In the United States Court of Federal Claims

OFFICE OF SPECIAL MASTERS
No. 16-185V
Filed: November 1, 2019
PUBLISHED

CHRISTIE KIRBY, Petitioner, v. SECRETARY OF HEALTH AND HUMAN SERVICES, Respondent.	Special Master Horner Entitlement; Influenza ("flu") vaccine; Radial Nerve Injury; Radial Neuritis; Injection Injury

Richard Gage, Richard Gage, P.C., Cheyanne, WY, for petitioner.
Mallori Browne Openchowski, U.S. Department of Justice, Washington, DC, for respondent.

RULING ON ENTITLEMENT[1]

On February 8, 2016, petitioner, Christie Kirby, filed a petition under the National Childhood Vaccine Injury Act, 42 U.S.C. § 300aa-10-34 (2012),[2] alleging that an influenza ("flu") vaccine she received on October 8, 2013 caused her pain in her right arm. (ECF No. 1, p. 2; Pet., p. 1.) Petitioner subsequently filed an amended petition on March 19, 2018 alleging she suffered a Table shoulder injury related to vaccine administration ("SIRVA") caused by her flu vaccine. (ECF No. 44, p. 2; Am. Pet., p. 2.) For the reasons set forth below, I conclude that petitioner suffered a right radial nerve injury that was caused-in-fact by the injection of her flu vaccination.

[1] Because this decision 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 v. Sec' of Health & Human Servs.*, 940 F.2d 1518, 1525 (Fed. Cir. 1991).

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 1279; *Hines*, 940 F.2d at 1525. Under that standard, the 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. The petitioner need not show that the vaccination was the sole cause of the injury or condition, but must demonstrate that the vaccination was at least a "substantial factor" in causing the condition, and was a "but for" cause. *Shyface v. HHS*, 165 F.3d 1344, 1352 (Fed. Cir. 1999). Thus, the petitioner must supply "proof of a logical sequence of cause and effect showing that the vaccination was the reason for the injury;" the logical sequence must be supported by "reputable medical or scientific explanation, *i.e.*, evidence in the form of scientific studies or expert medical testimony." *Althen*, 418 F.3d at 1278; *Grant v. HHS*, 956 F.2d 1144, 1148 (Fed. Cir. 1992). 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).

In what has become the predominant framing of this burden of proof, the *Althen* court described the "causation-in-fact" standard, as follows:

> Concisely stated, Althen's burden is to show by preponderant evidence that the vaccination brought about her injury by providing: (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. If Althen satisfies this burden, she is entitled to recover unless the [government] shows, also by a preponderance of the evidence, that the injury was in fact caused by factors unrelated to the vaccine.

Althen, 418 F.3d at 1278 (citations omitted). 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. The court also indicated that, in finding causation, a Program fact-finder may rely upon "circumstantial evidence," which the court found to be consistent with the "system created by Congress, in which close calls regarding causation are resolved in favor of injured claimants." *Id*. at 1280.

II. Procedural History

In her initial petition, petitioner alleged broadly that her October 8, 2013 influenza vaccination injured her right arm. (ECF No. 1, pp. 1-2.) She did not specify the manner in which the vaccination allegedly caused her injury.[3] (*Id*.)

This case was initially assigned to the Special Processing Unit of the Office of Special Masters ("SPU") based on the allegations in the petition. The SPU "is designed to expedite the processing of claims that have historically been resolved without extensive litigation." (ECF No. 5, p. 1.) However, after completing his review, respondent determined that he was not amenable to settlement discussions and filed a Rule 4(c) report recommending against compensation. (ECF Nos. 15, 19.) Petitioner was ordered to file an expert report. (ECF No. 20.)

On February 20, 2017, petitioner filed an expert report from Dr. Marcel Kinsbourne, a neurologist, along with his CV and the medical literature that was cited in his expert report. (ECF Nos. 27-28; Exs. 9-17.) Dr. Kinsbourne opined that petitioner had suffered brachial neuritis caused by her vaccination based, *inter alia*, on an assumption that the onset of petitioner's condition was two days post-vaccination. (Ex. 9.)

[3] At the time of this filing, "Shoulder Injury Related to Vaccine Administration" or "SIRVA" had not yet been added to the Vaccine Injury Table, though it was pled as a theory of injury in many cases on a cause-in-fact basis prior to its inclusion on the injury table. Petitioner did not specifically address whether she claimed that her injury constituted a SIRVA.

On June 30, 2017, respondent filed a responsive expert report from neurologist, Dr. Peter D. Donofrio, M.D. (ECF Nos. 34; Exs. A-B.) On July 20, 2017, this case was removed from the SPU and reassigned at random to Special Master Laura D. Millman. (ECF No. 37.)

On September 8, 2017, petitioner filed a supplemental expert report and supporting material. (ECF No. 39; Exs. 18-22.) In the supplemental expert report, Dr. Kinsbourne revised his assessment of onset and, now assuming onset to be immediate to vaccination, provided an alternative theory that petitioner suffered a direct nerve trauma from an injection needle. (Ex. 18.) Respondent filed a supplemental report by Dr. Donofrio responding to Dr. Kinsbourne's alternate theory on November 14, 2017. (ECF No. 43; Ex. C.)

Subsequently, Special Master Millman set an entitlement hearing for July 15, 2019, a date ultimately falling beyond her date of retirement. (ECF No. 42.) Thereafter, the case largely remained dormant pending the hearing date; however, on March 19, 2018, petitioner filed an amended petition, now alleging a Table "SIRVA" injury resulting from her October 3, 2013 flu vaccine.[4] (ECF No. 44, p. 2; Am. Pet., p. 2.)

On June 5, 2019, this case was reassigned to my docket following Special Master Millman's retirement. (ECF No. 45.) On June 11, 2019, I informed the parties I would maintain the existing hearing schedule.

On June 28, 2019, the parties filed their pre-hearing briefs and witness lists. (ECF No. 51.) However, on July 11, 2019, a recorded status conference was held at respondent's request. (ECF No. 58.) Respondent expressed concern that petitioner's Table SIRVA allegation constituted unfair surprise relative to the scheduled hearing and that Dr. Kinsbourne is not qualified to opine regarding an orthopedic injury. (*Id*. at 7-8.) Respondent's counsel also expressed respondent's continuing concern that there is not preponderant evidence that petitioner suffered effects of her injury for at least six months. (*Id*. at 9.) I informed the parties that the hearing would proceed in order to address the competing expert opinions regarding the neurological aspects of petitioner's alleged injury and that the discussion of SIRVA concept and any orthopedic injury would not be permitted. If needed, petitioner would be allowed a separate opportunity to present an alternate orthopedic theory of injury.

On July 22, 2019, a one-day entitlement hearing was held. (*See* ECF No. 62, Transcript of Proceedings ("Tr"), July 22, 2019). Petitioner testified first, followed later by Drs. Kinsbourne and Donofrio. After petitioner testified, I provided a ruling from the bench (described further below) indicating that the onset of petitioner's arm pain was immediate. (Tr. 63-69.) Accordingly, petitioner limited her presentation during the hearing to Dr. Kinsbourne's theory of direct nerve trauma. (Tr. 74-75.)

This case is now ripe for a ruling on entitlement.

[4] Respondent asserts that this Table claim is untimely (ECF No. 51, n. 5); however, for the reasons described herein, it is unnecessary to reach that question.

III. Factual History

a. Medical Records

i. Pre-Vaccination Condition

Petitioner's prior medical history is unremarkable for any symptoms or conditions potentially related to her alleged vaccine injury. In May 2007, petitioner fell and had a distal radius fracture in her left wrist, which was treated by a short arm fiberglass cast. (Ex. 6, p. 1.) On March 10, 2009, Dr. Bauman performed an arthroscopy and osteotomy on petitioner's left ankle. (*Id*. at 8-9.) Petitioner continued to have persistent aggravation with her left ankle and the steroid injections did not relieve her pain. (*Id*. at 16-19.) Petitioner subsequently continued to seek follow up care relating to her ankle injury and to seek documentation of her injury for work leave under FMLA.[5]

Upon assessment during petitioner's visit at Pike Bowling Green Clinic on August 29, 2013, petitioner's doctor found her systems normal. (*Id*. at 12-13.) Petitioner's medical records indicated otherwise normal physical examinations during the year before her flu vaccination on October 8, 2013. (*See* Ex. 1, pp. 2-13.)

