

In the United States Court of Federal Claims

OFFICE OF SPECIAL MASTERS

No. 16-1712V

Filed: February 4, 2019

UNPUBLISHED

ALCEO LUCARELLI,

Petitioner,

v.

SECRETARY OF HEALTH AND
HUMAN SERVICES,

Respondent.

Special Processing Unit (SPU);
Ruling on Entitlement; Ruling on the
Record; Causation-In-Fact; Influenza
(Flu) Vaccine; Shoulder Injury
Related to Vaccine Administration
(SIRVA)

Ronald Craig Homer, Conway, Homer, P.C., Boston, MA, for petitioner.

Voris Edward Johnson, U.S. Department of Justice, Washington, DC, for respondent.

RULING ON ENTITLEMENT¹

Dorsey, Chief Special Master:

On December 29, 2016, Alceo Lucarelli (“Mr. Lucarelli” or “petitioner”) filed a petition for compensation under the National Vaccine Injury Compensation Program, 42 U.S.C. §300aa-10, *et seq.*,² (the “Vaccine Act” or “Program”), alleging that as a result of receiving the influenza (“flu”) vaccination on October 20, 2014, he suffered a shoulder injury related to vaccine administration (“SIRVA”). See Petition at 1. The case was assigned to the Special Processing Unit of the Office of Special Masters.

¹ The undersigned intends to post this ruling on the United States Court of Federal Claims' website. **This means the ruling 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, upon review, the undersigned agrees that the identified material fits within this definition, the undersigned will redact such material from public access. Because this unpublished ruling contains a reasoned explanation for the action in this case, undersigned is required to post it on the United States Court of Federal Claims' website in accordance with the E-Government Act of 2002. 44 U.S.C. § 3501 note (2012) (Federal Management and Promotion of Electronic Government Services).

² National Childhood Vaccine Injury Act of 1986, Pub. L. No. 99-660, 100 Stat. 3755. Hereinafter, for ease of citation, all “§” references to the Vaccine Act will be to the pertinent subparagraph of 42 U.S.C. § 300aa (2012).

Petitioner has now moved for a ruling on the written record finding that he is entitled to compensation. For the reasons discussed herein, the undersigned grants petitioner's motion and finds that petitioner is entitled to compensation for his SIRVA.

I. Procedural History

On January 4, 2017, petitioner filed medical records, affidavits, and a Statement of Completion. ECF Nos. 6-9; 12. After conducting a review of the records, on June 16, 2017, respondent filed a status report stating that he was willing to engage in settlement negotiations and inviting petitioner to forward a settlement demand. ECF No. 21. The parties, therefore, began discussions regarding an informal resolution of petitioner's claim.

On December 18, 2017, petitioner filed a status report indicating that, in response to his demand, "[r]espondent provided a counteroffer . . . indicating that petitioner's pre-existing problems likely explain his current symptoms." ECF No. 36. Accordingly, petitioner requested the opportunity to supplement the record with an expert report to clarify the symptoms related to petitioner's alleged injury. *Id.*

On February 2, 2018, petitioner filed an expert report and accompanying exhibits. ECF No. 38. On May 4, 2018, petitioner filed a status report indicating that, despite engaging in settlement discussions following the submission of petitioner's expert report, the parties' valuation of petitioner's claim remained disparate and requested guidance from the Court. ECF No. 41. A Rule 5 status conference was held on June 19, 2018, during which the undersigned tentatively found that petitioner met his burden of proving causation-in-fact under *Althen v. HHS*, 418 F.3d 1274 (Fed. Cir. 2005). ECF No. 44.

On August 7, 2018, petitioner filed a motion requesting a ruling on the record finding that he is entitled to compensation. ECF No. 45. Respondent filed a response on August 21, 2018, joining petitioner's request for a ruling on the record and electing not to submit additional evidence on the issue of entitlement. *Id.*

The undersigned finds that this case is ripe for adjudication on the question of whether petitioner is entitled to compensation for his alleged SIRVA.

