tr. 13.) About three months later, on December 19, 2016, she went to the pharmacy for a pneumococcal vaccination, but a flu vaccination was accidentally administered instead. (*Id.* at 13-17; Ex. 1, pp. 2-5.)

Petitioner testified that within 24 hours of receiving this second flu vaccine, she had flu-like symptoms, including a headache that lasted for about ten days and "just not feeling well." (Tr. 18.) Within four days, she described experiencing severe tinnitus that "just happened out of nowhere," accompanied by difficulty hearing and feeling as though her head was under water. (*Id*.) Petitioner first reported these symptoms to her primary care provider on December 22, 2016, and later presented in the office on January 3, 2017. (Ex. 3, pp. 78, 81.) She was diagnosed with Swimmer's ear (otitis externa) on the right side and prescribed Vibramycin, an antibiotic. (*Id*. at 80.)

Petitioner then presented to her ENT physician on January 16, 2017 with a history of bilateral tinnitus beginning about three days after a flu vaccine. (Ex. 3, pp. 75-76; Ex. 4, pp. 1-2.) She reportedly had associated dizziness and ear fullness, but no facial weakness, ear pain, drainage, or headache. (Ex. 4, p. 1.) The exam was unremarkable, and she was diagnosed with tinnitus and sudden hearing loss. (*Id.* at 1-2.) She was prescribed prednisone and instructed to follow up in two weeks, which she did on January 27, 2017. (*Id.* at 2, 4-5.) Her follow up exam, including an audiogram, was unremarkable. (Ex. 3, pp. 71-74; Ex. 4, pp. 4-5.) According to petitioner, both her

primary care provider and her ENT were receptive to the idea that her symptoms were vaccine-related (Tr. 20-22); however, no such impression is included in the corresponding encounter records. Petitioner further testified that her primary care provider felt that, if her condition were vaccine-related, then steroid treatment should calm her tinnitus. (*Id.* at 55.) Yet, it did not. (*Id*.)

Petitioner returned to the ENT on February 20, 2017, at which time she reported that her course of steroids had resulted in a 50% improvement, though she was still experiencing vertigo (*see also* Tr. 22-23) and a cold during the first week of February had exacerbated her tinnitus. (Ex. 4, p. 7.) She also indicated that she was experiencing cold sweats, shaking, palpitations, and bowel issues. (*Id.*) An MRI was ordered to assess for acoustic neuromas that could explain the vertigo. (*Id*. at 8.) A second audiogram was normal. (*Id*.) The ENT noted that petitioner associated her condition to her vaccination but indicated that "[w]e are not entirely sure what is causing this." (*Id*.)

Petitioner had an MRI of the brain performed on March 13, 2017. (Ex. 5, pp. 32-33.) The MRI showed: "diffuse smooth symmetric dural enhancement and mild dural thickening throughout both cerebral and cerebellar hemispheres extending into the anterior and posterior interhemispheric fissures." (*Id.* at 32.) This extended into both internal auditory canals. (*Id*.) The radiologist's report indicated that the differential diagnosis for such dural enhancement included several different entities, including meningitis, though it was noted that leptomeningeal enhancement would be a more common finding than dural enhancement. (*Id.*) The differential diagnosis also included intracranial hypotension and pachymeningitis. (*Id*.)

Petitioner then had two different neurology assessments on March 22, 2017. (Ex. 9; Ex. 5, pp. 1-3.) First, she saw neurologist Arnold Witte, M.D. (Ex. 9.) She provided a history consistent with the above. (*Id*. at 1.) However, Dr. Witte did not agree that petitioner's flu vaccine caused her condition. (*Id*. at 2.) Dr. Witte noted that he agreed with the radiologist's interpretation of petitioner's MRI and further remarked that her laboratory studies, including sedimentation rate (an inflammatory marker) were normal. (*Id*. at 2.) Dr. Witte felt that petitioner's symptoms, most notably her tinnitus, were caused by the abnormality demonstrated on her MRI and not related to her flu vaccine and also were unlikely to be due to a viral process. (*Id*.) Dr. Witte ordered a follow up lumbar puncture and also noted that a biopsy of the dura may be needed to confirm diagnosis. (*Id*.) (As discussed below, respondent's expert, Dr. Wilson, explained that biopsy is often needed to confirm a diagnosis of pachymeningitis. (Ex. F, p. 2.)). Petitioner testified that as a result of the recommendation for a biopsy "all my bells and whistles went off." (Tr. 26.) She explained that she had not viewed Dr. Witte as credible, even before seeing him, and that she reached out to a second neurologist. (*Id.* at 26-27).

Petitioner then had a neurology follow up with Dr. Emil L. Matarese, M.D., who she continued to treat with thereafter. (Ex. 5, pp. 1-3.) Petitioner provided a history consistent with the above, noting that she had developed a flu-like illness around

January 30, 2017 that worsened her condition. (*Id*. at 1.) She also reported painful paresthesia affecting her face and head. (*Id*.) The neurologist opined that the presentation "is consistent with an autoimmune-induced reaction following double dosing of a flu vaccine." (*Id*. at 3.) Noting the MRI finding of diffuse meningeal enhancement and dural thickening, "[t]his could represent an aseptic meningitis due to the post [vaccinal] reaction." (*Id*.) Petitioner was directed to repeat a 12-day course of steroids and was additionally prescribed gabapentin. (*Id*.)

On April 3, 2017, petitioner returned to Dr. Matarese and reported significant improvement, including resolution of her paresthesia. (Ex. 5, pp. 4-6.) Her exam was normal. (*Id.* at 6.) She reported having seen an infectious specialist who ruled out any active infection to explain her meningeal enhancement. (*Id*. at 5.) Dr. Matarese felt that her condition was likely autoimmune by clinical presentation and, though there was no evidence for active meningitis, that the initial presentation of headache and paresthesia may have been explained by aseptic meningitis. (*Id*. at 6.)

Petitioner underwent a repeat MRI on May 9, 2017. (Ex. 5, p. 25.) It showed resolution of the previously observed diffuse hyperintense signal; however, because the study was performed without contrast, direct comparison to the prior study was not possible, especially with respect to dural enhancement. (*Id*.) Petitioner continued to improve, as noted during follow up encounters of June 1, June 30, and August 1, 2017, and the assessment was unchanged. (Ex. 5, pp. 10-18.) Petitioner continued on gabapentin and noted that her facial paresthesia returned when her dose was lowered. (*Id.* at 16-18.) By November 7, 2017, petitioner was reporting no significant change in her condition, with good days and bad days. (*Id.* at 19-21; *see also* Tr. 29-31.) By her February 9, 2018 neurology follow up, petitioner's condition was deemed fully resolved and she was to taper off of gabapentin, with no need to return unless symptoms returned. (Ex. 5, pp. 22-24.) However, petitioner testified that, around September of 2020, she had another worsening of her vertigo that prompted her to go to the emergency department, where she was then admitted for five days. (Tr. 31-32; *see generally* Ex. 21.) As part of the evaluation, petitioner underwent an MRI on September 18, 2020. (Ex. 21, pp. 7, 206-07.) It showed "[d]iffuse pachymeningeal enhancement peripheral to the bilateral cerebral hemispheres, along the anterior aspect of the internal auditory canals and posterior to the clivus," likely suspicious for an infectious process, such as meningitis. (*Id.* at 206-07.)

Petitioner returned to her Dr. Matarese on September 25, 2020 for reevaluation of what was then described as "recurrent bouts" of headaches, vertigo, tinnitus, and paresthesia of the face, torso, and all four limbs.[5] (Ex. 20, pp. 2-6.) Dr. Matarese continued to note that an autoimmune meningitis could be a potential explanation for petitioner's initial presentation in 2017, but did not believe that such a diagnosis could account for her recurrent, episodic presentation. (*Id*. at 5.) He stated that "[t]he temporal nature of her various symptoms with each attack would also go against an

[5] Somewhat confusingly, Dr. Matarese included several later updates within the history of present illness for this encounter. (Ex. 20, p. 5.)

isolated post-vaccinal meningitis." (*Id*.) She was referred to Penn Medicine where she underwent additional testing over a period of months. (*Id*. at 6; *see also* Exs. 84-85.)

Petitioner then presented to neurologist Matthew Schindler, M.D., on October 15, 2020, for evaluation of Dr. Matarese's suspicion of an autoimmune meningitis. (Ex. 85, p. 222.) Petitioner reported having had five episodes of symptoms within the last year; however, she noted that the frequency of her symptoms had recently increased and reported experiencing five episodes during the last month. (*Id*.) Based on history, examination, and prior test results, Dr. Schindler did not immediately arrive at a diagnosis. (*Id.* at 222-26; Tr. 34.) He ordered serum testing for inflammatory markers and directed petitioner's prior MRIs to Penn radiology for reinterpretation. (Ex. 85, p. 226.) The next day, Penn radiology reviewed petitioner's MRI results of September 18, 2020,[6] and compared it against her prior studies from March 13, 2017, and May 9, 2017. (*Id*. at 218-19.) The radiology report concluded that the MRI showed diffuse smooth pachymeningeal enhancement similar to the initial March 13, 2017 MRI, which was noted to be nonspecific and have a broad differential diagnosis. (*Id*.)

