In the United States Court of Federal Claims
OFFICE OF SPECIAL MASTERS
No. 21-1579V

* *

WILLIAM MINNER,

Petitioner,

v.

SECRETARY OF HEALTH AND HUMAN SERVICES,

Respondent.

* *

Chief Special Master Corcoran

Filed: September 25, 2025

Laura J. Levenberg, Muller Brazil, Dresher, PA, for Petitioner.

Ryan D. Pyles, U.S. Department of Justice, Washington, DC, for Respondent.

ENTITLEMENT DECISION[1]

On July 15, 2021, William Minner filed a petition for compensation under the National Vaccine Injury Compensation Program (the "Vaccine Program").[2] Petitioner alleges that an influenza ("flu") vaccine he received on August 31, 2020, caused him to develop brachial neuritis.[3] Petition (ECF No. 1) at 1.

I have opted to decide the claim on the basis of the filed records, and the parties have submitted briefs in support of their respective positions. Petitioner's Motion for Ruling on the Record, dated January 17, 2025 (ECF No. 49) ("Br."); Respondent's Opposition Brief, dated March 10, 2025 (ECF No. 52) ("Opp."); Petitioner's Reply, dated March 31, 2025 (ECF No. 53) ("Reply"). Now, for the reasons set forth below, I deny entitlement. Petitioner has not

[1] Under Vaccine Rule 18(b), each party has fourteen days within which to request redaction "of any information furnished by that party: (1) that is a trade secret or commercial or financial in substance and is privileged or confidential; or (2) that includes medical files or similar files, the disclosure of which would constitute a clearly unwarranted invasion of privacy." Vaccine Rule 18(b). Otherwise, the whole Decision will be available to the public in its present form. *Id*.

[2] The Vaccine Program comprises Part 2 of the National Childhood Vaccine Injury Act of 1986, Pub. L. No. 99-660, 100 Stat. 3758, codified as amended at 42 U.S.C. §§ 300aa-10 through 34 (2012) ("Vaccine Act" or "the Act"). Individual section references hereafter will be to § 300aa of the Act (but will omit that statutory prefix).

[3] Medical science interchangeably refers to brachial neuritis as Parsonage-Turner syndrome or brachial plexitis. As a result, references in the records to either are consistent with Petitioner's alleged brachial neuritis injury.

AUTHENTICATED U.S. GOVERNMENT INFORMATION GPO

demonstrated that the onset of his brachial neuritis began in a medically-acceptable timeframe, measured from the date of vaccination.

I. Medical History

Pre-Vaccination History

Two years prior to vaccination, on July 5, 2018, Mr. Minner had been seen in physical therapy ("PT") for low back pain and cervicalgia following a motor vehicle accident. Ex. 3 at 6. He was discharged from PT the following month after improvement in symptomatology. *Id.* at 32–33. A year later (mid-June 2020), Petitioner was seen by his primary care provider ("PCP"). Ex. 15 at 186–90. Although the focus of the assessment reflected in the record pertained to other medical issues unrelated to the injury in question, it also noted a "[l]abral tear of long head of right biceps tendon, sequela," with the notes, "[u]nsure of previous diagnosis" and "[w]ill refer back to ortho[pedics] for evaluation." *Id*. at 190, 196.

On August 6, 2020 (the same month as the vaccination at issue), Petitioner saw an orthopedist and was then diagnosed with "[r]upture [of the] long head of biceps right shoulder." Ex. 16 at 8. The history section of the records for this visit notes that Petitioner had been experiencing "increased swelling in the right biceps muscle," with no pain or dysfunction, for approximately two years. *Id.* Later that same August, he underwent an MRI for right arm and shoulder pain. Ex. 2 at 623. A "large fatty mass with mild internal septation" was observed for the arm imaging, and interpreted to reflect edema[4] or a lipoma[5]. *Id*. at 627. The shoulder images suggested the presence of "a tear of the supraspinatus tendon," plus degeneration and fluid. *Id*. at 646. On September 8, 2020, But Petitioner was advised that the tear likely did not require intervention at that time, since it was asymptomatic. Ex. 16 at 12.

Vaccination and Immediate Complaints

On August 31, 2020, Mr. Minner received a flu vaccine at Dillon Pharmacy in Topeka, KS. Ex. 1. The very next day (September 1, 2020), he went to Stormont Vail Hospital with complaints of left shoulder pain beginning the evening after vaccination. Exam revealed decreased strength in the affected arm, but no complaints or objective findings of numbness, tingling, or weakness were made at this time. Ex. 2 at 623–742, Ex. 15 at 202 Petitioner was diagnosed with having an adverse reaction to the vaccine and prescribed a physical therapy referral (although the treater expressed the view that the symptoms would subside on their own). Ex. 2 at 623–742; Ex. 15 at 202.

[4] Edema is "the presence of abnormally large amounts of fluid in the intercellular tissue spaces of the body, usually referring to subcutaneous tissues." *Edema*, Dorland's Medical Dictionary Online, https://www.dorlandsonline.com/dorland/definition?id=15589&searchterm=edema (last visited Sept. 2, 2025).

[5] A lipoma is defined as "a benign, soft, rubbery, encapsulated tumor of adipose tissue, usually composed of mature fat cells." *Lipoma,* Dorland's Medical Dictionary Online, https://www.dorlandsonline.com/dorland/definition?id=28440&searchterm=lipoma (last visited Sept. 2, 2025).

Two days later (September 3, 2020), Mr. Minner saw his PCP and complained of left arm pain and numbness to his forth and fifth left digits, and decreased strength in his fingers. His symptoms were deemed consistent with some reaction secondary to his recent vaccination. Ex. 15 at 200–03.

On September 22, 2020, Petitioner followed up with his PCP, again complaining of numbness in his left fourth and fifth digits up to his elbow, and weakness of his shoulder. He was referred to PT, and an EMG[6] was ordered. Ex. 15 at 206–08. A week later, Petitioner obtained an initial PT therapy evaluation. He attended 28 subsequent physical therapy sessions through December 31, 2020. Ex. 3 at 37–88. At his PT discharge, it was noted that he had plateaued in his progress, and no further benefit was likely. *Id.* at 84.

Almost a month later, on October 19, 2020, Mr. Minner went to Cotton O'Neil Neurology reporting burning and tingling with numbness involving the 4th and 5th digits of the left hand that was travelling up into the elbow. He noted that these kind of symptoms had persisted since his August vaccination, adding that he was also now experiencing weakness. Ex. 4 at 1–2. He also at this time underwent the planned EMG. The EMG was deemed to suggest "evidence of a mixed sensory motor neuropathy," without satisfying the criteria for demyelination. *Id.* at 2. The results were interpreted to support a probable post-vaccination brachial plexitis/Parsonage-Turner syndrome. *Id.* at 1–2. Petitioner followed up with his PCP on November 10, 2020, complaining of continued weakness of his left shoulder and neuropathy of his fingers. He was diagnosed with Parsonage-Turner syndrome. Ex. 15 at 212–15.

Almost six months later (May 2021), Petitioner returned to a neurologist, reporting arm pain, numbness on three of his left hand fingers, and grip weakness (along with improvement in arm weakness generally). Ex. 6 at 4. He was again diagnosed with post-vaccination Parsonage-Turner syndrome. Ex. 5 at 1–5. It was later recommended that month that he undergo an MRI. Ex. 6 at 1–10. The proposed MRI occurred on June 7, 2021, focusing on Petitioner's left shoulder and cervical spine, but the results were interpreted to be unremarkable. Ex. 7 at 1–4.

On July 19, 2021 (less than a week after this claim's filing), Petitioner returned to his PCP with continued complaints of tingling/sensory change and weakness. Ex. 14 at 26–36. Mr. Minner visited an orthopedist a few months later, in December 2021, and reported comparable concerns (as well as finger dexterity issues), but the treater expressed doubt that they were vaccine-associated. *Id.* at 50, 52.

