

# UNIVERSAL DIAGNOSTIC IMAGING, Inc.

5152 Sepulveda Blvd, Suite 117

Sherman Oaks, CA 91403

Phone: (818) 989-3645 Fax: (818) 989-3649

## **Electromyogram (EMG)**

## **Nerve Conduction Studies (NCV) and Somatosensory Evoked Potentials (SSEP) Report**

### **Upper Extremities**

**Patient:** Walls, Darlene  
**Sex:** Female  
**Date of Birth:** 03/23/1967  
**Date of Testing:** 02/27/2020  
**Referred by:** Harold Iseke, D.C.

#### ***CLINICAL SUMMARY:***

- **Clinically Significant radicular upper back pain with radicular upper extremities symptoms (pain, tingling, numbness) and signs. Patient's right hand is dominant. The temperature of the patient's arms was > 32C.**

#### **Demo Version - ExpertPDF Software Components**

Patient was referred for the studies to assist in diagnosis and management of probable Carpal Tunnel Syndrome CTS, Cervical Radiculopathy / Brachial Plexopathy, entrapment neuropathy peripheral neuropathy or other nerve injury.

#### ***PROCEDURE***

- 
- Nerve Conduction Studies of the Median and Ulnar motor nerves with corresponding F-Waves; Ulnar, Median, and Superficial Radial sensory and motor nerves were performed utilizing standard technique.  
Median CMAP was recorded from abductor pollicis brevis muscle with stimulation 8 cm proximally. Ulnar CMAP was recorded from abductor digit minima muscle with a stimulation point 8 cm proximally, below and above elbow, with an across-elbow ulnar nerve segment distance of 10 cm and elbow flexed at 90 degree angle. F-waves were elicited on repetitive stimulation of each motor nerve tested. Radial CMAP was recorded from EDC, stimulation occurs at the elbow, at the joint between the brachioradialis muscle and the biceps tendon, and at the spiral groove (high) in the upper arm. Median sensory peak latency was recorded from the 2<sup>nd</sup> digit

**Patient:** Walls, Darlene  
**Date of Exam:** 02/27/2020  
**Page 2 of 5**

by ring electrodes with stimulation at 7 cm proximally at mid-palm and 14 cm at the wrist. Ulnar sensory peak latency was recorded from the fifth digit with stimulation 14 cm proximally at the wrist.

Utilizing a Cadwell Somatosensory evoked potential averager and computer, the patient's C6, C7 nerve roots were stimulated at the rate of 2.82 per second for a duration of 100 milliseconds. Double trial stimulation of 500 stimuli as tolerated by the patient were done. The low frequency filter was set at 10 Hz and the high frequency filter was set at 2000 Hz. Median / and Ulnar nerves were stimulated at the rate of 2.82 per second for a duration of 100 milliseconds. Double trial stimulation of 500 stimuli as tolerated by the patient were done. The low frequency filter was set at 10 Hz and the high frequency filter was set at 200 Hz. Recordings were taken from cervical C7 area as referenced against FpZ and subsequently over contralateral parietal scalp 2cm behind the C3 or C4 electrode positions of the International 10-20 system of EEG electrode placement.

**FINDINGS**

**EMG**

**Demo Version - ExpertPDF Software Components**

Monopolar needle EMG was performed in selected bilateral upper extremities muscles innervated by C5-T1 nerve roots inclusive. No spontaneous activity was seen in any muscles tested in the form of fibrillations, positive sharp waves, or fasciculations. Voluntary motor unit morphologies are otherwise normal.

All examined muscles (as indicated in the following table) showed no evidence of electrical instability.

