

Subject: Nerve Conduction Velocity Studies Including Late Response (H-reflex and F-wave)

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INSTRUCTIONS FOR USE

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Nerve conduction velocity (NCV) studies are considered medically necessary when they are conducted and interpreted at the same time as needle electromyography (NEMG) studies, to confirm the diagnosis of ANY of the following medical conditions:

- motor neuron diseases
- myopathies
- radiculopathies
- plexopathies
- neuropathies
- nerve compression syndromes
- neuromuscular junction disorders
- neurotrauma

Nerve conduction velocity (NCV) studies alone are considered medically necessary in the following situations:

- as follow-up studies of neuromuscular structures that have undergone previous electrodiagnostic evaluation
- current use of anticoagulants
- presence of lymphedema
- carpal tunnel syndrome
- the patient cannot tolerate the NEMG procedure

The following electrodiagnostic tests are considered experimental, investigational or unproven and thus not medically necessary:

- nerve conduction velocity (NCV) studies performed without needle electromyography, other than when performed for follow-up testing, with current use of anticoagulants, the presence of lymphedema, for carpal tunnel syndrome, or if the patient cannot tolerate the NEMG procedure
- nerve conduction studies where the interpretation is delayed and not completed at the time of testing
- automated or portable hand-held noninvasive nerve conduction testing (e.g., NC-stat System, Brevio[®] nerve conduction monitoring system)

General Background

Electrodiagnostic studies are frequently used to evaluate patients with suspected neuromuscular disorders and include needle electromyography and other nerve stimulation tests such as nerve conduction studies. Electrodiagnostic testing may provide an important means of diagnosing conditions attributable to nerve, muscle or neuromuscular junction weakness such as myopathies (muscle weakness), radiculopathies (nerve root disease), plexopathies (peripheral neuropathy), neuropathies (nerve disease), neuromuscular junction disorders, and nerve compression syndromes.

Nerves control the muscles in the body through electrical impulses. The impulses make the nerves react in very specific ways. Disorders of nerves and muscles cause abnormal reactions. Nerve conduction studies (NCS), also referred to as nerve conduction velocity studies, are performed to diagnose disorders of the peripheral nervous system. The nerve is stimulated with electrodes placed on the skin over the nerve in various locations. A mild electrical stimulus is applied to the nerve in two or more points. Recording of the electrical response to stimulation of the nerve between these points along its route is conducted and compared to normal responses. The study measures speed (conduction velocity and/or latency), amplitude (size) and the shape of neurologic response for detecting demyelination and axon loss. NCS are routinely performed with needle electromyogram (NEMG), enabling the presence and extent of peripheral nerve pathology to be determined (Katrjji, 2002; North American Spine Society [NASS], 2003; Aminoff, 2003; Asbury, 2004; American Association of Neuromuscular and Electrodiagnostic Medicine [AANEM], 2004). EMG studies measure the electrical activity of muscles. When performed together, they can be extremely helpful in detecting whether the pathology originates in the proximal or distal root ganglia and whether the neuromuscular dysfunction relates to peripheral nerve disease.

Both EMG and NCS are required for a clinical diagnosis of peripheral nervous system disorders (AANEM, 2004). For example, radiculopathies cannot be definitively diagnosed by NCS alone; needle EMG is performed to confirm the radiculopathy. EMG results reflect on the integrity of the functioning connection between a nerve and its innervated muscle and also on the integrity of a muscle itself. Performance of one does not eliminate the need for the other.

In adults, conduction velocity in the arms is normally between 50 and 70 meters per second (m/s), and in the legs it is between 40 and 60 m/s. It is related to the diameter of the nerve and the normal degree of myelination (the presence of myelin sheath on the axon). Newborn infants have values that are half that of the adult values, and adult values are generally reached by age three to four years. Abnormal results are caused by nerve damage or destruction and include conduction slowing, conduction blockage, lack of responses and/or low amplitude responses. Conditions of demyelination result in prolongation of conduction time, while conditions of axonal loss generally result in loss of nerve or muscle amplitude. Routinely, a physician assesses the results of the degree of myelination or axonal loss; however, it may be performed by a trained technologist under the direct supervision of a physician. Direct supervision implies that a physician is in close proximity to the patient undergoing testing, is immediately available to provide the trained technician with assistance and direction if necessary, and is responsible for determining the nerve conduction studies that are appropriate.