During a November 4, 2020 follow up, Dr. Schindler noted that an autoimmune etiology was less likely due to a lack of pleocytosis and a concern was raised for spontaneous intracranial hypotension, which could otherwise explain her diffuse dural enhancement on MRI. (Ex. 85, pp. 169, 172.) Dr. Schindler proposed to investigate whether petitioner had a spontaneous CSF leak by conducting a spinal MRI without contrast to look for extra-meningeal fluid collection as well as a CT myelogram and repeat lumbar puncture. (*Id*. at 172; Tr. 35-37.) The spinal MRI showed no intraspinal fluid collection, apart from a "questionable tiny abnormal CSF attenuating fluid" in the cervical spine but did note multilevel nerve root sleeve cysts and Tarlov (perineural) cysts.[7] (Ex. 85, pp. 152-54.) Dr. Schindler felt that the MRI results "show what we had been concerned for," which he suggested "are not suggestive of inflammation" and that instead "there is a leak of spinal fluid that has caused your symptoms (probably all along)." (*Id.* at 92, 94.) On February 4, 2021, she underwent a CT myelogram that in pertinent part showed multiple perineural cysts throughout the cervical, thoracic, and lumbar spine. (Ex. 85, p. 11.) After undergoing additional testing and further evaluation by specialists, petitioner was diagnosed as suffering a CSF-venous fistula. (Ex. 80, pp. 78-79; Ex. 78, pp. 20-21 (finding a CSF venous fistula at T7-T8).) Petitioner testified that, based on what her treating physicians told her, this finding, which resulted in low

[6] The Penn Radiology record erroneously suggests that petitioner's September 2020 MRI was performed on September 24, 2020. (Ex. 85, p. 218.) However, petitioner's MRI was performed on September 18, 2020. (*See* Ex. 21, pp. 206-07.)

[7] A Tarlov cyst, also referred to as a perineural cyst, is "an outpouching of the perineurial space on the extradural portion of the posterior sacral or coccygeal nerve roots at the junction of the root and ganglion." This type of cyst can cause low back pain and sciatica. *Perineurial Cyst*, DORLAND'S MEDICAL DICTIONARY ONLINE, https://www.dorlandsonline.com/dorland/definition?id=68402 (last visited Dec. 29, 2025); *Tarlov Cyst*, DORLAND'S MEDICAL DICTIONARY ONLINE, https://www.dorlandsonline.com/dorland/definition?id=68402 (last visited Dec. 29, 2025).

CSF pressure, explained all of her neurologic symptoms[8]. (Tr. 37-38.) She characterized it as a "definitive diagnosis." (*Id.* at 59.)

Petitioner explained that the treatment she received for the CSF-venous fistula, a fibrin blood patch, improved her symptoms, though she then experienced back pain as a side effect of the placement of the patch. (Tr. 39-41.) Although petitioner's symptoms did not completely resolve with the patch, she did not want to pursue neurosurgery, which was the next recommended treatment. (*Id.* at 42-43.) As an alternative, she sought an evaluation from the Mayo Clinic, where a vascular procedure was available that ablates the vein and vessels associated with the fistula. (*Id.* at 44-45; *see generally* Ex. 78.) That procedure resolved her symptoms, except for right side pain with exertion and some tinnitus in the morning. (Tr. 46-47.) However, she still gets "small flares." (*Id.* at 48.)

In February of 2024, petitioner was evaluated by a personalized medicine physician, Dr. Lawrence Afrin. (Ex. 82.) Petitioner reportedly presented for a second opinion regarding MCAD (mast cell activation disease) because she had heard at a conference that MCAS (mast cell activation syndrome) can cause vascular abnormalities, such as fistulas. (*Id*. at 8, 11.) After taking an extensive history, not just of petitioner's post-vaccination course but of her entire life, Dr. Afrin opined:

> Kudos to the patient, as I think she's almost certainly correct in her suspicions that MCAD – and far more likely the far more prevalent (if only recently recognized) type termed mast cell activation syndrome (MCAS) . . . is at the root of most (even easily all) of her chronic multisystem comorbidity of general themes of inflammation, allergic-type phenomena, and aberrant growth/development (i.e. diastrophisms) in assorted tissues. I don't know of any other human diseases which come anywhere near as close as MCAS does to accounting, directly or indirectly, for the full range and chronicity of all the specific symptoms and findings here (including literally all of the central neuronal issues she has had, though I'll also acknowledge that some extent of natural "medical PTSD" could easily be present, too).

(*Id*. at 14.)

Dr. Afrin added that he is not suggesting that petitioner's other prior diagnoses are wrong, but only that none of the other conditions explain her entire history. (Ex. 82, p. 15.) Instead, he opined that "MCAS can readily account for all that's gone on in her." (*Id*.) However, Dr. Afrin declined to list how MCAS could cause each of her otherwise known conditions. (*Id.*) Dr. Afrin agreed that petitioner's December 2016 flu vaccine caused her subsequent symptoms but opined that these symptoms were manifestations of her underlying MCAS. (*Id*. at 16.) Although discussed as part of the history, Dr. Afrin

[8] Petitioner also testified that the neurologist who performed the CT myelogram, Dr. Gray, told her that CSF-venous fistulas result from an inflammatory immune response. (Tr. 37.)

did not specifically discuss petitioner's CSF-venous fistula in his assessment. However, he did note that "[o]verall, I'm doubtful of any MCAS-relevant abdominal vasculature compromise syndromes . . ." (*Id*. at 17.) Ultimately, Dr. Afrin opined that "I remain reluctant to make/confirm a definitive diagnosis of MCAS without also finding objective laboratory evidence of improperly behaving/activated mast cells, and I think a definitive diagnosis of MCAS needs to be made before she heads much further down the potentially long and extensive therapeutic road for MCAS . . . ." (*Id*. at 18.) Petitioner did not testify about her evaluation by Dr. Afrin during the hearing.

IV. Expert Opinions

a. Petitioner's Experts

i. Georges A. Ghacibeh, M.D., M.S.[9]

Petitioner's expert, Dr. Georges A. Ghacibeh, submitted four expert reports in this case. (Exs. 12, 19, 72, 86.) Based on his review of petitioner's medical history, Dr. Ghacibeh concluded that petitioner's clinical presentation constituted an aseptic meningitis. (Ex. 12, p. 2.) He based this conclusion primarily on petitioner's MRI findings of meningeal enhancement. (Ex. 72, p. 2.) Otherwise, he acknowledged that "[a]fter several years of extensive evaluations and consultations with several specialists and subspecialists, her diagnosis remains unknown and her current physicians continue to make speculations regarding the etiology of her symptoms." (*Id*.) In his final report, although Dr. Afrin had most recently suspected petitioner suffered MCAS, Dr. Ghacibeh maintained the view that petitioner's condition was due to aseptic meningitis. (Ex. 86, p. 4.) Additionally, having noted that petitioner's medical records from 2020 raised a

[9] Georges A. Ghacibeh, M.D., M.S. is board certified neurologist. (Ex. 13, p. 2.) He currently works as the Chief of the Division of Neurology and a Medical Director at the Primary Stroke Center at Pascack Valley Medical Center and Hackensack Meridian Health. (*Id.* at 1.) In addition, he works as an assistant professor in the Department of Neurology at Seton Hall-Hackensack Meridian School of Medicine. (*Id.*) Dr. Ghacibeh received his Master of Science in Clinical Investigation from the University of Florida and his medical degree from Lebanese University. (*Id.*) He has published just over 40 peer reviewed articles, book chapters, and abstracts. (*Id.* at 3-6.) Dr. Ghacibeh evaluated petitioner in clinic on December 9, 2020 and April 20, 2023. (Ex. 79.) However, given that Dr. Ghacibeh and Dr. Wilson both agree as to the ultimate diagnosis of CSF-venous fistula (Ex. 86, pp. 4-5, Ex. J), this is of little significance. As discussed in the analysis that follows, the experts' clinical assessment differs only in their interpretation of the first several weeks of petitioner's presentation (*compare* Ex. 86, pp. 4-5, *with* Ex. J), and Dr. Ghacibeh did not evaluate petitioner until years after the onset of her condition. *Nuttall v. Sec'y of Health & Human Servs.*, 122 Fed. Cl. 821, 832-33 (2015) (noting that an expert's opinion is not automatically entitled to deference as a treating physician simply because the expert evaluated the patient in person after the onset of the injury and explaining that a physician who is familiar with the patient both before and after the alleged vaccine injury is likely to be in a better position than an expert who was retained after the fact), *aff'd*, 640 F. App'x 996 (Fed. Cir. 2016); *Skinner-Smith v. Sec'y of Health & Human Servs.*, No. 14-1212V, 2022 WL 4116896, at *20 n.12 (Fed. Cl. Spec. Mstr. Aug. 15, 2022) (finding that an expert's opinion was not entitled to any added enhancement as a treating physician given that the expert had one phone consultation and one in-person evaluation of petitioner, both of which occurred years after the alleged onset of petitioner's condition), *mot. for recons. denied*, 2022 WL 13461862 (Fed. Cl. Spec. Mstr. Sept. 9, 2022).

suspicion of a CSF-venous fistula and CSF leak, Dr. Ghacibeh further opined that such a fistula was attributable to her aseptic meningitis and that it likely explained petitioner's worsening of symptoms in late January of 2017. (*Id*. at 5.) Dr. Ghacibeh opined that petitioner's aseptic meningitis and resulting CSF-venous fistula were caused by her second flu vaccination that she received on December 19, 2016, several days prior to the onset of symptoms of severe headache, tinnitus, and ear discomfort. (*Id*. at 2, 7.)

