EFFECTIVE DATE: 05|01|2026
POLICY LAST REVIEWED: 01|21|2026

OVERVIEW

Radiofrequency ablation (RFA) and cryoneurolysis of nerves have been proposed as treatments for several different types of pain. RFA has been used to treat a number of clinical pain syndromes such as trigeminal neuralgia as well as cervical and lumbar pain. This review evaluates the application of RFA and cryoneurolysis in peripheral sites distant from the spine.

Morton neuroma is a common and painful compression neuropathy of the dorsal foot that is also referred to as intermetatarsal neuroma, interdigital neuroma, interdigital neuritis, and Morton metatarsalgia. Morton neuroma has been treated with conservative measures (pads, orthotics, drugs) or surgery. Minimally invasive procedures, including intralesional alcohol injection, radiofrequency ablation (RFA) and cryoablation, have been investigated as alternatives to open surgery. These methods have also been used to treat other peripheral neuromas.

MEDICAL CRITERIA

Peripheral Nerve CPT Code 64640
Medicare Advantage Plans and Commercial Products
Peripheral nerve or branch ablation may be considered medically necessary when the criteria in the online tool is met. Please refer to the Prior Authorization of Services, Treatments or Procedures policy for the appropriate clinical criteria source.

Genicular Nerve CPT Code 64624
Medicare Advantage Plans and Commercial Products
Not applicable.

Other Nerves/Neuromas CPT Codes 64632, 0440T – 0442T
Medicare Advantage Plans and Commercial Products
Not applicable.

Device HCPCS Codes C9808, C9809
Medicare Advantage Plans
Nerve cryoablation probe and cryoablation needle may be considered medically necessary when the associated procedure is determined to be medically necessary AND when the criteria in the Medical Necessity policy is met. Refer to the Related Policies section.

Commercial Products
Not applicable.

PRIOR AUTHORIZATION

Peripheral Nerve CPT Code 64640
Medicare Advantage Plans and Commercial Products
Prior authorization is required for Medicare Advantage Plans and recommended for Commercial Products via the online tool for participating providers.

Genicular Nerve CPT Code 64624
Medicare Advantage Plans and Commercial Products
Not applicable.

Other Nerves/Neuromas CPT Codes 64632, 0440T – 0442T
Medicare Advantage Plans and Commercial Products
Not applicable.

Device HCPCS Codes C9808, C9809
Medicare Advantage Plans
Prior authorization is required for Medicare Advantage Plans and recommended for Commercial Products.

Commercial Products
Not applicable.

POLICY STATEMENT

Peripheral Nerve CPT Code 64640
Medicare Advantage Plans and Commercial Products

Because CPT code 64640 is used to represent ablation of peripheral nerve, but is not specific to a particular method of treatment (i.e. radiofrequency or cryoneurolysis), medical necessity review is needed to determine specifically what procedure is being performed.

Peripheral nerve or branch ablation may be considered medically necessary when the criteria in the online tool is met. Please refer to the Prior Authorization of Services, Treatments or Procedures policy for the appropriate clinical criteria source.

Cryoneurolysis of peripheral nerves to treat pain associated with knee osteoarthritis or total knee arthroplasty is not covered for Medicare Advantage Plans and not medically necessary for Commercial Products as the evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Radiofrequency ablation or cryoneurolysis of peripheral nerves to treat pain associated with occipital neuralgia or cervicogenic headache is not covered for Medicare Advantage Plans and not medically necessary for Commercial Products as the evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Genicular Nerve CPT Code 64624
Medicare Advantage Plans
Ablation of the genicular nerve (radiofrequency or cryoneurolysis) is covered.