Nerve Conduction Studies

Nerve conduction velocity (NCV) measurements consist primarily of three types: motor, sensory and mixed. Motor nerve conduction study responses include amplitude, latency, configuration, and motor conduction velocity. Sensory nerve conduction study responses include amplitude, latency, configuration and sensory conduction velocity. Mixed nerve conduction study responses include amplitude, latency, configuration and both sensory and motor conduction velocity.

Another type of NCS is referred to as late response (H-reflex and F-wave testing) and is usually performed on nerves more proximal to the spine. These segments include the first several centimeters of a compound nerve emerging from the spinal cord or brainstem. They are helpful in diagnosing conditions of radiculopathies, plexopathies, polyneuropathies, and proximal mononeuropathies (AANEM, 2004).

Late response studies are additional studies complementary to NCV and are performed during the same patient evaluation.

The H-reflex involves conduction from the periphery to and from the spinal cord. As a result, the responses that occur are longer than those from direct motor response. These studies may be abnormal even when distal motor response is unremarkable (Fisher, 2002). The H-reflex study involves the assessment of the gastrocnemius/soleus muscle complex in the calf, and is usually performed bilaterally due to the need to assess symmetrical results in determining abnormalities. A bilateral study involves an entirely separate procedure for each side evaluated. In rare cases, it may be necessary to test other muscles, such as the upper limb muscles. In this case, H-reflex studies may also be performed in the arm (flexor carpi radialis muscle) and small muscles of the hand and foot. Typically, only two studies are performed in any given exam.

The F-wave study is a late response similar to the H-reflex. F-wave studies are used to assess the proximal segments of the motor nerve function, and are performed in combination with the examination of motor nerves, although the study requires using different machine settings and separate stimulation settings to obtain larger numbers of responses. It requires activation of the motor axon in producing a particular response. It is one to two m/s shorter than H-reflexes and is most prominent with high intensity stimulation (Fisher, 2002). The number of F-wave studies performed is dependent on the diagnosis, and other electrodiagnostic findings already evidenced. It may be appropriate in some cases to perform some NCV studies with F-wave and some without F-wave studies.

Professional Societies/Organizations: The AANEM recommends that a typical nerve conduction examination include: development of a differential diagnosis based upon appropriate history and physical exam, the NCV study (recording and studying of electrical responses from peripheral nerves or muscles) and the completion of indicated needle EMG studies to evaluate the differential diagnosis and to complement the nerve conduction study.

The minimum standards recommended by the AANEM for NCV testing are as follows:

- The testing is medically indicated.
- It is performed using equipment that provides assessment of all parameters of the recorded signals (equipment designed for screening purposes is not acceptable).
- The test is performed by a physician, or by a trained technician under the direct supervision of a physician.
- The EMG must be performed by a trained physician.
- One physician supervises and performs all components of the exam.

In a position statement published by the AANEM regarding the performance and interpretation of electrodiagnostic studies (AANEM, 2006), the AANEM states, "The performance of or interpretation of NCS separately from the needle EMG component of the testing should clearly be the exception. Nerve conduction studies performed independent of needle EMG may only provide a portion of the information needed to diagnose muscle, nerve root, and most nerve disorders. When the NCS is used on its own without integrating needle EMG findings, or when an individual relies solely on a review of NCS data, the results can be misleading and important diagnoses may be missed. Moreover, individuals who interpret NCV data without patient interaction or who rely on studies that have delayed interpretation, who have interpretation made off-site, and who interpret results without complementary information obtained from EMG studies are not meeting the standards outlined in the AANEM policy recommendations. "

Summary: Nerve conduction studies (NCS) are part of an electrodiagnostic evaluation, and are an extension of the neurologic portion of a physical examination. Both require detailed knowledge of a patient and his/her disease. The testing is performed as part of consultation for diagnosis or as follow-up of an existing condition. The appropriate number of studies to be performed should be left to the judgment of the physician performing the evaluations. However, some cases require additional testing, and in some situations it may be necessary to test a contralateral asymptomatic limb to establish normal values for a patient. In this situation, the physician should be able to provide the necessary documentation to justify the additional testing.

Automated Nerve Conduction Testing

Automated nerve conduction tests can be used in a variety of clinical settings, including a physician's office, without the need for specialized training or equipment. Most recently, portable devices have been developed to provide nerve conduction studies at the point of care (e.g., primary care setting), particularly for carpal tunnel evaluation and evaluation of diabetic peripheral neuropathy. Manufacturers state these devices have computational algorithms, provide delivery of stimulus, measure and analyze the patient's response, and provide a detailed report of study results.

