Clinical Policy: Nerve Blocks and Neurolysis for Pain Management.

Reference Number: WNC.CP.148
Last Review Date: 05/24

Coding Implications
Revision Log

See Important Reminder **at the end of this policy for important regulatory and legal information.**

Note: When state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Description

Nerve blocks are the temporary interruption of conduction of impulses in peripheral nerves or nerve trunks created by the injection of local anesthetic solutions. They can be used to identify the source of pain or to treat pain.

Policy/Criteria

It is the policy of WellCare of North Carolina® that invasive pain management procedures performed by a physician are **medically necessary** when *the relevant criteria are met and the patient receives only one procedure per visit, with or without radiographic guidance*.

I. Occipital Nerve Block

A. An ***initial injection*** of a local anesthetic for the diagnosis of suspected occipital neuralgia is **medically necessary** when **ALL** of the following are met:

1. Patient has unilateral or bilateral pain located in the distribution of the greater, lesser and/or third occipital nerves;[1]
2. Pain has **TWO** of the following three characteristics:[1]
   a. recurring in paroxysmal attacks lasting from a few seconds to minutes;
   b. severe intensity;
   c. shooting, stabbing, or sharp in quality;
3. Pain is associated with dysesthesia and/or allodynia apparent during innocuous stimulation of the scalp and/or hair, and at least **one** of the following:
   a. tenderness over the affected nerve branches;
   b. trigger point at the emergence of the greater occipital nerve or in the distribution of C2.

B. *Therapeutic occipital nerve blocks* are **medically necessary** when **ALL** of the following are met:

1. There was temporary relief from the initial/previous injection; as evidenced by a reduction in numeric rating scale pain score reported by the member/enrollee;
2. The member has failed **3 months** of conservative treatment including **ALL** of the following:
   a. heat, rest and/or physical therapy, including massage;

b. NSAIDS, unless contraindicated or not tolerated;
c. oral anticonvulsant medications (e.g., carbamazepine, gabapentin, pregabalin) or tricyclic antidepressants;
d. activity modification to address triggers;

3. No more than **4** injections are to be given within **12** months (includes diagnostic injection).

C. *Occipital nerve block* for the diagnosis or treatment of other types of headaches, including migraine and cervicogenic headaches, is considered **NOT medically necessary,** as effectiveness has not been established**.**

II. Celiac Plexus Nerve Block/Neurolysis

A. ***Celiac plexus nerve block/neurolysis*** is **medically necessary** for either of the following indications:

1. Chronic neuralgic pain secondary to pancreatic cancer, all of the following:
   a. Diagnosis of pancreatic cancer with severe visceral abdominal/back pain;
   b. Strong analgesics such as opioids are no longer effective or their side effects decrease quality of life;
   c. No malignancy in an area of somatic innervation such as the peritoneum or diaphragm.
2. Refractory pain due to chronic pancreatitis with non–dilated pancreatic duct.[30,40]

B. A ***repeat celiac plexus nerve block*** for refractory pain from chronic pancreatitis with nondilated pancreatic duct is medically necessary when both of the following are met:

1. At least three months have passed since previous injection;
2. There was a clinical benefit from the initial celiac block. (e.g., alleviation or reduction of abdominal pain, elimination of the need for oral analgesia).

C. Repeat celiac plexus nerve blocks or neurolysis, for any indication other than those noted above, are **not medically necessary** as there is a lack of evidence to support effectiveness.

III. Intercostal Nerve Block/Neurolysis

A. Intercostal nerve block/neurolysis is **medically necessary** for chronic neuralgic pain secondary to an injured intercostal nerve as a result of a rib fracture, a thoracotomy incision or chronic pain due to post herpetic neuralgia, or other neuropathic process when **all** of the following are met:

1. Suspected organic problem;
2. Non-responsiveness to conservative modalities of treatment;
3. Pain and disability of moderate to severe degree;
4. No evidence of contraindications such as infection or pain of predominately psychogenic origin.

IV. Genicular Nerve Blocks, Neurolysis and Genicular Nerve Radiofrequency Neurotomy

A. There is insufficient evidence to determine safety and efficacy of genicular nerve blocks, neurolysis and radiofrequency neurotomy of the articular nerves.[9,40]

V. Peripheral/Ganglion Nerve Blocks

Note*: If administered as part of a surgery or other procedure, coding for peripheral/ganglion nerve blocks should follow proper coding practices and would not be subject to prior authorization or payment separately from the procedure*.