[6] Electromyogram, also known as an "EMG," is "the record obtained by electromyography." *Electromyogram*, Dorland's Medical Dictionary Online, https://www.dorlandsonline.com/dorland/definition?id=15852 (last visited Sept. 2, 2025).

The next year (in February 2022), Petitioner followed up with his neurologist with complaints of ongoing weakness, numbness, and tingling. Ex. 13 at 3–6. On May 27, 2022, Petitioner's brachial neuritis symptomatology was described as waxing and waning. Ex. 15 at 278. The assessment included "[s]houlder injury related to vaccine administration (SIRVA)," noted to be chronic and stable. *Id.* at 281. The plan included a referral to occupational therapy. *Id*.

II. Expert Reports

Despite the fact that this case involved a relatively minor injury (at least in comparison to the kinds of matters that the Program often resolves, which can pertain to catastrophic and life-long health issues), the parties opted to offer two experts each—and devoted a total of eighty-eight pages to their opinions. But this case turns on a single prong of the causation-in-fact test, and I therefore focus on what each expert proposed with respect to that aspect of Petitioner's burden.

A. *Petitioner's Experts*

1. Dr. John D. Hixson - Dr. Hixson, a neurologist, offered two written reports for Petitioner. Report, dated Jan. 13, 2024, filed as Ex. 17 (ECF No. 35-2) ("First Hixson Rep."); Report, dated May 27, 2024, filed as Ex. 107 (ECF No. 42-2) ("Second Hixson Rep."). Dr. Hixson proposes that Petitioner experienced an acute left brachial plexus neuritis due to receipt of the flu vaccine.

Dr. Hixson attended Texas A&M University for his undergraduate degree, and Johns Hopkins University School of Medicine for his medical degree. *See* Curriculum Vitae, filed Aug. 29, 2022 (ECF No. 35-3) ("Hixson CV") at 1; Hixson First Rep. at 1. He then completed his residency in Neurology at the University of Pennsylvania, followed by a fellowship in Epilepsy and Neurophysiology at the University of Iowa. Hixson CV at 1. He is currently a Professor of Neurology at the San Francisco VA Medical Center and the University of California San Francisco. *Id.* at 2; Hixson First Rep. at 1. Dr. Hixson is board certified by the American Academy of Psychiatry and Neurology. Hixson First Rep. at 1. Clinically, he sees patients in both an outpatient and inpatient setting—on average, Dr. Hixson sees approximately 30-35 patients per week and evaluates and treats patients with brachial neuritis. *Id.* at 1–2.

First Report

Dr. Hixson opined that the flu vaccine caused Petitioner's brachial neuritis injury. Hixson First Rep. at 4. Dr. Hixson describes PTS as a "neurological condition affecting the peripheral nerves in the brachial plexus . . . that manifests with sudden, unilateral shoulder pain that quickly amplifies in severity, usually lasting several weeks." *Id.* What causes PTS is unknown. *Id.* at 5. While the most common reported risk factor for developing PTS in recent viral illness, Dr. Hixson offers medical literature supporting that recent immunizations are the second most common risk factor. *Id.* (citing J. Feinberg & J. Radecki, *Parsonage-Turner Syndrome*, 6 HSS J. 199, 199 (July 2010), filed as Ex. 19 (ECF No. 35-4) ("Feinberg & Radecki").

Dr. Hixon also proposed that the timeframe in which Petitioner's injury began was medically acceptable. Hixson First Rep. at 6. He noted that brachial neuritis typically features an acute onset of pain, followed by "progressive (but limited) weakness and numbness in the affected limb." *Id.* Petitioner's complaints on the first day of vaccination were, he speculated, likely "more attributable to a vaccination injection site reaction," but within two days were "wholly consistent with PTS." *Id.* Thus, Dr. Hixson effectively distinguished between evidence suggestive of onset on the evening of August 31st versus complaints lodged by Petitioner on September 3rd.

Second Report

In his second report, Dr. Hixson responded to Dr. Cohen's expert report and assertions. With respect to Dr. Cohen's opinion that timing of symptom onset was not consistent with development of an autoimmune mediated disease, Dr. Hixson allowed that such an onset timeframe would be "less common." Hixson Second Rep. at 2. But he reiterated his argument that the symptoms Petitioner experienced at that time were likely reflective of typical, post-vaccination reaction. *Id.* Petitioner's neurologic symptoms, by contrast, occurred three or four days after vaccination, consistent with neurologic symptom onset. *Id.* He also noted that the timeframe to onset of weakness could be "highly variable." *Id.* (referencing M. Bromberg, *Brachial Plexus Syndromes*, UpToDate (Sep. 19, 2023), filed as Ex. 20 (ECF No. 35-5), at 8 ("Bromberg")).

2. Dr. Omid Akbari – Dr. Akbari, and immunologist, prepared two written reports for Petitioner. Report, dated January 5, 2024, filed as Ex. 35 (ECF No. 36-2) ("First Akbari Rep."); Report, dated May 14, 202, filed as Ex. 84 (ECF No. 41-2) ("Second Akbari Rep."). Dr. Akbari also believes that the Petitioner's flu vaccine induced peripheral demyelination and brachial neuritis via molecular mimicry. (Because I only find Dr. Akbari's first report to have made substantive points about onset and its acceptability, I discuss only that report below).

Dr. Akbari is both a director and professor of Immunology at the University of Southern California Keck School of Medicine. First Akbari Rep. at 2; Curriculum Vitae, dated Jan. 19, 2024, filed as Ex. 36 (ECF No. 36-3) ("Akbari CV") at 2. He received both his bachelor's and master's degrees from University College London before receiving a Ph.D. in cellular and molecular immunology from the Nation Institute for Medical Research in London, England. Akbari CV at 1. Afterwards, he completed a postdoctoral fellowship at Stanford University. *Id.* Dr. Akbari worked as an assistant professor at the Children's Hospital of Boston before joining the faculty of the Keck School of Medicine in 2008. *Id.* at 2. He has and continues to serve on the editorial board of several journals, and he has numerous publications in the field of immunology research. *Id.* at 5, 9–16. His research largely focuses on analyzing "cytokines and inflammation with the focus specifically on dysregulated immune responses." First Akbari Rep. at 2. Dr. Akbari is not a medical doctor, however, and does not diagnose or treat patients with neurological diseases in a clinical setting.

Dr. Akbari's first report was lengthy, and much of it addresses issues not germane to the issues upon which resolution of this case turns. But with respect to vaccine-caused brachial neuritis

onset, he offered some literature including consideration of VAERS[7] data. S. Shah et al., *Brachial Plexopathy After Influenza Vaccination in Adults in the USA. A Report from the CDC/FDA Vaccine Adverse Event Reporting System* (1990–2017) (P2.431), 90 Neurology (15 Supp. Apr. 18, 2018), filed as Ex. A-9 (ECF No. 37-10) ("Shah"). Shah's authors reported one hundred sixty reported cases (eighty-four confirmed, seventy-six possible) of brachial plexopathy following the flu vaccination, with an average symptom onset time within the first two weeks. Shah at 1.

