IEHP UM Subcommittee Approved Authorization Guidelines

Percutaneous Radiofrequency Neurotomy
(Facet Denervation: Neurotomy, Rhizotomy, or Articular Rhizolysis)

Policy:

Percutaneous Radiofrequency Neurotomy is considered medically necessary for treatment of Members with intractable cervical or lumbar back pain with or without sciatica in the outpatient setting when all of the following are met:

1. Member has experienced severe pain limiting activities of daily living for at least 6 months; and
2. Member has had no prior spinal fusion surgery; and
3. Neuroradiologic studies are negative or fail to confirm disc herniation; and
4. Member has no significant narrowing of the vertebral canal or spinal instability requiring surgery; and
5. Member has tried and failed conservative treatments such as bed rest, back supports, physiotherapy, correction of postural abnormality, as well as pharmacotherapies (e.g., anti-inflammatory agents, analgesics, and muscle relaxants); and
6. Trial of facet joint injections has been successful in relieving the pain at least 50% reduction of pain; and
7. At least 6 months has elapsed since a prior denervation treatment (per side, per anatomical spine level).

Covered CPT Codes:

64490, 64491, 64492, 64493, 64494, 64495, 64622, 64623, 64626, 64627, 77003

Non-pulsed radiofrequency facet denervation is considered experimental and investigational for all other indications.

CMS Local Coverage Determination for Paravertebral Facet Joint Block and Facet Joint Denervation (L28288):

If the patient gets sufficient relief of pain from a facet joint block for a meaningful period of time but the pain recurs, one of the options is to denervate the facet joint. This procedure requires...
placement of a needle in the facet joint under fluoroscopic or CT guidance, injection of a local anesthetic agent, and if the pain is relieved (confirming that the needle is in the area desired to be denervated) an injection of a neurolytic agent will be administered to destroy the facet joint nerve. This denervation can also be achieved by passing an electric current through a similarly placed electrode, by applying heat or by using radiofrequency.

When facet joint block has been effective in managing the back pain under consideration, then a permanent denervation may be considered, but should be restricted only to the level or levels that, from the results of the blocks, can be reasonably considered the source of the pain. This may not include all the levels that were blocked.

CPT/HCPCS Codes:
64490, 64491, 64492, 64493, 64494, 64495, 64622, 64623, 64626, 64627, 77003

Medi-Cal:
Update
General Medicine | July 2010 | Bulletin 433

2010 CPT-4/HCPCS Updates: Implementation September 1, 2010:
The 2010 updates to the Current Procedural Terminology – 4th Edition (CPT-4) and Healthcare Common Procedure Coding System (HCPCS) National Level II codes will be effective for Medi-Cal for dates of service on or after September 1, 2010. Specific policy is detailed below. Updated manual replacement pages reflecting new policy or policy changes will be published in a future Medi-Cal Update.

New Medi-Cal Benefits:
The following CPT-4 surgical procedure codes have been added as Medi-Cal benefits:,*64490, *64491, *64492, *64493, *64494 and *64495.

The procedure codes above identified with an asterisk ( * ) are payable only to the primary surgeon.

Medi-Cal’s TAR and Non-Benefit list March 2010:
Destruction by Neurolytic Agent, Somatic Nerves
64622  Destruction by neurolytic agent, paravertebral facet joint nerve; lumbar or sacral, single level ...........................................3

64623  Destruction by neurolytic agent; paravertebral facet joint nerve; lumbar or sacral, each additional level .........................3

64626  Destruction by neurolytic agent; paravertebral facet joint nerve; cervical or thoracic, single level ...........................................3
ECRI: Evidence Based Research:

Searches identified 169 articles, and 154 of these were excluded because they did not meet our 12 pre-specified inclusion criteria. An additional five studies were excluded due to several large baseline differences between groups. The remaining 10 articles described nine unique studies: six compared RF denervation to sham; one compared RF annuloplasty to conservative management; one compared RF annuloplasty to IDET, and one compared coblation nucleoplasty to conservative management.

Conclusions:

The evidence is insufficient to determine whether radiofrequency denervation yields different outcomes from sham denervation. The insufficiency of evidence to answer the Key question should not be interpreted as evidence that RFA does not work. Rather, ECRI deemed the evidence insufficient to determine the answer to the question.