II. Factual History

Mr. Lucarelli was born on July 22, 1942. Petition at 2; Exhibit 1 at 2. In his affidavit, Mr. Lucarelli stated that he lives on 5 acres of land, half of which requires tending. Exhibit 21 at 1. Specifically, he stated that prior to October 2014 his activities in and around his home included planting trees, installing fencing, repairing stone walls, and home renovations such as remodeling of his master bathroom. *Id.*

On October 20, 2014, petitioner received a flu vaccination in his left deltoid. Exhibit 1 at 2. Prior to his vaccination, Mr. Lucarelli's medical history does not reflect any record of shoulder pain. See *generally* Exhibit 9.³

In his affidavit, petitioner stated that the administration of the vaccination was very painful and that, within days, the pain intensified. Exhibit 21 at 2. He further stated the pain started at the injection site on his left deltoid and radiated down his left arm. *Id.*

On January 12, 2015, Mr. Lucarelli filed a Vaccine Adverse Event Reporting System ("VAERS") report. The report describes the adverse event as "difficulty raising left arm since the vaccination" and "pain at injection site" beginning on October 21, 2014. Exhibit 17 at 1.

On January 14, 2015, Mr. Lucarelli consulted with neurologist, Dr. Peter Greco. Exhibit 11 at 11. During this visit Mr. Lucarelli reported that, after receiving a flu vaccination on October 20, 2014, he developed pain and discomfort in his left arm. *Id.* An EMG showed no evidence of motor sensory neuropathy, and no definite evidence of plexopathy or radiculopathy. *Id.* An x-ray showed "small olecranon bone spur with adjacent soft tissue swelling suggesting bursitis." *Id.* at 10.

Mr. Lucarelli underwent magnetic resonance imaging ("MRI") of his left shoulder and his cervical spine on January 16, 2015. Exhibit 11 at 2, 8-9. The MRI of petitioner's left shoulder showed supraspinatus and infraspinous tendinosis, mild fluid/edema within the subacromial subdeltoid bursa, and "moderate-to-advanced acromioclavicular joint arthrosis with marginal osteophyte formation and capsular hypertrophy." *Id.* at 2. The MRI of petitioner's cervical spine showed "multilevel and multifactorial central canal and foraminal stenosis, most notably centrally and toward the left at the C6-C7 level with underlying cord compression." *Id.* at 9.

On January 23, 2015, Mr. Lucarelli attended a follow-up appointment with Dr. Greco. Exhibit 11 at 13. The medical record states that petitioner "still has the left shoulder pain [and] does note some right shoulder pain." *Id.* Petitioner was advised to attend physical therapy. *Id.* at 14.

On January 29, 2015, Mr. Lucarelli had his initial physical therapy evaluation. Exhibit 15 at 20. The evaluation indicated that petitioner had a flu shot in October in his left arm and "the next day the left arm started to get sore in the left elbow and wrist and then eventually the pain started to move into the right[.]" *Id.* Mr. Lucarelli rated his pain at 8 out of 10. *Id.* Petitioner continued physical therapy through March 5, 2015 and, according to the discharge record, "[p]atient had increased [range of motion] in B[oth] shoulder[s] but therapy was unable to decrease pain in all of his Jts [joints]." *Id.* at 23.

Mr. Lucarelli presented to Dr. David Cohen, an orthopedic specialist, on February 9, 2015. Exhibit 2 at 1-2. Petitioner reported that he experienced left shoulder pain immediately after his October 20, 2014 vaccination. *Id.* at 1. Petitioner also noted pain

³ Petitioner's medical history includes restless leg syndrome, sleep apnea, arthritis, and chest pain.

that moved toward his right shoulder as well as increased pain in his elbows and knees. *Id.* Dr. Cohen assessed Mr. Lucarelli with impingement syndrome, stating that his “overall impression is that this began with a subacromial bursitis in reaction to a flu vaccine injection that most likely went a little deep into the subacromial bursa and caused a reaction. Subsequently, possibly from overuse, he developed some right-sided shoulder impingement as well.” *Id.*

On March 3, 2015, Mr. Lucarelli presented to Dr. Stephen Moses for a rheumatology consultation. Exhibit 12 at 6. Dr. Moses noted that petitioner “is complaining of generalized arthralgias that began in his left shoulder soon after receiving a flu shot in October 2014.” *Id.*

Mr. Lucarelli had a hematology and oncology consultation with Dr. Kevin Jain on April 6, 2015. Exhibit 13 at 10-11. Petitioner reported that, subsequent to his October flu vaccination, he developed left shoulder pain that migrated to his right shoulder. *Id.* at 10. Dr. Jain noted that petitioner “then had subsequent elbow pain, joint pain, and bony pain. He reports that he did have physical therapy, but his pain has been relentless.” *Id.* at 10.