Side	Muscle	Nerve	Root	Ins Act	Fibs	Psw	Amp	Dur	Pol y	Recrt	Int Pat	Comme nt
Left	Biceps	Musculocut	C5-6	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Left	Deltoid	Axillary	C5-6	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Left	Brachialis	Musculocut	C5-6	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Left	FlexCarpiUln	Ulnar	C8,T1	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Left	PronatorTeres	Median	C6-7	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Left	ExtIndicis	Radial (Post Int)	C7-8	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Right	Triceps	Radial	C6-7-8	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Right	Biceps	Musculocut	C5-6	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Right	1stDorInt	Ulnar	C8-T1	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Right	FlexCarpiUln	Ulnar	C8,T1	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Right	PronatorTeres	Median	C6-7	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Right	ExtIndicis	Radial (Post Int)	C7-8	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	

**Patient:** Walls, Darlene  
**Date of Exam:** 02/27/2020  
**Page 3 of 5**

### **Dermatomal C6, C7 Somatosensory Evoked Potentials**

C6 nerve root was stimulated using the Superficial Radial sensory nerve.  
C7 nerve root was stimulated using the 3rd digit.

Cortical responses were normal bilaterally with recording from C6 and C7 nerve roots.

### **Nerve Conduction Studies (NCV)**

#### **Motor Nerve Study:**

1. Study of left median motor nerve showed normal distal latency, normal conduction velocity and normal AMPs.
2. Study of right median motor nerve showed normal distal latency, normal conduction velocity and normal AMPs.
3. Study of left ulnar motor nerve showed normal distal latency, *slowing of conduction velocity* and normal AMPs.
4. Study of right ulnar motor nerve showed normal distal latency, *slowing of conduction velocity* and normal AMPs.
5. Study of left radial motor nerve showed normal distal latency, normal conduction velocity and normal AMPs.
6. Study of right radial motor nerve showed normal distal latency, normal conduction velocity and normal AMPs.

#### **Sensory Nerve Study:**

1. Study of left median sensory nerve showed normal distal latency on the wrist (compare to mid palm) with *reduced* AMP.  
*Median sensory peak latency was prolonged by 0.6ms compared to the radial response, when recorded from the thumb on the left (NL<0.4ms) at 10cm.*
2. Study of right median sensory nerve showed normal distal latency on the wrist (compare to mid palm) with normal AMP.  
*Median sensory peak latency was prolonged by 0.2 ms compared to the Radial response, when recorded from the thumb on the right (NL<0.4ms) at 10cm.*
3. Left Ulnar sensory nerve showed normal distal latency with normal AMP.
4. Right Ulnar sensory nerve showed normal distal latency with normal AMP.
5. Left radial sensory nerve showed normal distal latency with normal AMP.
6. Right radial sensory nerve showed normal distal latency with normal AMP.

**Patient:** Walls, Darlene  
**Date of Exam:** 02/27/2020  
**Page 4 of 5**

## **IMPRESSION**

---

- **Abnormal Neurodiagnostic Study of Bilateral Upper Extremities** is consistent with:

- 1. Mild Left Carpal Tunnel Syndrome involving the sensory fibers only.**
- 2. Bilateral demyelinating Ulnar motor neuropathy across the elbows.**

*Based on the date of injury and as defined by ACOEM Guidelines (p 108) this case is now chronic. Thus, ACOEM guidelines do not apply. Compensation is requested pursuant to Section 4600(a), 4603.(b), and 5402(c) of the Labor Code.*

*If applicant's condition is in acute or sub acute stage, pursuant to ACOEM Guidelines (p 178, 182) NCV/SEP's and/or NCV/EMG/H reflex is recommended. Certification is mandatory pursuant to section 4610 (g)(1) of the Labor Code. If the statutory time (14 days) to approve has expired, your right to delay, deny or modify is deemed waived and payment within (45) days from receipt of bill and report is required pursuant to section 4603.2 (b) of the Labor Code.*

*If applicant's condition is in acute or sub acute stage, pursuant to ACOEM Guidelines (pp 293B, 366B, 330, 334B) NCV/SEP's and/or NCV/EMG W/H reflex is recommended. Certification is mandatory pursuant to section 4610 (g)(1) of the Labor Code. If the statutory time (14 days) to approve has expired, your right to delay, deny or modify is deemed waived and payment within (45) days from receipt of bill and report is required pursuant to section 4603.2 (b) of the Labor Code.*