Dr. Akbari also observed the undeniable temporal relationship between Petitioner's vaccination and his onset. First Akbari Rep. at 20–21. But, like Dr. Hixson, he differentiated between initial symptoms and what came later. Petitioner's hypersensitivity symptoms occurred in the first few hours after vaccination, and later symptoms of peripheral neuropathy and weakness started approximately two to three days later. *Id.* While the timing of this onset may appear atypical, Dr. Akbari maintained that faster onset could occur due to inflammasome activation triggering immune pathways. *Id.* Medical literature and developments in immunology have documented development of both peripheral neuropathy and brachial neuritis within days after flu vaccinations. *Id.* at 20 (discussing Shah where 78% of patients reported bronchial neuritis within 14 days of receiving the flu vaccine). Also, neurologists discovered that T cells can enter the nervous system within the first few hours of being in the periphery. *Id.* at 21 (citing R. Ransohoff et al., *Three or More Routes for Leukocyte Migration into the Central Nervous System*, 3 Nat. Rev. Immunol. 569, 578 (2003), filed as Ex. 83 (ECF No. 36-50)). Those same T cells can cause demyelination within a matter of hours to days according to Dr. Akbari, thereby justifying the time between vaccine and onset of symptoms seen in the Petitioner. *Id.*

B. *Respondent's Experts*

1. Dr. Jeffrey Cohen – Dr. Cohen is a treating neurologist, and he prepared two written reports for Respondent. Report, dated March 16, 2024, filed as Ex. A (ECF No. 37-1) ("First Cohen Rep."); Report, dated Sept. 12, 2024, filed as Ex. F (ECF No. 47-1) ("Second Cohen Rep.").

Dr. Cohen received his doctorate from the University of Oklahoma College of Medicine. Curriculum Vitae, filed as Ex. B (ECF No. 37-12) ("Cohen CV") at 1. He subsequently completed his residency in Neurology at Mount Sinai Hospital. *Id.* Then Dr. Cohen participated in a clinical and research fellowship in Neurology at the Massachusetts General Hospital, and then Peripheral

[7] The Vaccine Adverse Event Reporting System ("VAERS") is a national warning system designed to detect safety problems in U.S.-licensed vaccines. *See About VAERS*, VAERS, https://vaers hhs.gov/about.html (last visited July 7, 2025). It is managed by both the CDC and the FDA. VAERS monitors and analyzes reports of vaccine related injuries and side effects from both healthcare professionals and individuals. But it has been observed in the Program that VAERS data is not particularly probative of causation unless supplemented with other reliable evidence—since a VAERS report only establishes a temporal, post-vaccination occurrence. *See also Vig v. Sec'y of Health & Human Servs.*, No. 01–198V, 2013 WL 6596683, at *17 (Fed. Cl. Spec. Mstr. Nov. 14, 2013) ("VAERS is a stocked pond, containing only reports of adverse events after vaccinations but no data about the number of vaccines administered or the occurrence of the same adverse event in individuals who have not been vaccinated").

Nerve Disease fellowship at the Mayo Clinic in Rochester, Minnesota. *Id.* Dr. Cohen's career in neurology spans over forty years. First Cohen Rep. at 2. Dr. Cohen most recently served as a professor Emeritus in Neurology at the Geisel School of Medicine at Dartmouth College in Hanover, New Hampshire, where he held that position for seventeen years. Cohen CV at 1. Throughout the course of Dr. Cohen's career, he has authored over sixty peer reviewed articles relating to neurology *Id.* 21–26. (As with Dr. Akbari, only Dr. Cohen's first report squarely addressed the question of Petitioner's onset, and so I limit my summary to that report).

In providing an opinion generally that Petitioner's vaccination was unlikely to have caused his condition, Dr. Cohen commented on the timing of onset. He noted that the vaccination had occurred too close to onset of symptoms for there to be a causal relationship between the two, even according to Dr. Hixon's provided literature. First Cohen Rep. at 2. Ashworth specifically notes that the course of brachial neuritis begins with pain, and any "flaccid paralysis of shoulder and parascapular muscles" occurs several days after onset. N. Ashworth et al., *Brachial Neuritis* (Oct. 19, 2021) https://emedicine.medscape.com/article/315811, filed as Ex. 21 (ECF No. 35-6) ("Ashworth"). Other case reports filed in the matter recorded instances where onset of symptoms occurred more than twenty-four hours after receiving a vaccine. First Cohen Rep. at 3 (citing J. Miller et al., *Acute Brachial Plexus Neuritis: An Uncommon Cause of Shoulder Pain*, 62 Am. Fam. Physician 2067, 2067 (2000), filed as Ex. A Tab 7 (ECF No. 37-8); G. Suarez et al., *Immune Brachial Plexus Neuropathy: Suggestive Evidence for an Inflammatory-Immune Pathogenesis*, 46 Neurology 559, 559 (1996), filed as Ex. 29 (ECF No. 35-14) ("Suarez")). These case reports also do not specify whether a flu vaccine was administered before any of these cases. First Cohen Rep. at 3.

2. Dr. Robert Fujinami – Dr. Fujinami is a renowned immunologist, and he appeared in this case on Respondent's behalf. Report, dated March 27, 2024, filed as Ex. C (ECF No. 38-1) ("First Fujinami Rep."); Report, dated Sept. 4, 2024, filed as Ex. E (ECF No. 45-1) ("Second Fujinami Rep.").

Dr. Fujinami holds a Ph.D. in immunology from Northwestern University, where he studied how autoimmune nervous system disease in the neonate. Curriculum Vitae, filed as Ex. D (ECF No. 38-1) ("Fujinami CV") at 1; First Fujinami Rep. at 1. He attended postdoctoral training at The Scripps Research Institute where he investigated how viruses and infections could induce autoimmune disease. First Fujinami Rep. at 1. He was a pioneer of the concept of molecular mimicry, and helped introduce the concept to the medical field. *Id.* Dr. Fujinami has served as an Associate Professor in University of California, San Diego's Department of Pathology and studied virus triggers for neuroinflammatory autoimmune disease, before becoming a professor at The University of Utah. *Id.*; Fujinami CV at 1. Dr. Fujinami still serves as a professor at The University of Utah in its Department of Neurology, where he continues to study virus-host interactions. First Fujinami Rep. at 1.

First Report

Dr. Fujinami argued that Petitioner's seasonal influenza vaccine did not cause brachial neuritis. First Fujinami Rep. at 9. Dr. Fujinami's first report addressed Petitioner's causation theory and timing between vaccine and symptom onset. *See generally id.* From the outset, Dr. Fujinami held that Dr. Akbari's causation theory lacked biological plausibility. *Id.* at 2–3. Dr. Fujinami first pointed out that there is a lack of scientific evidence that brachial neuritis is an autoimmune demyelinating disease associated with the flu vaccine. *Id.* at 3. Dr. Akbari opined that brachial neuritis is an autoimmune disease characterized by an immune-mediated inflammatory response but does not offer medical literature or any other support that this is true. *Id.* (discussing First Akbari Rep. at 5–6). Petitioner's evidence characterizing brachial neuritis as immune-mediated does not necessarily mean it is an autoimmune disease. *Id.* Similarly, Dr. Fujinami stated that Dr. Akbari also failed to provide support that brachial neuritis is initiated by molecular mimicry. *Id.* In Dr. Fujinami's opinion, the evidence supports a viral etiology of brachial neuritis than Petitioner's vaccine molecular mimicry theory. *Id.* at 4 (citing Feinberg & Radecki at 2 (noting the most common associated risk factor in developing brachial plexopathy is viral illness); S. Lhomme et al., *Hepatitis E Virus Infection: Neurological Manifestations and Pathophysiology*, 10 Pathogens 1582, 1586 (2021), filed as Ex. C Tab 13 (ECF No. 39-4) (discussing a viable association of viral infections and brachial neuritis/PTS)).