In his first report, Dr. Ghacibeh reported that a PubMed search revealed 138 peer-reviewed articles discussing both vaccines and aseptic meningitis, though he did not actually discuss any of these articles.[10] (Ex. 12, p. 2.) Instead, he asserted more broadly that meningitis can be autoimmune and that vaccines can cause autoimmunity via multiple different mechanisms. (*Id*. at 2-3.)

He opined:

> In the case of [petitioner], the temporal relationship between receiving the second flu vaccine, the development of headache followed by ear pain, tinnitus, and facial paresthesias, along with the indisputable MRI findings diagnostic of meningitis support a causal relationship between the flu vaccine and the meningitis. The flu vaccine often causes flu-like symptoms. This is caused by the immune reaction to the antigen contained in the vaccine, in addition to other substances in the vaccine that are meant to trigger the immune system. Meningitis is due to reactive inflammation in the membranes and fluid that surround the brain. There are three such membranes referred to as the meninges, the pia matter, arachnoid, and dura matter. A space between the pia and the arachonoid, called the suarachoid space, is filled with a fluid called the cerebrospinal fluid. All the nerves that leave the brain and communicated information between the brain and the rest of the body have to pass through this space. When there

[10] Although not cited or discussed within the report, petitioner's filing of Dr. Ghacibeh's first report was accompanied by the following medical articles: Andrew Riordan & Shamez N. Ladhani, *Aseptic Meningitis Associated with Routine Infant Immunisation Visits That Include the Group B Meningococcal Vaccine*, *4CMenB,* 104 ARCHIVES DISEASE CHILDHOOD 1237 (2019) (EX.14) (describing three cases of aseptic meningitis following primary immunization in infants, but not including the flu vaccine); Pamela Bravo-Alcantara et al., *Building Capacity for Active Surveillance of Vaccine Adverse Events in the Americas: A Hospital-Based Multi-Country Network*, 36 VACCINE 363 (2018) (Ex. 15) (study using active surveillance in 15 hospitals throughout the Americas to identify adverse effects to vaccines, and, specifically, identified 16 cases of aseptic meningitis associated with the measles, mumps, rubella ("MMR") vaccine); Tetsuo Nakayama, *Causal Relationship Between Immunological Responses and Adverse Reactions Following Vaccination*, 37 VACCINE 366 (2019) (Ex. 16) (study seeking to investigate vaccine adverse events in Japan since 1990, specifically referenced the discontinuation of a combined MMR vaccine in 1993 "because of an unexpectedly high incidence of aseptic meningitis"); Rexa Taherkhani et al., *Vaccine-Associated Paralytic Poliomyelitis in a Patient with Acute Lymphocytic Leukemia*, 24 J. NEUROVIROLOGY 372 (2018) (Ex. 17) (case report of an immunocompromised patient who developed vaccine associated paralytic poliomyelitis following vaccination for poliovirus); INST. OF MED., ADVERSE EFFECTS OF VACCINES: EVIDENCE AND CAUSALITY (Kathleen Stratton eds., 2012) (Ex. 18) (summarizing the evidence of and causal theories for adverse reactions to vaccinations and, specifically, summaries studies that look at associations between the MMR vaccine and aseptic meningitis).

> is an inflammation in the subarachonid space, the nerves travelling in and out of the brain can be affected by this inflammation and their function can be compromised, causing various neurological symptoms. Inflammation in the subarchonoid [sic] space can be caused by an infection, such as a virus or bacteria, or by an autoimmune process . . . .

(*Id*. at 3.)

In his second report, Dr. Ghacibeh further indicated that, although the distinction between pachymeningitis[11] and leptomeningitis[12] is "important," an MRI cannot necessarily distinguish pachymeningitis from leptomeningitis. (Ex. 19, p. 1.) He indicated that "[t]he presence of enhancement in any of the layers surrounding the brain is always considered abnormal and a sign of inflammation in the meninges . . . [i]t is, therefore, meningitis." (*Id.*) He reiterated that "[t]he relationship between vaccines and autoimmune conditions including meningitis has been well established in the medical literature," but again did not provide any supporting citations. (*See id*.)

In his third report, Dr. Ghacibeh agreed that "there is a distinction between pachymeningitis and leptomeningitis" and that the two conditions can lead to different symptoms; however, he opined that they both result from inflammation and that "the two membranes, the dura and the arachnoid, are practically glued to each other and inflammatory responses may easily spread from one to the other." (Ex. 72, p. 1 (citing M.J. Kupersmith et al., *Idiopathic Hypertrophic Pachymeningitis*, 62 NEUROLOGY 686 (2004) (Ex. G, p. 2); Byung-Nam Yoon et al., *Neuro-Behçet's Disease Presenting as Hypertrophic Pachymeningitis*, 24 EXPERIMENTAL NEUROBIOLOGY 252 (2015) (Ex. I)).) He further opined that elevated proteins and lymphocytes are generally considered evidence of leptomeningitis but not pachymeningitis.[13] (*Id*. (citing Aaron S. Dumont et

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[11] Pachymeningitis refers to inflammation of the dura mater, which is the outermost of the three membranes covering the brain and spinal cord. Symptoms of this disease resemble those of meningitis. *Pachymeningitis*, DORLAND'S MEDICAL DICTIONARY ONLINE, https://www.dorlandsonline.com/dorland/definition?id=36311 (last visited Dec. 31, 2025); *Dura mater*, DORLAND'S MEDICAL DICTIONARY ONLINE, https://www.dorlandsonline.com/dorland/definition?id=15060 (last visited Dec. 31, 2025).

[12] Leptomeninges refers to inflammation of the pia mater and the arachnoid. The pia mater is the innermost of the three membranes covering the brain and spinal cord, and the arachnoid is the middle membrane covering the brain and spinal cord. *Leptomeningitis*, DORLAND'S MEDICAL DICTIONARY ONLINE, https://www.dorlandsonline.com/dorland/definition?id=27947 (last visited Dec. 31, 2025); *Leptomeninges*, DORLAND'S MEDICAL DICTIONARY ONLINE, https://www.dorlandsonline.com/dorland/definition?id=27945 (last visited Dec. 31, 2025); *Pia mater*, DORLAND'S MEDICAL DICTIONARY ONLINE, https://www.dorlandsonline.com/dorland/definition?id=39136 (last visited Dec. 31, 2025); *Arachnoid mater*, DORLAND'S MEDICAL DICTIONARY ONLINE, https://www.dorlandsonline.com/dorland/definition?id=3954 (last visited Dec. 31, 2025); *Arachnoidea mater*, DORLAND'S MEDICAL DICTIONARY ONLINE, https://www.dorlandsonline.com/dorland/definition?id=3951 (last visited Dec. 31, 2025).

[13] However, he acknowledged that petitioner's own CSF test results indicated a low cell count and no evidence of inflammation. (Ex. 72, p. 2 (citing Ex. 21, p. 48).) Dr. Ghacibeh opined that this was due to the fact that the spinal tap was not performed until September of 2020, about four years after symptom

al., *Idiopathic Hypertrophic Pachymeningitis: A Report of Two Patients and Review of the Literature*, 27 CAN. J. NEUROLOGICAL SCIS. 333 (2000) (Ex. H)).) Dr. Ghacibeh suggested that a pure pachymeningitis could not interfere with neuronal function to cause seizures and ataxia. (*Id*. at 2.)