Petitioner filed a second VAERS report on October 5, 2015. Exhibit 17 at 3. This report states that “after vaccination, the patient developed pain in shoulders across back and down both arms radiating to hands and also had muscle deterioration and bone issues.” *Id.* at 4.

On March 1, 2016, petitioner was seen by Dr. Peter Levinson. Exhibit 18. Petitioner reported a history of pain after receiving the flu shot. *Id.* at 3. Dr. Levinson noted that Mr. Lucarelli “had a prolonged problem with pain and discomfort in the area and has had an extensive investigation[.] There is no obvious etiology but likely it is less frequent and not as severe. It is possible that it is a neuralgic pain possibly from nerve irritation[.]” *Id.* Petitioner presented to Dr. Levinson again on August 18, 2016. Exhibit 23 at 4. During this appointment he noted that the pain was less frequent and “may occur once a month.” *Id.*

A. Petitioner’s Expert Report

In addition to medical records, Mr. Lucarelli submitted an expert report of Dr. Marko Bodor. Exhibit 24. Dr. Bodor is a board certified physician with experience in neuromuscular and sports medicine. Exhibit 25 (Curriculum Vitae of Dr. Marko Bodor). He has expertise in shoulder injuries related to vaccines and has published numerous journal articles on the subject. *Id.* at 3.

In his expert report, Dr. Bodor noted that Mr. Lucarelli had no pre-existing pain in his left shoulder, and stated that the flu vaccination administered on October 20, 2014 likely went into petitioner’s subdeltoid bursa and rotator cuff. Exhibit 24 at 2. Dr. Bodor also provided an explanation for Mr. Lucarelli’s initial pain, stating that when a vaccine is injected into the subdeltoid bursa it can cause a robust local and immune inflammatory

response resulting in pain and a reduced range of motion. *Id.* at 2, citing Exhibit 24, Tab A (Bodor, M and Montalvo, E, *Vaccine-related shoulder dysfunction*, Vaccine 25 (2007) 585-587) and Exhibit 24 Tab B (Atanasoff, et al, *Shoulder injury related to vaccine administration (SIRVA)*, Vaccine 28 (2010) 8049-8052). Dr. Bodor also stated that inflammation in the rotator cuff and bursa likely resulted in shoulder impingement, as noted by one of petitioner's treating physicians, Dr. Cohen. *Id.* Dr. Bodor cited medical literature that indicated a SIRVA may not only result in deltoid bursitis, but also may relate to tendonitis, impingement syndrome, rotator cuff tear, and adhesive capsulitis. *Id.* at 2-3 citing Exhibit 24, Tab A (Bodor, *Vaccine-related shoulder dysfunction*, Vaccine 25 (2007)) and Exhibit 24 Tab B (Atanasoff et al, *Shoulder injury related to vaccine administration (SIRVA)*, Vaccine 28 (2010)).

Dr. Bodor also addressed Mr. Lucarelli's underlying physiology, and explained how it contributed to his left shoulder injury and symptoms. Dr. Bodor noted that petitioner's left shoulder MRI showed moderate to severe acromioclavicular ("AC") joint hypertrophy or osteoarthritis, which he states is a common finding among men above the age of 50 who played sports or were involved in manual labor. *Id.* at 3. The doctor further indicated that hypertrophy of the AC joint narrows the subacromial outlet, predisposing the shoulder to impingement. *Id.* According to Dr. Bodor, the combination of pre-existing joint hypertrophy or osteoarthritis with an acute inflammatory response in the bursa and/or rotator cuff caused by a vaccination could easily precipitate symptoms of impingement. *Id.* He notes that, "[o]nce the cycle of impingement starts, it can perpetuate itself because impingement causes inflammation and inflammation causes impingement." *Id.*

Additionally, Dr. Bodor provided an explanation regarding how Mr. Lucarelli's multilevel spondylosis and stenosis in his cervical spine complicated petitioner's injury, and manifested additional symptoms in his right shoulder. *Id.* Dr. Bodor described how patients with shoulder impingement may compensate for pain and reduced range of motion at the glenohumeral joint⁴ by increasing motion at the scapulothoracic joint.⁵ *Id.* citing Exhibit 24 Tab D (Graichen H et al., *Three-dimensional analysis of shoulder girdle and supraspinatus motion patterns in patients with impingement syndrome* J Orthop Res. 2001; 19:1192-1198). Dr. Bodor noted that "[t]his compensatory movement involves increased activation of muscles which have their origin or insertion on the spine. This could result in increased load on the spine and the precipitation of spinal stenosis symptoms." *Id.* According to Dr. Bodor, this could have occurred in petitioner. *Id.* Dr. Bodor also noted that "sometime after the onset of his left shoulder pain, [petitioner]

⁴ The glenohumeral joint is the joint between the humerus (upper arm bone) and scapular (shoulder blade). Grey's Anatomy, 813 (Susan Strandring, et al., eds. 41st Ed. 2016).