A. Peripheral nerve blocks *for diagnosis and treatment of malignant pain* are considered **medically necessary** as part of a comprehensive pain management program.

B. *Peripheral nerve blocks for diagnosis or treatment of post-herniorrhaphy pain* are considered **medically necessary** when **all** of the following criteria are met:

1. A *first diagnostic* peripheral nerve block when **all** of the following are met:
   a. diagnosis of post-herniorrhaphy neuralgia;
   b. groin pain has persisted for three months after surgical hernia repair;
   c. less invasive pain management methods such as NSAIDs and/or opiates have not relieved the pain;
   d. imaging studies have ruled out non-neuropathic causes of pain;
   e. documentation indicates that pain is not attributable to any other cause;
2. *Therapeutic* peripheral nerve block(s) for treatment of post-herniorrhaphy pain when **all** of the following are met:
   a. there was temporary relief from the initial/previous injection;
   b. injections are given at least a week apart.

C. Peripheral nerve blocks for *prevention or treatment of headaches*, including, but not limited to: migraine headaches, treatment-refractory migraines in pregnancy, and short lasting unilateral neuralgiform headaches, are considered **not medically necessary** as effectiveness has not been established.

D. There is insufficient evidence in the published peer-reviewed literature to support the use of peripheral nerve blocks for the treatment of trigeminal neuralgia.

E. There is insufficient evidence in the published peer reviewed literature to support the use of peripheral/ganglion nerve blocks or neurolysis *for any condition not indicated elsewhere in this policy*, including chronic pain. There is ongoing research but insufficient evidence to establish efficacy.

VI. Intraosseous Radiofrequency Nerve Ablation of the Basi-vertebral Nerve

A. There is insufficient evidence to determine the safety and effectiveness of intraosseous radiofrequency nerve ablation of the basi-vertebral nerve (e.g., Intracept® Intraosseous Nerve Ablation System.) for the treatment of chronic low back pain.[44]

Background

Local Injections for Cervicogenic and Occipital Neuralgia

Greater occipital nerve blocks have been advocated as a diagnostic test for cervicogenic headache and occipital neuralgia. The effectiveness of greater occipital nerve block in patients with primary headache syndromes is controversial.[25] The International Headache Society (IHS) defines occipital neuralgia as unilateral or bilateral paroxysmal, shooting or stabbing pain in the posterior part of the scalp, in the distribution of the greater, lesser or third occipital nerves, sometimes accompanied by diminished sensation or dysesthesia in the affected area and commonly associated with tenderness over the involved nerve(s).[1] The IHS includes relief of pain following a local anesthetic block of the affected nerve as part of their diagnostic criteria for occipital neuralgia.[1] Thus, the principal indication for occipital block is diagnosis. Another indication is the treatment of chronic occipital neuralgia, often with a series of therapeutic blocks combining local anesthetic and corticosteroid. Pain relief is typically prompt with improvement primarily noted to the sharp but not the dull component of the occipital neuralgia pain.[54] The pain relief may last several weeks or even months.[1] At that time the injection may be repeated.[19,25] The Veterans Affairs/Department of Defense (VA/DoD) also suggest greater occipital nerve block for the acute treatment of migraine in the VA/DoD Clinical Practice Guideline for the Primary Care Management of Headache.[58]

Celiac Plexus Nerve Block/Neurolysis for Pancreatic Cancer

Although its analgesic effectiveness is similar to analgesic drugs, celiac plexus neurolysis offers pain reduction without the significant adverse effects of opiates.[2] A multidisciplinary, international guideline issued a strong recommendation based on moderate quality evidence for celiac plexus neurolysis as a treatment for pain associated with advanced pancreatic cancer.[2] Furthermore, a 2011 Cochrane review stated that celiac plexus block (neurolysis) significantly reduced opiate use and lowered pain compared to the control group.[3] A meta-analysis and systematic review demonstrated pain relief up to 53% to 80% of the time for the pooled proportion of patients with pancreatic cancer treated with EUS-guided celiac plexus neurolysis.[53]

The optimal timing of celiac plexus neurolysis for pain due to pancreatic cancer is not known.[2] Advocates of an earlier approach argue that pain is more effectively addressed by neurolysis when treated earlier, and opiate-related side effects may also be reduced compared to later treatment. However, the effects of celiac plexus neurolysis diminish over time, which would leave a patient with fewer options as the cancer progresses and pain becomes more severe. Repeat celiac plexus neurolysis for pain due to pancreatic cancer is effective only about 30% of the time and is not recommended.[2, 17]