In any event, Ghacibeh opined that the fact that pachymeningitis is otherwise associated with rheumatologic conditions underscores the likelihood that it results from systemic inflammation and autoimmunity. (Ex. 72, p. 2.) Dr. Ghacibeh cited an article by Nakayama et al. for the proposition that various mechanisms implicate vaccines as the cause of significant side effects, including autoimmune and inflammatory responses. (*Id*. (citing Tetsuo Nakayama, *Causal Relationship Between Immunological Responses and Adverse Reactions Following Vaccination,* 37 VACCINE 366 (2019) (Ex. 16)).) Thus, even if petitioner did suffer a rheumatologic condition, this would not preclude her vaccinations as a trigger of her condition. For example, he cited two articles for the proposition that the Covid-19 vaccine has been shown to trigger symptoms or cause relapses in multiple sclerosis. (*Id*. at 3 (citing Afaga Garjani et al., *COVID-19 is Associated with New Symptoms of Multiple Sclerosis that are Prevented by Disease Modifying Therapies*, 52 MULTIPLE SCLEROSIS RELATED DISORDERS 52 (2021) (Ex. 74); Joachim Havla et al., *First Manifestation of Multiple Sclerosis After Immunization with the Pfizer-BioNTech COVID-19 Vaccine*, 269 J. NEUROLOGY 55 (2021) (Ex. 75)).)

In his fourth and final report, Dr. Ghacibeh explained his opinion that petitioner's aseptic meningitis resulted in a CSF-venous fistula (which he abbreviates "CVF") and CSF leak. (Ex. 86, pp. 4-7.) He indicated:

> A CVFs [sic] is an abnormal connection between the spinal subarachnoid space and adjacent paraspinal veins that allow unregulated egress of CSF into the venous system. Resultant CSF depletion causes intracranial hypotension. CSF flows in one direction, from the subarachnoid space into the venous system, because CSF pressure is usually maintained at a level greater than venous pressure. CVFs are typically found in the lower thoracic spine, at T7 to T12. They usually do not cause pooling of CSF in the epidural space which makes it difficult to detect them on standard imaging. CVFs are often associated with a diverticulum of a nerve root sleeve, however, the presence of nerve root sleeve diverticula does not necessarily predict the presence of a fistula.

(*Id*. at 5.)

According to Dr. Ghacibeh, CSF-venous fistula was first described as a cause of CSF leak in 2014. (Ex. 86, p. 5.) Since that time, publications have focused on diagnosis and treatment and "the mechanism of formation of the fistula remains

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onset. (*Id*.) In his fourth report, Dr. Ghacibeh indicated that petitioner's March 13, 2017 MRI showed diffuse dural enhancement and thickening consistent with pachymeningitis, which he opined is most consistent with intracranial hypotension due to a spontaneous CSF leak. (Ex. 86, p. 5.)

elusive." (*Id*. (citing Peter G. Kranz et al., *CSF-Venous Fistulas: Anatomy and Diagnostic Imaging*, 217 AJR AM. J. ROENTGENOL 1418 (2021) (Ex. 91)).) Thus, he noted that "current medical literature does not offer us much information about the mechanism." (*Id*. at 7.) However, Dr. Ghacibeh indicated that fistulas may develop at the site of arachnoid granulations when a ruptured vein permits unregulated drainage of cerebrospinal fluid into the venous system. (*Id.* at 6.) Despite citing a lack of evidence as to the mechanism of formation for CSF-venous fistulas, Dr. Ghacibeh indicated that "ample evidence" supports either trauma or inflammation as the causes of fistulas more generally. (*Id*.) He opined that the understanding of how fistulas develop generally can be extrapolated to explain a CSF-venous fistula.[14] (*Id*.)

ii. Omid Akbari, Ph.D., M.S.[15]

Dr. Akbari submitted only one expert report in this case. (Ex. 22.) Dr. Akbari primarily opined that molecular mimicry between components of the flu vaccine and proteins within myelin tissue can result in an autoimmune reaction leading to neuromyelitis and demyelinating disease. (*Id*. at 7.) Specifically, Dr. Akbari opined that H1N1 influenza vaccination can cause cranial neuropathy leading to tinnitus. (*Id*. at 9 (citing Abraham Shulman, Barbara Goldstein, & Arnold M. Strashun, *Central Nervous System Neurodegeneration and Tinnitus: A Clinical Experience*, *Part II: Translation Neurovascular Theory of Neurodegenerative CNS Disease and Tinnitus*, 14 INT'L TINNITUS J. 43 (2008) (Ex. 47); Abraham Shulman, Barbara Goldstein, & Arnold M. Strashun, *Final Common Pathway for Tinnitus: Theoretical and Clinical Implications of Neuroanatomical Substrates*, 15 INT'L TINNITUS J. 5 (2009) (Ex. 48); S. Elizabeth Williams et al., *Causality Assessment of Serious Neurologic Adverse Events Following 2009 H1N1 Vaccination*, 29 VACCINE 8302 (2011) (Ex. 49); Daniel N.A. Ankrah et al.,

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[14] Specifically, he describes the formation of a fistulas as follows:

> A fistula, in general, is due to an abnormal communication between two cavities, such as between an artery and a vein, the bowels and the bladder, the skin and the bowls, and so forth. Histologically, cavities in the body are separated by biological tissue that regulates the transfer of fluids. Trauma may cause a mechanical rupture in the walls separating two adjacent spaces. During the healing process, the body sometimes "makes a mistake" and instead of keeping two cavities separated, it connects them together creating a fistula. An inflammatory process acts almost the same way. If the walls of two adjacent cavities are inflamed, the cells forming these walls lose their tight connection, causing weakness in the walls and compromising their integrity. Over time, two adjacent walls may merge together creating abnormal communication, or a fistula.

(Ex. 86, p. 7.)

[15] Omid Akbari, Ph.D., M.S., received his Master of Science in Medical and General Microbiology from the University College of London and his Ph.D. in Cellular and Molecular Immunology from the National Institute for Medical Research. (Ex. 23, p. 1.) He currently works as a Professor of Immunology at the Keck School of Medicine in their Department of Molecular Microbiology and Immunology and their Department of Medicine. (*Id.* at 2.) He is also an adjunct professor at the David Geffen School of Medicine. (*Id.*) He has published 95 peer reviewed articles. (*Id.* at 9-16.)

Incidence of Adverse Events Among Healthcare Workers Following H1N1 Mass Immunization in Ghana, 36 DRUG SAFETY 259 (2013) (Ex. 62)).)

Dr. Akbari did not explicitly support, or even acknowledge, Dr. Ghacibeh's opinion; however, having noted that respondent's expert, Dr. Wilson, opined that petitioner had suffered meningitis, he cited literature purporting to show that both meningitis and encephalitis has been reported following the flu vaccine. (Ex. 22, p. 10 (citing Williams et al., *supra*, at Ex. 49; W.L. Gross, K.G. Ravens, & H.W. Hansen, *Meningoencephalitic Syndrome Following Influenza Vaccination*, 217 J. NEUROLOGY 219 (1978) (Ex. 50); Nashaat Boutrous & Brian P. Keck, *Delirium Following Influenza Vaccination*, 150 AM. J. PSYCHIATRY 1899 (1993) (Ex. 51)).) Nonetheless, he did not incorporate meningitis in his explanation of how vaccination could have contributed to petitioner's condition, instead contending that petitioner suffered vaccine-induced demyelinating neuropathy that explained her symptoms, including most notably her tinnitus. (*Id*. at 13-14)

b. Respondent's Expert

i. Michael Robert Wilson, M.D., M.A.S., F.A.A.N.[16]

Respondent's expert, Dr. Michael Wilson, submitted three reports in this case. (Exs. A, F, J.) Dr. Wilson agreed that petitioner suffered meningitis but stressed that she suffered pachymeningitis. (Ex. A, p. 3.) Pachymeningitis is anatomically distinct from leptomeningitis, which is what is typically associated with the term "aseptic meningitis." (*Id.*) Petitioner's MRI had evidence of pachymeningitis in that she had diffuse enhancement of the dura, but had no evidence of leptomeningitis. (*Id*.) MRI and CT scans are the "test of choice" to identify pachymeningitis, though a biopsy of the dura mater is often necessary for a definitive diagnosis. (Ex. F, p. 2.) Dr. Wilson agreed that MRI is an insensitive tool for detecting leptomeningitis but stressed that CSF testing is sensitive for leptomeningitis and, in fact, is the gold standard for detecting it. (*Id*. at 1-2.) Thus, Dr. Wilson opined that it is significant that petitioner's September 2020 spinal tap revealed no evidence of inflammation despite the fact that her condition was active and worsening at that time. (*Id*. at 2 (citing Ex. 21, pp. 59-62).) Considering the MRI and spinal tap results together, pachymeningitis is most likely. (*Id*. at 2.)