Commercial Products
Ablation of the genicular nerve (radiofrequency or cryoneurolysis) is not medically necessary as the evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Other Nerves/Neuromas CPT Codes 64632, 0440T – 0442T
Medicare Advantage Plans
Minimally invasive ablation procedures, including intralesional alcohol injection, radiofrequency ablation, and cryoablation, are not covered for the treatment of Morton and other peripheral neuromas as the evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Commercial Products

Minimally invasive ablation procedures, including intralesional alcohol injection, radiofrequency ablation, and cryoablation, are not medically necessary for the treatment of Morton and other peripheral neuromas as the evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Device HCPCS Codes C9808, C9809

Medicare Advantage Plans

Nerve cryoablation probe and cryoablation needle may be considered medically necessary when the associated procedure is determined to be medically necessary and when the criteria in the Medical Necessity policy is met. Refer to the Related Policies section.

Commercial Products

Nerve cryoablation probe and cryoablation needle are not medically necessary as the evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

COVERAGE

Benefits may vary between groups and contracts. Please refer to the appropriate Benefit Booklet, Evidence of Coverage or Subscriber Agreement for applicable surgery and not medically necessary/not covered benefits/coverage.

BACKGROUND

Nerve Radiofrequency Ablation

Nerve radiofrequency ablation (RFA) is a minimally invasive method that involves the use of heat and coagulation necrosis to destroy tissue. A needle electrode is inserted through the skin and into the tissue to be ablated. A high-frequency electrical current is applied to the target tissue and a small sphere of tissue is coagulated around the needle by the heat generated. It is theorized that the thermal lesioning of the nerve destroys peripheral sensory nerve endings, resulting in the alleviation of pain. Cooled RFA is a variation of nerve RFA using a water-cooled probe that applies more energy at the desired location without excessive heat diffusing beyond the area, causing less tissue damage away from the nerve. The goal of ablating the nerve is the same.

RFA is also distinguished from pulsed radiofrequency (RF) treatment, which has been investigated for different types of pain. The mechanism of action of pulsed RF treatment is uncertain but it is thought not to destroy the nerve. It does produce some degree of nerve destruction but is thought to cause less damage than standard RFA. Some studies refer to pulsed RF treatment as ablation.

Cryoneurolysis

Cryoneurolysis is being investigated to alleviate pain. Temperatures of -20° to -100°C applied to a nerve cause Wallerian (anterograde axonal) degeneration, with disruption of nerve structure and conduction but maintenance of the perineural and epineural elements of the nerve bundle. Wallerian degeneration allows complete regeneration and recovery of nerve function in about 3 to 5 months. The iovera° cryoablation system is a portable handheld device that applies percutaneous and targeted delivery of cold to superficial peripheral nerves.

Neuroma

A neuroma is a pathology of a peripheral nerve that develops as part of a normal reparative process. Neuromas may develop after nerve injury or result from chronic irritation, pressure, stretch, poor repair of nerve lesions or previous neuromas, laceration, crush injury, or blunt trauma. Neuromas typically appear 6 to10 weeks after trauma, with most presenting within 1 to 12 months after injury or surgery. They may gradually enlarge over 2 to 3 years and may or may not be painful. Pain from a neuroma may be secondary to traction on the nerve by scar tissue, compression of the sensitive nerve endings by adjacent soft tissues, ischemia of the nervous tissue, or ectopic foci of ion channels that elicit neuropathic pain. Patients may describe the pain as low-intensity dull pain or intense paroxysmal burning pain, often triggered by external stimuli such as touch or temperature. Neuroma formation has been implicated as a contributor of

neuropathic pain in residual limb pain, post thoracotomy, postmastectomy, and post herniorrhaphy pain syndromes. Neuromas may coexist with phantom pain or can predispose to it.

Morton Neuroma
Morton neuroma is a common and painful compression neuropathy of the common digital nerve of the foot that may also be referred to as interdigital neuroma, interdigital neuritis, and interdigital or Morton metatarsalgia. It is histologically characterized by perineural fibrosis, endoneurial edema, axonal degeneration, and local vascular proliferation. Thus, some investigators do not consider Morton neuroma to be a true neuroma; instead, they consider it to be an entrapment neuropathy occurring secondary to compression of the common digital nerve under the overlying transverse metatarsal ligament. Morton neuroma appears 10-fold more often in women than in men, with an average age at presentation of around 50 years.

