APEX Diagnostics

(BLS Diagnostics, LLC)

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ELECTRODIAGNOSTIC (EDX) REPORT

[PI – UEDX – RADICULOPATHY] **Test Date:** [redacted]

Patient:	[redacted]	**D.O.B.:**	[redacted]	**EMG Doc:**	B. Seymore, DABCE, DIBE, PT, DC
Gender:	Female	**Height:**	5' 4"	**NCV Tech:**	J. Giordano, R.NCS.T.

REASON FOR ELECTRODIAGNOSTIC CONSULTATION AND EXAMINATION:
Patient was referred to this office for a thorough neurological assessment by [redacted].
Patient is being seen for an evaluation following a motor vehicle accident to be assessed due to suffering from cervical and/or upper extremity symptoms. The goal of this independent examination is to rule in/out radiculopathy, focal neuropathy, small fiber neuropathy, myopathy and peripheral neuropathy, and make appropriate recommendations for additional diagnostic testing and/or outside referrals for care as clinically indicated.

CHIEF COMPLAINT:
Patient is a pleasant 30-year-old right hand dominant Female who presents with **14-day history** of worsening cervical and upper extremity symptoms **following a motor vehicle accident on** [redacted].

ACCIDENT / INJURY INFORMATION:
Patient was driving when she was struck from behind as she recalls her head striking the headrest. Patient also had both legs impact the dashboard and her torso impacted by her seatbelt. She recalls experiencing disorientation, feeling dazed and nervous after the accident. Patient was seen at patient first and a chiropractor where she received cervical x-rays. Symptoms described as sharp, aching, numbness / tingling, weakness. Aberrant sensation reported in the median, ulnar and/or radial sensory nerve distributions bilaterally, significantly worse on the, right.

PAST / RELATED MEDICAL HISTORY:
No prior injuries or surgeries reported. Patient was able to sit for 5 hours without difficulty or discomfort, now can only sit for 20 minutes due to discomfort. Patient also shares that before the accident, she could dance for 3 hours without difficulty, but can only dance for 10 minutes now due to discomfort. Please see referring / providing physician's complete H&P for full history details.

ELECTRODIAGNOSTIC FINDINGS:
All nerve conduction studies (as indicated in the following tables) were within normal limits. Left vs. Right side comparison data for the median motor nerve indicates abnormal L-R amplitude difference (46.7 %). The Dorsal Ulnar Cutaneous sensory nerve indicates abnormal L-R amplitude difference (26.2 %). The medial antebrachial cutaneous sensory nerve indicates abnormal L-R amplitude difference (64.2 %). The Median Digital (2nd) sensory nerve indicates abnormal L-R amplitude difference (51.2 %). The Radial Digital (5th) sensory nerve indicates abnormal L-R amplitude difference (40.5 %). The Ulnar Digital (5th) sensory nerve indicates abnormal L-R amplitude difference (49.7 %). All remaining left vs. right side differences were within normal limits. All F Wave latencies were within normal limits. All F Wave left vs. right side latency differences were within normal limits. Needle evaluation of the right biceps muscle showed slightly increased spontaneous activity. All remaining muscles (as indicated in the following table) showed no evidence of electrical instability.

DIAGNOSTIC IMPRESSION:

- **Radiculopathy:** Electrophysiological evidence of an acute C6 radiculopathy on the right, more likely than not, related to this patient's injury. No evidence of pre-existing radiculopathy noted on this study. *(See Clinical Note)*
- **Normal NCV Baseline:** This is essentially a normal nerve conduction study establishing a "normal" neurological functional baseline and eliminating pre-existing neuropathy from prior injury or dysfunction to explain patient's current symptoms. *(See Clinical Note)*

CLINICAL NOTE:

Radiculopathy: Motor axon loss represented by decreased recruitment and/or increased insertional activity and/or presence of spontaneous paraspinal muscle activity on electromyography (EMG) indicate an acute injury that is typically 1-2 weeks old. [Md, K.B. (2007). *Electromyography in Clinical Practice: A Case Study Approach* (2nd ed.). Mosby.] Therefore, this examination performed within the 2-week post-injury window of time establishes acute trauma related to patient's injury. **Absence of polyphasia, satellite potentials, and/or evidence of reinnervation, suggest these findings are more likely acute and therefore do not suggest a chronic or pre-existing condition. Therefore, this examination performed within the 2-week post-injury window of time establishes acute trauma related to patient's injury.**

Normal NCV Baseline: Injury affecting the nervous system (peripheral or central) causing symptoms in the extremities will not show those peripheral electrophysiological deficits/effects on nerve conduction studies until 3-weeks (21-days) post-injury, with the exception of a neurotmesis (complete severance of the axon), which generally reveals the deficit sooner than 3-weeks post-trauma (usually immediately). [Md, K. B. (2007). *Electromyography in Clinical Practice: A Case Study Approach* (2nd ed.). Mosby.] A "normal" nerve conduction study within three weeks of a trauma does not necessarily mean there is no damage caused from the trauma. **Therefore, this examination performed within the 3-week post-injury window of time factually establishes an objective "normal" baseline, absent of electrophysiological deficit which may have been caused by any pre-existing condition.** If patient's symptoms persist or worsen, a study performed at least 6 months in the future would be valuable to compare to the results of this study to establish neurologically-based impairment caused from this patient's trauma.

RECOMMENDATIONS:

Follow-up with [redacted].
Advanced lumbar imaging (MRI/CT) as clinically indicated.
X-ray (WB) biomechanical analysis to r/o spondylolisthesis or anatomical anomalies as clinically indicated.
Cervical spine assessment and manual therapy (chiropractic / physical therapy) to address C6 on the right.
Specialty consultations recommended: Pain management, orthopedic.
Re-evaluate electrodiagnostically in 6 months or PRN based on patient's clinical progress.

Thank you for this referral and the opportunity to assist with this patient's care. The patient's symptoms and condition are causally related to the injury. These statements are made within a reasonable degree of medical certainty. Recommendations are subject to the clinical data available at the time of this examination. If you have any questions or concerns, please don't hesitate to contact our office.

Professionally,

B. Seymore, DABCE, DIBE, PT, DC
Certified / Diplomate, Board of Electrodiagnosis

M. Ribeiro, MD
Board Certified Neurologist

Ordered by referring physician with intent to follow up with patient and make appropriate treatment recommendations as necessary. This electrodiagnostic study has been co-signed and performed (including diagnostic interpretation) by a Diplomate of the International and American Boards of Electrodiagnosis / Certified Electromyographer. Autonomic (somatosensory PRN) studies were performed by a Certified (Registered) Nerve Conduction Study Technologist (R.NCS.T.) under the supervision of the co-signed Board-Certified Neurologist. Nerve conduction studies and needle EMG have been performed using standardized techniques according to the AANEM, IBE and AAET guidelines. The following electrodiagnostic equipment was used in the examination of this patient: Cadwell Sierra Summit. The following supplies were required for this examination: Ambu concentric needle, 2 ground sticker electrodes, 8 standard sticker electrodes, standard conduction gel, alcohol prep.

Patient: [redacted] **Test Date:** [redacted]