ii. Alleged Injury-Causing Vaccination and First Report of Injury

On October 8, 2013, petitioner received a seasonal flu vaccine in her right deltoid at the Department of Corrections. (Ex. 5.) One week later, on October 15, 2013, petitioner saw Jennifer Chandler, NP at Pike Bowling Green Clinic with a complaint of persistent right arm numbness and tingling that started a one week ago. (Ex. 1, p. 14.) Petitioner reported that she received "a flu shot a week ago today and her arm has been hurting ever since." (*Id*.) Upon physical examination of the upper extremities, specifically petitioner's elbow, wrist, and hand, NP Chandler found no swelling, no tenderness, no pain, and normal range of motion. (*Id*. at 15.) However, upon review of petitioner's musculoskeletal system, NP Chandler noted, "Present – Myalgia (patient having numbness tingling down right arm since Sunday. Patient states that she had a flu shot on Friday and after flu shot, arm became numb and started hurting.). Not Present – Joint Pain." (*Id*. at 14.) Petitioner was assessed as having right arm paresthesia and prescribed a Depo-Medrol-Methylprednisolone acetate injection, prednisone packet, and ibuprofen. (*Id*.)

iii. Post-Vaccination Condition and Treatment

The next day, October 16, 2013, petitioner visited Dr. Gregory L. Henry, DO at Hannibal Regional Medical Group Occupational Medicine with a complaint of a sudden onset of moderate persistent pain and numbness in her upper right arm that radiated into her right neck and down to her right hand and fingers. (Ex. 4, pp. 1-5.) Petitioner reported that she had the flu shot on October 8, 2013, which caused her right arm pain

[5] The Family and Medical Leave Act allows employers to request certification from a health care provider in order to request leave or to restore position. 29 U.S.C.A § 2613, §2614 (2009).

and swelling. Petitioner also reported that she saw her doctor on October 15, 2013, and was given a steroid injection, prednisone packet, and ibuprofen. (*Id*. at 1.) Upon examination, Dr. Henry noted decreased radial nerve distribution regarding light touch and reduced muscle strength in petitioner's right upper extremity. (*Id*. at 2.) Dr. Henry ordered a routine muscle test and a limited electromyography ("EMG") with nerve conduction study for radial nerve injury. (*Id*.) Dr. Henry ordered petitioner to wear a sling, to refrain from performing work with her right hand, and to follow up in one week. (*Id*.) Dr. Henry noted that petitioner may require MRI studies of the right brachium for abscess formation and the neck for radicular pain. (*Id*. at 3.) Dr. Henry ultimately assessed petitioner as having a complication due to vaccination, infection following immunization, and radial neuritis. (*Id*.)

On October 23, 2013, petitioner returned to Hannibal Regional Medical Group Occupational Medicine for a follow-up visit. (Ex. 4, pp. 6-10.) Petitioner reported her pain had been persisting for 15 days, but the course was decreasing. She also described her pain as mild to moderate and characterized her pain as throbbing, aching, and feeling weak. (*Id*. at 6.) Dr. Henry noted that petitioner's strength had improved in her right arm, but her right thumb was numb and she had a knot at the injection site (distal to deltoid insertion). (*Id*. at 6-7.) Upon physical examination, Dr. Henry noted decreased sensation in her right radial nerve, predominately in the thumb, and mild and localized tenderness in her shoulder. However, Dr. Henry found normal strength and tone in her wrist and normal grip strength and range of motion in her hand. (*Id*. at 7.) Dr. Henry noted that, given the improvement, petitioner did not need an EMG and asked petitioner to follow up in two weeks. (*Id*.)

On November 7, 2013, petitioner returned to see Dr. Henry for another follow-up visit to recheck her pain. (Ex. 4, pp. 11-15.) Petitioner reported that her pain had been occurring in a persistent pattern for 30 days and the course was constant. The pain was described as mild to moderate and located in her right upper arm with numbness in her right thumb. (*Id*. at 11.) Again, petitioner characterized her pain as throbbing, aching, and feeling weak. (*Id*.) Petitioner also stated that her right wrist and hand were very weak, that she could not write for long, but had returned to working regular duties. (*Id*.) Upon physical examination, Dr. Henry found decreased sensation in petitioner's dorsum of her right thumb. (*Id*. at 12.) An examination of petitioner's humerus revealed no palpable swelling or erythema of surrounding tissue, but there was mild tenderness over the spiral groove. (*Id*.) Dr. Henry prescribed a routine physical therapy evaluation and treatment for post vaccination radial neuritis, a limited EMG with nerve conduction study, and a routine one-limb muscle test for post vaccination radial neuropathy. (*Id*.)

On November 12, 2013, petitioner visited Advance Physical and Sports Medicine and met with Brock Mitchell, PT for an initial evaluation. (Ex. 3, pp. 1-4.) Petitioner was referred for her right wrist/hand radial nerve injury and stated that she noticed a lot of arm pain and hand weakness two days after she received the flu shot on October 8, 2013. (*Id*. at 1.) Petitioner reported that her pain was a two out of ten, the "pain was in her right lateral arm below the shoulder and down through forearm at times into the forearm," and "sitting with arm on an arm rest and a lot of shoulder movement" were

aggravating factors while having "arm at side" relieved pain. (*Id*.) The mechanism of injury was listed as "flu shot and [two] days later pain." (*Id*.) Upon examination, her physical therapist noted that petitioner was an "obese middle aged woman who is deconditioned" with "complaints of tenderness over the lateral deltoid" and had range of motion that was "grossly within functional limits." (*Id*. at 2.) Petitioner tested 5/5 on her left arm in all her muscle testing, but received 4/5 on her right arm in shoulder, wrist, finger, and thumb muscle testing. (*Id*.) Her therapist noted that, "[i]n my professional opinion, [petitioner] requires skilled physical therapy in conjunction with home exercise program to address problems and achieve the goals […] expected length of this episode of skilled therapy services required to address [petitioner's] condition is estimated to be [one] month." (*Id*. at 3.) It was recommended that petitioner attend rehabilitative therapy three times a week for four weeks. (*Id*. at 4.)

About five weeks after vaccination, petitioner visited Dr. Boris Khariton for a motor nerve study on November 14, 2013. (Ex. 2.) Dr. Khariton recorded that petitioner had right arm pain as well as right thumb numbness and tingling since October 2013. (Ex. 2, p. 1.) Dr. Khariton found, upon physical examination, that petitioner had normal manual motor testing, decreased sensation in her right thumb compared to her left side, and mild pain during palpation of her right lateral arm. (*Id*.)

Petitioner visited Dr. Henry for a follow-up visit after her EMG testing to recheck her pain on November 21, 2013. (Ex. 4, pp. 16-19.) Petitioner reported that her pain had been occurring in an intermittent pattern for 43 days. (*Id*. at 16.) Petitioner described her pain as mild, but her strength had improved, and the tingling lessened. Dr. Henry interpreted petitioner's EMG as negative. (*Id*.) Physical examinations revealed that petitioner had normal sensation and normal muscle strength. (*Id*. at 17.) Dr. Henry listed petitioner as having radial neuritis and asked petitioner to continue and finish her physical therapy. (*Id*.)

Petitioner had 11 physical therapy sessions from November 13, 2013 to December 10, 2013. (*Id*. at 8-45.) Throughout the first five sessions, petitioner completed each session's "treatment/therapeutic activity with minimal complains of pain and difficulty." (*Id.* at 9, 13, 16, 19, 22.) By the end of her sixth session, petitioner completed her treatment without complaints of pain or difficulty and was noted to be progressing towards her goals as expected. (*Id*. at 25.) During petitioner's session on December 5, 2013, her physical therapist noted that petitioner was doing well with increasing her strength.

On December 10, 2013, petitioner was discharged from her skilled rehabilitative therapy. (*Id*. at 40, 43.) Petitioner had largely met all of her goals. However, for muscle testing, petitioner met only 80% of her goal having scored 4/5 on her right thumb extension muscle testing. (*Id*. at 44.) Otherwise, petitioner scored 5/5 on the remaining muscle testing that she previously scored 4/5 in November during the initial assessment. (*Id*. at 46.) Petitioner's pain was zero out of ten, but she complained of numbness. (*Id*.) Her therapist concluded that petitioner "exhibits a good prognosis at time of discharge from skilled rehabilitative therapy in conjunctions with a home

exercise program" and that "[f]rom the initiation of treatment to discharge the patient's status is improved." (*Id*. at 47.)

Petitioner saw Dr. Henry again on December 12, 2013. (Ex. 4, pp. 20-23.) Petitioner reported that she noticed mild pain in the morning when she got up, but "after being awake for a bit," the pain went away and there was occasional tingling down her right arm for the prior 64 days. (*Id*. at 20.) Petitioner noted that her strength was almost back to normal and her right thumb numbness had been resolved with only occasional tingling. Petitioner's physical exams were normal in all aspects including sensation, coordination, strength, and tone. According to Dr. Henry, petitioner had reached maximum medical improvement ("MMI") with no impairment and therefore could resume regular duties. (*Id*. at 21.)