Celiac Plexus Nerve Block/Neurolysis for Chronic Pancreatitis

Celiac plexus blockade is an option for pain relief in patients with refractory pain due to chronic pancreatitis and a non-dilated pancreatic duct. Advantages of celiac plexus

blockade include that a single treatment can potentially provide pain reduction or relief, may reduce or eliminate the need for oral analgesia, and can be performed quickly and repeated as needed. However, it is unclear which patients will derive the most benefit and the pain relief is transient, lasting for three to six months.[24]

The American College of Gastroenterology suggests considering celiac plexus block for treatment of pain in chronic pancreatitis (conditional recommendation, very low quality of evidence) noting that celiac plexus blockade represents a relatively low-risk, opioid-free method to reduce refractory pain in certain patients with chronic pancreatitis. [41]

Intercostal Nerve Blocks

Intermittent intercostal nerve blocks can be used to control pain in the chest and upper abdomen, such as pain associated with rib fractures or chronic pain due to post herpetic neuralgia. Intercostal nerve blocks can be performed using anatomic landmarks or with ultrasound guidance, which can be used to minimize the chance of intravascular injection and pneumothorax and to increase reliable dermatomal coverage.[4, 8]

For isolated injuries, such as single rib fracture, nonsteroidal anti-inflammatory drugs with or without opioids would be the initial treatment. For more severe injuries, particularly if ventilation is compromised, intercostal nerve blocks may be needed. For patients with multiple rib fractures, there is a need to perform the procedure at multiple intercostal levels. Repeated blockade may be needed for prolonged relief upon return of pain and/or deterioration in functional status. For repeat blocks or other interventions, the patient must have been responsive to prior interventions with improvement in physical and functional status. [5, 8]

Regional anesthesia plays an important role in thoracic surgery, particularly with regard to postoperative pain control. The first choice of regional anesthesia for thoracic surgery is epidural analgesia or thoracic paravertebral block. In general, the analgesic efficiencies of both these types of anesthesia are equivalent; however, thoracic paravertebral block has some advantages over epidural analgesia, including fewer complications. When these two blocks are contraindicated, intercostal nerve block or interpleural block should be considered. [6, 7]

Genicular Nerve Blocks and Radiofrequency Neurotomy

The genicular nerve is a sensory nerve that surrounds the knee and provides innervation for the joint. Genicular nerve blocks, neurolysis and radiofrequency neurotomy are emerging interventions for knee pain. The limited evidence regarding genicular nerve blocks for determining appropriateness of treatment with genicular radiofrequency ablation has reached conflicting results. [9, 10, 41] A few small studies suggest that genicular radiofrequency neurotomy may be effective for relief of pain, but further research is needed to establish safety and efficacy. [11, 12, 13, 14, 15]

Peripheral/Ganglion Nerve Block

Peripheral nerve blocks (PNB) are widely used for surgical anesthesia as well as for both postoperative and nonsurgical analgesia. Indications for PNBs are diverse and vary widely. Blocks are often used to avoid the effects of alternative anesthetics or analgesics. The most common rationale for their use is to avoid side effects and complications of general anesthesia, particularly respiratory-related effects, and to provide analgesia while minimizing opioid use.[37]

Chronic pain can be treated with a number of pharmacologic and nonpharmacologic therapies which generally fall into six major categories: pharmacologic, physical medicine, behavioral medicine neuromodulation, interventional and surgical approaches.[33] Optimal outcomes result from multiple approaches.[33,50] Interventional approaches, which typically attempt to target the presumed pain generators, may play a complementary role to other strategies (e.g., rehabilitation and appropriate pharmacotherapy.) The best candidates for interventional management have persistent focal pain of shorter duration, appropriate expectations, and well-managed psychosocial distress.[33]

Cancer pain can be caused by complex interactions among cancer cells, the peripheral and central nervous systems, and the immune system. Peripheral pain receptors may become activated, sensitized or injured with certain cancers. Neuropathic pain may arise from nerve tissue damage and cancer patients may experience mild to severe pain. At least 15% will experience no relief or have severe adverse effects from interventions to address their pain. Nerve blocks or other interventional procedures may be appropriate as part of a comprehensive pain management program.[34, 35]