NC-stat System (NEUROMetrix[®] Inc., Waltham, MA) is a hand-held, noninvasive, automated nerve conduction testing system that has been proposed by some authors as an alternative to conventional nerve conduction testing. The device has been marketed for use in an office or clinic setting, to assess nerves of the upper and lower extremities assisting in the diagnosis of peripheral nerve disorders such as carpal tunnel syndrome, diabetic peripheral neuropathy, and sciatica. The system consists of four components which include single-use biosensors, a battery-powered monitor that connects to the sensors and stores information, a docking station for the monitor and the onCall[®] information system to which hard-copy test data are transmitted for final analysis. The manufacturer suggests that data can be analyzed and readily available within minutes and then transmitted to the physician via email, internet or as a faxed document. A computerized system interprets the data. The proposed benefits of the device are ease of use and rapid results.

Another device proposed for automated testing of peripheral nerves is the Brevio nerve conduction monitoring system (NeuMed, Inc., West Trenton, NJ). According to the manufacturer, the device calculates latency and amplitude for sensory, motor, and f-wave responses using a single noninvasive neuro-sensor for testing performed on the patient. Similar to the NC-stat device, when testing is performed, the results can be immediately sent to a printer in the office or through a Web service for an electronic report.

U.S Food and Drug Administration (FDA): The initial approval by the FDA for the NC-stat System was given in 1998 (FDA 510[k] summary K982359) and was for measurement of neuromuscular signals that are useful in diagnosing and evaluating systemic and entrapment neuropathies. The device was originally approved for use as an adjunct to and not as a replacement for conventional electrodiagnostic measurements. Since the initial approval, at least four 510(k) approvals have been issued. The intended use of the device has not changed, although it has been modified to extend nerve testing capability (FDA, 1998).

The Brevio nerve conduction monitor received FDA approval in 2001 as a hand-held automated device utilized to perform motor and sensory nerve conduction testing on peripheral nerves in a clinical setting (FDA 510[k], K012069). The device consists of two units, a hand-held processor with LCD screen and a stimulator.

Literature Review: There are several published clinical trials evaluating the safety and efficacy of the NC-stat device. Leffler et al. (2000) studied two groups of 75 consecutive patients (an initial group, and a validation group) referred to an academic electrophysiology laboratory for upper extremity complaints in order to evaluate the NC-stat instrument in patients receiving formal neurodiagnostic studies. NC-stat detected distal motor latency in 97% of hands in the validation group and 92% in the initial group and detected F-wave latency in 65% of subjects detected by conventional means in the initial group, 92% in the validation group, with correlations to conventional F-wave measures of .84 (retrospective analysis) and .86, respectively. At 90% specificity, the NC-stat had a sensitivity rate of 86% for median neuropathy of the wrist (MNW) among those diagnosed with MNW by the neurologist. The authors reported that all patients were willing to undergo NC-stat testing again.

Vinik et al. (2004) compared the NC-stat System with conventional nerve conduction studies (supervised by a neurologist) in a case series of 17 patients with symptoms of diabetic neuropathy. Conventional nerve studies were used as the reference measurement. The authors compared results of ulnar and median distal motor latencies (DML) and F-waves obtained by both methods of testing. The NC-stat measurements were also correlated with a historical control population (i.e., data from NC-stat System). The NC-stat median and ulnar DMLs were significantly lower than the reference measurement

counterparts (median $P < 0.001$, ulnar $P < 0.05$). F-wave latencies did not demonstrate significant differences ($P > 0.05$). Validity of the NC-stat System was assessed by the Pearson product-moment correlation with the laboratory reference; the correlation coefficient ranged from 0.70 for the ulnar nerve DML to 0.96 for the median nerve DML ($P < 0.001$). When NC-stat measurements were compared to historical controls, significant differences were noted for all measurements ($p < 0.05$). The authors concluded that NC-stat results were similar to those obtained with conventional nerve conduction studies. However, this study evaluated upper extremity measurements, and the authors stated that further comparative trials are needed to assess lower extremity measurements.