*If applicant's condition is in acute or sub acute stage, pursuant to ACOEM Guidelines (p 211, 212) NCV/SEP's and/or NCV/EMG/H reflex to the shoulder(s) is recommended. Certification is mandatory pursuant to section 4610 (g)(1) of the Labor Code. If the statutory time (14 days) to approve has expired, your right to delay, deny or modify is deemed waived and payment within (45) days from receipt of bill and report is required pursuant to section 4603.2 (b) of the Labor Code.*

*If applicant's condition is in acute or sub acute stage, pursuant to ACOEM Guidelines (p 232, 233, 238, 242) NCV/SEP's and/or NCV/EMG/H reflex to the elbow(s) is recommended. Certification is mandatory pursuant to section 4610 (g)(1) of the Labor Code. If the statutory time (14 days) to approve has expired, your right to delay, deny or modify is deemed waived and payment within (45) days from receipt of bill and report is required pursuant to section 4603.2 (b) of the Labor Code.*

*If applicant's condition is in acute or sub acute stage, pursuant to ACOEM Guidelines (p 261, 262, 269, 272) NCV/SEP's and/or NCV/EMG/H reflex to the forearm, wrist and hand(s) is recommended. Certification is mandatory pursuant to section 4610 (g)(1) of the Labor Code. If the statutory time (14 days) to approve has expired, your right to delay, deny or modify is deemed waived and payment within (45) days from receipt of bill and report is required pursuant to section 4603.2 (b) of the Labor Code.*

*If applicant's condition is in acute or sub acute stage, pursuant to ACOEM Guidelines (p 108) this case is now chronic. Thus, ACOEM guidelines do not apply. Certification is requested pursuant to Section 4600(a) of the Labor Code. Certification is mandatory pursuant to section 4610 (g)(1) of the Labor Code. If the statutory time (14 days) to approve has expired, your right to delay, deny or modify is deemed waived and*

**Patient: Walls, Darlene**  
**Date of Exam: 02/27/2020**  
**Page 5 of 5**

*payment within (45) days from receipt of bill and report is required pursuant to section 4603.2 (b) of the Labor Code.*

*Certification is mandatory pursuant to section 4610 (g)(1) of the Labor Code. If the statutory time (14 days) to approve has expired, your right to delay, deny or modify is deemed waived and payment within (45) days from receipt of bill and report is required pursuant to section 4603.2 (b) of the Labor Code.*

## **DISCLOSURE**

---

I declare under penalty of perjury that all opinions stated in this report are mine. The evaluation was performed and the time spent performing the evaluation was in compliance with the guidelines, if any, established by the Industrial Medical Council or the administrative director pursuant to paragraph (5) of subdivision (j) of section 139.2 or 5307.6 of the Labor Code.

The nerve conduction studies ordered were performed by Ms. Inna Plotkin, CNCT, R.NCS.T, R.EP.T, Board Certified NCV Technician under the referring doctor's general supervision.

I declare under penalty of perjury that the information contained in this report and its attachment, if any, is true and correct to the best of my knowledge and belief except as to information and I have indicated that I received from others.

As to that information, I declare under penalty of perjury that the information accurately describes the information provided to me and, except as noted herein, that I believe to be true. **Demo Version - ExpertPDF Software Components**

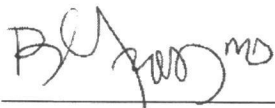
Comments: Quality of data obtain, accuracy, different techniques, technical experience, patient history, and physical exam, all play is very critical factor for an optimal interpretation. For a more comprehensive evaluation an EMG, MRI, CAT Scan, and any other diagnostic modality capable of establishing a differential diagnosis is recommended at the discretion of the referring physician, this is only interpretation of data and patient was not examined.

I have complied with the Labor Code 139.3 and I have not offered or received any commissions or inducements for this evaluation. This declaration is executed today in the county of Los Angeles.

As with all electrodiagnostic assessments, clinical correlation is suggested.

Thank you for referring the patient to us.

Sincerely,



**Benjamin Gross, M.D.**  
**Diplomate, American Board of Psychiatry and Neurology**