Peripheral Nerve Blocks for Prevention or Treatment of Headaches

Peripheral nerve blocks have been proposed as a treatment for migraines in pregnancy and refractory migraines. However, evidence is limited to support this indication. In a series of 13 birthing individuals with migraine refractory to medication, injection of local anesthetic into one or more peripherals nerve resulted in elimination of pain in seven individuals, pain reduction in two and no response in four. Larger studies are necessary to better define the efficacy of this approach.[31]

Peripheral Nerve Blocks for Diagnosis and Treatment of Post-Herniorrhaphy Groin Pain

Persistent pain following inguinal hernia surgery is relatively common and a comprehensive pain management program is recommended. A prospective study, including elective primary open hernia repairs, found persistent pain occurred in 16.5-16.1 percent of patients at six months and five years.[36] Acute pain persisting more than eight weeks is most likely neuropathic due to primary or secondary nerve injuries. Post-herniorrhaphy neuralgia should be suspected if pain persists beyond six to eight weeks. These patients should undergo imaging to exclude nonneuropathic causes. Patients with

positive response to initial nerve block can be treated every 1-3 weeks until pain relief is sustained. Those who have a positive response initially, but the pain returns, may require groin nerve sacrifice via percutaneous nerve ablation or surgical neurectomy.[36]

Peripheral Nerve Blocks for Prevention or Treatment of Trigeminal Neuralgia

Compression of the trigeminal nerve root is the main mechanism of trigeminal neuralgia, but brainstem lesions account for a small proportion of cases. Initial treatment of most patients with trigeminal neuralgia is pharmacologic therapy. For patients with TN refractory to medical therapy, it is reasonable to discuss options for surgical therapy (e.g., microvascular decompression, various types of rhizotomy, or gamma knife radiosurgery.) The decision to have surgery and the choice among surgical options will be influenced by individual circumstances including patient preference, adverse effect profile of the available techniques, and expertise of the local center.[42] There is insufficient evidence in the published peer-reviewed literature to support the use of peripheral nerve blocks for the treatment of trigeminal neuralgia.[50]

Intraosseous Radiofrequency Nerve Ablation of Basi-vertebral Nerve

Basi-vertebral nerve radiofrequency ablation has been developed for the treatment of chronic low back pain thought to arise from the vertebral body endplates.[43] The Intracept Intraosseous Nerve Ablation System, Relievant Medsystems, Inc. is approved by the FDA and intended to be used in conjunction with radiofrequency generators for the ablation of basi-vertebral nerves of the L3 through S1 vertebrae. Its purpose is to relieve chronic low back pain of at least six months duration that has not responded to at least six months of conservative care, and is also accompanied by features consistent with Type 1 or Type 2 Modic changes on an MRI [e.g., inflammation, edema, vertebral endplate changes, disruption and fissuring of the endplate, vascularized fibrous tissues within the adjacent marrow, hypointensive signals (Type 1 Modic change), and changes to the vertebral body marrow including replacement of normal bone marrow by fat, and hyperintensive signals (Type 2 Modic change.)] [49]

Studies to date report relief of pain and improvement in function and quality of life after treatment, however, most are company sponsored, limited in size and are of generally poor or fair quality. A review of full-text clinical practice guidelines and position statements offers weak support for the Intracept Intraosseous Nerve Ablation for chronic low back pain of suspected vertebrogenic origin. Long-term non–industry-funded prospective trials should be pursued to confirm the results of currently published clinical studies.[44]

Coding Implications

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2024, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are