Kong et al. (2006) evaluated the validity and reliability of automated NC-stat median and ulnar nerve conduction study measurements. NC-stat and reference nerve conduction studies were performed on 60 subjects. The authors reported that as a result of differences in electrode placement, NC-stat and reference mean values had systematic differences; however, the authors concluded that NC-stat median and ulnar nerve conduction studies are valid and reliable. Furthermore, the authors reported that the use of NC-stat would require an applicable reference range because of the systematic differences between test results.

Katz and associates (2006) attempted to establish a normal data set for median nerve studies in industrial workers using the NC-stat device. The authors' goals were to determine if the data set obtained in workers without carpal tunnel syndrome (CTS) symptoms corresponded to reference ranges noted on NeuroMetrix reports, to see if the reference values were applied appropriately to the screening studies in this industrial population, and to determine whether screening industrial workers with the NC-stat technology was a useful strategy for the employer to avoid hiring workers with pre-existing CTS. The study population consisted of 1695 persons applying for employment to a major heavy industry employer. Each person who met criteria for employment underwent screening using NC-stat on their dominant side, utilizing median-motor biosensors. Sensory biosensors were not available when the study was initiated. A frequency histogram of distal motor latency (DML) was constructed by the authors and revealed data that appeared to be normally distributed. The authors of this study reported that inspection of data interpreted by NeuroMetrix in the reports of the 1695 subjects did not correspond to the independent data analysis. For example, DML values between 3.6 and 4.3 milliseconds were considered "borderline" by NeuroMetrix in 221 patients; however, the frequency histogram demonstrated all of the values were within normal limits. A total of 194 subjects had values between 3.95 and 4.60 milliseconds and were flagged as "prolonged" by NeuroMetrix; however, the frequency histogram demonstrated that all of those values should have been interpreted as normal because, according to the authors, they were well below the 95% cut-off. One hundred and seventy-two subjects were flagged as "very prolonged", yet only 81 of those would be considered abnormal when using the 95% as a cut-off between normal and abnormal. The authors concluded that the NC-stat evaluation using DML is an ineffective method of screening for diagnosing CTS in industrial workers. The authors reported that, apparently, the normal values used by NeuroMetrix were determined using data from a very different population. The DML values measured using NC-stat were essentially identical to those obtained using traditional nerve conduction study techniques; however, without sensory conduction studies, the NC-stat has poor sensitivity and specificity in the diagnosis of CTS. Using the NeuroMetrix dataset, CTS would be over-diagnosed in an asymptomatic population of industrial workers.

In 2006, Vinik and colleagues conducted a comparative study utilizing automated nerve testing to characterize nerve conduction of patients with diabetes in the primary care setting. The study group consisted of a diabetes cohort and a control cohort, both of which received automated nerve conduction testing of the deep peroneal nerve with NC-stat. Testing was conducted by allied health professionals trained according to the manufacturer's instructions for use. Raw data and automated decision support analysis was made available for diagnosis and management. The recorded parameters included distal motor latency (DML), compound muscle action potential amplitude (CMAP), mean F-wave latency and the presence of A-waves. Nerve conduction studies were obtained in 324 limbs from 172 control subjects, and in 1434 patients from the diabetic subject cohort. The authors reported statistically significant differences in peroneal nerve conduction between the control and diabetic cohorts ($P < 0.001$). The diabetic cohort demonstrated DML and F-wave latencies that were prolonged compared to the control group, and the CMAP was reduced. Of the diabetic group, 75.1% had at least one peroneal nerve abnormality and 53.2% had bilateral abnormalities; the control group had 12.8% and 2.1%, respectively.

The authors concluded automated nerve conduction studies confirm diabetic peripheral neuropathy in the primary care setting and, furthermore, that the test has clinical utility.

Megerian et al (2007) conducted a retrospective analysis of a point-of-service nerve conduction study data registry. A total of 1190 patients who underwent testing were analyzed. Among those patients, 1585 limbs had both median and ulnar data and represented the analysis cohort. The median distal motor latency was 4.4 ± 1.2 m/s. Among the limbs in the analysis cohort, 483 had normal conduction studies, 842 indicated carpal tunnel syndrome, and 86 identified an ulnar neuropathy. A total of 174 limbs were labeled nonspecific neuropathy. The authors concluded that point-of-service testing for carpal tunnel syndrome was applied to appropriate patient subpopulations, was performed in accordance with evidence-based testing parameters, and demonstrated relevant diagnostic outcomes. The authors did not evaluate physician clinical interpretation of the nerve conduction studies, and data from a single registry was evaluated, leading to possible selection bias.