Dr. Fujinami also opined that Petitioner's experts failed to establish a connection between the influenza vaccination and brachial neuritis. First Fujinami Rep. at 6. Dr. Akbari argued there is direct evidence that components of influenza vaccine are capable of inducing autoreactive T cells causing demyelination, but failed to provide evidence of such a phenomena. *Id.* (citing First Akbari Rep. at 15). Two studies Dr. Akbari provided looked at influenza virus and MS/GBS—not brachial neuritis. *Id.* (discussing Wucherpfennig 1995 at 699; Wucherpfennig 1997 at 1114). Dr. Akbari's claim that the influenza vaccine can induce immune responses to gangliosides is also not supported, according to Dr. Fujinami. *Id.* The Nachamkin article that Dr. Akbari offered as evidence of antibodies against gangliosides developing from a seasonal flu vaccine strictly observed mice. *Id.* (citing Nachamkin at 5). The same study was conducted four years later on mice *and* humans and found no evidence of antibodies against gangliosides in any human vaccinated subject or in vaccinated mice. *Id.* (discussing T. Lei et al., Anti-Ganglioside Antibodies were not Detected in Human Subjects Infected with or Vaccinated Against 2009 Pandemic Influenza A (H1N1) Virus, 30 Vaccine 2605, 2605 (2012), filed as Ex. C Tab 12 (ECF No. 39-3). Dr. Fujinami observed that the only support for a connection between the influenza vaccine and brachial neuritis support is temporal in nature. *Id.* at 6 (citing J. Wright et al., *Shoulder Pain and Dysfunction After Vaccination: A Systemic Review*, 11 Systematic Rev. of Vaccine-Related Shoulder Injuries 1, (2023), filed as Ex. 63 (ECF No. 36-30) ("Wright")).

Although much of Dr. Fujinami's report attempted to rebut contentions made by Dr. Akbari about causation more generally, he also argued that the less than one-day timeframe between

Petitioner's vaccination and symptom onset was not medically appropriate. First Fujinami Rep. at 7. That short timeframe was inconsistent with influenza vaccine causing inflammasome activation and a subsequent adaptive autoreactive immune response. *Id.*

Dr. Akbari's argument, he maintained was based on inappropriate comparisons between other vaccines or injuries/diseases to the vaccine and injury in this matter. First Fujinami Rep. at 7–8. For example, Dr. Akbari likened the flu vaccine to infections that induce autoimmune disease via molecular mimicry. *Id.* But timing and cytokine production of a live virus verses an inactive virus is different, and does not support a faster cytokine production capable of resulting in manifestation of symptoms. *Id.* at 8 (discussing W. Tang et al., *Post-Vaccination Serum Cytokines Levels Correlate with Breakthrough Influenza Infections*, 13 Scientific Reports 1174, 1174 (2023), filed as Ex. 51 (ECF No. 36-18)).

In addition, Dr. Akbari's theory (that the Petitioner suffered some sort of suppression of his immune system that allowed such a severe vaccination response) was in Dr. Fujinami's view based on an inappropriate parallel. First Fujinami Rep. at 8. The article offered by Dr. Akbari followed cytokine and T cell behavior in the development of myopericarditis after receiving the COVID-19 vaccination. T. Won et al., *Increased Interleukin 18-Dependent Immune Responses Are Associated With Myopericarditis After COVID-19 mRNA Vaccination*, Frontiers in Immunology, Feb. 17, 2022, at 1, filed as Ex. 53 (ECF No. 36-20) ("Won"). But Won's authors found no autoantibodies against cardiac antigens, nor T cell infiltration. Won at 11. It was therefore weak evidence of a possible atypically fast response to vaccination.

Dr. Fujinami also disagreed that T cells enter the nervous system within a few hours after vaccination, as Dr. Akbari claimed. First Fujinami Rep. at 8 (citing R. Ransohoff et al., *Three or More Routes for Leukocyte Migration into the Central Nervous System*, 3 Nature Reviews Immunology 569, 569 (2003), filed as Ex. 83 (ECF No. 36-50) ("Ransohoff")). Ransohoff conducted adopted transfer experiments, but found it took *five days* after adoptive transfer of the highly activated T cells to cause disease. Ransohoff at 576. And the Petitioner in this case was not injected with anything comparable to the highly stimulated and activated autoreactive T cells that could result in a similarly quick timeline. First Fujinami Rep. at 8. Rather, Dr. Fujinami maintained it would more likely take two to three weeks for an autoimmune response after immunization with an encephalitogenic peptide (mimicking peptide) via molecular mimicry to show clinical signs—not within two to three days. Ransohoff at 576.

III. Procedural History

As noted above, this Petitioner was initiated in July 2021, and was initially assigned to the "Special Processing Unit," (the "SPU") based upon the assumption that settlement was likely. Respondent filed his Rule 4(c) Report opposing compensation in May 2022, and later amended it in January 2023 (after it became clear the parties could not settle the claim). *See* ECF No. 28. Thereafter, the matter was transferred out of SPU to a different special master, and the process of

filing expert reports began. Once those reports (referenced above) were obtained and filed, a schedule for resolving the case on the written record was established in the Fall of 2024. The case was subsequently re-assigned to me in February 2025 (ECF No. 50), and briefing on the claim completed by the end of March of this year. It is now ripe for resolution.

IV. Parties' Arguments

Because my resolution of this matter turns solely on the third prong of the test established for causation claim's in the Federal Circuit decision *Althen v. Sec'y of Health & Hum. Servs*., 418 F.3d 1274, 1278 (Fed. Cir. 2005), I only review the arguments both sides made with respect to that one prong.

Petitioner

Referencing Dr. Hixson's opinion, Petitioner maintains that his initial brachial neuritis symptoms began within 24 hours of receiving the vaccine. Br. at 9–10 (referencing First Hixon Rep. at 5). Reports of symptoms within 24 hours of the vaccination reflected a more traditional injection site reaction. First Hixon Rep. at 5. But as Dr. Akbari noted, Petitioner's subsequent complaints the day after vaccination were evidence of hypersensitivity and inflammasome induction. Pet. Ex. 35 at 21. This was the actual onset of Petitioner's brachial neuritis.

In addition, even if Petitioner's onset was atypically rapid, it was "not without precedent." Br. at 12. As noted in Wright, the symptom onset in some of the brachial neuritis cases were reported to occur within 24 hours of vaccination. Wright at 9. Thus, Petitioner's onset occurred in a medically acceptable timeframe, measured from vaccination.

On reply, Petitioner attempted to rebut Respondent's argument that Petitioner's onset of symptoms occurred within a day of vaccination, arguing that the record better supports a finding of onset within two to three days of vaccination. Dr. Hixson, he argued, had clearly differentiated between Petitioner's symptoms at his initial emergency department visit and when his brachial neuritis symptoms began. Dr. Hixson opined that the initial symptoms within 24 hours of the vaccination reflected a more traditional injection site reaction (pain in left deltoid). First Hixon Rep. at 5. But by September 3, 2020, his neurological symptoms began in a way "wholly consistent" with PTS/brachial neuritis. Pet. First Hixon Rep. at 6. By contrast, Petitioner's complaints the day after vaccination were evidence of hypersensitivity and inflammasome induction, a common vaccine reaction. Ex. 35 at 21.

Petitioner also cited another decision in which a fairly-immediate onset of brachial neuritis was found to be medically acceptable. *See, e.g.*, *Echols v. Sec'y of Health & Hum. Servs.*, No. 17-838V, 2021 WL 4891589 (Fed. Cl. Spec. Mstr. Sept. 14, 2021), at *23 (onset within three to four

hours deemed medically acceptable), *mot. for review den'd,* 165 Fed. Cl. 9 (2023).[8] And he endeavored to distinguish cases where a shorter onset was rejected, noting that they sometimes turned more on a finding that the alleged brachial neuritis injury was not substantiated. Reply at 6 (citing *Bull v. Sec'y of Health & Hum. Servs*., No. 18-361V, 2021 WL 2772859 at *15 (Fed. Cl. Spec. Mstr. Apr. 20, 2021)).