included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

CPT®* Codes	Description
64400	Injection(s), anesthetic agent(s) and/or steroid; trigeminal nerve, each branch (ie, ophthalmic, maxillary, mandibular)
64405	Injection(s), anesthetic agent(s) and/or steroid; greater occipital nerve
64408	Injection(s), anesthetic agent(s) and/or steroid; vagus nerve
64415	Injection(s), anesthetic agent(s) and/or steroid; brachial plexus
64417	Injection(s), anesthetic agent(s) and/or steroid; axillary nerve
64418	Injection(s), anesthetic agent(s) and/or steroid; suprascapular nerve
64420	Injection(s), anesthetic agent(s) and/or steroid; intercostal nerve, single level
64421	Injection(s), anesthetic agent(s) and/or steroid; intercostal nerve, each additional level
64425	Injection(s), anesthetic agent(s) and/or steroid; ilioinguinal, iliohypogastric nerves
64430	Injection(s), anesthetic agent(s) and/or steroid; pudendal nerve
64435	Injection(s), anesthetic agent(s) and/or steroid; paracervical (uterine) nerve
64445	Injection(s), anesthetic agent(s) and/or steroid; sciatic nerve
64447	Injection(s), anesthetic agent(s); femoral nerve
64450	Injection(s), anesthetic agent(s) and/or steroid; other peripheral nerve or branch
64454	Injection(s), anesthetic agent(s) and/or steroid; genicular nerve branches, including imaging guidance, when performed
64505	Injection, anesthetic agent; sphenopalatine ganglion
64600	Destruction by neurolytic agent, trigeminal nerve; supraorbital, infraorbital, mental, or inferior alveolar branch
64605	Destruction by neurolytic agent, trigeminal nerve; second and third division branches at foramen ovale
64610	Destruction by neurolytic agent, trigeminal nerve; second and third division branches at foramen ovale under radiologic monitoring
64620	Destruction by neurolytic agent, intercostal nerve
64624	Destruction by neurolytic agent, genicular nerve branches including imaging guidance, when performed
64640	Destruction by neurolytic agent; other peripheral nerve or branch
64680	Destruction by neurolytic agent, with or without radiologic monitoring; celiac plexus
64999	Unlisted procedure, nervous system

Reviews, Revisions, and Approvals	Reviewed Date	Approval Date
Original approval date	03/21	06/21

Reviews, Revisions, and Approvals	Reviewed Date	Approval Date
Added Sympathetic Nerve Block criteria, Background information, and CPT codes. Added note to Peripheral/ganglion nerve blocks criteria.	08/21	11/21
Revised policy title from "Nerve Blocks for Pain Management" to "Nerve Blocks and Neurolysis for Pain Management." Change verbiage C.1. "…either of the following indications..." Added. " A. Chronic neuralgic pain secondary to pancreatic cancer, all of the following" Added refractory chronic pancreatitis as an indication for celiac plexus block to C1B. Changed verbiage to C.2. and added meeting criteria. Changed verbiage to C.3. Change verbiage E.1. w/no change to criteria. Section F.1.. moved NOTE for visibility and edited verbiage to say, "If administered as part of a surgery or other procedure, coding for peripheral/ganglion nerve blocks should follow proper coding practices and would not be subject to prior authorization or payment separately from the procedure."; F.1. & F.5. Changed "Experimental/investigational" language. F.4. Added insufficient evidence to support peripheral nerve block for treatment of trigeminal neuralgia. Added G. "Added VII. Insufficient evidence to determine the safety and effectiveness of intraosseous radiofrequency nerve ablation of basivertebral nerve. Added ICD -10 codes K86.0 & K86.1 to support coverage criteria. removed G50.0 from list of ICD 10 codes that support coverage criteria updated background and references accordingly.	08/22	08/22
Annual review completed. To I.C., added "as effectiveness has not been established." Background updated. Reworded some extraneous language with no clinical significance. References reviewed and updated.	11/22	11/22
NCHC verbiage removed from NC Guidance Verbiage	04/23	04/23
Criteria I.B.1. Added: "as evidenced by a reduction in numeric rating scale pain score reported by the member/enrollee;" Criteria I.C. Added: "as effectiveness has not been established." Criteria II.B.2. Added: "(e.g., alleviation or reduction of abdominal pain, elimination of the need for oral analgesia). Background, Local Injections for Cervicogenic and Occipital Neuralgia, Additions: "with improvement primarily noted to the sharp but not the dull component of the occipital neuralgia pain. The pain relief…The Veterans Affairs/Department of Defense (VA/DoD) also suggest greater occipital nerve block for the acute treatment of migraine in the VA/DoD Clinical Practice Guideline for the Primary Care Management of Headache." Background, Celiac Plexus Nerve Block/Neurolysis for Pancreatic Cancer, Added:" A meta-analysis and systematic review demonstrated pain relief up to 53% to 80% of the time for the pooled proportion of patients with pancreatic cancer	11/23	11/23

Reviews, Revisions, and Approvals	Reviewed Date	Approval Date
treated with EUS-guided celiac plexus neurolysis." Added CPT codes 64600 64605 64610. Deleted CPT 64530. ICD-10 Diagnosis code table removed.		
Annual Review. Minor rewording with no clinical significance. HCPCS table removed. References reviewed & updated.	05/24	05/24