In his first two reports, Dr. Wilson suggested that broader diagnoses to explain why petitioner was suffering pachymeningitis reasonably remained under investigation (Ex. A, p. 4; Ex. F, p. 3); however, he agreed with those of petitioner's treating physicians who opined that a vaccine-induced autoimmune reaction would not explain her longer course of recurrent, episodic symptoms (Ex. F, p. 3). Dr. Wilson noted that

[16] Michael Robert Wilson, M.D., M.A.S., F.A.A.N is a board-certified neurologist. (Ex. B, p. 1.) He currently works as an associate professor of neurology at the University of California, San-Francisco School of Medicine. (*Id.* at 2.) He received his medical degree from the University of California, San Francisco School of Medicine and his master's in clinical research from the University of California, San Francisco. (*Id.* at 1.) He has published 69 peer reviewed articles, review articles, books, and chapters. (*Id.* at 19-24.)

neither Dr. Ghacibeh nor Dr. Akbari had provided literature to support any link between flu vaccination and pachymeningitis. (Ex. A, p. 4; Ex. F, pp. 3-4.) In particular, he noted that the dura mater, the only tissue inflamed in pachymeningitis, does not contain myelin antigens, as implicated in Dr. Akbari's theory. (Ex. F, pp. 3-4.) Additionally, although petitioner filed literature with Dr. Ghacibeh's first report seeking to implicate vaccination with aseptic meningitis, that literature pertained to live attenuated vaccines against neurotropic viruses such as varicella zoster, measles, mumps, rubella, and poliovirus. (Ex. A, p. 3.) This is in contrast to the flu vaccine at issue in this case. Dr. Wilson agreed that in rare instances vaccine strain viruses in these attenuated vaccines can become neuroinvasive in immunocompromised children. (*Id*. at 3-4.)

In his final report, Dr. Wilson opined, based on more recently created medical records, that "petitioner finally got a definitive diagnosis for her chronic pachymeningitis." (Ex. J, p. 1.) Specifically, he explained that CSF-venous fistula and intracranial hypotension due to the resulting CSF leak, are a classic cause of diffuse pachymeningitis. (*Id.*) Thus, he noted that repeated treatments to close her fistula has resulted in improvement of her symptoms. (*Id*. (citing Exs.78, 80.) Dr. Wilson opined that petitioner's condition (*i.e*. pachymeningitis) was not caused by autoimmune disease, but instead by a structural defect (*i.e*. the fistula). (*Id*. at 2.) Although Dr. Ghacibeh had noted inflammation and trauma as causes of fistulas generally, Dr. Wilson opined that a significant risk factor for CSF-venous fistulas specifically is the presence of perineural cysts. (*Id.*) In that regard, petitioner's CT myelogram of February 4, 2021 confirmed the presence of many perineural cysts along her cervical, thoracic, and lumbar spine. (*Id*. (citing Ex. 85, p. 11).) Dr. Wilson stressed that this represents an anatomic explanation for petitioner's condition that "had nothing to do with modulating her immune system" and asserted that no literature supports aseptic meningitis as a cause of perineural cysts. (*Id*.) Moreover, although aseptic meningitis may result in intracranial pressure changes, it would more likely result in intracranial hypertension, rather than intracranial hypotension as was evidenced in petitioner's case. (*Id*.) Ultimately, Dr. Wilson opined that "one does not need to invoke any additional, completely unfounded and unproven theories to explain why she became so ill." (*Id*.)

V. Party Contentions

In her motion for a ruling on the written record, petitioner argues that the opinions of Drs. Ghacibeh and Afrin should be read together as presenting a theory of causation under *Althen* prong one. (ECF No. 106, p. 9.) Specifically, Dr. Ghacibeh opines that petitioner suffered aseptic meningitis that resulted in a venous fistula and CSF leak. (*Id.*) This was the consequence of an autoimmune inflammatory process, which is consistent with Dr. Afrin's opinion that petitioner had an established pattern of increased inflammatory responses to illness, suggesting a predisposition to an inflammatory overreaction to her vaccination. (*Id*.) Conspicuously, petitioner does not invoke any aspect of Dr. Akbari's opinion as supporting her showing under *Althen* prong one. (*Id*. at 9-11.)

Regarding *Althen* prong two, petitioner primarily argues that the venous fistula in itself constitutes evidence of an inflammatory process, which petitioner attributes to her double dose of the flu vaccine. (ECF No. 106, pp. 11-12.) Petitioner also argues that the difference drawn by respondent between pachymeningitis (affecting the dural membrane) and leptomeningitis (affecting the arachnoid membrane) is immaterial because the two are contiguous and inflammation affecting one is likely to also affect the other. (*Id*. at 10-11.) Pertinent to *Althen* prong two, she attributes the venous fistula to weakness in the arachnoid granulation caused by aseptic meningitis. (*Id*. at 12.) Petitioner invokes Dr. Akbari's opinion with respect to *Althen* prong two to additionally implicate petitioner's vaccines as the cause of her tinnitus. (*Id.*) Specifically, she argues that tinnitus can be explained by neuropathy of the trigeminal nerve, which can result from neurovascular dysfunction caused by inflammation. (*Id.* at 12-15.) However, petitioner does not connect this to her meningitis. Instead, she proposes a direct causal relationship between the flu vaccine and tinnitus. (*Id.* at 13-15.) Regarding *Althen* prong three, petitioner argues that her condition began with the onset of tinnitus about four days post-vaccination. (*Id*. at 15-16.) Petitioner asserts that both of her experts support this timing as appropriate for post-vaccination meningitis and tinnitus. (*Id*. at 16-17.)

In response, respondent argues that petitioner has not shown how the flu vaccine can cause a CSF-venous fistula, stressing that little is known about how they occur. (ECF No. 109, p. 9.) In fact, respondent suggests that petitioner has the theoretical causal chain backward, arguing that the CSF-venous fistula is the cause of pachymeningitis. (*Id*.) In that regard, he notes that petitioner had pre-existing perineural cysts, which are a known risk factor for CSF-venous fistulas. (*Id*.) Regarding *Althen* prong two, respondent stresses that the elimination of other possible causes does not carry petitioner's burden of proof. (*Id*. at 10.) Moreover, petitioner was never diagnosed with meningitis[17] and the one key objective finding, MRI evidence of perineural cysts along petitioner's spine, are associated with CSF-venous fistula and not either vaccination or meningitis. (*Id*. at 11.) Although Dr. Ghacibeh is correct to note that meningitis can affect pressure around the brain, aseptic meningitis should result in intercranial hypertension whereas petitioner experienced intracranial hypotension. (*Id*. at 9.) Regarding *Althen* prong three, respondent contends that petitioner as only shown that she experienced tinnitus about 4 days post-vaccination, without any showing as to a causal link. (*Id*. at 11-12.) Moreover, this does not suffice to identify the timing of the formation of the CSF-venous fistula. (*Id*. at 12.)

In reply, petitioner argues that the lack of definitive scientific literature regarding the causes of CSF-venous fistulas does not invalidate her claim. (ECF No. 111, p. 2.) She stresses that she is not obligated to present a mechanism of injury[18] and that Dr.

[17] Notably, however, in his Rule 4 report, respondent previously indicated that he "agrees that petitioner developed an aseptic meningitis (which is not a demyelinating condition) about three to four days after her second flu vaccine of the season, which manifested primarily as headaches, tinnitus, vestibular symptoms, and paresthesias." (ECF No. 26, p. 6.)

[18] Although petitioner is correct that she is not obligated to present a mechanism of causation, she does misstate her burden of proof by additionally asserting that she is obligated to present only a "plausible"

Ghacibeh's explanation that an autoimmune meningitis resulted in the CSF-venous fistula is consistent with established scientific principles. (*Id*.) Regarding *Althen* prong two, petitioner further argues that this explanation by Dr. Ghacibeh moves beyond simple "post hoc, ergo propter hoc" reasoning. (*Id*. at 2-3.) Petitioner stresses that the presence of a predisposing factor, such as perineural cysts, does not preclude the vaccination from also being a substantial contributing factor. (*Id*. at 3.) Regarding *Althen* prong three, petitioner argues that, even if onset of the CSF-venous fistula, occurred several weeks post-vaccination, this longer latency does not preclude causality. (*Id*. at 3-4.) But, in any event, petitioner argues that the tinnitus occurring four days post-vaccination was an early manifestation of the condition that progressed into a CSF-venous fistula. (*Id*.)