Thereafter, petitioner's medical records do not address her right arm pain again until nearly two years later. In the interim, petitioner had a number of medical appointments unrelated to her arm pain.

On January 16, 2014, petitioner returned to Pike Bowling Green Clinic for a general adult physical exam and to get her FMLA paperwork completed regarding her prior ankle condition. (Ex. 1, p. 16; Ex. 4, pp. 25-28.) Petitioner reported that "she has been feeling fine she is just here today to get her FMLA paper work filled out." (*Id*.) A review of systems indicated that there was joint pain present due to petitioner's chronic pain in her right ankle. (*Id*.) Petitioner's physical exam was otherwise normal.[6] (*Id*.)

On October 28, 2014, petitioner saw NP Chandler for a "foot problem." (Ex. 4, pp. 29-32; Ex. 7, pp. 1-4.) Petitioner stated that both her feet and legs started feeling swollen and painful for a week before her doctor's visit. There was no known injury. Petitioner's condition exacerbated when she walked, stood, or put weight on it, but felt better if she was resting and not moving. (Ex. 4, p. 29.) Petitioner's physical examination was otherwise normal. (*Id*. at 31.)

On February 3, 2015, petitioner visited NP Chandler again for a follow-up visit. (Ex. 4, pp. 33-36; Ex. 7, pp. 10-13.) Petitioner had no complaints and considered her medications to be effective with no side effects. Petitioner again needed her FMLA paperwork completed. (Ex. 4, p. 33.) NP Chandler did not make any significant notes regarding petitioner's physical exam except that there were traces of edema in both of petitioner's legs. (*Id*. at 35.) On March 19, 2015, petitioner visited NP Chandler for medication management. (Ex. 4, pp. 37-40; Ex. 7, pp. 14-17.) Petitioner's physical examination was normal. On July 21, 2015, petitioner returned for a follow-up visit. (*Id*. at 41-44; Ex. 7, pp. 21.) Petitioner had an acute upper respiratory infection ("URI") and was given amoxicillin as treatment. Petitioner's visit was otherwise normal. (*Id*. at 43-44.)

[6] However, a "problem list/past medical history" "promoted" and recorded as of the date of this appointment indicated that petitioner had right arm paresthesia. (Ex. 1, p. 18.)

On October 13, 2015, petitioner saw her doctor again with a complaint of gradual and intermittent mild pain in her right arm for the past three years since receiving her flu vaccination.[7] (Ex. 4, pp. 45-48; Ex. 7, pp. 22-25.) Petitioner reported that she was seen by a doctor for her worker's compensation claim regarding her right arm pain and "was told that the pain was from hitting a nerve." (Ex. 4, p. 46.) Petitioner said that she still had nerve pain but "decreased tremendously from when the injury occurred." (*Id*.) Petitioner did not report having any limitations due to this pain. (*Id*.) Upon physical examination, petitioner's doctor noted normal musculoskeletal extremities except for a note of "right arm pain". (*Id*.) NP Chandler indicated that she "explained nerve processes" with petitioner. (*Id*.) Petitioner was assessed as having neuropathic pain of the upper extremity; however, there was no treatment plan recorded. (*Id*. at 47.)

None of petitioner's subsequent records further address her arm pain.

b. Testimony

Petitioner testified that she received the flu vaccine on October 8, 2013 in her right shoulder as required by her employer, Northeast Correctional Center. (Tr. 7-8; Ex. 8, p. 1.) Petitioner recalled that Edna Barry, a registered nurse hired by the prison, administered her the flu shot that day. (Tr. 44.) Petitioner asserted that RN Barry had previously administered her vaccinations. (Tr. 43-44.) Although petitioner did not see RN Barry inserting the needle, petitioner knew where the shot was administered based on how the shot felt and that the spot was red and swollen after the needle was removed. (Tr. 44-45.) Petitioner asserted that this shot was different from the past and further, that at the time the shot was given, "it burned as it was going in the arm […] and it hurt a little bit as she was poking it in, giving it to me." (Tr. 8, 45.) Petitioner felt that the shot was placed lower in her arm than usual. (Tr. 46.) Petitioner testified that she alerted RN Barry on the day of vaccination that the shot felt different than usual and RN Barry said something like "there was something in the vaccination, something in the stream or something." (Tr. 46.) Petitioner recalled that two days after receiving the flu shot, petitioner showed RN Barry how red her arm was as they passed by each other in the hallway. Petitioner testified that RN Barry told her to go home and put ice on it. (Tr. 48.)

As the day went on, petitioner's "arm began to hurt worse and it got red and swollen" and it gradually became worse throughout the week of receiving the flu shot. (*Id*. at 8-9.) Overall, the injection site was painful and after the injection, petitioner experienced pain, weakness, numbness, and tingling in her right arm and hand, especially in her thumb. (Tr. 12-13; Ex. 8, p. 1.) Petitioner had trouble performing simple tasks such as brushing her hair and writing. (Tr. 14-15.) After experiencing such pain for a week, petitioner went to see her primary caretaker, nurse practitioner Chandler. (Tr. 9; Ex. 8, p. 1.) Petitioner recalled NP Chandler stating that petitioner's pain appeared to be caused from the flu shot. (Tr. 10.)

[7] Her complaints of vaccine-related arm pain actually began in October 2013, only two years prior.

Petitioner testified that she saw Dr. Henry for the first time the following day after seeing NP Chandler. (Tr. 11.) Petitioner recalled that on the day she saw Dr. Henry, the place where the needle was injected was still red and swollen and she still felt pain and a burning sensation. (*Id*. at 12.) Petitioner stated that Dr. Henry attributed her pain to the flu vaccination and when she asked him about her recovery, Dr. Henry did not give a definite answer and said instead that "with the nerve thing […] you couldn't set a time or date on it." (Tr. 14.)

Petitioner recalled visiting NP Chandler over several occasions in 2014 in order to have her FMLA paperwork filled or for weight loss supplements. (Tr. 33-34, 36-37.) Petitioner asserted that NP Chandler would inquire about petitioner's arm pain, but petitioner did not "go directly just in to the doctor for the pain in [her] arm." (Tr. 33, 35.)

Petitioner testified that "it was well over a year before [her] arm strength got back to somewhat normal." (Tr. 24.) Petitioner testified that by early 2014, she still had some weakness, numbness, and tenderness, but she felt significantly better than the previous months. (Tr. 25-26.) Petitioner stated that without any trigger, her arm felt like it had a headache, but certain activities would cause it to flare up. (*Id*.) As 2014 progressed, petitioner avoided performing different activities such as lifting with her right arm or sleeping on her right arm in order to avoid eliciting a pain response. (Tr. 27.) However, petitioner never had any work restrictions for her arm pain. (Tr. 55-56.) Petitioner testified that her pain gradually got better over time, but at least for a year after being discharged from physical therapy, petitioner felt she was still symptomatic. (Tr. 30, 62.)

As of February 16, 2017, petitioner affirmed that her right arm was still sensitive to pressure and would experience increased pain if she slept on her right side, engaged in strenuous activity, or performed heavy lifting. (Ex. 8, pp. 1-2.) However, at the time of the hearing on July 22, 2019, petitioner testified that she felt fine and no longer had problems with her arm. (Tr. 28.) Petitioner no longer experienced any soreness, redness, and swelling. (Tr. 29.)

Additionally, petitioner received an award from Missouri Workers Compensation for her right arm injury.[8] (Ex. 8, p. 2.) Petitioner testified that she was compensated because her injury happened at work and it was a work-related issue. (Tr. 38.)

IV. Expert Opinions

a. Petitioner's Expert, Dr. Marcel Kinsbourne

In support of her claim, petitioner presented an expert opinion by neurologist Marcel Kinsbourne, M.D. Dr. Kinsbourne has served as a senior fellow at the Center for the Study of Aging and Human Development at Duke University, an adjunct professor of neurology at Boston University School of Medicine, a research professor at the Center

[8] The claim was resolved via settlement. Petitioner filed the Stipulation For Compromise Settlement as Exhibit 23.

for Cognitive Studies at Tufts University, and a professor of psychology at New School University. Dr. Kinsbourne obtained his B.M.B. Ch. From Oxford University Medical School in 1955 and his medical degree from State of North Carolina in 1967. (Ex. 10, p. 1-2.) According to his curriculum vitae, Dr. Kinbourne sits on ten different editorial boards relating to neurology and psychology. (*Id*. at 3.) Though retired from hospital-based clinical practice, Dr. Kinsbourne testified that he occasionally still sees patients, primarily regarding pediatric neurology. (Tr. 71, 109-11.)