Respondent

Respondent contends Petitioner's onset occurred within one day of vaccination, offering a number of medical records in which he not only so reported, but also indicated a progression of the symptoms, establishing their linkage. *See, e.g*., Ex. 15 at 200; Ex. 1 at 3. Dr. Hixson had attempted to read the medical records to suggest that Petitioner's initial symptoms reflected post-vaccination, transient malaise, but Respondent deemed such contentions not only speculative but contrary to the record. Thus, by September 1, 2020, Petitioner's symptoms were not localized to the site of vaccination, but instead were reported more globally as "left arm pain," with no evidence of a localized situs reaction. Ex. 2 at 662, 665 (no "obvious effusion or swelling;" no "tenderness to palpitation of deltoid or surrounding area;" no edema). Subsequent records were consistent in characterizing Petitioner's concerns as sudden arm pain. Ex. 15 at 200–01; Ex. 2 at 667; Ex. 3 at 37. And these reports accurately mirror how brachial neuritis is known to present. Feinberg & Radecki at 2.

Respondent also argued that Dr. Akbari's parallel efforts to distinguish between Petitioner's clearly-documented early complaints against those voiced later were similarly unsuccessful. Dr. Akbari opined that the first symptoms reflected a hypersensitivity reaction, but this was speculative. Brachial neuritis is known to manifest with pain—precisely what occurred here (even the later progression of symptoms made it easier to *diagnose* brachial neuritis at a later date). Opp. at 14 (citing *Nieves v. Sec'y of Health & Hum Servs.,* No. 18-1602V, 2023 WL 3580148, at *40–41 (Fed. Cl. Spec. Mstr. May 22, 2023), *aff'd,* 167 Fed. Cl. 422 (2023)).

Given the early onset, Respondent argued, Petitioner could not establish *Althen* prong three's requirement that onset occurred in a medically acceptable timeframe. Even Dr. Hixson had agreed that a short onset for brachial neuritis (itself not a particularly common condition)[9] was uncommon, relying on the clinical variability of the condition to explain onset away as an issue. Second Hixon Rep. at 2; Bromberg at 8. But Respondent noted that Bromberg was merely addressing when weakness would manifest *in the wake* of initial pain—not when brachial neuritis's *first* symptoms would appear. Petitioner's experts ultimately seemed to accept that the autoimmune process they alleged explains brachial neuritis would take two to three days post-vaccination to

[8] The other decision cited by Petitioner involved an onset of two to three days, and thus is too factually inapposite to support the onset reflected in the present record. *Morgan v. Sec'y of Health & Hum. Servs*., No. 16-269V, 2023 WL 3984415, at *31 (Fed. Cl. June 12, 2023).

[9] Feinberg & Radecki at 1 ("Parsonage-Turner Syndrome (PTS), also referred to as idiopathic brachial plexopathy . . . is a rare syndrome that may occur in otherwise normal healthy individuals").

result in manifestation of symptoms. First Akbari Rep. at 21. Even if this timeframe were accepted (and Respondent's immunologic expert, Dr. Fujinami, deemed it still too short) Petitioner's actual onset was not consistent with that temporal element of the causation theory.

V. Applicable Legal Standards

A. *Petitioner's Overall Burden in Vaccine Program Cases*

To receive compensation in the Vaccine Program, a petitioner must prove either: (1) that he suffered a "Table Injury"—i.e., an injury falling within the Vaccine Injury Table—corresponding to one of the vaccinations in question within a statutorily prescribed period of time or, in the alternative, (2) that his illnesses were actually caused by a vaccine (a "Non-Table Injury"). *See* Sections 13(a)(1)(A), 11(c)(1), and 14(a), as amended by 42 C.F.R. § 100.3; § 11(c)(1)(C)(ii)(I); *see also Moberly*, 592 F.3d at 1321; *Capizzano v. Sec'y of Health & Hum. Servs.*, 440 F.3d 1317, 1320 (Fed. Cir. 2006).[10] There is no Table claim for brachial neuritis after receipt of the flu vaccine.

For both Table and Non-Table claims, Vaccine Program petitioners bear a "preponderance of the evidence" burden of proof. Section 13(1)(a). That is, a petitioner must offer evidence that leads the "trier of fact to believe that the existence of a fact is more probable than its nonexistence before [he] may find in favor of the party who has the burden to persuade the judge of the fact's existence." *Moberly*, 592 F.3d at 1322 n.2; *see also Snowbank Enter. v. United States*, 6 Cl. Ct. 476, 486 (1984) (mere conjecture or speculation is insufficient under a preponderance standard). Proof of medical certainty is not required. *Bunting v. Sec'y of Health & Hum. Servs.*, 931 F.2d 867, 873 (Fed. Cir. 1991). In particular, a petitioner must demonstrate that the vaccine was "not only [the] but-for cause of the injury but also a substantial factor in bringing about the injury." *Moberly*, 592 F.3d at 1321 (quoting *Shyface v. Sec'y of Health & Hum. Servs.*, 165 F.3d 1344, 1352–53 (Fed. Cir. 1999)); *Pafford v. Sec'y of Health & Hum. Servs*., 451 F.3d 1352, 1355 (Fed. Cir. 2006). A petitioner may not receive a Vaccine Program award based solely on his assertions; rather, the petition must be supported by either medical records or by the opinion of a competent physician. Section 13(a)(1).

In attempting to establish entitlement to a Vaccine Program award of compensation for a Non-Table claim, a petitioner must satisfy all three of the elements established by the Federal Circuit in *Althen v. Sec'y of Health & Hum. Servs*., 418 F.3d 1274, 1278 (Fed. Cir. 2005): "(1) a medical theory causally connecting the vaccination and the injury; (2) a logical sequence of cause

[10] Decisions of special masters (some of which I reference in this ruling) constitute persuasive but not binding authority. *Hanlon v. Sec'y of Health & Hum. Servs.*, 40 Fed. Cl. 625, 630 (1998). By contrast, Federal Circuit rulings concerning legal issues are binding on special masters. *Guillory v. Sec'y of Health & Hum. Servs.*, 59 Fed. Cl. 121, 124 (2003), *aff'd* 104 F. Appx. 712 (Fed. Cir. 2004); *see also Spooner v. Sec'y of Health & Hum. Servs.*, No. 13-159V, 2014 WL 504728, at *7 n.12 (Fed. Cl. Spec. Mstr. Jan. 16, 2014).

and effect showing that the vaccination was the reason for the injury; and (3) a showing of proximate temporal relationship between vaccination and injury."

Each of the *Althen* prongs requires a different showing. Under *Althen* prong one, petitioners must provide a "reputable medical theory," demonstrating that the vaccine received *can cause* the type of injury alleged. *Pafford*, 451 F.3d at 1355–56 (citations omitted). To satisfy this prong, a petitioner's theory must be based on a "sound and reliable medical or scientific explanation." *Knudsen v. Sec'y of Health & Hum. Servs.*, 35 F.3d 543, 548 (Fed. Cir. 1994). Such a theory must only be "legally probable, not medically or scientifically certain." *Id.* at 549.

Petitioners may satisfy the first *Althen* prong without resort to medical literature, epidemiological studies, demonstration of a specific mechanism, or even a generally accepted medical theory. *Andreu*, 569 F.3d at 1378–79 (citing *Capizzano*, 440 F.3d at 1325–26). Special masters, despite their expertise, are not empowered by statute to conclusively resolve what are essentially thorny scientific and medical questions, and thus scientific evidence offered to establish *Althen* prong one is viewed "not through the lens of the laboratorian, but instead from the vantage point of the Vaccine Act's preponderant evidence standard." *Id.* at 1380. Accordingly, special masters must take care not to increase the burden placed on petitioners in offering a scientific theory linking vaccine to injury. *Contreras v. Sec'y of Health & Hum. Servs.*, 107 Fed. Cl. 280, 245 (2012).