References

1. Headache Classification Committee of the International Headache Society (IHS). The International Classification of Headache Disorders, 3rd edition (beta version). Cephalalgia. 2018;38(1):1 to 211. doi:10.1177/0333102417738202
2. Drewes AM, Campbell CM, Ceyhan GO, et al. Pain in pancreatic ductal adenocarcinoma: A multidisciplinary, International guideline for optimized management. Pancreatology. 2018;18(4):446 to 457. doi: 10.1016/j.pan.2018.04.008
3. Arcidiacono PG, Calori G, Carrara S, McNicol ED, Testoni PA. Celiac plexus block for pancreatic cancer pain in adults. Cochrane Database Syst Rev.2011;2011(3):CD007519. Published 2011 Mar 16. doi: 10.1002/14651858.CD007519.pub2
4. Bashir MM, Shahzad MA, Yousaf MN, Khan BA, Khan FA. Comparison of postoperative pain relief by intercostal block between pre-rib harvest and post-rib harvest groups. J College Physicians Surg Pak. 2014;24(1):43 to 46.
5. Sarani B. Inpatient management of traumatic rib fractures. UpToDate. www.uptodate.com. Updated November 18, 2022. Accessed March 27, 2024.
6. Hwang EG, Lee Y. Effectiveness of intercostal nerve block for management of pain in rib fracture patients. Exerc Rehabil. 2014;10(4):241 to 24. doi10.12965/jer.I40137
7. Morimoto Y. (2019) Regional anesthesia for thoracic surgery. Anesthesia Pain and Intensive Care. 352 to 356. 2010-2013
8. Rice DC, Cata JP, Mena GE, Rodriguez-Restrepo A, Correa AM, Mehran RJ. Posterior intercostal nerve block with liposomal bupivacaine: an alternative to thoracic epidural analgesia. Ann Thorac Surg. 2015;99(6):1953 to 1960.
9. Health Technology Assessment: Genicular Nerve Block for the Treatment of Knee Osteoarthritis. Hayes. www.hayesinc.com. Published December 7, 2023. Accessed March 28, 2024.
10. McCormick ZL, Reddy R, Korn M, et al. A prospective randomized trial of prognostic genicular nerve blocks to determine the predictive value for the outcome of cooled radiofrequency ablation for chronic knee pain due to osteoarthritis. Pain Med. 2018;19(8):1628 to 1638.
11. Kesikburun S, YaSar E, Uran A, Adiguzel E, Yimaz B. Ultrasound-guided genicular nerve pulsed radiofrequency treatment for painful knee osteoarthritis: a preliminary report. Pain Physician 2016;19(5):E751 to E759.
12. Qudsi-Sinclair S, Borrás-Rubio E, Abellan-Guillén JF, Padilla Del Rey ML, Ruiz-Merino G. A comparison of genicular nerve treatment using either radiofrequency or analgesic block with corticosteroid for pain after a total knee arthroplasty: a double-blind, randomized clinical study. Pain Pract. 2017;17(5):578 to 588. doi:10.1111/papr.12481