The pain associated with Morton neuroma is usually throbbing, burning, or shooting, and localized to the plantar aspect of the foot. It is typically located between the 3rd and 4th metatarsal heads, although it may appear in other proximal locations. The pain may radiate to the toes and can be associated with paresthesia. The pain can be severe, and the condition may become debilitating to the extent that patients are apprehensive about walking or touching their foot to the ground. It is aggravated by walking in shoes with a narrow toe box or high heels that cause excessive pronation and excessive forefoot pressure; removal of tight shoes typically relieves the pain.

Diagnosis
Although a host of imaging methods are used to diagnosis Morton neuroma, including plain radiographs, magnetic resonance imaging, and ultrasonography, objective findings are unique to this condition and are primarily used to establish a clinical diagnosis. Thus, a patient's toes often show splaying or divergence. Patients may describe the feeling of a "lump" on the foot bottom or a feeling of walking on a rolled-up or wrinkled sock. Clinical examination with medial and lateral compression may reproduce the painful symptoms with a palpable "click" on interspace compression (Mulder sign).

Treatment
Management of patients diagnosed with Morton neuroma typically starts with conservative approaches, such as the use of metatarsal pads in shoes and orthotic devices that alter supination and pronation of the affected foot. These approaches try to reduce pressure and irritation of the affected nerve. They may provide relief, but do not alter the underlying pathology. There is scant evidence to support the effectiveness or comparative effectiveness of these practices. In a case series, Bennett et al (1995) evaluated a 3-stage protocol of" stepped care" through which private practice patients (N=115) advanced from stage I (education plus footwear modifications, and a metatarsal pad) to stage II (steroid injections with local anesthetic or local anesthetic alone), and into stage III (surgical resection) if stages I and II were not relieved within 3 months. Overall, 97 (85%) of 115 patients believed that pain had been reduced with the treatment program. However,24 (21%) patients eventually required surgical excision of the nerve, and 23 (96%) of them had satisfactory results.

Minimally Invasive Ablation Procedures
Several minimally invasive procedures to treat refractory Morton and other peripheral neuromas are aimed at in situ destruction of the pathology, including intralesional alcohol injection, radiofrequency ablation (RFA) and cryoablation (also known as cryoneurolysis, cryolysis, and cryoanalgesia).

Dehydrated ethanol has been shown to inhibit nerve function in vitro, has high affinity for nerve tissue, and causes direct damage to nerve cells via dehydration, cell necrosis, and precipitation of protoplasm, leading to neuritis and a pattern of Wallerian degeneration. Technically, ethanol is a sclerosant that causes chemical neurolysis of the nerve pathology but is considered an ablative procedure for this evidence review. The use of ultrasound guidance during this procedure has been shown to increase surgical accuracy, improve outcomes, and shorten procedure duration. RFA uses heat generated by an electrode that conducts electromagnetic energy into a tissue or lesion to denature proteins and destroy cells. RFA is used to ablate a wide range of tissues or lesions, including osteoid osteoma; cardiovascular system pathologies; cervical pain syndromes; liver, lung, and other cancers; and varicosities. Cryoablation uses coolant to chill a cryoprobe to temperatures

below -75°C, which when inserted into a lesion, freezes and kills the tissue. It has been used to treat Morton neuroma, other chronic nerve pain syndromes, and conditions for which RFA has been used.