The Washington State Department of Labor and Industries (2006) conducted a technology assessment evaluating NC-Stat System and concluded that the scientific evidence does not show NC-stat to be equivalent to conventional methods for nerve conduction testing.

A Health Technology Brief by Hayes (2007) found the evidence base insufficient to demonstrate equivalence of the NC-stat System to conventional electrodiagnostic testing. Hayes reported the NC-stat System may return a nondiagnostic result in approximately 8% to 10% of subjects compared with the conventional systems. Additionally, they reported there are some concerns among the specialist community that nonspecialists do not have the expertise to diagnose such conditions, and that diagnoses based solely on the NC-stat System may be unreliable in some cases because of the need for additional examinations such as EMG.

Evidence evaluating the diagnostic utility of the Brevio nerve conduction monitor was not found in the published literature.

Summary: No evidence evaluating the diagnostic utility of the Brevio nerve conduction monitor system was found in the published literature, and there is limited evidence evaluating the diagnostic utility of the NC-stat System. Most of the published clinical studies have evaluated use of the NC-stat device for assessment of median and ulnar nerves. Some authors have reported a strong correlation when comparing NC-stat with reference standards (Perkins, et al., 2006; Kong, et al., 2006). Additionally, while some authors have found high sensitivity and specificity when examining NC-stat accuracy for carpal tunnel syndrome (Leffler, et al., 2000; Rotman, et al., 2004), other authors have reported NC-stat is no more sensitive or specific than a traditionally performed distal motor latency for the diagnosis of carpal tunnel syndrome (Katz, 2006). In addition, the diagnostic accuracy for other conditions involving the lower extremities has not been sufficiently demonstrated in the literature. Moreover, there is some concern among specialists regarding lack of standard EMG testing and incomplete assessment. The AANEM does not have a formal position statement or policy addressing NC-stat; however, the Association recommends electrodiagnostic studies be performed by properly trained physicians and that interpretation of nerve conduction study data alone, absent face-to-face patient interaction and control over the process, provides substandard care (AANEM, 2006). There is insufficient evidence to demonstrate equivalence or superiority of the NC-stat device in comparison to conventional electrodiagnostic testing methods.

Number of Services Recommended

Except in limited clinical situations, evidence in the published, peer-reviewed scientific literature, textbooks and statements by the AANEM indicates that both nerve conduction studies (NCS) and needle electromyography (NEMG) are required to diagnose peripheral nervous system disorders. Circumstances under which NCS and EMG should not be performed together include, but are not limited to, limited follow-up studies of neuromuscular structures that have undergone previous electrodiagnostic evaluation, the current use of anticoagulants, the presence of lymphedema, or when a patient cannot tolerate the needle EMG procedure. In addition, the AANEM indicates that for suspected carpal tunnel syndrome, the extent of the needle EMG examination depends on the results of the NCSs and the differential diagnosis considered for the individual patient (AANEM, 2004).

| Table 1 | | | | | |
|---|---|---|-------------|--|---|
| Indication | Needle Electromyography (EMG) CPT™ Codes 95860-95864 and 95867-95870 | Nerve Conduction Studies (NCS) CPT™ Codes 95900,95903, 95904 | | Other Electromyographic Studies CPT Codes 95934, 95936, 95937 | |
| | | Motor NCS with and/or without F Waves | Sensory NCS | H-Reflex | Neuromuscular Junction Testing (Repetitive Stimulation) |
| Carpal Tunnel (unilateral) | 1 | 3 | 4 | n/a | n/a |
| Carpal Tunnel (bilateral) | 2 | 4 | 6 | n/a | n/a |
| Radiculopathy | 2 | 3 | 2 | 2 | n/a |
| Mononeuropathy | 1 | 3 | 3 | 2 | n/a |
| Polyneuropathy/Mononeuropathy Multiplex | 3 | 4 | 4 | 2 | n/a |
| Myopathy | 2 | 2 | 2 | n/a | 2 |
| Motor Neuropathy (e.g., ALS) | 4 | 4 | 2 | n/a | 2 |
| Plexopathy | 2 | 4 | 6 | 2 | n/a |
| Neuromuscular Junction | 2 | 2 | 2 | n/a | 3 |
| Tarsal Tunnel Syndrome (unilateral) | 1 | 4 | 4 | n/a | n/a |
| Tarsal Tunnel Syndrome (bilateral) | 2 | 5 | 6 | n/a | n/a |
| Weakness, fatigue, cramps, or twitching (local) | 2 | 3 | 4 | n/a | 2 |
| Weakness, fatigue, cramps, or twitching (general) | 4 | 4 | 4 | n/a | 2 |
| Pain, numbness, or tingling (unilateral) | 1 | 3 | 4 | 2 | n/a |
| Pain, numbness, or tingling (bilateral) | 2 | 4 | 6 | 2 | n/a |