13. Ahmed A, Arora D. Ultrasound-guided radiofrequency ablation of genicular nerves of knee for relief of intractable pain from knee osteoarthritis: a case series. Br J Pain. 2018;12(3):145 to 154. doi: 10.1177/2049463717730433
14. Kim DH, Choi SS, Yoon SH, et al. Ultrasound-guided genicular nerve block for knee osteoarthritis: a double-blind, randomized controlled trial of local anesthetic alone or in combination with corticosteroid. Pain Physician. 2018;21(1):41 to 52.
15. Choi WJ, Hwang SJ, Song JG, et al. Radiofrequency treatment relieves chronic knee osteoarthritis pain: a double-blind randomized controlled trial. Pain. 2011;152(3):481 to 487. doi: 10.1016/j.pain.2010.09.029
16. Kucera TJ, Boezaart AP. Regional anesthesia does not consistently block ischemic pain: two further cases and a review of the literature. Pain Med. 2014;15(2):316 to 319. doi: 10.1111/pme.12235. Epub 2013 Sep 18.
17. McGreevy K, Hurley RW, Erdek MA, Aner MM, Li S, Cohen SP. The effectiveness of repeat celiac plexus neurolysis for pancreatic cancer: a pilot study. Pain Pract. 2013;13: 89 to 95. doi:10.1111/j.1533-2500.2012.00557.x
18. Gonzalez Sotelo V, Maculée F, Minguell J, Bergé R, Franco C, Sala-Blanch X... Ultrasound-guided genicular nerve block for pain control after total knee replacement: preliminary case series and technical note. Rev Esp Anestesiol Reanim.2017:64(10):568 to 576. doi:10.1016/j.redar.2017.04.001
19. Garza I. Occipital neuralgia. UpToDate. www.uptodate.com. Updated February 27, 2024. Accessed April 2, 2024.
20. Rosenblatt MA. Lai Y. Scalp block and cervical plexus block techniques. UpToDate. www.uptodate.com. Updated May 16, 2023. Accessed April 2, 2024.
21. Abdi S. Complex regional pain syndrome in adults: pathogenesis, clinical manifestations, and diagnosis. UpToDate. www.uptodate.com. Updated June 22, 2022. Accessed April 2, 2024.
22. Abdi S. Complex regional pain syndrome in adults: Treatment, prognosis, and prevention. UpToDate. www.uptodate.com. Updated January 19, 2023. Accessed April 2, 2024.
23. Fernandez-del Castillo C, Jimenez RE, Murphy JE. Supportive care of the patient with locally advanced or metastatic exocrine pancreatic cancer. UpToDate. www.uptodate.com. Updated December 1, 2023. Accessed April 2, 2024.
24. Freedman SD, Forsmark CE. Chronic pancreatitis: management. UpToDate. www.uptodate.com. Updated March 4, 2024. Accessed April 2, 2024.
25. Health Technology Assessment: Local injection therapy for cervicogenic headache and occipital neuralgia. Hayes. www.hayesinc.com. Published February 2, 2023. Accessed July 14, 2023.
26. Soloman M, Mekhail MN, Mekhail N. Radiofrequency treatment in chronic pain. Expert Rev Neurother. 2010;10(3):469 to 474. doi:10.1586/ern.09.153
27. Copenhaver DJ, Pritzlaff SG, et al. Interventional therapies for chronic pain. UpToDate. www.uptodate.com. Updated February 9, 2024. Accessed April 2, 2024.
28. Lavu H, Lengel HB, Sell NM, et al. A prospective, randomized, double-blind, placebo controlled trial on the efficacy of ethanol celiac plexus neurolysis in patients with operable pancreatic and periampullary adenocarcinoma. J Am Coll Surg. 2015;220(4):497 to 508. doi: 10.1016/j.jamcollsurg.2014.12.013

29. Wyse JM, Carone M, Paquin SC, Usatii M, Sahai AV. Randomized, double-blind, controlled trial of early endoscopic ultrasound-guided celiac plexus neurolysis to prevent pain progression in patients with newly diagnosed, painful, inoperable pancreatic cancer. J Clin Oncol. 2011;29(26):3541 to 3546. doi:10.1200/JCO.2010.32.2750
30. American Society of Anesthesiologists Task Force on Chronic Pain Management; American Society of Regional Anesthesia and Pain Medicine. Practice guidelines for chronic pain management: an updated report by the American Society of Anesthesiologists Task Force on Chronic Pain Management and the American Society of Regional Anesthesia and Pain Medicine. Anesthesiology 2010;112(4):810 to 833. doi: 10.1097/ALN.0b013e3181c43103
31. Lee MJ, Guinn D, Hickenbottom S. Headache in pregnant and postpartum women. UpToDate. www.uptodate.com. Updated December 8, 2023. Accessed April 2, 2024.
32. Matharu MS, Cohen AS. Short-lasting unilateral neuralgiform headache attacks: treatment and prognosis. UpToDate. www.uptodate.com. Updated December 15, 2022. Accessed April 2, 2024.
33. Tauben D, Stacey BR. Approach to the management of chronic non-cancer pain in adults. UpToDate. www.uptodate.com. Updated March 25, 2024. Accessed April 2, 2024.
34. Smith TJ, Saiki CB. Cancer pain management. Mayo Clin Proc. 2015;90(10):1428 to 1439. doi: 10.1016/j.mayocp.2015.08.009
35. Chambers WA. Nerve blocks in palliative care. Br J Anaesth. 2008; P 101(1):95 to 100. doi:10.1093/bja/aen105
36. Bonwich, JB. Post-herniorrhaphy groin pain. UpToDate. www.uptodate.com. Updated March 18, 2024. Accessed April 2, 2024.
37. Jeng, CL, Rosenblatt, MA. Overview of peripheral nerve blocks. UpToDate. www.uptodate.com. Updated December 6, 2023. Accessed April 2, 2024.
38. Phillips, K, Schur PH. Management of isolated musculoskeletal chest pain. UpToDate. www.uptodate.com. Updated September 27, 2023. Accessed April 2, 2024.
39. Wiersema, MJ, Saumoy M. Endoscopic ultrasound-guided celiac plexus interventions for pain related to pancreatic disease. UpToDate. www.uptodate.com. Updated May 30, 2023. Accessed April 2, 2024.
40. Health Technology Assessment: Radiofrequency Nerve ablation for the management of osteoarthritis of the knee. Hayes. www.hayesinc.com. Published December 22, 2020. (annual review December 28, 2023). Accessed April 1, 2024.
41. Gardner TB, Adler DG, Forsmark CE, Sauer BG, Taylor JR, Whitcomb DC. ACG clinical guideline: chronic pancreatitis. Am J Gastroenterol. 2020;115(3):322 to 339. doi:10.14309/ajg.0000000000000535
42. Ho CC, Khan SA, Whealy MA. Trigeminal neuralgia. UpToDate. www.uptodate.com. Updated March 22, 2024. Accessed April 2, 2024.
43. Michalik A, Conger A, Smuck M, Maus TP, McCormick ZL. Intraosseous basivertebral nerve radiofrequency ablation for the treatment of vertebral body endplate low back pain: current evidence and future directions. Pain Med. 2021;22(Suppl 1):S24 to S30. doi:10.1093/pm/pnab117
44. Evolving Evidence Review. Intracept intraosseous nerve ablation system (relievant medsystems inc.) for treatment of adults with low back pain. Hayes. www.hayesinc.com. Published October 24, 2022 (annual review June 23, 2023). Accessed July 12, 2023.