In discussing the evidentiary standard applicable to the first *Althen* prong, the Federal Circuit has consistently rejected the contention that it can be satisfied merely by establishing the proposed causal theory's scientific or medical *plausibility*. *Cerrone v. Sec'y of Health & Hum. Servs*., 146 F.4th 1113 (Fed. Cir. 2025); *Kalajdzic v. Sec'y of Health & Hum. Servs.*, No. 2023-1321, 2024 WL 3064398, at *2 (Fed. Cir. June 20, 2024) (arguments "for a less than preponderance standard" deemed "plainly inconsistent with our precedent" (*citing Moberly*, 592 F.3d at 1322)); *Boatmon v. Sec'y of Health & Hum. Servs.*, 941 F.3d 1351, 1359 (Fed. Cir. 2019); *see also Howard v. Sec'y of Health & Hum. Servs*., 2023 WL 4117370, at *4 (Fed. Cl. May 18, 2023) ("[t]he standard has been preponderance for nearly four decades"), *aff'd*, 2024 WL 2873301 (Fed. Cir. June 7, 2024) (unpublished). And petitioners always have the ultimate burden of establishing their *overall* Vaccine Act claim with preponderant evidence. *W.C. v. Sec'y of Health & Hum. Servs.*, 704 F.3d 1352, 1356 (Fed. Cir. 2013) (citations omitted); *Tarsell v. United States*, 133 Fed. Cl. 782, 793 (2017) (noting that *Moberly* "addresses the petitioner's overall burden of proving causation-in-fact under the Vaccine Act" by a preponderance standard).

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 v. Sec'y of Health & Hum. Servs.*, 956 F.2d 1144, 1148 (Fed. Cir. 1992). 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 v. Sec'y of Health & Hum. Servs.*, 993 F.2d 1525, 1528 (Fed. Cir. 1993).

Medical records and statements of a treating physician, however, 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. Section 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 & Hum. 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 be weighed against other, contrary evidence also present in the record—including conflicting opinions among such individuals. *Hibbard v. Sec'y of Health & Hum. 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); *Veryzer v. Sec'y of Dept. of Health & Hum. Servs.*, No. 06-522V, 2011 WL 1935813, at *17 (Fed. Cl. Spec. Mstr. Apr. 29, 2011), *mot. for review den'd*, 100 Fed. Cl. 344, 356 (2011), *aff'd without opinion*, 475 F. Appx. 765 (Fed. Cir. 2012).

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 which, given the medical understanding of the disorder's etiology, it is medically acceptable to infer causation." *de Bazan v. Sec'y of Health & Hum. Servs.*, 539 F.3d 1347, 1352 (Fed. Cir. 2008). The explanation for what is a medically acceptable timeframe must align 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 & Hum. Servs.*, 101 Fed. Cl. 532, 542 (2011), *recons. den'd after remand*, 105 Fed. Cl. 353 (2012), *aff'd mem.*, 503 F. Appx. 952 (Fed. Cir. 2013); *Koehn v. Sec'y of Health & Hum. Servs.*, No. 11-355V, 2013 WL 3214877 (Fed. Cl. Spec. Mstr. May 30, 2013), *mot. for rev. den'd* (Fed. Cl. Dec. 3, 2013), *aff'd*, 773 F.3d 1239 (Fed. Cir. 2014).

B. *Legal Standards Governing Factual Determinations*

The process for making determinations in Vaccine Program cases regarding factual issues

begins with consideration of the medical records. Section 11(c)(2). 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." Section 13(b)(1)(A). The special master is then required to weigh the evidence presented, including contemporaneous medical records and testimony. *See Burns v. Sec'y of Health & Hum. Servs*., 3 F.3d 415, 417 (Fed. Cir. 1993) (determining that it is within the special master's discretion to determine whether to afford greater weight to contemporaneous medical records than to other evidence, such as oral testimony surrounding the events in question that was given at a later date, provided that such determination is evidenced by a rational determination).

As noted by the Federal Circuit, "[m]edical records, in general, warrant consideration as trustworthy evidence." *Cucuras*, 993 F.2d at 1528; *Doe/70 v. Sec'y of Health & Hum. Servs.*, 95 Fed. Cl. 598, 608 (2010) ("[g]iven the inconsistencies between petitioner's testimony and his contemporaneous medical records, the special master's decision to rely on petitioner's medical records was rational and consistent with applicable law"), *aff'd*, *Rickett v. Sec'y of Health & Hum. Servs*., 468 F. App'x 952 (Fed. Cir. 2011) (non-precedential opinion). A series of linked propositions explains why such records deserve some weight: (i) sick people visit medical professionals; (ii) sick people attempt to honestly report their health problems to those professionals; and (iii) medical professionals record what they are told or observe when examining their patients in as accurate a manner as possible, so that they are aware of enough relevant facts to make appropriate treatment decisions. *Sanchez v. Sec'y of Health & Hum. Servs.*, No. 11–685V, 2013 WL 1880825, at *2 (Fed. Cl. Spec. Mstr. Apr. 10, 2013); *Cucuras v. Sec'y of Health & Hum. Servs.*, 26 Cl. Ct. 537, 543 (1992), *aff'd*, 993 F.2d at 1525 (Fed. Cir. 1993) ("[i]t strains reason to conclude that petitioners would fail to accurately report the onset of their daughter's symptoms").

Accordingly, if the medical records are clear, consistent, and complete, then they should be afforded substantial weight. *Lowrie v. Sec'y of Health & Hum. Servs*., No. 03–1585V, 2005 WL 6117475, at *20 (Fed. Cl. Spec. Mstr. Dec. 12, 2005). Indeed, contemporaneous medical records are often found to be deserving of greater evidentiary weight than oral testimony—especially where such testimony conflicts with the record evidence. *Cucuras*, 993 F.2d at 1528; *see also Murphy v. Sec'y of Health & Hum. Servs*., 23 Cl. Ct. 726, 733 (1991), *aff'd per curiam*, 968 F.2d 1226 (Fed. Cir. 1992), *cert. den'd*, *Murphy v. Sullivan*, 506 U.S. 974 (1992) (citing *United States v. United States Gypsum Co.*, 333 U.S. 364, 396 (1947) ("[i]t has generally been held that oral testimony which is in conflict with contemporaneous documents is entitled to little evidentiary weight.")).

However, the Federal Circuit has also noted that there is no formal "presumption" that

records are accurate or superior on their face to other forms of evidence. *Kirby v. Sec'y of Health & Hum. Servs.,* 997 F.3d 1378, 1383 (Fed. Cir. 2021). There are certainly situations in which compelling oral or written testimony (provided in the form of an affidavit or declaration) may be more persuasive than written records, such as where records are deemed to be incomplete or inaccurate. *Campbell v. Sec'y of Health & Hum. Servs*., 69 Fed. Cl. 775, 779 (2006) ("like any norm based upon common sense and experience, this rule should not be treated as an absolute and must yield where the factual predicates for its application are weak or lacking"); *Lowrie*, 2005 WL 6117475, at *19 ("[w]ritten records which are, themselves, inconsistent, should be accorded less deference than those which are internally consistent") (quoting *Murphy*, 23 Cl. Ct. at 733)). Ultimately, a determination regarding a witness's credibility is needed when determining the weight that such testimony should be afforded. *Andreu*, 569 F.3d at 1379; *Bradley v. Sec'y of Health & Hum. Servs*., 991 F.2d 1570, 1575 (Fed. Cir. 1993).