⁵ The scapulothoracic joint refers to the space between the scapula (shoulder blade) and the underlying chest wall. See Grey's Anatomy, 810 (Susan Strandring, et al., eds. 41st Ed. 2016) (describing the scapulothoracic joint).

developed pain in the right shoulder and down both arms, classic symptoms of cervical central spinal stenosis.” *Id.*

Dr. Bodor concluded that, in his opinion, to a reasonable degree of medical certainty, Mr. Lucarelli’s symptoms were, more likely than not, a result of his October 20, 2014 vaccination. *Id.*

III. Ruling on Entitlement

A. Legal Standard

In this case, because the petition predates the inclusion of a SIRVA on the Vaccine Injury Table, petitioner must show that his injury was “caused-in-fact” by the vaccination in question. § 300aa-13(a)(1)(B); § 300aa-11(c)(1)(C)(ii). The showing of “causation-in-fact” must satisfy the “preponderance of the evidence” standard. § 300aa-13(a)(1)(A); see also *Althen*, 418 F.3d at 1279; *Hines v. HHS*, 940 F.2d 1518, 1525 (Fed. Cir. 1991).

The petitioner need not show that the vaccination was the sole cause or even the predominant 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). Additionally, “[t]here must be a ‘logical sequence of cause and effect showing that the vaccination was the reason for the injury.’” *Id.* The *Althen* court explained this “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 court also indicated that, in finding causation, a 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.

Section 11(c)(1) of the Vaccine Act also contains requirements concerning the type of vaccination received and the geographic location where it was administered, the duration or significance of the injury, and the lack of any other award or settlement. See § 11(c)(1)(A),(B),(D) and (E). With regard to duration, whether a Table or non-Table claim, the petitioner must establish he:

- (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.

§ 11(c)(1)(D).

B. Analysis

In his Motion for Ruling on the Record, petitioner argues that he suffered a left shoulder SIRVA as a result of receiving the flu vaccine on October 20, 2014, and that the pain and reduced range of motion progressed and extended into his right shoulder. ECF No. 45 at 17-18. Petitioner further argues that, based on the medical records, affidavit testimony, expert report, and supporting medical literature, he has satisfied the three prongs of *Althen*. The undersigns agrees.

i. *Althen* Prong One: A Medical Theory Causally Connecting the Vaccination and Injury

Although petitioner's claim was filed before SIRVA was added as a Table claim, analysis of the Qualifications and Aids to Interpretation ("QAI") for SIRVA is informative. The criteria are as follows:

A vaccine recipient shall be considered to have suffered SIRVA if such recipient manifests all of the following: (i) No history of pain, inflammation or dysfunction of the affected shoulder prior to intramuscular vaccine administration that would explain the alleged signs, symptoms, examination findings, and/or diagnostic studies occurring after vaccine injection; (ii) Pain occurs within the specified time-frame; (iii) Pain and reduced range of motion are limited to the shoulder in which the intramuscular vaccine was administered; and (iv) No other condition or abnormality is present that would explain the patient's symptoms (e.g. NCS/EMG or clinical evidence of radiculopathy, brachial neuritis, mononeuropathies, or any other neuropathy).

42 C.F.R. § 100.3(c)(10). Petitioner's claim is atypical in that his pain and reduced range of motion was not limited to the shoulder in which he received the vaccination. There are also other conditions and abnormalities present that would explain certain symptoms, specifically the pain in his right shoulder.

Petitioner's expert, Dr. Bodor, provided a medical theory for how a vaccination in the left shoulder can result in a left shoulder SIRVA, with pain and reduced range of motion that also manifests in the right shoulder. Dr. Bodor explained that when a vaccination is administered into the subdeltoid bursa it can cause a robust local and immune inflammatory response resulting in pain and reduced range of motion. *Id.* at 2 (citing Bodor, Vaccine 25 (2007) 585-587; Atanasoff, et al., Vaccine 28 (2010) 8049-8052). Dr. Bodor also stated that inflammation in the rotator cuff and bursa may result

in numerous symptoms, including deltoid bursitis, tendonitis, impingement syndrome, rotator cuff tears, and adhesive capsulitis. *Id.* at 2-3 (citing Bodor, Vaccine 25 (2007) 585-587; and Atanasoff *et al.*, Vaccine 28 (2010) 8049-8052).