VI. Analysis

a. *Althen* Prong One

Under *Althen* prong one, petitioner must provide a "reputable medical theory," demonstrating that the vaccine received can cause the type of injury alleged. *Pafford v. Sec'y of Health & Human Servs.*, 451 F.3d 1352, 1355-56 (Fed. Cir. 2006) (quoting *Pafford v. Sec'y of Health & Human Servs.*, No. 01-0165V, 2004 WL 1717359, at *4 (Fed. Cl. Spec. Mstr. July 16, 2004)). Such a theory must only be "legally probable, not medically or scientifically certain." *Knudsen v. Sec'y of Health & Human Servs.*, 35 F.3d 543, 548-49 (Fed. Cir. 1994). Petitioner may satisfy the first *Althen* prong without resort to medical literature, epidemiological studies, demonstration of a specific mechanism, or a generally accepted medical theory. *See Andreu v. Sec'y of Health & Human Servs.*, 569 F.3d 1367,1378-79 (Fed. Cir. 2009) (citing *Capizzano v. Sec'y of Health & Human Servs.*, 440 F.3d 1317, 1325-26 (Fed. Cir. 2006)). However, "[a] petitioner must provide a 'reputable medical or scientific explanation' for [her] theory. While it does not require medical or scientific certainty, it must still be 'sound and reliable.'" *Boatmon*, 941 F.3d at 1359 (quoting *Moberly v. Sec'y of Health & Human Servs.*, 592 F.3d 1315, 1322 (Fed. Cir. 2010); *Knudsen*, 35 F.3d at 548-49).

Based on the expert opinions presented, petitioner must demonstrate as a matter of general causation both that the flu vaccine can cause aseptic meningitis and that aseptic meningitis can in turn cause a CSF-venous fistula. Petitioner has not preponderantly demonstrated either point.

Dr. Ghacibeh explained that meningitis results from inflammation in the subarachnoid space, which can be caused either by infection or an autoimmune process. (Ex. 12, p. 3.) However, his report was accompanied only by literature purporting to implicate other, generally live and neurotropic, vaccines as a cause of

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theory of causation. (ECF No. 111, p. 2.) The Federal Circuit has "consistently rejected theories that the vaccine only 'likely caused' the injury and reiterated that a 'plausible' or 'possible' causal theory does not satisfy the standard." *Boatmon*, 941 F.3d at 1360; *see also Cerrone v. Sec'y of Health & Human Servs*., 146 F.4th 1113, 1122 (Fed. Cir. 2025) (endorsing the special master's analysis requiring the petitioner to preponderantly establish that the vaccine more likely than not can cause the relevant disease).

aseptic meningitis. (Andrew Riordan & Shamez N. Ladhani, *Aseptic Meningitis Associated with Routine Infant Immunisation Visits That Include the Group B Meningococcal Vaccine*, *4CMenB,* 104 ARCHIVES DISEASE CHILDHOOD 1237 (2019) (Ex.14); Pamela Bravo-Alcántara et al., *Building Capacity for Active Surveillance of Vaccine Adverse Events in the Americas: A Hospital-Based Multi-Country Network*, 36 VACCINE 363 (2018) (Ex. 15); Tetsuo Nakayama, *Causal Relationship Between Immunological Responses and Adverse Reactions Following Vaccination*, 37 VACCINE 366 (2017) (Ex. 16); Reza Taherkhani et al., *Vaccine-Associated Paralytic Poliomyelitis in a Patient with Acute Lymphocytic Leukemia*, 24 J. NEUROVIROLOGY 372 (2018) (Ex. 17); INST. OF MED., ADVERSE EFFECTS OF VACCINES: EVIDENCE AND CAUSALITY (Kathleen Stratton eds., 2012) [hereinafter IOM Report] (Ex. 18).) Thus, Dr. Wilson noted that neuroinvasion by a vaccine strain virus is the likely mechanism of any such reported instances of post-vaccinal meningitis. (Ex. A, pp. 3-4.) Indeed, this hypothesis is likewise supported by petitioner's own submitted evidence. (IOM Report, *supra*, at Ex. 18, p. 172.) This mechanism does not apply to the flu vaccine, which is not a live vaccine, and the flu vaccine has not otherwise been demonstrated as being a known cause of meningitis. Dr. Ghacibeh later filed a single case report of aseptic meningitis following vaccination for Covid-19 (Valérie Dupon et al., *Aseptic Meningitis after SARS-CoV-2 Pfizer/BioNTech Vaccination*, 77 ACTA CLINICA BELGICA 976 (2022) (Ex. 89)); however, the case report authors stressed that the pathophysiology of any purported post-vaccinal aseptic meningitis remains unknown. (*Id*. at 3.) They proposed that, if autoimmunity were implicated, it would likely result from molecular mimicry related to the specific spike protein contained in the Covid-19 vaccine. (*Id.*) Again, this would not be applicable to the flu vaccine.

Dr. Ghacibeh did not actually explain how the flu vaccine could trigger an autoimmune process leading to aseptic meningitis. Similar to the above noted case report, Dr. Ghacibeh did cite molecular mimicry as a prime theory for autoimmunity. (Ex. 12, pp. 2-3.) However, he did not include any discussion that could substantiate a role for molecular mimicry in causing meningitis. As prior cases have observed, molecular mimicry "is a generally accepted scientific principle, [but] mere invocation of the scientific term does not carry a petitioner's burden in a Program case." *Deshler v. Sec'y of Health & Human Servs*., No. 16-1070V, 2020 WL 4593162, at *20 (Fed. Cl. Spec. Mstr. July 1, 2020) (citing *Forrest v. Sec'y of Health & Human Servs.*, No. 14-1046V, 2019 WL 925495, at *3 (Fed. Cl. Spec. Mstr. Jan. 18, 2019)). Dr. Ghacibeh did not, for example, provide any evidence to support the notion that meningitis results from antibody attack against an auto-antigen or even suggest what antibody and/or auto-antigen may be implicated. Dr. Ghacibeh cited an article by Nakayama et al. for the proposition that various mechanisms implicate vaccines as the cause of significant side effects, including autoimmune and inflammatory responses. (*Id*. (citing Nakayama, *supra*, at Ex. 16).) However, this paper discusses aseptic meningitis only as an adverse event following MMR vaccination. (Nakayama, *supra*, at Ex. 16.) Dr. Akbari focused on molecular mimicry against proteins within myelin tissue (Ex. 22); however, petitioner has not demonstrated that myelin tissue is affected in meningitis. For example, Dr. Wilson indicated that myelin tissue is not implicated in pachymeningitis. (Ex. F, pp. 3-4).

On this record, only isolated case reports cited by Dr. Akbari seek to evidence the flu vaccine as a cause of aseptic meningitis. (S. Elizabeth Williams et al., *Causality Assessment of Serious Neurologic Adverse Events Following 2009 H1N1 Vaccination*, 29 VACCINE 8302 (2011) (Ex. 49); W.L. Gross et al., *Meningoencephalitic Syndrome Following Influenza Vaccination*, 217 J. NEUROLOGY 219 (1978) (Ex. 50); Nashaat Boutros & Brian P. Keck, *Delerium Following Influenza Vaccination*, 150 AM. J. PSYCHIATRY 1899 (1993) (Ex. 51).) Dr. Akbari cited a 2011 paper reviewing neurologic adverse events following 2009 H1N1 vaccination. (Williams et al., *supra*, at Ex. 49.) The paper examined 212 VAERS[19] reports of non-fatal but serious neurologic events. (*Id.* at 1.) Dr. Akbari cited this paper because it identified four instances of meningitis as a reported adverse event following this flu vaccine. (*Id*. at 13 (Table 3).) However, after the authors concluded their causality assessments, meningitis was not included as among the conditions for which a causal relationship was considered to be at least "possible." (*Id*. at 5.) Dr. Akbari also highlighted a 1978 case report of a meningoencephalitis following a flu vaccination. (Gross et al., *supra*, at Ex. 50.) Importantly, however, the authors concluded that the patient had a "distinct hypersensitivity" to chicken protein, which was a likely causal factor because the flu vaccine contained egg albumin. (*Id*. at 2.) And, finally, Dr. Akbari cited a 1993 case report of a women who experienced confusion and bizarre thinking post-flu vaccination. (Boutros & Keck, *supra*, at Ex. 51.) The authors speculated that the patient's symptoms might constitute a form of aseptic encephalopathy, but did not actually indicate that this diagnosis was confirmed clinically. (*Id.*) Instead, they noted that the patient had MRI evidence of white matter lesions attributable to vascular disease but speculated that the vaccine caused her symptoms because she reportedly experienced prior post-vaccinal episodes. (*Id*.)

After review of these materials, these case reports do not provide meaningful evidence supportive of Dr. Ghacibeh's theory that the flu vaccine can cause an autoimmune reaction leading to meningitis. In any event, case reports, though not entirely devoid of evidentiary value, generally are not considered strong evidence. *E.g.*, *Crutchfield v. Sec'y of Health & Human Servs.*, No. 09-0039V, 2014 WL 1665227, at *19 (Fed. Cl. Spec. Mstr. Apr. 7, 2014) (noting that "single case reports of Disease X occurring after Factor Y . . . do not offer strong evidence that the *temporal* relationship is a *causal* one—the temporal relationship could be pure random chance"), ***aff'd***, 125 Fed. Cl. 251 (2014); *see also Paluck v. Sec'y of Health & Human Servs.*, 104 Fed. Cl. 457, 475 (2012) (indicating that case reports "do not purport to establish causation definitively, and this deficiency does indeed reduce their evidentiary value. . . [but] the fact that case reports can by their nature only present indicia of causation does not deprive them of all evidentiary weight" (quoting *Campbell v. Sec'y of Health & Human Servs.*, 97 Fed. Cl. 650, 668 (2011))), ***aff'd***, 786 F.3d 1373 (Fed. Cir. 2015)).