When witness testimony is offered to overcome the presumption of accuracy afforded to contemporaneous medical records, such testimony must be "consistent, clear, cogent, and compelling." *Sanchez*, 2013 WL 1880825, at *3 (citing *Blutstein v. Sec'y of Health & Hum. Servs*., No. 90–2808V, 1998 WL 408611, at *5 (Fed. Cl. Spec. Mstr. June 30, 1998)). In determining the accuracy and completeness of medical records, the Court of Federal Claims has listed four possible explanations for inconsistencies between contemporaneously created medical records and later testimony: (1) a person's failure to recount to the medical professional everything that happened during the relevant time period; (2) the medical professional's failure to document everything reported to her or him; (3) a person's faulty recollection of the events when presenting testimony; or (4) a person's purposeful recounting of symptoms that did not exist. *La Londe v. Sec'y of Health & Hum. Servs*., 110 Fed. Cl. 184, 203–04 (2013), *aff'd*, 746 F.3d 1334 (Fed. Cir. 2014). In making a determination regarding whether to afford greater weight to contemporaneous medical records or other evidence, such as testimony at hearing, there must be evidence that this decision was the result of a rational determination. *Burns*, 3 F.3d at 417.

C. *Analysis of Expert Testimony*

Establishing a sound and reliable medical theory often requires a petitioner to present expert testimony in support of his claim. *Lampe v. Sec'y of Health & Hum. Servs*., 219 F.3d 1357, 1361 (Fed. Cir. 2000). Vaccine Program expert testimony is usually evaluated according to the factors for analyzing scientific reliability set forth in *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 594–96 (1993). *See Cedillo v. Sec'y of Health & Hum. Servs.*, 617 F.3d 1328, 1339 (Fed. Cir. 2010) (citing *Terran v. Sec'y of Health & Hum. Servs.*, 195 F.3d 1302, 1316 (Fed. Cir. 1999). Under *Daubert*, the factors for analyzing the reliability of testimony are:

> (1) whether a theory or technique can be (and has been) tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) whether

> there is a known or potential rate of error and whether there are standards for controlling the error; and (4) whether the theory or technique enjoys general acceptance within a relevant scientific community.

Terran, 195 F.3d at 1316 n.2 (citing *Daubert*, 509 U.S. at 592–95).

In the Vaccine Program the *Daubert* factors play a slightly different role than they do when applied in other federal judicial settings, like the district courts. Typically, *Daubert* factors are employed by judges (in the performance of their evidentiary gatekeeper roles) to exclude evidence that is unreliable or could confuse a jury. By contrast, in Vaccine Program cases these factors are used in the *weighing* of the reliability of scientific evidence proffered. *Davis v. Sec'y of Health & Hum. Servs*., 94 Fed. Cl. 53, 66–67 (2010) ("uniquely in this Circuit, the *Daubert* factors have been employed also as an acceptable evidentiary-gauging tool with respect to persuasiveness of expert testimony already admitted"). The flexible use of the *Daubert* factors to evaluate the persuasiveness and reliability of expert testimony has routinely been upheld. *See*, *e.g.*, *Snyder*, 88 Fed. Cl. at 742–45. In this matter (as in numerous other Vaccine Program cases), *Daubert* has not been employed at the threshold, to determine what evidence should be admitted, but instead to determine whether expert testimony offered is reliable and/or persuasive.

Respondent frequently offers one or more experts in order to rebut a petitioner's case. Where both sides offer expert testimony, a special master's decision may be "based on the credibility of the experts and the relative persuasiveness of their competing theories." *Broekelschen*, 618 F.3d at 1347 (citing *Lampe*, 219 F.3d at 1362). However, nothing requires the acceptance of an expert's conclusion "connected to existing data only by the *ipse dixit* of the expert," especially if "there is simply too great an analytical gap between the data and the opinion proffered." *Snyder*, 88 Fed. Cl. at 743 (quoting *Gen. Elec. Co. v. Joiner*, 522 U.S. 146 (1997)); *see also Isaac v. Sec'y of Health & Hum. Servs*., No. 08–601V, 2012 WL 3609993, at *17 (Fed. Cl. Spec. Mstr. July 30, 2012), *mot. for review den'd*, 108 Fed. Cl. 743 (2013), *aff'd*, 540 F. App'x. 999 (Fed. Cir. 2013) (citing *Cedillo*, 617 F.3d at 1339). Weighing the relative persuasiveness of competing expert testimony, based on a particular expert's credibility, is part of the overall reliability analysis to which special masters must subject expert testimony in Vaccine Program cases. *Moberly*, 592 F.3d at 1325–26 ("[a]ssessments as to the reliability of expert testimony often turn on credibility determinations"); *see also Porter v. Sec'y of Health & Hum. Servs*., 663 F.3d 1242, 1250 (Fed. Cir. 2011) ("this court has unambiguously explained that special masters are expected to consider the credibility of expert witnesses in evaluating petitions for compensation under the Vaccine Act").

D. *Consideration of Medical Literature*

Both parties filed numerous items of medical and scientific literature in this case, but not all such items factor into the outcome of this decision. While I have reviewed all the medical literature submitted in this case, I discuss only those articles that are most relevant to my determination and/or are central to Petitioner's case—just as I have not exhaustively discussed every individual medical record filed. *Moriarty v. Sec'y of Health & Hum. Servs.*, No. 2015–5072, 2016 WL 1358616, at *5 (Fed. Cir. Apr. 6, 2016) ("[w]e generally presume that a special master considered the relevant record evidence even though he does not explicitly reference such evidence in his decision") (citation omitted); *see also Paterek v. Sec'y of Health & Hum. Servs.,* 527 F. App'x 875, 884 (Fed. Cir. 2013) ("[f]inding certain information not relevant does not lead to—and likely undermines—the conclusion that it was not considered").

E. *Determination to Resolve Case without a Hearing*

I have opted to decide entitlement in this case based on written submissions and evidentiary filings, including the expert reports filed by each side. The Vaccine Act and Rules not only contemplate but encourage special masters to decide petitions on the papers rather than via evidentiary hearing, where (in the exercise of their discretion) they conclude that the former means of adjudication will properly and fairly resolve the case. Section 12(d)(2)(D); Vaccine Rule 8(d). The choice to do so has been affirmed on appeal. *See D'Toile v. Sec'y of Health & Human Servs.*, No. 15-85V, 2018 WL 1750619, at *2 (Fed. Cir. Apr. 12, 2018); *see also Hooker v. Sec'y of Health & Human Servs.*, No. 02-472V, 2016 WL 3456435, at *21 n.19 (Fed. Cl. Spec. Mstr. May 19, 2016) (citing numerous cases where special masters decided on the papers in lieu of hearing and that decision was upheld). I am simply not required to hold a hearing in every matter, no matter the preferences of the parties. *See Hovey v. Sec'y of Health & Human Servs.*, 38 Fed. Cl. 397, 402-03 (1997) (special master acted within his discretion in denying evidentiary hearing); *Burns*, 3 F.3d at 417.

ANALYSIS

I. Overview of Program Treatment of Brachial Neuritis

Although the Vaccine Injury Table only provides for tetanus–containing vaccines to be causal of brachial neuritis, special masters have on many occasions found that *other* vaccines—including the flu vaccine—might also be causal of the condition. *Morgan v. Sec'y of Health & Hum. Servs.*, No. 16-269V, 2023 WL 3984415 (Fed. Cl. Spec. Mstr. June 12. 2023) (finding two to three days post-intradermal influenza vaccination and the progression of pain and weakness over several days to be an acceptable temporal association); *Abels v. Sec'y of Health & Hum. Servs.*, No. 18-558V, 2022 WL 2036101 (Fed. Cl. Spec. Mstr. May 6, 2022) (flu vaccine deemed causal of brachial neuritis).