Overall, the six RF denervation studies were well-designed and conducted. All six randomized patients to groups, and all 6 blinded patients to group assignment. Five of the six also blinded the managing physician, and the sixth (the Oh study) did not report whether the managing physician was blinded. Three of the six RF denervation studies used concealment of allocation, and the other three did not report this information. Attrition was generally low. The scores for internal validity were High or Moderate for all outcomes in all of these 6 studies, with scores ranging from 7.3 to 9.1 on the 0-10 scale (with 10 indicating high internal validity).

Table 3. Evidence Base:

<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Centers</th>
<th>Enrollment Dates</th>
<th>N for RFA</th>
<th>N for Other Treatment</th>
<th>Length of Follow up</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Denervation vs. Sham</td>
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<td></td>
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<tr>
<td>van Wijk et al. (2005)†⁵⁹</td>
<td>The Netherlands</td>
<td>4 medical centers in the Netherlands</td>
<td>May 96 - Jan 99</td>
<td>40</td>
<td>41</td>
<td>At least 3 months in all patients.</td>
</tr>
<tr>
<td>Leclaire et al. (2001)†⁶⁰</td>
<td>Canada</td>
<td>Center Hospitalier de l'Universite de Montreal, Hopital Notre-Dame, Montreal</td>
<td>Oct 93- Dec 96</td>
<td>36</td>
<td>34</td>
<td>66/70 (94%) were followed for 3 months; the other 4 (6%) were followed for 1 month.</td>
</tr>
<tr>
<td>Study</td>
<td>Country</td>
<td>Centers</td>
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<tr>
<td>van Kleef et al.</td>
<td>The Netherlands</td>
<td>Pain Management and Research Centre, University Hospital Maastricht</td>
<td>June 94 - April 96</td>
<td>15</td>
<td>16</td>
<td>3 mos in all pts. Failures were excluded then, therefore reported timepoints at 6 &amp; 12 mos were only for 3 mos successes.</td>
</tr>
<tr>
<td>Lord et al.</td>
<td>Australia</td>
<td>Cervical Spine Research Unit, Mater Misericordiac Hospital, Newcastle</td>
<td>NR</td>
<td>12</td>
<td>12</td>
<td>&lt;100 days: 14/24 (58%) 100-200 days: 2/24 (8%) 200-300 days: 3/24 (12%) &gt;300 days: 5/24 (21%)</td>
</tr>
<tr>
<td>Oh et al. (2004)</td>
<td>South Korea</td>
<td>Clinical Pain Research Center, Samsung Fine Hospital, Seoul</td>
<td>Jan 01 - Sept 01</td>
<td>26</td>
<td>23</td>
<td>Mean 4 months (neither range nor dispersion reported)</td>
</tr>
<tr>
<td>Geurts et al. (2003)</td>
<td>The Netherlands</td>
<td>4 medical centers in the Netherlands</td>
<td>July 96 - Jan 99</td>
<td>45</td>
<td>38</td>
<td>&lt;3 months: 3/83 (4%) 3-6 months: 66/83 (80%) 6-9 months: 9/83 (11%) 9-12 months: 2/83 (2%) &gt;12 months: 3/83 (4%)</td>
</tr>
</tbody>
</table>

**Systematic Review**

<table>
<thead>
<tr>
<th>Study</th>
<th>Conclusions Specific to RFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kirpalani et al. (2008)</td>
<td>RF denervation: “RF neurotomy through a continuous or pulsed approach has been shown through limited studies to provide lasting pain relief from cervical facet joint dysfunction for several months” (p773)</td>
</tr>
<tr>
<td>Manchikanti et al. (2008)</td>
<td>RF denervation: “Based on the ACOEM [American College of Occupational and Environmental Medicine] quality of evidence criteria, the evidence category is B - moderate, with evidence based on at least one high quality study, in managing cervical and lumbar facet joint pain.” (p425)</td>
</tr>
<tr>
<td>Cohen et al. 2010</td>
<td>151 total patients (# of patients per group was not reported) “Group 0 received [RF] denervation based solely on clinical findings;  Group 1 underwent denervation contingent on a positive response to a single diagnostic block; and  Successful outcome at 3 months:  Group 0:17 patients (33%)  Group 1:8 patients (16%)  Group 2:11 patients (22%)  Using current reimbursement scales, these findings suggest that proceeding to RF denervation without a diagnostic block is the most cost-effective treatment paradigm.</td>
</tr>
</tbody>
</table>
Medical Review Criteria:

Apollo & InterQual Concur this is covered under specific circumstances:

Facet Denervation: Neurotomy, Rhizotomy, or Articular Rhizolysis

Coverage – All of the following must be met:

1. Severe pain limiting activities of daily living for at least 6 months.
2. No prior spinal fusion surgery
3. Neuroradiologic studies are negative or fail to confirm disc herniation
4. No significant narrowing of the vertebral spinal canal or spinal instability requiring surgery is present.
5. Patient has tried and failed conservative therapy for a period of 3 months or longer – e.g., physical therapy, home exercise programs, and pharmacologic therapies.
6. The cervical zygapophyseal or lumbar joint pain has been confirmed by local anesthetic blocks with at least a 50% reduction in pain.
7. At least 6 months has elapsed since a prior denervation treatment (per side, per anatomical spine level).

Note: only 1 denervation procedure is usually indicated within a 12-month period.

Major Insurance Carriers (Aetna, Anthem, Cigna):

Nonpulsed radiofrequency facet denervation (also known as facet neurotomy, facet rhizotomy, or articular rhizolysis) is considered medically necessary for treatment of members with cervical facet pain (C1-C2 thru C7-T1 vertebrae) and lumbosacral facet pain (T12-L1 thru L5-S1 vertebrae) is considered medically necessary when all of the following criteria are met:

1. Member has experienced severe pain (non radicular) limiting activities of daily living for at least 6 months; and
2. Member has had no prior spinal fusion surgery in the vertebral level being treated; and
3. Neuroradiologic studies are negative or fail to confirm disc herniation; and
4. Member has no significant narrowing of the vertebral canal or spinal instability requiring surgery; and

5. Member has tried and failed conservative treatments such as bed rest, back supports, physiotherapy, correction of postural abnormality, as well as pharmacotherapies (e.g., anti-inflammatory agents, analgesics and muscle relaxants); and

6. A diagnostic, temporary block with local anesthetic of the facet nerve (medial branch block) or injection under fluoroscopic guidance into the facet joint has resulted in at least a 50% reduction in pain for the duration of the specific local anesthetic effect used [e.g. generally 3-4 hours for bupivacaine (Marcaine®, Sensorcaine®) and 30 minutes to 1 hour for lidocaine (Xylocaine®)]; and

7. A minimum time of six (6) months has elapsed since prior RF treatment (per side, per anatomical level of the spine). Note: a diagnostic, temporary block (as above) is not required for repeat RF at a previously treated site, if it has been less than one year since the last RF.

Nonpulsed radiofrequency facet denervation is considered experimental and investigational for all other indications.

Only 1 treatment procedure per level per side is considered medically necessary in a 6-month period.

**Background:**

Radiofrequency facet (RF) neurolysis is a procedure in which sensory afferent nerve fibers are selectively destroyed with heat produced by radio waves delivered through an electrode. Treatment objectives are to eliminate pain, reduce the likelihood of recurrence and prolong the time to recurrence by selectively destroying pain fibers without inducing excessive sensory loss, motor dysfunction, or other complications.

**Definitions**

- **Ablation:** the removal or destruction of a body part or tissue or its function. Ablation may be performed by surgery, hormones, drugs, radiofrequency, heat or other methods.
- **Facet:** interlocking bones on the vertebrae which allow the spine to flex while maintaining its stability.
- **Neurolysis:** the destruction of nerves or nerve tissue by heat, cutting or by chemical injection.
- **Radiofrequency:** an invasive procedure that involves heating tissue in order to destroy it.

**Effective Date:** October 20, 2005  
**Reviewed Annually:** November 12, 2014

**Revised:**

- February 9, 2011
- August 22, 2012
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Bibliography:


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