As noted above, Dr. Kinsbourne offered alternative theories depending on two different conclusions as to the onset of petitioner's condition. First, assuming onset was two days post-vaccination, Dr. Kinsbourne opined that petitioner has brachial neuritis. (*Id*. at 3.) Dr. Kinsbourne stated that brachial neuritis, also named Parsonage Turner Syndrome or neuralgic amyotrophy, is classified as the sudden onset of severe neuropathic pain, (i.e. aching and shooting sensation), within the territory supplied by the brachial plexus. (*Id*.) Damage to the nerve root proximal to the dorsal root ganglion of petitioner's brachial plexus would explain petitioner's negative nerve conduction study because such damage would not affect sensory nerve action potential. (*Id*.)

Initially, Dr. Kinsbourne ruled out "a misdirected injection into the shoulder joint" as an explanation to petitioner's pain due to the "extent of the sensory symptoms and the two-day latency." (*Id*.) Subsequently, however, petitioner filed Dr. Kinsbourne's supplemental expert report on September 8, 2017. (Ex. 18.) Dr. Kinsbourne amended his opinion after reconsidering the medical records as indicating onset of petitioner's neuropathic pain to be immediate as oppose to after two days of vaccination.[9] (*Id*. at 1-2.) Accepting that petitioner's symptoms manifested immediately after vaccination, Dr. Kinsbourne agreed with Dr. Henry (petitioner's treating physician) that petitioner had radial neuritis. (*Id*. at 2.) Dr. Kinsbourne opined that the "only viable cause of a radial neuritis with onset on the day of vaccination is direct injury of the radial nerve by vaccinating needle." (*Id*.)

In support of his opinion, Dr. Kinsbourne cited three articles that documented penetration nerve injuries.[10] (Tr. 128.) Two of the articles collectively, reported 82

[9] Dr. Kinsbourne explained that neuropathy is a general term describing some damage to the nerve resulting from various sources including infection, autoimmunity, toxic, or trauma. (Tr. 141.) Neuropathic pain is caused by malfunctioning nerve fibers, i.e. neuropathy. (*Id*.) On the other hand, neuritis is a disorder involving specifically an inflamed nerve; however the inflammation could have been cause by immunity, infection, trauma, etc. (*Id*. at 142.) Dr. Donofrio also explained that radial neuropathy encompasses neuropathy of the radial nerve of any cause whereas radial neuritis would be inflammation of the radial nerve, a diagnosis that can be confirmed by biopsy. (Tr. 178.) Lastly, Dr. Kinsbourne distinguished radial nerve paralysis as the radial nerve having no function at all while radial nerve palsy varies by degree. (*Id*. at 142-43.) Dr. Donofrio elaborated that radial nerve palsy implies experiencing weakness of muscles in a distribution of the radial nerve. (*Id*. at 178.)

[10] Suresh Chandra Gaur & Anand S. Swarup, *Radial Nerve Palsy Caused by Injections*, 21B:3 J. of Hand Surgery 338 (1996) (Ex. 24); Yoshua Esquenazi, et al., *Surgical Management and Outcome of Iatrogenic Radial Nerve Injection Injuries*, 142 Clinical Neurology & Neurosurgery 98 (2016) (Ex. 25); Hyun Jung Kim, Sun Kyung Park & Sang Hyun Park, *Upper Limb Nerve Injuries Caused by Intramuscular Injection or Routine Venipuncture*, 12(2) Anesthesia & Pain Medicine 103 (2017) (Ex. 27).

cases where injections caused radial nerve injury. (Ex. 18, pp. 1-2.) Dr. Kinsbourne relied on the *Gaur* article (Ex. 24) to assert that when a vaccination is mislocated, damage to the peripheral nerve can be caused by either the needle or the contents of the syringe. (Tr. 102-103.) However, the *Gaur* article focused on cases involving injections to children by untrained personnel, where the nature of the drug being injected in most of the cases were unknown. (Tr. 129.) Dr. Kinsbourne relied on the *Esquenazi* article (Ex. 25) to support his description of the anatomy of the radial nerve. (Tr. 104-05.) The *Esquenazi* article listed certain agents, including tetanus toxoid, typhus vaccine, and penicillin, that when injected adjacent to or directly into the nerve may result in chemical irritation or toxic reaction. (Tr. 105.) The Esquenazi article focuses on radial nerve injuries that resulted from intramuscular injections as well as intravenous injections. (Tr. 131.) Dr. Kinsbourne also referenced the *Kim* article (Ex. 27) to explain that the radial nerve is located "superficially in the middle third of the lateral aspect of the arm and therefore, an intramuscular injection into this site could result in damaging the nerve." (Tr. 106.) Ultimately the *Kim* article cautioned administrators to avoid injuring the radial nerve by administering injections in the upper limb at the deltoid muscle instead, which is the standard of care in the United States. (Tr. 106, 134.) Additionally, petitioner filed the *Steinfeldt* article (Ex. 21), a study, using pigs as research subjects, that tested "whether the diameter of the applied needle is associated with the magnitude of nerve injury after needle nerve perforation."[11] The study concluded that the severity of nerve injury was related to the size of the applied needle or cannula.

Dr. Kinsbourne found petitioner's initial symptoms of having numbness and tingling, as represented in the October 15, 2013 medical records, consistent with a nerve injury. (*Id*. at 76-77.) Dr. Kinsbourne further agreed with NP Chandler's prescribing steroid treatment for petitioner's arm paraesthesia since methylprednisolone is an anti-inflammatory. (*Id*. at 77.) Dr. Kinsbourne explained that "if the needle penetrates the muscle and the point of the needle is near a nerve, and then injects the vaccine, that will cause an inflammatory reaction in that tissue, because both the physical trauma of the point of the needle and the nature of the vaccine being pro-inflammatory, causes inflammation." (*Id*.)

Dr. Kinsbourne opined that the location where petitioner described the needle injection on the outer of her right arm is where the "radial nerve winds around the back of the arm and comes to its side. This is the first place at which that nerve becomes superficial [meaning close to the surface (Tr. 106)], which is also in the range of the needle." (*Id*. at 80.) This is would explain Dr. Henry's recordings of petitioner's "radial nerve distribution," meaning that petitioner had weakness and distribution of numbness in the radial nerve territory. (Tr. 79-81.) Dr. Kinsbourne found significant Dr. Henry's notation that the dorsal aspect of petitioner's right thumb was numb because the "radial nerve supplies dorsal, the median nerve supplies ventral." (*Id*. at 84-85.) Dr. Kinsbourne asserted that while a standard size vaccination needle, about four and a half centimeters, would not be able to penetrate the radial nerve if correctly placed in

[11] Thorsten Steinfeldt et al., *Nerve Injury by Needle Nerve Perforation in Regional Anaesthesia: Does Size Matter?*, 104 BJA: British J. of Anaesthesia 245, 245 (2010) (Ex. 21).

the deltoid region, even a short needle can cause damage if placed at the particular area where the radial nerve becomes superficial. (*Id*. at 121-22.) Dr. Kinsbourne testified that the radial nerve becomes superficial just below the deltoid insertion.[12] (*Id*. at 122.)

Dr. Kinsbourne further testified that "when the radial nerve comes around from the back and runs to the side, it runs into a groove on the bone. That groove is called a spiral groove." According to Dr. Kinsbourne, the radial nerve is the only nerve that sits in the spiral groove. (*Id*. at 87.) Dr. Kinsbourne noted that Dr. Henry felt tenderness in petitioner's spiral groove upon physical examination one month post vaccination and Dr. Kinsbourne believed that such finding was conclusive. (*Id*.) Additionally, Dr. Kinsbourne testified that radial neuritis that shows significant resolution after two months can wax and wane for a period of years after if the fibers are sensitized. (Tr. 135.) Dr. Kinsbourne believes that petitioner was sensitized as shown through Dr. Henry's note that he felt the sensitized nerve in the spiral groove. (Tr. 135-36.) Based on petitioner's testimony and recorded complaints, Dr. Kinsbourne insisted that it is medically reasonable that petitioner's pain persisted past the formal treatment period of injury in the two months following vaccination despite having no signs of symptoms upon physical examination. (Tr. 139-40.)