Table 1 summarizes the recommendations of the AANEM regarding the reasonable maximum number of studies per diagnostic category necessary for a physician to arrive at a diagnosis for 90% of patients with that final diagnosis (AANEM, 2004).

Coding/Billing Information

Note: This list of codes may not be all-inclusive.

When medically necessary:

| CPT®* Codes | Description |
|------------------------|---|
| 95900 | Nerve conduction, amplitude and latency/velocity study, each nerve; motor, without F-wave study |
| 95903 | Nerve conduction, amplitude and latency/velocity study, each nerve; motor, with F-wave study |
| 95904 | Nerve conduction, amplitude and latency/velocity study, each nerve; sensory |
| 95934 | H-reflex, amplitude and latency study; record gastrocnemius/soleus muscle |
| 95936 | H-reflex, amplitude and latency study; record muscle other than gastrocnemius/soleus muscle |

| HCPCS Codes | Description |
|------------------------|--------------------|
| | No specific codes |

| ICD-9-CM Diagnosis Codes | Description |
|---|---|
| 138 | Late effects of acute poliomyelitis |
| 192.2 | Malignant neoplasm of spinal cord |
| 192.3 | Malignant neoplasm of spinal meninges |
| 225.3 | Benign neoplasm of spinal cord |
| 333.2 | Myoclonus |
| 333.3 | Tics of organic origin |
| 333.6 | Idiopathic torsion dystonia |
| 333.7 | Symptomatic torsion dystonia |
| 333.82 | Orofacial dyskinesia |
| 333.83 | Spasmodic torticollis |
| 336.9 | Spinal cord myelopathy |
| 335.20 | Amyotrophic lateral sclerosis |
| 335.21 | Progressive muscular atrophy |
| 335.22 | Progressive bulbar palsy |
| 335.24 | Primary lateral sclerosis |
| 337.0 | Idiopathic peripheral autonomic neuropathy |
| 337.3 | Autonomic dysreflexia |
| 340 | Multiple sclerosis |
| 352.6 | Multiple cranial nerve palsies |
| 353.5 | Neuralgic amyotrophy |
| 354.0 | Carpal tunnel syndrome |
| 357.82 | Critical illness polyneuropathy |
| 358.00-358.1 | Myasthenia gravis |
| 710.4 | Polymyositis |
| 721.0 | Cervical spondylosis without myelopathy |
| 721.1 | Cervical spondylosis with myelopathy |
| 721.41 | Spondylosis with myelopathy, thoracic region |
| 721.42 | Lumbosacral myelopathy, lumbar region |
| 722.4 | Degeneration of cervical intervertebral disc |
| 722.51 | Degeneration of thoracic or thoracolumbar intervertebral disc |

| | |
|--------|---|
| 722.52 | Degeneration of lumbar or lumbosacral intervertebral disc |
| 723.0 | Spinal stenosis in cervical region |
| 952.00 | C1-C4 level spinal cord injury, unspecified |
| 952.10 | T1-T6 level spinal cord injury, unspecified |
| 952.2 | Lumbar spinal cord injury without spinal bone injury |
| 952.3 | Sacral spinal cord injury without spinal bone injury |
| 952.4 | Cauda equina spinal cord injury without spinal bone injury |
| 952.8 | Multiple sites of spinal cord injury without spinal bone injury |

Experimental/Investigational/Unproven/Not medically necessary:

| CPT* Codes | Description |
|------------|------------------|
| | No specific code |

| HCPCS Codes | Description |
|-------------|--|
| S3905 | Non-invasive electrodiagnostic testing with automatic computerized hand-held device to stimulate and measure neuromuscular signals in diagnosing and evaluating systemic and entrapment neuropathies |

| ICD-9-CM Diagnosis Codes | Description |
|--------------------------|-------------|
| | All codes |

*Current Procedural Terminology (CPT®) © 2006 American Medical Association: Chicago, IL.

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