For individuals who have knee osteoarthritis (OA) who receive radiofrequency ablation (RFA) of peripheral nerves, the evidence includes systematic reviews of randomized controlled trials (RCTs), RCTs with 24 to 200individuals, and non-randomized comparative studies with up to 12 months of follow-up. Relevant outcomes include symptoms, functional outcomes, and quality of life (QOL). Knee OA is a common disorder in older adults. RFA of the genicular nerves has the potential to alleviate pain and improve function in this population, and might also delay or eliminate the need for total knee arthroplasty (TKA). At this time, there is high heterogeneity in methods and comparators. The systematic reviews generally found that RFA had a benefit on pain, function, and composite scores compared to the control treatments at 3 and 6-month follow-up; however, most estimates were determined to have moderate to high heterogeneity. The network meta-analysis compared multiple RFA modalities and found that cooled RFA had significantly improved efficacy for pain and function through 6 months follow-up compared with traditional or pulsed RFA. The 2 multicenter trials conducted in the U.S. used anesthetic nerve block under fluoroscopic guidance and compared efficacy of cooled RFA to either steroid injection or hyaluronic acid injection. Both studies reported a responder rate of approximately 70% at 6 months, which was significantly greater than the control conditions. A small, double-blind RCT of bipolar RFA with genicular nerve block compared to genicular nerve block and sham RFA found no differences between groups for visual analog score (VAS) pain or the Western Ontario and McMaster Universities Arthritis Index (WOMAC) scores through 12 months follow-up. Given that OA of the knee is a common condition; adequately powered studies , preferably blinded with active and sham controls and follow-up of at least 12 months, is needed to determine the benefits and potential harms of this treatment. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have knee OA or TKA who receive cryoneurolysis of peripheral nerves, the evidence includes 2 RCTs with a total of 304 participants, a comparative, retrospective cohort study of 57 participants, and a registry study of 140 individuals. Relevant outcomes include symptoms, functional outcomes, and QOL. In one RCT, cryoneurolysis in individuals with knee OA resulted in a greater decrease in WOMAC pain score, WOMAC total score, and VAS score at 30 days compared with sham-treated controls. However, subsequent measurements showed no significant benefit of cryoneurolysis on WOMAC score at 60 days or VAS scores at60 or 90 days. Another RCT investigated cryoneurolysis compared to standard of care for patients with knee OA who were planning to undergo TKA. Cryoneurolysis resulted in a lower rate of opioid consumption, a reduction in numeric rating scale (NRS) pain scores, and Knee injury and Osteoarthritis Outcome Score for Joint Replacement (KOOS JR) functional performance at 12 weeks post discharge. The retrospective cohort study reported superiority of cryoneruolysis on the KOOS JR and Short Form-12 item (SF-12) mental score at1 year follow-up; no significant differences were observed on the SF-12 physical score at 1 year follow-up or for any outcome at earlier 3 month assessment. A registry study found improved pain and lowered opioid use with cryoneurolysis prior to TKA; however, functional outcomes through 6 months were similar. Several technical issues including the optimal number of applications for each nerve, the duration of treatment, and the duration of thawing before moving the cannula have not been resolved. The most effective method for determining probe insertion location (eg, ultrasound-guided or based on anatomic landmarks) also needs to be established. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have plantar fasciitis who receive RFA of peripheral nerves, the evidence includes 2 RCTs and a meta-analysis. Relevant outcomes include symptoms, functional outcomes, and QOL. The meta-analysis pooled evidence from 2 RCTs and did not demonstrate a significant improvement in pain outcomes compared to the control group. The analysis revealed significant heterogeneity, and the overall quality of evidence was graded as low. One of the randomized trials only evaluated 17 individuals, and assessment of randomized outcomes was limited to 4 weeks post-treatment. A second RCT evaluated 36 individuals out to 12weeks. Both trials found RFA associated with pain reduction, but to be more confident in the efficacy of this treatment, controlled trials with larger samples and longer follow-up would be necessary. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have occipital neuralgia or cervicogenic headache who receive RFA or cryoneurolysis of peripheral nerves, the evidence includes RCTs and systematic reviews of RCTs. Relevant outcomes are symptoms, functional outcomes, and QOL. No RCTs of RFA for chronic occipital neuralgia have been identified. Three RCTs of RFA for a cervicogenic headache have been published, none of which were high quality. Pain is a subjective, patient-reported measure that is particularly susceptible to a placebo effect. Randomized trials with sham or active-controls are needed to evaluate the efficacy of this treatment. One controlled trial found a temporary benefit of cryoneurolysis for cervicogenic headache, but the effect was not significantly better than injection of corticosteroid and local anesthetic. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have Morton neuroma who receive intralesional alcohol injection(s), the evidence includes retrospective case series. Relevant outcomes are symptoms, functional outcomes, and treatment-related morbidity. The body of evidence is limited, consisting of case series reporting on the treatment response of patients with refractory Morton neuroma. The available case series have generally reported that some patients experience pain relief and express satisfaction with the procedure. Some evidence has suggested that surgery after failed cases of alcohol injections is more complex and challenging than in untreated patients due to the presence of fibrosis. There is a lack of controlled trials comparing alcohol injections with alternative therapies, and there are no controlled studies comparing outcomes for alcohol injections with those for surgery in surgical candidates. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have Morton neuroma who receive radiofrequency ablation (RFA), the evidence includes a systematic review and case series. Relevant outcomes are symptoms, functional outcomes, and treatment-related morbidity. The body of evidence is highly heterogeneous regarding RFA protocols, descriptions of prior conservative management, patient characteristics, follow-up durations, outcome measures, and reporting of outcomes. Variable proportions of patients require surgery after RFA, making the benefit of RFA for avoiding more invasive treatment uncertain. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have Morton neuroma who receive cryoablation, the evidence includes case series. Relevant outcomes are symptoms, functional outcomes, and treatment-related morbidity. Only retrospective case series on the use of cryoablation to treat peripheral nerve pain were identified in a literature review. The case series were heterogeneous regarding cryoablation protocols and length of follow-up. Outcome measures did not provide information on functional endpoints. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have peripheral neuroma(s) other than Morton neuroma who receive ablation no published literature was identified. Relevant outcomes are symptoms, functional outcomes, and treatment-related morbidity. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