In addressing the normal results of petitioner's EMG study, Dr. Kinsbourne explained that "in this case, enough normal uncut, undamaged so called alpha fibers, the big ones, were left that do not show up as a deficit in the EMG," which would be consistent with a mild injury such as with petitioner's case. (Tr. 90.) Furthermore, Dr. Kinsbourne found significant that despite petitioner's normal results, Dr. Henry's diagnosis of "radial neuritis, complication due to vaccination" remained unchanged. (*Id*. at 89-90.) Dr. Kinsbourne used Dr. Henry's medical diagnosis as a basis in forming his opinion as to the mechanism of petitioner's injury. (Tr. 117.) Dr. Kinsbourne noted the decreased sensation in the right thumb as compared to the left and mild pain with palpation of the right lateral arm and opined that the tenderness in the right lateral arm was consistent with the petitioner's vaccination site and the location of where radial nerve runs near the surface. (*Id*. at 88.) Additionally, Dr. Kinsbourne explained that Dr. Henry performed a palpation exam to check for cervical radiculopathy, but he found no evidence of such injury, and thus any MRI of the cervical spine was not needed. (*Id*. at 82-83.)

b. Respondent's Expert, Dr. Peter D. Donofrio

Respondent presented a responsive expert opinion from neurologist Peter D. Donofrio, M.D. Dr. Donofrio is a professor of neurology at Vanderbilt University Medical Center, Chief of the Neuromuscular Section, Director of the EMG lab, Directorship of the MDA Clinic and ALS Clinic, and member of the Medical Advisory Committee of the GBS/CIDP International Foundation. (Ex. A, p. 1) He is also board certified in

[12] Dr. Donofrio later clarified that, while gesturing about a third of the way down his arm, a deltoid insertion is approximately "where the deltoid muscle comes together and inserts on the humerus." (Tr. 161.)

neurology, internal medicine, EMG, and neuromuscular disorders. Dr. Donofrio has treated patients with MS, ADEM, TM, and brachial neuritis. He has published in the areas of GBS, CIDP, and other neuropathies, including his textbook in peripheral neuropathy. (*Id*.)

Dr. Donofrio agreed with Dr. Kinsbourne's initial opinion that petitioner's neurologic complaints do not relate to the needle insertion. (*Id*. at 5.) However, regarding Dr. Kinsbourne's initial theory, Dr. Donofrio opined that "it would be impossible to support a brachial plexopathy of any etiology" because of petitioner's normal physical exam by NP Chandler on October 15, 2013. (*Id*.) Dr. Donofrio stated that "[p]atients with a brachial plexopathy (a broad term including brachial neuritis) must have neurologic deficits localized to the brachial plexus" and "typically have pain localized behind the clavicle with radiation to the shoulder and down the upper limb." (*Id*.) Dr. Donofrio noted that petitioner's weakness was found only in muscles innervated by the right radial nerve and associated with tenderness in the spiral groove, which are not anatomically consistent with a brachial plexopathy or brachial neuritis. (*Id*. at 6.)

On November 14, 2017, respondent filed Dr. Donofrio's supplemental expert report responding to Dr. Kinsbourne's supplemental expert report. (Ex. C.) Dr. Donofrio rejected Dr. Kinsbourne's conclusion that a misplaced vaccination needle caused petitioner's radial nerve injury. (*Id*.) Dr. Donofrio explained that "anatomically, the course of the radial nerve is never lateral and below the shoulder joint in an area susceptible to injury by a needle injection." (*Id*.) Moreover, considering the typical area for administering a flu shot and the course of the radial nerve, "it is hard to conceive how a thin needle 5/8-1 inch in length could injure the radial nerve in a large woman."[13] (*Id*. at 1-2.) Dr. Donofrio also rejected any notion that an immediate radial nerve injury from a vaccination is caused through an autoimmune mechanism. He stated, "[t]he only reaction to a vaccine that occurs acutely and within minutes of an injection would be anaphylaxis and the petitioner manifested no features of anaphylaxis." (*Id*. at 2.)

Dr. Donofrio emphasized again on petitioner's normal physical exam with NP Chandler on October 15, 2013, one week after vaccination, to cast doubt that petitioner had a radial nerve injury from a needle injection. (*Id*. at 2-3.) Dr. Donofrio stated that "[p]atients with a radial neuropathy must have neurologic deficits localized to the nerve. One would expect a patient to have a combination of weakness, severe pain, and sensory loss." (*Id.* at 2.) Dr. Donofrio concluded again that "petitioner's symptoms could have been explained by a right cervical radiculopathy." (*Id*. at 3.) In summary, Dr. Donofrio could not relate the October 8, 2013 flu vaccination to petitioner's subsequent right upper limb symptoms and, in his opinion, petitioner did not have radial neuropathy either. (*Id*. at 3.)

[13] Dr. Donofrio noted that petitioner weighed about 354 pounds in June 2012. (Ex. C, p. 3.) Petitioner weighed 306 pounds around the time of her vaccination. (Ex. 1, p. 14.)

Subsequently, however, at the hearing, after evaluating the records from petitioner's first visit after vaccination, Dr. Donofrio agreed with NP Chandler that petitioner experienced arm paraesthesia. (Tr. 155-56.) Additionally, Dr. Donofrio agreed, based on Dr. Henry's first examination and assessment of petitioner, that radial neuritis or radial neuropathy would be a consideration. (Tr. 158.) Dr. Donofrio testified that, without knowing which vaccine was administered and the location of the injection site, he would question Dr. Henry's conclusion that petitioner's injury was a complication from vaccination. (*Id*.) Additionally, regarding Dr. Henry's finding of a knot at the injection site, Dr. Donofrio testified that a knot is "usually a collection of blood, like a hematoma under the skin," inconsistent with a nerve injury. (Tr. 160.) Dr. Donofrio testified that an injection given slightly distal to the insertion of the deltoid or some trauma occurred after the injection could produce a knot. However, he added that in light of the location of the knot itself, "given that the insertion site gathers over the lateral portion of the arm, [the exact injury] would actually be within muscle and not really close to any major nerve in the upper extremity." (*Id*. at 162.)

Additionally, based on Dr. Donofrio's review of petitioner's physical therapy records, Dr. Donofrio opined that petitioner's initial physical therapy examination showed abnormalities in muscles that are innervated by at least three nerves, which would mean petitioner had a combination of axillary, median, ulnar, and radial nerve deficits. (Tr. 164.)

Dr. Donofrio explained the importance of EMG studies in diagnosing radial nerve palsy as part of his standard practice of care. (Tr. 151-52.) Upon suspicion of a possible radial nerve injury based on his physical examination, Dr. Donofrio would order an EMG. Dr. Donofrio noted, however, that an EMG is most effective in "picking up a radial nerve palsy at three, four, or five weeks." (Tr. 152.) Here, Dr. Donofrio stated that petitioner had her EMG performed five weeks from her injury, which was an appropriate time. (*Id*. at 165.) Reviewing petitioner's nerve conduction study results, Dr. Donofrio concluded that petitioner's radial, median, and ulnar nerves were normal, where there were actually slightly better results from petitioner's right radial nerve than from her left radial nerve. (*Id*.) Dr. Donofrio testified that "it is conceivable that in an extremely mild radial nerve injury that the studies could be normal, but that's just about unheard of, in particular when the right radial nerve conduction studies are better than the left." (Tr. 166.) Given his 40 years of experience in examining EMGs, Dr. Donofrio reached the conclusion that petitioner's study did not show right radial neuropathy. (*Id*.) Therefore, Dr. Donofrio ultimately did not agree with Dr. Henry's diagnosis of radial neuritis, even if it was a good presumption initially, because it was never confirmed by nerve conduction studies and he certainly would not conclude that the vaccination caused her problem. (Tr. 179-80.)

Further, for an intramuscular vaccination to have occurred in the arm in the region of the radial nerve, the needle would have to be injected at the back of the arm, about midway between the shoulder and the elbow. (*Id*. at 190.) However, based on his review of the medical records and petitioner's testimony at the hearing, Dr. Donofrio placed petitioner's October 8, 2013 vaccination injection site at "midline, lower portion of

the deltoid level," where vaccinations are usually given. (*Id*. at 189.) Thus, "[i]t would be very, very difficult in a normal-sized person, and even much more difficult in this patient," for a typical flu shot insertion to reach the radial nerve. (*Id*. at 190.) Dr. Donofrio explained further that radial nerve palsies after vaccination are rare because "the vaccination needle is so short that once it gets through the skin and the subcutaneous tissue gets into muscle, there is plenty of space between it and the radial nerve and any other major nerve in the upper extremity." (*Id*. at 191.) Dr. Donofrio opined that for radial nerve injuries a "patient would have the immediate onset of severe pain" and would have immediate "burning and electric shock sensations going up and down the distribution" of the nerve upon injection. (*Id*. at 192.) Nevertheless, Dr. Donofrio stated that the flu vaccine can cause a radial nerve palsy or neuropathy in a case where it is an "extremely misdirected injection at the back of the arm in a very thin person." (*Id*. at 195.)