Dr. Bodor also stated that certain underlying physiological conditions can contribute to these symptoms, including moderate to severe AC joint hypertrophy or osteoarthritis, which are common among men above the age of 50 who led physically active lives. *Id.* at 3. Further, according to Dr. Bodor, the combination of pre-existing joint hypertrophy or osteoarthritis with an acute inflammatory response in the bursa and/or rotator cuff could easily precipitate symptoms of impingement. *Id.*

Additionally, Dr. Bodor provided an explanation regarding how multilevel spondylosis and stenosis in the cervical spine can manifest SIRVA symptoms in the shoulder that did not receive the vaccine. *Id.* Dr. Bodor described how patients with shoulder impingement may compensate for pain and reduced range of motion by increasing motion at the scapulothoracic joint. According to Dr. Bodor “[t]his compensatory movement involves increased activation of muscles which have their origin or insertion on the spine. This could result in increased load on the spine and the precipitation of spinal stenosis symptoms.” *Id.* Further, “pain in the right shoulder and down both arms” are “classic symptoms of cervical central spinal stenosis.” *Id.*

The undersigned concludes that, based on the expert report of Dr. Bodor and the articles cited therein, petitioner has provided preponderant evidence that the vaccination petitioner received can cause a left shoulder SIRVA. Further, due to certain underlying pathology, the injury can also manifest as right shoulder pain though the mechanism described by Dr. Bodor. Accordingly, petitioner has satisfied *Althen* Prong One.

ii. *Althen* Prong Two: A Logical Sequence of Cause and Effect Showing the Vaccine Was the Reason for the Injury

Guided by the criteria for evaluating a Table SIRVA injury, the undersigned finds that Mr. Lucarelli has shown, by a preponderance of the evidence, a logical sequence of cause and effect showing that his October 20, 2014 flu vaccine was the reason for his shoulder injuries. Specifically, the criteria for evaluating a SIRVA injury, as set forth above, includes (i) no history of pain, inflammation or dysfunction of the affected shoulder prior to intramuscular vaccine administration that would explain the alleged signs, symptoms, examination findings, and/or diagnostic studies occurring after vaccine injection; and (ii) pain occurs within the specified timeframe. 42 C.F.R. § 100.3(c)(10). The criteria also require consideration of (iii) whether pain and reduced range of motion are limited to the shoulder in which the vaccine was administered and (iv) whether the existence of another condition or abnormality would explain the patient’s symptoms. *Id.*

a. Petitioner did not have a history of pain, inflammation, or dysfunction of the affected shoulder prior to vaccine administration.

Prior to October 20, 2014, petitioner had no record of pain, inflammation, or dysfunction in either of his shoulders. See Pet. Ex. 9 at 4-5 (describing petitioner's medical history).

b. Onset occurred within the specified timeframe.

Petitioner's medical records and affidavit evidence demonstrate that petitioner consistently placed the onset of his condition within 48 hours of his October 20, 2014 vaccination.

As set forth above, on January 12, 2015, petitioner filed a VAERS report noting an October 21, 2014 onset date. Exhibit 17 at 1. Moreover, all of petitioner's subsequent reports consistently place onset of his symptoms within 48 hours of receiving the vaccination. See, e.g., Exhibit 11 at 11 (reporting that petitioner developed pain and discomfort in the area in which he received the flu shot and has had "recurrent aching pain since."); Exhibit 2 at 1 (stating that petitioner noted the onset of left shoulder pain immediately after his October 20, 2014 flu shot). Exhibit 15 at 20 (physical therapy evaluation reporting that petitioner experienced pain the day after vaccination). Further, petitioner stated in his affidavit that the administration of the vaccination was itself painful, and within days the pain intensified. Exhibit 21 at 3.

Accordingly, based on petitioner's sworn statement and medical records, petitioner has provided preponderant evidence that his shoulder pain began within 48 hours of his October 20, 2014 vaccination.

c. Pain and reduced range of motion were not limited to shoulder in which the intramuscular vaccine was administered.