I have yet to rule in a case that brachial neuritis could *not* be caused by any particular vaccine—and acknowledge that persuasive and well-reasoned case law suggests it can. When adjudicating comparable claims, my decisions have usually turned on whether onset occurred in a medically acceptable timeframe – often finding onset happened too long after vaccination to deem the injury vaccine-caused. *See, e.g.*, *Greene v. Sec'y of Health & Hum. Servs.*, No. 11-631V, 2019 WL 4072110 (Fed. Cl. Spec. Mstr. Aug. 2, 2019) (41-day onset after tetanus vaccine too long to be causal in Table claim), *mot. for rev. den'd*, 146 Fed. Cl. 655 (Fed. Cl. 2020), *aff'd*, 841 Fed. App'x. 195 (Fed. Cir. 2020); *Garner v. Sec'y of Health & Human Servs.*, No. 15-063V, 2017 WL 1713184 (Fed. Cl. Mar. 24, 2017), *mot. for rev. den'd*, 2017 WL 3483352 (Fed. Cl. July 31, 2017) (dismissing claim that the Hepatitis A and B vaccines caused brachial neuritis, where claimant first reported arm or shoulder pain 45 days post-vaccination).

I have also, however, declined to find entitlement in cases where onset of brachial neuritis occurred in *too short* a timeframe to deem it medically acceptable. *Marshall v. Sec'y of Health & Hum. Servs.*, No. 21-1445V, 2024 WL 2059813, at *16 (Fed. Cl. Spec. Mstr. Apr. 12, 2024) (claimant failed to prove injury—but also did not establish that onset of alleged brachial neuritis within a day of vaccination was medically acceptable); *Pelelo v. Sec'y of Health & Hum. Servs.,* No. 17-1485V, 2021 WL 4100312, at *20 (Fed. Cl. Spec. Mstr. Aug. 6, 2021) (onset within 24 hours of vaccination too short to satisfy prong three); *Bull v. Sec'y of Health & Hum. Servs/*, No. 18-361V, 2021 WL 2772859, at *15 (Fed. Cl. Spec. Mstr. Apr. 20, 2021) (petitioner did not preponderantly establish that alleged brachial neuritis injury could have manifested immediately after vaccination), *mot. for review den'd*, 156 Fed. Cl. 329 (2021).

II. Petitioner Cannot Establish Entitlement

Petitioner's brachial neuritis diagnosis possesses adequate evidentiary support. Certainly treaters consistently embraced it as reasonable. Ex. 4 at 2; Ex. 6 at 9; Ex. 14. at 35; Ex. 15 at 236**.** And although Respondent off-handedly suggests that this diagnosis has not been preponderantly established (Opp. at 12), he acknowledges that his own diagnostic expert, Dr. Cohen, accepted it as a reasonable explanation for Petitioner's symptoms. *See* First Cohen Rep. at 5.

Nevertheless, Petitioner's claim founders on the third *Althen* prong—and because a claimant must satisfy all three prongs to prevail, I do not include analysis of Petitioner's success in establishing the first two prongs. *Dobrydnev v. Sec'y of Health & Hum. Servs*., 566 Fed. Appx. 976, 980 (Fed. Cir. 2014).

The record in this case strongly preponderates in favor of onset beginning the same day as vaccination—perhaps within as little as twelve hours after. Petitioner sought care for his shoulder the day after vaccination, and at that time noted his symptoms began *the evening of the same day*

he had been vaccinated. Ex. 15 at 202; Ex. 2 at 623–742. He repeatedly thereafter linked that onset to the vaccination. *See* Ex. 3 at 37; Ex. 6 at 9; Ex. 14 at 50; Ex. 15 at 200–01, 234. And there are no records gainsaying these more-contemporaneous records. *See generally* Ex. 15.

The arguments of Drs. Hixson and Akbari that Petitioner's initial symptoms did not reflect brachial neuritis, but were instead evidence of a transient but immediate vaccine reaction, are unpersuasive. No doubt, a claimant *could* successfully distinguish initial, malaise-like reaction to a vaccine from later symptoms reflective of a greater and more long-lasting injury. But this record best supports the conclusion that Petitioner's first symptoms were likely related to what followed. First Hixon Rep. at 1 (referencing Ex. 15 at 200–01); Ex. 2 at 662, 665. Indeed, the close, constricted timeframe of Petitioner's course is consistent with a process of progressing related symptoms, rather than one kind of transient reaction followed by something different and more lasting. Drs. Hixson and Akbari largely engaged in uncorroborated speculation when they proposed Petitioner's initial reaction was simply transient vaccination-associated malaise.

Such an acute onset greatly *decreases* the likelihood of vaccine causation. Petitioner's experts proposed that brachial neuritis is an autoimmune condition. First Hixon Rep. at 5; First Akbari Rep. at 5. Although the parties' experts disagreed as to the latency period for symptoms manifestation, it would not likely occur sooner than two to three days post-vaccination—as Dr. Akbari maintained. First Akbari Rep. at 21.

Thus, such an immune-mediated process would not manifest so quickly. A SIRVA injury (which occurs due to a combination of mechanical vaccine misadministration and introduction of the vaccine's antigenic contents to bursal spaces in the shoulder, which in turn cause localized inflammation) is thought to occur almost immediately post-vaccination.[11] This would not be the case with an injury that is immune-mediated. Its occurrence depends on an aberrant adaptive immune response, which will take more than a day or so to complete before actual symptoms of pain and/or weakness become evident. (Indeed, even the Table claim of tetanus vaccine-caused brachial neuritis seems to recognize this fact, with such claims requiring proof of onset to have occurred no sooner than *two* days post-vaccination. 42 C.F.R. § 100.3(a)(I)(B)).

Petitioner's experts were unsuccessful in arguing for a longer-after-vaccination onset. It is clear that Petitioner's symptoms started hours after vaccination and were not localized to the vaccination site. Ex. 2 at 662. Petitioner's pain continued consistently throughout the next few days, suggesting a continual progression that began on vaccination day rather than a few days later. Even Dr. Akbari characterized Petitioner's symptoms as "progress[ing], evolving into chronic pain in the left arm and hand accompanied by a reduction in grip strength and sensation." First Akbari Rep. at 21. This

[11] Petitioner did not allege he experienced a left-shoulder SIRVA, a Program Table claim. And even if he had, I would not be able to find the Table elements were met (beyond onset within two days of vaccination). This is because Petitioner's complaints were clearly not isolated to his shoulder, but involved reports of hand/finger numbness. And there is no evidence he experienced any left shoulder range of motion limitations either.

suggests a continuation of symptoms from the time of vaccination, rather than a delayed onset occurring a few days later that was unconnected to Petitioner's same-day complaints.

I also give little weight to other Program decisions (some of which Petitioner has cited) in which a shorter onset timeframe was found medically acceptable for brachial neuritis. *See, e.g.*, *Echols,* 2021 WL 4891589, at *23 (onset in three to four hours). As a threshold matter, such determinations do not bind me (any more than the special master who decided *Echols* felt at all obligated to give weight to contrary determinations on this issue). And *Echols* is factually-distinguishable as well. That petitioner was found to have ongoing inflammatory bursitis *at the time of vaccination*, purportedly hastening her reaction to the vaccine. *Echols,* 2021 WL 4891589, at *24. By contrast, any arm-related issues Petitioner had were then-asymptomatic, and have not otherwise been shown to be related to what followed after vaccination. And I do not find the reasoning in *Echols* (which strained to identify some other esoteric immune pathway by which vaccination could spark a reaction) persuasive. *See* Ex. 2 at 662, 659, 667; Ex. 15 at 200–02, 206.

CONCLUSION

Petitioner has not met her burden of proof. In the absence of a motion for review filed pursuant to RCFC Appendix B, the Clerk of the Court **SHALL ENTER JUDGMENT** in accordance with the terms of this Decision.[12]

IT IS SO ORDERED.

/s/ Brian H. Corcoran
Brian H. Corcoran
Chief Special Master

[12] Pursuant to Vaccine Rule 11(a), the parties may expedite entry of judgment if (jointly or separately) they file notices renouncing their right to seek review.