Dr. Donofrio took the position that none of the articles Dr. Kinsbourne relied on applied particularly to petitioner's case. (Tr. 193.) In his supplemental expert report, Dr. Donofrio called attention to the case reports. (Ex. C, p. 3.) Dr. Donofrio noted that the *Gaur* case report consisted largely of patients that were 20 years or younger and in the majority of those cases, the drug injected was unknown. (*Id*.) Dr. Donofrio also noted that the *Esquenazi* report "did not describe the needles used or the medications injected. The authors did not mention whether any of [the radial nerve injection injuries from intramuscular or intravenous injections in the upper extremity] followed vaccination. The [report] primarily focused on surgical management and outcomes." (*Id*.)

Ultimately, Dr. Donofrio testified that in his opinion petitioner, more likely than not, did not develop a radial nerve palsy or radial neuritis from her vaccination and he is unsure whether petitioner had cervical radiculopathy.[14] (Tr. 150.)

V. Bench Ruling and Finding of Fact Regarding Onset

In this case, petitioner's medical records included some conflicting notations regarding the onset of her right arm pain. As noted above, this led Dr. Kinsbourne to offer alternate theories based on different assumptions regarding onset of petitioner's alleged injury. In order to focus the expert testimony in the case, I issued a bench ruling during the hearing finding that there is preponderant evidence that petitioner's October 8, 2013 influenza vaccination was itself painful, that petitioner experienced onset of immediate and sudden pain in her right arm at the time of injection, and that petitioner's arm pain extended through her arm and to her thumb.[15] (Tr. 65.)

[14] In contrast, in his written report, Dr. Donofrio opined that petitioner more likely than not had a right cervical radiculopathy or right radial neuropathy, neither of which can be related to her October 8, 2013 flu vaccine. (Ex. A, p. 7.) According to petitioner's statement that she had, at onset, radiating pain to the right side of her neck, Dr. Donofrio opined that there's a strong possibility that petitioner had cervical radiculopathy, which he noted had many etiologies, but not including vaccination. (*Id*. at 5.)

[15] The complete bench ruling, which is incorporated by reference, appears in the transcript of proceedings at pages 63 to 69.

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 & Human Servs.*, 3 F.3d 415, 417 (Fed. Cir. 1993) (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 a determination is evidenced by a rational determination). Medical records that are created contemporaneously with the events they describe are presumed to be accurate and "complete" (*i.e*., presenting all relevant information on a patient's health problems). *Cucuras v. Sec'y of Health & Human Servs.*, 993 F.2d 1525, 1528 (Fed. Cir. 1993); *Doe v. Sec'y of Health & Human 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 & Human Servs.*, 468 Fed. Appx. 952 (Fed. Cir. 2011) (non-precedential opinion).

Upon review and consideration of the medical records as a whole, I found that, notwithstanding certain conflicting notations that indicated onset at two days post-vaccination (Ex. 3, pp. 1, 51; Ex. 4, p. 4), the bulk of the records supported an immediate onset of shoulder pain. The most contemporaneous and most detailed of the histories recorded by petitioner's physicians all indicated that she experienced arm pain beginning on the date of her vaccination and continuing ever since. (Ex. 1, pp. 14-15; Ex. 4, pp. 1-3; Ex. 2, p. 1.) Additionally, petitioner testified that her October 8, 2013 flu shot was painful and that she experienced a burning sensation at the time of injection. (Tr. 8, 42-43.) She testified that she experienced increasing pain, swelling and redness on the day of the vaccination which gradually worsened over the course of the following week. (Tr. 8-9, 47-49.) I found that testimony to be credible. (Tr. 65.)

There is a much later primary care record of October 13, 2015, that misidentified onset of petitioner's injury as being three years, rather than two years, prior, but also confirmed the injury was related to the flu vaccination. (Ex. 7, pp. 22.) I concluded that this record does not outweigh the contemporaneous records.

VI. Discussion

a. Weighing the Expert Testimony

Where both parties 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 v. Sec'y of Health & Human Servs.*, 618 F.3d 1339, 1347 (Fed. Cir. 2010) (citing *Lampe v. Sec'y of Health & Human Servs.*, 219 F.3d 1357, 1362 (Fed. Cir. 2000)). 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 v. Sec'y of Health & Human Servs.*, 592 F.3d 1315,1325-26 (Fed. Cir. 2010) ("[a]ssessments as to the reliability of expert testimony often turn on credibility determinations"); *see also Porter v. Sec'y of Health & Human 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").

In this case, both experts are neurologists and are qualified to opine in this case. Dr. Donofrio, however, has clinical experience that is more up-to-date and more directly relevant to the issues in this case than does Dr. Kinsbourne. Dr. Kinsbourne explained that his most significant research contributions have been in the area of behavioral neurology and neuroscience. (Tr. 110.) He has never published on the topics of radial nerve injuries or brachial neuritis. (Tr. 112.) Moreover, although he still sees some patients, he has not maintained a hospital-based neurology practice since the early 1990's. (Tr. 109.) Additionally, Dr. Donofrio's credentials are especially noteworthy regarding EMG and nerve conduction studies. (Tr.146-47.) However, Dr. Kinsbourne's testimony was more persuasive insofar as I concluded that he was more conscientious of the facts and opinions recorded in the contemporaneous medical records. This offsets Dr. Donofrio's superior credentials to a very significant degree.

On multiple occasions during the hearing, I had to prompt Dr. Donofrio to review parts of the medical records that he initially failed to consider. (Tr. 155, 185.) In one instance, this did change his ultimate view of the medical assessment at issue. (Tr. 155-56.) Dr. Donofrio challenged Nurse Practitioner Chandler's assessment of right arm paresthesia, believing it to be unsupported, but when the Review of Systems she recorded was brought to his attention, he concluded that the diagnosis was correct. (*Id*.) This issue was particularly significant because Dr. Donofrio sought to establish that petitioner's medical history demonstrated a misdiagnosis on the whole. Thus, his understanding of the medical records was critical to his opinion in this case. Indeed, he had stressed the significance of NP Chandler's initial examination in his reports. (Ex. A, p. 5; Ex. C, pp. 2-3.)

I do note that Dr. Kinsbourne had a significant change in opinion, one that was much more fundamental than an error in reading the medical records. Having initially opined that petitioner suffered brachial neuritis, he altered his entire theory of the case

based on a different time of onset. Dr. Kinsbourne, however, was quite candid about the reason for this change. He explained that he was persuaded by Dr. Donofrio's competing assessment of onset. (Tr. 116-17.) Significantly, both of Dr. Kinsbourne's alternate assumptions regarding onset had reasonable grounding in the medical records. It is simply the case that, as described above, the medical records present conflicting reports of the onset of petitioner's condition. Thus, Dr. Kinsbourne's change of opinion does remain consistent with a careful reading of petitioner's medical history. Accordingly, I do not find that Dr. Kinsbourne's change of opinion negatively affects his credibility in this case.

b. Petitioner has Satisfied the *Althen* Prongs

i. *Althen* Prong One

Under *Althen* prong one, petitioners 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) (citations omitted). To satisfy this prong, petitioner's theory must be based on a "sound and reliable medical or scientific explanation." *Knudsen v. Sec'y of Health & Human 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. However, petitioners may satisfy the first *Althen* prong without resort to medical literature, epidemiological studies, demonstration of a specific mechanism, or a generally accepted medical theory. *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)).

In this case, Dr. Kinsbourne opined that a radial nerve injury can be caused by a traumatic event, including a misplaced vaccination needle. While a standard needle being injected to a patient's deltoid area would not injure the radial nerve, a needle injected in the area where the radial nerve becomes superficial can cause a radial nerve injury. (Tr. 121-22.) Dr. Kinsbourne explained that the needle can penetrate the muscle and if the needle is near a nerve, then both the physical trauma of the needle and the nature of the vaccine can cause an inflammatory reaction, which in turn can affect the transmission of nerve pulses. (Tr. 77.) In support of this opinion, Dr. Kinsbourne cited several studies showing a relationship between deltoid injections and radial nerve injuries[16] as well as an experimental animal study in which nerves were directly punctured with needles and cannulas of various sizes. (Ex. 18, p. 2.)

Although Dr. Donofrio stressed that it would be highly unlikely that a vaccination needle would come in contact with the radial nerve, he did ultimately concede that petitioner's theory is possible in circumstances where the needle is greatly misplaced.

[16] Dr. Donofrio also noted that the studies cited by Dr. Kinsbourne did not involve vaccination, but rather injections of vitamins, penicillin, quinidine, and Terramycin. (Ex. C, p. 3.) During the hearing, I asked Dr. Donofrio, given that the injections were reported as intramuscular injections into the upper arm, if he knew the recommended administration practices for these injections to differ from the recommendations for vaccination. He responded that he does not know. (Tr. 197.)