Pain and reduced range of motion began in petitioner's left shoulder; however, it was not limited to this area. Petitioner reported that following the manifestation of pain in his left shoulder, he began to experience pain in his right shoulder in January of 2015. See, e.g., Exhibit 11 at 13 (reporting that petitioner had some right shoulder pain). See *also*, e.g., Exhibit 15 at 20 (establishing that petitioner's pain "started to move into the right[.]"); Exhibit 17 at 3 (reporting "pain in shoulders across back and down both arms . . .").

Nevertheless, Dr. Bodor offered a reasonable explanation, supported by scientific evidence, regarding how and why petitioner suffered pain in both his left and right shoulders. Specifically, Dr. Bodor noted that petitioner's flu vaccination "likely went into his subdeltoid bursa and rotator cuff" and concluded that the resulting pain in his left shoulder was consistent with an inflammatory response. Exhibit 24 at 2. Dr. Bodor explained that this inflammation of the rotator cuff and bursa likely resulted in shoulder impingement and that "[p]atients with shoulder impingement may compensate for pain and reduced range of motion at the glenohumeral joint by increasing motion at the scapulothoracic joint." *Id.* In synthesizing these points Dr. Bodor states:

This compensatory movement involves increased activation of the trapezius and levator scapulae muscles which have their origin or insertion on the spine. This could result in increased load on spine and precipitation of spinal stenosis symptoms. This may indeed have been the case with Mr. Lucarelli. It is noted that sometime after the onset of his left shoulder pain, he developed pain in the right shoulder and down both arms, classic symptoms of cervical central spinal stenosis.

Id. (citations omitted). Respondent has not controverted Dr. Bodor's opinion.

The undersigned finds that Dr. Bodor is well qualified to opine on the subject. Further, the undersigned finds that this mechanism of injury, and the manifestation of symptoms in both petitioner's left and right shoulders, is plausible and supported by medical literature.

d. Conditions or abnormalities that contributed to petitioner's symptoms.

The undersigned finds that petitioner's preexisting conditions contributed to, but did not cause, petitioner's injury. These conditions were described in petitioner's January 16, 2015 left shoulder MRI which showed "moderate-to-advanced acromioclavicular joint arthrosis with marginal osteophyte formation and capsular hypertrophy." Exhibit 11 at 2. Dr. Bodor noted that these are common findings among men above the age of 50 who were involved in manual labor (Exhibit 24 at 3), which describes petitioner as he was 72 years old at the time of his vaccination and led an active lifestyle. Further, as addressed herein at Section B(ii)(c), Dr. Bodor opined that the combination of pre-existing joint hypertrophy or osteoarthritis with an acute inflammatory response in the bursa and or rotator cuff could easily precipitate symptoms of impingement. Exhibit 24 at 3. Dr. Atanasoff's article supports this opinion. In the article *Shoulder Injury Related to Vaccine Administration*, Dr. Atanasoff concludes "some of the MRI findings in our case series, such as rotator cuff tears, may have been present prior to vaccination and became symptomatic as a result of vaccination-associated synovial inflammation." Atanasoff at 8-51.

Therefore, the undersigned finds the existence of preponderant evidence of a medical theory causally connecting the vaccination and injury. As previously noted, although petitioner's pain was not limited to his vaccinated shoulder, petitioner has offered a reasonable explanation, supported by scientific evidence, regarding how and why his symptoms extended to his right shoulder. Further, while petitioner's arthrosis, osteophyte formation, and capsular hypertrophy may have contributed to his injury, he did not have pain until his vaccination, and his injury was triggered by the vaccination.

iii. Althen Prong Three: Proximate Temporal Relationship Between Vaccination and Injury

Under *Althen* prong three, there must be a proximate temporal relationship between vaccination and injury. Under the SIRVA criteria, the onset of the symptoms of petitioner's shoulder injury must begin within 48 hours or less of vaccination. The undersigned has found that the onset of petitioner's shoulder injury began within 48 hours of vaccination, and thus, petitioner has satisfied *Althen* prong three.

IV. Factors Unrelated to Vaccination

Respondent has not asserted, and the undersigned does not find, that there is any evidence in the record to support respondents' burden of establishing an alternative cause for petitioner's injury unrelated to a vaccination.

V. Conclusion

In light of the above, and in view of the submitted evidence, the undersigned GRANTS petitioner's motion and finds that petitioner is entitled to Vaccine Act compensation.

IT IS SO ORDERED.

/s/Nora Beth Dorsey

Nora Beth Dorsey
Chief Special Master