[19] The Vaccine Adverse Event Reporting System ("VAERS") is a national spontaneous vaccine safety surveillance system established in 1990 to detect possible safety problems in vaccines licensed in the U.S. (Williams et al., *supra*, at Ex. 49, p. 2.) VAERS is not designed to assess a causal relationship between a given vaccine and a reported adverse event. (*Id.*)

Nor does Dr. Afrin's assessment bolster Dr. Ghacibeh's theory as petitioner argues in her motion. After reviewing Dr. Afrin's evaluation, Dr. Ghacibeh did not incorporate MCAS into his theory. (Ex. 86.) Although Dr. Ghacibeh accepted MCAS as an indicator of a predisposition to inflammation, mast cells were not specifically invoked as part of the autoimmune process he had proposed, and he did not otherwise explain how mast cells would contribute to the development of meningitis.[20] Without demonstration that the flu vaccine can cause meningitis, a predisposition to experiencing inflammation, while potentially relevant under *Althen* prong two, does not standing alone establish a theory of general causation. Conversely, while Dr. Afrin separately opined that MCAS could explain neurologic symptoms, he did not clearly opine that petitioner ever suffered meningitis. (Ex. 82.) Accordingly, his opinion likewise does not suffice to explain how MCAS might contribute to meningitis. But, in any event, for purposes of *Althen* prong one, petitioner "must provide a reputable medical or scientific explanation that pertains specifically to the petitioner's case." *Brokelschen v. Sec'y of Health & Human Servs*., 618 F.3d 1339, 1345 (Fed. Cir. 2020). However, Dr. Afrin's evaluation does not preponderantly establish that petitioner actually suffered MCAS. (Ex. 82, p. 18 (expressing reluctance to diagnose MCAS absent objective evidence from lab results).) Thus, even if one were inclined to read Dr. Ghacibeh's and Dr. Afrin's opinions as being in harmony, any theory of causation premised on MCAS would not be applicable to petitioner's own case.

And, while one can appreciate petitioner's own concern regarding the fact that she inadvertently received a double dose of the flu vaccine, her experts have not substantiated that this is causally relevant. The flu vaccine is administered annually, meaning that people routinely receive repeat flu vaccinations in their lifetimes, albeit with varied compositions. Petitioner has not filed, nor have her experts cited, any guidance that would suggest an established minimum interval between flu vaccines for adults or that receiving multiple flu vaccines in one flu season is potentially dangerous.[21] Nor have petitioner's experts substantiated that any inflammatory response from the first flu vaccine would have remained active by the time of the second flu vaccine, which was administered about three months later. Nor have they otherwise explained why the first flu vaccine would in any way amplify the overall inflammatory effect of the second vaccine.

Finally, even if Dr. Ghacibeh had substantiated that the flu vaccine can cause aseptic meningitis, he has not preponderantly supported the further notion that aseptic meningitis can cause a CSF-venous fistula. Dr. Ghacibeh opines that it is plausible that

[20] In another decision, I concluded based on a more robust record that a prior petitioner had not demonstrated that the flu vaccine can act as a trigger to either cause or significantly aggravate MCAS. *Mulrenin ex rel. R.M. v. Sec'y of Health & Human Servs*., No. 18-22V, 2021 WL 566441 (Fed. Cl. Spec. Mstr. Jan. 19, 2021); *see also Landrum v. Sec'y of Health & Human Servs*., No. 18-1497V, 2025 WL 3532110 (Fed. Cl. Spec. Mstr. Oct. 8, 2025).

[21] While most people only need one dose of the flu vaccine each year, CDC guidance does indicate that some children require two doses of the flu vaccine. In that context, the CDC recommends that the two doses be administered at least four weeks apart. *See* CTRS. FOR DISEASE CONTROL & PREVENTION, *Who Needs a Flu Vaccine* (Sept. 18, 2025), https://www.cdc.gov/flu/vaccines/vaccinations.html.

inflammation from aseptic meningitis created a weakness of the arachnoid granulation that resulted in a CSF-venous fistula. (Ex. 86, p. 7.) In that regard, Dr. Ghacibeh appears to be correct that CSF-venous fistulas have been observed to occur at the site of arachnoid granulations. (Ex. 86, p. 6; Kranz et al., *supra*, at Ex. 91, p. 5.) However, rupture of granulation is only one of two leading theories on the formation of CSF-venous fistulas and both of these theories are noted to be "speculative." (Kranz et al., *supra*, at Ex. 91, p. 5.) Instead, the literature indicates that "[t]he event or sequence of events that precipitate the formation of a [CSF-venous fistula] is currently unknown." (*Id.* at 3.) And, importantly, Dr. Ghacibeh agrees. (Ex. 86, p. 5 (explaining that "the mechanism of formation of the fistula remains elusive").) Thus, Dr. Ghacibeh's opinion is based primarily on the notion that, because other types of fistulas in other parts of the body may be caused by inflammation, the same is therefore likely for CSF-venous fistulas. (*Id*. at 7.) However, this is speculative.

Petitioner argues that the lack of definitive scientific literature regarding the causes of CSF-venous fistulas does not invalidate her claim. (ECF No. 111, p. 2.) However, the issue here is not simply a lack of scientific literature, but rather the fact that the literature that is available confirms that Dr. Ghacibeh's opinion is not sound and reliable based on what is known about CSF-venous fistulas. The Court of Federal Claims has previously explained that while the *Althen* Court rejected the need for scientific certainty, "in 'a field bereft of complete and direct proof of how vaccines affect the human body,' . . . [t]he standard of proof does not operate as a sliding scale that varies depending upon the quantity and quality of the scientific evidence that is available." *Caves v. Sec'y of Health & Human Servs*., 100 Fed. Cl. 119, 143 (2011) (quoting *Althen*, 418 F.3d at 1280), *aff'd*, 463 F. App'x 932 (Fed. Cir. 2012).

For all these reasons, and considering the record as a whole, petitioner has not met her preponderant burden of proof under *Althen* prong one.

b. *Althen* Prong two

The second *Althen* prong requires proof of a logical sequence of cause and effect, usually supported by facts derived from a petitioner's medical records. *Althen*, 418 F.3d at 1278; *Andreu*, 569 F.3d at 1375–77; *Capizzano*, 440 F.3d at 1326; *Grant*, 956 F.2d at 1148. In establishing that a vaccine "did cause" injury, the opinions and views of the injured party's treating physicians are entitled to some weight. *Andreu*, 569 F.3d at 1367; *Capizzano*, 440 F.3d at 1326 ("medical records and medical opinion testimony are favored in vaccine cases, as treating physicians are likely to be in the best position to determine whether a 'logical sequence of cause and effect show [s] that the vaccination was the reason for the injury'") (quoting *Althen*, 418 F.3d at 1280). Medical records are generally viewed as particularly trustworthy evidence, since they are created contemporaneously with the treatment of the patient. *Cucuras*, 993 F.2d at 1528.

However, medical records and/or statements of a treating physician's views do not *per se* bind the special master to adopt the conclusions of such an individual, even if

they must be considered and carefully evaluated. *See* § 300aa-13(b)(1) (providing that "[a]ny such diagnosis, conclusion, judgment, test result, report, or summary shall not be binding on the special master or court"); *Snyder v. Sec'y of Health & Human Servs.*, 88 Fed. Cl. 706, 746 n.67 (2009) ("there is nothing ... that mandates that the testimony of a treating physician is sacrosanct—that it must be accepted in its entirety and cannot be rebutted"). As with expert testimony offered to establish a theory of causation, the opinions or diagnoses of treating physicians are only as trustworthy as the reasonableness of their suppositions or bases. The views of treating physicians should also be weighed against other, contrary evidence also present in the record—including conflicting opinions among such individuals. *Hibbard v. Sec'y of Health & Human Servs.*, 100 Fed. Cl. 742, 749 (2011) (not arbitrary or capricious for special master to weigh competing treating physicians' conclusions against each other), *aff'd*, 698 F.3d 1355 (Fed. Cir. 2012); *Caves*, 100 Fed. Cl. at 136; *Veryzer v. Sec'y of Health & Human Servs.*, No. 06-522V, 2011 WL 1935813, at *17 (Fed. Cl. Spec. Mstr. Apr. 29, 2011), *mot. for rev. denied*, 100 Fed. Cl. 344, 356 (2011), *aff'd without opinion*, 475 F. App'x 765 (Fed. Cir. 2012).