(Tr. 189-195.) Nonetheless, respondent has stressed the view that such misplacement is highly unlikely. In particular, respondent emphasized that the studies cited by petitioner involved injection practice in developing countries, suggesting poor injection practices, inconsistent with the level care that is given in the United States, were to blame. (Tr. 128-32.)

However, Dr. Kinsbourne persuasively noted by way of analogy that the occurrences of SIRVA documented in this country, though relatively rare, do happen in spite of a standard of care that should theoretically avoid them.[17] In that regard, it is also worth noting that petitioner testified she did not receive her vaccination in an ordinary medical setting. (Tr. 43.) Notwithstanding the general standard of care in this country, human error cannot be eliminated as a factor even in an ideal setting, let alone in the context of repeated administrations under time pressure in a workplace setting.

Accordingly, in light of Dr. Kinsbourne's opinion as well as Dr. Donofrio's agreement that a radial nerve injury *can* result from a misplaced injection, respondent's argument as to the likelihood of such an occurrence does not defeat petitioner's claim. Thus, I find that petitioner has met her burden in demonstrating a medical theory connecting the flu vaccination to radial nerve injury, satisfying *Althen* prong one.

ii. *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 v. Sec'y of Health & Human 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). 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* 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 & 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").

Here, the medical record and the expert opinions provide preponderant evidence that petitioner had radial neuritis. Notably, Dr. Henry diagnosed petitioner with radial neuritis caused by complication due to vaccination after his initial examination, one

[17] Dr. Kinsbourne's testimony regarding SIRVA did not run afoul of my order that SIRVA is not be the topic of the hearing. Dr. Kinsbourne did not say that petitioner had a SIRVA, but only noted that SIRVA exists in spite of the standard of care. (Tr. 129.)

week after petitioner's vaccination. (Ex. 4, p. 3.) Moreover, Dr. Henry noted symptoms consistent with a post-vaccination radial nerve injury, including radial nerve distribution, weakness in petitioner's right wrist and finger extensors, a knot present at the injection site (distal to deltoid insertion),[18] numbness in the dorsal aspect of petitioner's thumb, and pain along petitioner's spiral groove. (Ex. 4, pp. 1-4, 6-7, 12.) Treating physician opinions are ordinarily accorded a degree of deference because "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." *Capizzano*, 440 F.3d at 1326.

Additionally, Dr. Kinsbourne confirmed and agreed with petitioner's physicians' diagnosis and treatment. (Tr. 75-76, 85-86, 107-08.) And, in fact, Dr. Donofrio also agreed with Dr. Henry's *initial* suspicion of radial neuritis. (Tr. 158.) He indicated, however, that he felt that the subsequent EMG, results of which were negative, should have ruled out radial neuritis. (Tr. 179-80.) He also opined that, in light of petitioner's report of neck pain, radicular radiculopathy should have been a consideration. (Ex. A, p.7, Tr. 181.)

Ultimately, however, both experts testified that a mild case of radial neuritis could remain undetected by EMG. (Tr. 90; Tr. 166.) Dr. Donofrio remained skeptical that this would be the case here, especially because petitioner's right arm study was better than her left, but acknowledged that is "conceivable." (Tr. 166, 199-200.) In that regard, it is noteworthy that Dr. Henry maintained his diagnosis of radial neuritis after having interpreted petitioner's EMG results as negative. (Ex. 4, pp. 16-17.) Moreover, although cervical radiculopathy was initially considered, Dr. Henry ultimately did not diagnose petitioner with any cervical or radicular issues and did not find his initial suspicion warranted subsequent testing. The remainder of the records are silent as to any suggestion of neck pain and there is no other evidence in petitioner's subsequent medical history that her symptoms were related to any neck or cervical condition. Therefore, weighing the opinions of petitioner's treating physicians, petitioner's testing results, petitioner's subsequent treatment, and the expert opinions, I find that petitioner did suffer a right radial neuritis, leaving only the question of injection placement.

During the hearing, both experts marked a diagram of the axillary and radial nerves, indicating their respective opinions of where the radial nerve wraps around from the back to the front of the arm to become superficial. (Exs. 28, E.) In comparison, Dr. Donofrio's marking was slightly lower, suggesting that he thinks, in order to be injurious to the radial nerve, the injection would need to be lower than where Dr. Kinsbourne suggested. Although the experts' markings varied somewhat, the markings are close enough that there is no fundamental disagreement as to the relevant anatomy. And, significantly, both markings are consistent with Dr. Henry's notation that upon physical

[18] Dr. Donofrio persuasively opined that the knot itself is not evidence of a nerve injury, but it remains relevant regarding the location of the injection.

examination he visualized a knot at the injection site, which he placed distal to the deltoid insertion.[19] (Ex. 4, pp. 6-7; Tr. 161.)

Petitioner also testified that the vaccination was administered lower than usual.[20] (Tr. 46.) Also of note, petitioner testified that at the time the shot was given, she felt a burning sensation going into her arm. (Tr. 8-9.) This is consistent with the way in which Dr. Donofrio described onset of a direct nerve trauma. (Tr. 192.) Moreover, upon physical examination, petitioner had pain along the spiral groove, which Dr. Kinsbourne described, relying on the *Esquenazi* article (Ex. 25), as the area of the radial nerve. (Tr. 87, 104.)

In light of where the radial nerve becomes superficial as indicated by the experts, and taking in account both petitioner's testimony and Dr. Henry's observations upon physical examination, I find that petitioner's October 8, 2013 vaccination did injure petitioner's radial nerve. Accordingly, *Althen* prong two has been met.[21]

iii. *Althen* Prong Three

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." *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

[19] Distal means "remote; farther from any point of reference; opposed to proximal." Dorland's Illustrated Medical Dictionary, 32nd ed., p. 555. Deltoid insertion is the place of attachment of the deltoid to the bone it moves. *Id*. at 943.

[20] During the hearing, petitioner gestured to where she felt the vaccine was administered and Dr. Donofrio referenced this in his testimony. (Tr. 189.) I felt that Dr. Donofrio may have overstated the exactness with which petitioner gestured to her shoulder. The experts also disagreed regarding the significance of petitioner's size and whether that was relevant to her injection site. Dr. Kinsbourne reasoned that petitioner's adipose tissue could have obscured the contours of her bicep, potentially making a misplaced injection more likely. (Tr. 124.) Dr. Donofrio disagreed and further suggested that the adipose tissue would make needle contact with the nerve less likely. Although I have considered these points, I do not find either expert's speculation regarding the size of petitioner's arm to be persuasive in light of the other evidence of record. Notably, the experts had differing assumptions regarding the length of the needle that would have been used for petitioner's injection. Dr. Kinsbourne characterized it as 4.5 centimeters, which is greater than 1.5 inches. Dr. Donofrio assumed the needle was 1 inch to 5/8 of an inch. The literature filed in this case (*see* Ex. 27) indicates that for a woman of petitioner's weight, a 1.5-inch needle is recommended. However, there is no evidence regarding of the actual size of the needle used.

[21] This is a neurologic injury inclusive of clinical evidence of radial neuritis. I agree with respondent that a musculoskeletal injury is not relevant to this case and as Dr. Donofrio opined, in order for an injection to cause radial nerve injury, the injection must "be extremely misdirected." (Tr. 195.) Accordingly, this precludes a finding that petitioner suffered a Table SIRVA as alleged in her amended petition.

injury (*Althen* prong one's requirement). *Id.* at 1352; *Shapiro v. Sec'y of Health & Human Servs.*, 101 Fed. Cl. 532, 542 (2011), *recons. den'd after remand*, 105 Fed. Cl. 353 (2012), *aff'd mem.*, 503 Fed. Appx. 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 review den'd* (Fed. Cl. Dec. 3, 2013), *aff'd*, 773 F.3d 1239 (Fed. Cir. 2014).

In this case, both experts opined that the medically appropriate timeframe for symptoms of pain and burning associated with a radial nerve injury of the type petitioner suffered would be immediate. (Tr. 107, 192.) This is consistent with my finding of fact that onset was immediate as well as petitioner's more specific testimony that the immediate onset of her shoulder pain included a burning sensation. (*See* Section V, *supra*.) Accordingly, petitioner has satisfied *Althen* prong three.

c. Petitioner Experienced Six Months of Residual Effects

Even having established that her injury was vaccine-caused, in order to receive compensation, petitioner must also establish that her injury was of sufficient severity to warrant compensation. Under the Vaccine Act, petitioner must have either:

> (i) suffered the residual effects or complications of such illness, disability, injury, or condition for more than 6 months after the administration of the vaccine, or (ii) died from the administration of the vaccine, or (iii) suffered such illness, disability, injury or condition from the vaccine which resulted in inpatient hospitalization and surgical intervention.

