

Medical Affairs Policy & Procedure

Title/Service: Medial Branch Neuroablation (Medial Branch Neurolysis, Zygapophysial Joint Neurotomy, Radiofrequency Neuroablation, Radiofrequency Denervation, Medial Branch Neurotomy, Facet Neurotomy, Facet Rhizotomy)

Revised	
Reviewed	08/27/04, 07/28/06, 11/16/07, 05/16/08, 12/28/09, 07/27/10, 09/16/2011
Developed	08/27/04
Policy Committee Approval	09/16/2011

Description:

Neuroablation is the destruction of the medial branch nerve that innervates a symptomatic facet joint and is used to interrupt pain impulses. The expected outcome of neuroablation is a decrease in pain symptoms that can last for six to eighteen months.

Indications of Coverage:

Neuroablation is considered medically necessary when **all** of the following criteria are met:

- A. Chronic axial back or neck pain symptoms (at least three months in duration) without radicular symptoms (pain, numbness, or tingling in an extremity). Radicular symptoms should not be confused with peripheral causes of symptoms, such as carpal tunnel syndrome or diabetic neuropathy.
- B. Failure of a one-month trial of more conservative therapies including anti-inflammatory medications (or other analgesic medication if the anti-inflammatory medication is contraindicated) used on a regular basis and physical therapy or chiropractic manipulation.
- C. Documentation of two appropriately performed positive diagnostic comparative anesthetic blocks (see Facet Joint Injection and Medial Branch Nerve Block guideline).
- D. The diagnostic blocks provided significant (at least 80%) relief following the procedure when performing activities that previously aggravated the individual's symptoms. Symptom relief must be documented for a period of time that is concordant with the typical minimum duration of action for the type of local anesthetic used. (For example, mepivacaine should be effective for longer than lidocaine and bupivacaine should be effective for longer than both lidocaine and

mepivacaine.) The second diagnostic injection procedure must be performed at least one week after the initial injection procedure.

- Fluoroscopic guidance is required during medial branch neuroablation.
- Documentation of the contraindication to thermal neuroablation (for example, spinal instrumentation, pacemaker, implantable cardiac defibrillator) is required if chemical agents (for example phenol or alcohol) are used for the ablation procedure.

Limitations of Coverage:

- A. Review contract and endorsements for exclusions and prior authorization or benefit requirements.
- B. If used for a condition/diagnosis other than is listed in the Indications of Coverage, deny as experimental or investigative.
- C. If used for a condition/diagnosis that is listed in the Indications of Coverage, but the criteria are not met, deny as not medically necessary.
- D. Destruction of the medial branch nerve by any method other than thermal neuroablation (for example, cryoablation or phenol), without documentation of the contraindication to thermal ablation, is considered experimental or investigative.
- E. Neuroablation is considered investigative in any of the following situations as there is insufficient peer-reviewed scientific literature supporting neuroablation in these situations:
 - 1. When fluoroscopic guidance is not used during the procedure
 - 2. For any nerve other than the medial branch nerve
 - 3. When performed using pulsed ablation
- F. Neuroablation is considered not medically necessary in any of the following situations:
 - 1. In the absence of two positive diagnostic blocks
 - 2. When more than one neuroablation procedure on one side of a particular level of the spine is performed less than twelve months after an earlier neuroablation procedure

Documentation Required:

- Procedure reports for the two diagnostic injections
- Documentation of the results of the diagnostic injections

Rationale:

Neuroablation is not indicated without appropriate diagnostic injections. Because of the high incidence of false-positive responses after a single diagnostic injection, comparative blocks are performed to establish the facet joint/medial branch nerve as the source of the symptoms. The diagnostic injections establish the medical necessity of the neuroablation procedure.

Other techniques for destruction of the nerve have been used, but have not been shown to be an improvement or provide an increased duration of action over standard thermal ablation techniques. Neuroablation has been suggested as a management technique for pain from other nerves throughout the body, but at this time, there is insufficient evidence to support the effectiveness of the procedure for any other nerves.

Neuroablation is frequently effective for extended periods of time. The necessity of a repeat neuroablation procedure is dependent on the effectiveness of the previous procedure. If the neuroablation procedure was effective for a short period of time, it is unlikely that a repeat procedure will provide any additional benefit. The duration of action of a neuroablation procedure, as reported in the literature, is inconsistent and varies widely. Currently, there are limited controlled clinical trials that have evaluated the expected duration of action. A 2000 study by Dreyfuss documented 90% relief at one year for the majority of individuals in the study. An article by Schofferman found a ten to eleven month average duration of action from the previous neuroablation procedure. Therefore, the literature suggests that approximately one year of pain relief can be expected after neuroablation.

References:

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Approved by the Medical Director