CODING

The following code may be considered medically necessary for Medicare Advantage Plans and Commercial Products when the medical criteria in the online authorization tool is met:

64640 Destruction by neurolytic agent; other peripheral nerve or branch

The following code is covered for Medicare Advantage Plans and is not medically necessary for Commercial Products:

64624 Destruction by neurolytic agent, genicular nerve branches including imaging guidance, when performed

The following codes are not covered for Medicare Advantage Plans and not medically necessary for Commercial Products:

64632 Destruction by neurolytic agent; plantar common digital nerve
0440T Ablation, percutaneous, cryoablation, includes imaging guidance; upper extremity distal/peripheral nerve
0441T Ablation, percutaneous, cryoablation, includes imaging guidance; lower extremity distal/peripheral nerve
0442T Ablation, percutaneous, cryoablation, includes imaging guidance; nerve plexus or other truncal nerve (eg, brachial plexus, pudendal nerve)

The following codes may be considered medically necessary for Medicare Advantage Plans when the associated procedure is determined to be medically necessary AND when the criteria in the Medical Necessity policy is met, and are not medically necessary for Commercial Products:
C9808 Nerve cryoablation probe (e.g., cryoICE, cryoSPHERE, cryoSPHERE MAX, cryo2), including probe and all disposable system components, nonopioid medical device (must be a qualifying Medicare nonopioid medical device for postsurgical pain relief in accordance with Section 4135 of the CAA, 2023)
C9809 Cryoneurolysis needle (e.g., iovera system), including needle/tip and all disposable system components, nonopioid medical device (must be a qualifying Medicare nonopioid medical device for postsurgical pain relief in accordance with Section 4135 of the CAA, 2023) (Revised 7/1/2026)

RELATED POLICIES
Medical Necessity
Prior Authorization for Services, Treatments or Procedures

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