§300aa-11(c)(1)(D).

By all accounts, petitioner's injury was mild and she had a good recovery. In fact, by the time of hearing, petitioner characterized her injury as completely resolved. (Tr. 28-30.) Subsequent to her active treatment for her injury, petitioner described a period of intermittent symptoms that gradually gave way to complete recovery. However, petitioner could not recall in any significant detail when her injury resolved. (Tr. 30.) Moreover, she sought very little medical attention during this period. Thus, a precise date for the resolution of her injury is difficult, if not impossible, to ascertain. Nonetheless, I am not persuaded by respondent's contention that petitioner's condition does not meet the severity requirements of the Vaccine Act. Rather, I conclude that there is preponderant evidence that petitioner's condition lasted for at least six months.

Respondent stresses that petitioner's medical records reflect that she actively treated her injury for only about three months. (ECF No. 51, p. 11.) Respondent further notes that petitioner's EMG study showed no abnormality after only five weeks and that petitioner was discharged from physical therapy having met all of her goals. By the time of her last appointment with Dr. Henry petitioner was noted to be doing "much better." (*Id*. citing Ex. 4, pp. 20-21; Ex. 3, p. 9.) Respondent also notes that after that point petitioner stopped addressing her arm pain to her physicians and that she reported to

her primary care physician for a follow up on January 16, 2014, and indicated that she was "feeling well."[22] (*Id*. citing Ex. 4, p. 25.)

To the extent petitioner testified that she continued to experience "intermittent" pain after that point, Dr. Donofrio opined that such intermittent pain is inconsistent with the recovery process from a radial nerve injury. (Tr. 182-83.) Additionally, although petitioner returned to her primary care provider much later (two years later) to complain of her intermittent right arm pain (Ex. 7, p. 22), Dr. Donofrio opined that her subjective complaint cannot be linked back to her prior condition absent a more complete examination. (Tr. 182.) For these reasons, respondent contends that petitioner's medical records reflect that she made a "complete recovery" by no later than January 16, 2014.[23] (ECF No. 51, p. 11; Tr. 182.)

Although I agree that petitioner was only in active treatment for approximately three months, petitioner's medical records do not reflect a complete recovery on the timeline that respondent suggests. Indeed, each of the records cited by respondent has contradictory notations that suggest that petitioner had not fully recovered despite her good progress.

Petitioner was formally discharged from physical therapy on February 6, 2014, but her last physical therapy assessment was conducted on December 10, 2013. (Ex. 3, pp. 46-52.) As of that assessment, petitioner was reported to have completed all of her therapy goals. (*Id*. at 47, 50.) However, for two of those goals – regarding numbness and hand/wrist strength – petitioner was noted to have achieved only 80% of her goal. (*Id*. at 47; Tr. 51.) Petitioner's pain had reduced to a "0" out of "10," but her chief complaint still indicated the presence of numbness. Additionally, physical exam showed mild limitations in right thumb extension and complaints of tenderness over the lateral deltoid on palpation. (Ex. 3, pp. 46-47.) The physical therapist's assessment indicated that petitioner's status was "improved" with a "good prognosis," but that assessment was contingent upon her continuation of a home exercise plan. (*Id*. at 47.) Petitioner testified that she continued that home exercise plan for over a year and that she remained symptomatic for the duration. (Tr. 24.) I found petitioner's testimony on this point to be credible. Petitioner also brought her home exercise instruction sheets to the hearing and they were later filed into evidence. (Tr. 21-23; Ex. 29.)

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[22] In fact, the statement that petitioner was "feeling well" was recorded in the review of systems under "General." (Ex. 4, p. 26.) Petitioner is recorded the history section of her appointment as stating that she was "feeling fine." (*Id*. at 25.)

[23] Dr. Donofrio opined that a mild radial nerve injury could improve in two or three weeks, up to two or three months. (Tr. 179.) Dr. Donofrio also noted that many radial neuropathies never make a full recovery. (*Id*.) However, according to Dr. Donofrio, "once a radial neuropathy or neuritis resolves, it doesn't come back, unless there is another mechanism of injuring the nerve." (*Id*. at 182.) Therefore, Dr. Donofrio would not attribute the reported pain in petitioner's right arm two years after vaccination to the same injury caused by the same mechanism two years prior. (*Id*. at 182-83.)

Petitioner last saw Dr. Henry on December 12, 2013. (Ex. 4, pp. 20-22.) Dr. Henry noted that petitioner had reached maximum medical improvement ("MMI") and that she had "no impairment." (*Id*. at 21.) In the history of present illness, however, he recorded that petitioner's "strength [is] *almost* back to normal." (*Id*. at 20 (emphasis added).) This is consistent with the physical therapy discharge. Dr. Henry also observed that petitioner still experienced occasional tingling in her right thumb and that she had a pattern of intermittent pain and tingling in her right arm for 64 days. (*Id*.) Upon review of systems, Dr. Henry noted continued presence of tingling in petitioner's right arm, which he characterized as "occasional," and noted only the absence of "constant" thumb numbness. (*Id*.) Contrary to Dr. Donofrio's opinion, Dr. Henry appears to have accepted petitioner's report of intermittent symptoms residual to her nerve injury.

Respondent is correct that petitioner subsequently returned to her primary care provider about a month later on January 16, 2014 and reported that she was "feeling fine." (Ex. 1, p. 16.) However, this statement is relatively vague and does not rule out the possibility of ongoing, but less significant, symptoms related to petitioner's radial nerve injury. Moreover, at the time of this appointment, a combined "problem list" and "past medical" history was recorded that included right arm paresthesia (the diagnosis petitioner's primary care physician recorded when she first complained regarding her post-vaccination injury).[24] (Ex. 1, p. 16.) Petitioner did not return to her doctor until October of 2014. (Ex. 7, pp. 1-4.)

Petitioner later returned to her primary care provider after two years and again complained of recurrent intermittent arm pain. (Ex. 7, p. 22.) Petitioner was assessed as having neuropathic pain of the upper arm. Although physical exam was normal, the review of systems explained under musculoskeletal:

> Present – Muscle Pain (right arm after receiving influenza vaccine at work 3 years ago.[25] Patient was seen by workmans comp Dr. and was told that the pain was from hitting a nerve. Patient complains today that nerve pain is still present but has decreased tremendously from when the injury occurred. Explained nerve processes with patient today. She does not report having any limitations with the nerve pain.). Not Present – Arm Weakness, Decreased Movement, Joint Pain, Joint Redness, Joint Stiffness, Joint Swelling, Leg Weakness, Muscle Spasms and Muscle Twitch.

(Ex. 7, p. 23.)

[24] Although this notation is ambiguous insofar as the heading is combined as "problem list/past medical history," a more detailed notation in the medical records indicates that each of the conditions on the list was "promoted" and recorded on January 16, 2014, including her right arm paresthesia. (Ex. 1, p. 18.)

[25] This is incorrect, it was two years prior.

Dr. Donofrio opined that this record does not reflect continued residual effects from a radial nerve injury. As noted above, he opined that intermittent pain is inconsistent with recovery from such an injury and this exam was insufficient in that it did not rule out other causes. (Tr. 183-85.) I asked Dr. Donofrio whether it was fair to assume, since petitioner was an established patient, that the review of systems incorporates a shared understanding between petitioner and her healthcare provider of her own medical history as reflected in the prior medical records. He responded that it depends on petitioner's understanding of "nerve pain." (Tr. 187.) However, petitioner's testimony, consistent with this medical record, indicates that petitioner did recall discussing the nature of nerve injuries and the expected course of recovery with her care providers. (Tr. 10,12, 14, 35, 38.)

Dr. Donofrio's opinion does raise a significant question; however, it is simply outweighed by the competing evidence. The medical records reflect that both Dr. Henry and Nurse Practitioner Chandler accepted and recorded petitioner's report of intermittent symptoms as residual effects of her radial nerve injury. As the diagnosing and treating physicians, they are well positioned to make that determination. Moreover, Dr. Kinsbourne likewise provided a competing expert opinion that petitioner's reports of intermittent pain are consistent with a recovery from her nerve injury. (Tr. 101, 135-37, 140.) Additionally, notwithstanding her reports of intermittent pain, petitioner's medical records also include the explicit statement that "Patient complains today that nerve pain is *still present* but has decreased tremendously from when the injury occurred." (Ex. 7, p. 22 (emphasis added).)

For all these reasons, I find preponderant evidence that petitioner experienced residual effects of her radial nerve injury for more than six months.

VII. Conclusion

Accordingly, for all the reasons described above, I find that petitioner is entitled to compensation.

IT IS SO ORDERED.

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