In this case, the treating physician opinions do not preponderantly support vaccine causation when the medical records are evaluated holistically. Initially, petitioner secured two competing neurology assessments. Although Dr. Matarese felt that petitioner's presentation could be explained as a post-vaccinal autoimmune meningitis (Ex. 5, p. 6), Dr. Witte felt that petitioner was not undergoing any inflammatory process and that she needed follow up testing based on her MRI results. (Ex. 9, p. 2.) Because petitioner felt more comfortable with Dr. Matarese (Tr. 25-29), his diagnostic assessment carried forward during petitioner's treatment with him. However, once petitioner's symptoms recurred, Dr. Matarese ultimately concluded that his initial impression of an autoimmune meningitis could not explain petitioner's longer-term course. (Ex. 20, p. 5.) After he referred petitioner for further specialist evaluation, Dr. Schindler confirmed that petitioner was suffering a CSF leak, prompting him to opine that petitioner's condition had always been structural and was never inflammatory. (Ex. 85, pp. 8, 15, 92, 94; *see also* Ex. 80, pp. 19, 23, 78-79.)

Although Dr. Afrin additionally supported vaccine-causation, his opinion was based on his own diagnosis of MCAS, which was not a diagnostic opinion shared by any of petitioner's other treating physicians or either of her experts. And, in fact, Dr. Afrin's MCAS diagnosis was itself only tentatively stated. (Ex. 82, pp. 17-18.) Standing alone, Dr. Afrin's evaluation does not preponderantly support a logical sequence of cause and effect supporting vaccine causation of petitioner's condition. Nor, for the reasons discussed under *Althen* prong one, does Dr. Afrin's opinion reasonably buttress Dr. Ghacibeh's opinion as petitioner argued in her motion for a ruling on the written record. (ECF No. 106, p. 9.) Similarly, in light of petitioner's extensive evaluations and ultimate diagnosis of a CSF-venous fistula and CSF leak, Dr. Akbari is not persuasive in seeking to alternatively explain petitioner's tinnitus as a stand-alone demyelinating neuropathy of the cranial nerve. (Ex. 22, pp. 9-13.) Dr. Akbari is not a medical doctor and his opinion is not supported either by petitioner's clinical expert, Dr. Ghacibeh, or by petitioner's treating physicians. Moreover, tinnitus is consistent with intracranial

hypotension, which is in turn consistent with her diagnosed CSF-venous fistula and therefore does not require any separate explanation. (Ex. 86, pp. 4-5; Ex. J.)

Additionally, Dr. Wilson is persuasive in opining that petitioner's CSF-venous fistula and resulting CSF leak represents a complete and more likely explanation for petitioner's condition, including of her pachymeningitis and accompanying symptoms. *Accord Winkler*, F.4th at 963 (finding no error where the special master considered an infectious cause under analysis of the petitioner's initial burden of proof under *Althen*). This view was shared by Dr. Schindler, one of petitioner's treating physicians. (Ex. 85, pp. 90, 92, 94.) Petitioner's expert, Dr. Ghacibeh, likewise agreed that petitioner's confirmed CSF-venous fistula was responsible for much of petitioner's presentation. (Ex. 86, pp. 4-5.) He differs from Dr. Wilson only in attributing petitioner's symptoms prior to January 30, 2017 to an initial aseptic meningitis. (*Id.*) Importantly, however, this contention is not preponderantly supported. As Dr. Wilson explained, petitioner's initial MRI performed on March 13, 2017 showed signs of only pachymeningitis and not leptomeningitis. (Ex. A, pp. 2-3.) And, although leptomeningitis was within the radiologist's differential diagnosis (Ex. 3, p. 60), there was no significant CNS inflammation confirmed by other testing (Ex. 85, pp. 90, 92, 169, 226). Moreover, petitioner had multilevel nerve root sleeve and perineural cysts. (Ex. 85, pp. 152-54.) Dr. Wilson opines that perineural cysts are a risk factor for CSF-venous fistulas, which can in turn lead to pachymeningitis. (Ex. J, p. 2.) Dr. Ghacibeh similarly explained that nerve root sleeve diverticula[22] are associated with CSF-venous fistulas, though he stressed they are not predictive of the condition. (Ex. 86, p. 5.) By contrast, for the reasons discussed under *Althen* prong one, Dr. Ghacibeh has not persuasively demonstrated that aseptic meningitis can cause CSF-venous fistulas. Accordingly, petitioner's argument that her CSF-venous fistula evidences an inflammatory process is unavailing.

For all these reasons, and considering the record as a whole, petitioner has not met her preponderant burden of proof under *Althen* prong two.

c. *Althen* Prong 3

The third *Althen* prong requires establishing a "proximate temporal relationship" between the vaccination and the injury alleged. *Althen*, 418 F.3d at 1281. That term has been equated to the phrase "medically-acceptable temporal relationship." *Id.* A petitioner must offer "preponderant proof that the onset of symptoms occurred within a timeframe for which, given the medical understanding of the disorder's etiology, it is medically acceptable to infer causation in-fact." *de Bazan v. Sec'y of Health & Human Servs.*, 539 F.3d 1347, 1352 (Fed. Cir. 2008). The explanation for what is a medically acceptable timeframe must also coincide with the theory of how the relevant vaccine can cause an injury (*Althen* prong one's requirement). *Id.* at 1352; *Shapiro v. Sec'y of Health & Human Servs.*, 101 Fed. Cl. 532, 542 (2011), *mot. for recons. denied after*

[22] Similar to a cyst, a diverticulum is a "circumscribed pouch of sac of variable size." *Diverticulum*, DORLAND'S MEDICAL DICTIONARY ONLINE, https://www.dorlandsonline.com/dorland/definition?id=68402 (last visited Dec. 29, 2025).

remand, 105 Fed. Cl. 353 (2012), *aff'd*, 503 F. A'ppx 952 (Fed. Cir. 2013); *Koehn v. Sec'y of Health & Human Servs.*, No. 11-355V, 2013 WL 3214877 (Fed. Cl. Spec. Mstr. May 30, 2013), *mot. for rev. denied*, slip op. (Fed. Cl. Dec. 3, 2013), *aff'd*, 773 F.3d 1239 (Fed. Cir. 2014).

Here, petitioner has not preponderantly demonstrated that the flu vaccine can cause aseptic meningitis. Additionally, she has not preponderantly demonstrated that aseptic meningitis can cause a CSF-venous fistula. Nor, as discussed under *Althen* prong one, have her experts clearly explained the process by which they theorize this would occur. Accordingly, petitioner necessarily cannot satisfy her burden of proof under *Althen* prong three. On this record, Dr. Ghacibeh's opinion that a causal inference is possible based on a four-day latency between vaccination and onset of aseptic meningitis is speculative. To the extent there is some evidence to suggest that the MMR vaccine can cause meningitis via direct viral infection, the Institute of Medicine has observed that the published literature supports at least a nine-day latency. (IOM Report, *supra*, at Ex. 18, p. 172.) Additionally, Dr. Ghacibeh has no apparent basis for asserting that the timing is appropriate to conclude that petitioner's alleged meningitis beginning four days post-vaccination was the cause of her CSF-venous fistula, the onset of which he places 41 days post-vaccination. (Ex. 86, pp. 4-5.)

For all these reasons, and considering the record as a whole, petitioner has not met her preponderant burden of proof under *Althen* prong three.

But in any event, even acknowledging that petitioner's condition was essentially coincident to vaccination, her ability to satisfy *Althen* prong three would not entitle her to compensation in light of her failure to meet her burden of proof under *Althen* prongs one and two. *Veryzer v. Sec'y of Health & Human Servs.*, 100 Fed. Cl. 344, 356 (2011) (explaining that a "temporal relationship alone will not demonstrate the requisite causal link and that petitioner must posit a medical theory causally connecting [the] vaccine and injury"), *aff'd per curiam sub nom. Veryzer v. United States*, 475 F. App'x 765 (Fed. Cir. 2012); *Hibbard v. Sec'y of Health & Human Servs.*, 698 F.3d 1355, 1364-65 (Fed. Cir. 2012) (holding the special master did not err in resolving the case pursuant to *Althen* prong two when respondent conceded that petitioner met *Althen* prong three).

VII. Conclusion

Petitioner clearly suffered over a number of years. Moreover, she had to go to extensive effort to determine the nature of her condition, which was unfortunate and surely compounded her suffering. For that she has my sympathy. However, for all the reasons discussed above, there is not preponderant evidence that her condition, or any of her symptoms, were caused by her December 19, 2016 flu vaccination.

Therefore, pursuant to § 300aa-12(d)(3)(A) and Vaccine Rule 10, this decision concludes that petitioner is not entitled to an award of compensation. Absent a timely motion for review, the Clerk is directed to enter judgment dismissing this case for insufficient proof in accordance with Vaccine Rule 11(a).

IT IS SO ORDERED.

s/Daniel T. Horner
Daniel T. Horner
Special Master