45. Fischgrund JS, Rhyne A, Franke J, et al. Intraosseous basivertebral nerve ablation for the treatment of chronic low back pain: a prospective randomized double-blind sham-controlled multi-center study. Eur Spine J. 2018;27(5):1146 to 1156. doi:10.1007/s00586-018-5496-1
46. Fischgrund JS, Rhyne A, Macadaeg K, et al. Long-term outcomes following intraosseous basivertebral nerve ablation for the treatment of chronic low back pain: 5-year treatment arm results from a prospective randomized double-blind sham-controlled multi-center study. Eur Spine J. 2020;29(8):1925 to 1934. doi:10.1007/s00586-020-06448-x
47. Khalil JG, Smuck M, Koreckij T, et al. A prospective, randomized, multicenter study of intraosseous basivertebral nerve ablation for the treatment of chronic low back pain. Spine J. 2019;19(10):1620 to 1632. doi:10.1016/j.spinee.20
48. Fischgrund JS, Rhyne A, Franke J, et al. Intraosseous Basivertebral Nerve Ablation for the Treatment of Chronic Low Back Pain: 2-Year Results From a Prospective Randomized Double-Blind Sham-Controlled Multicenter Study. Int J Spine Surg. 2019;13(2):110 to 119. Published 2019 Apr 30. doi:10.14444/601519.05.598
49. 510(k) Premarket Notification. Intracept Intraosseous Nerve Ablation System (RF Probe), Intracept Intraosseous Nerve Ablation System (Access Instruments), Relievant RF Generator. Summary of Safety and Effectiveness. U.S. Food and Drug Administration Center for Devices and Radiological Health Web site. https://www.accessdata.fda.gov/cdrh_docs/pdf19/K190504.pdf. Published May 3, 2019. Accessed April 1, 2024.
50. Local Coverage Determination: peripheral nerve blocks (L36850). Centers for Medicare and Medicaid Services Website. https://www.cms.gov/medicare-coverage-database/search.aspx. Published May 1, 2017 (revised November 21, 2019). Accessed April 1, 2024.
51. Local Coverage Determination: thermal destruction of the intraosseous basivertebral nerve (BVN) for vertebrogenic lower back pain (L39420). Centers for Medicare and Medicaid Services Website. https://www.cms.gov/medicare-coverage-database/search.aspx. Published March 5, 2023. Accessed April 1, 2024.
52. Ebied AM, Nguyen DT, Dang T. Evaluation of occipital nerve blocks for acute pain relief of migraines. J Clin Pharmacol. 2020;60(3):378 to 383. doi:10.1002/jcph.1528
53. Kerdsirichairat T, Shin EJ. Endoscopic ultrasound guided interventions in the management of pancreatic cancer. World J Gastrointest Endosc. 2022;14(4):191 to 204. doi:10.4253/wjge.v14.i4.191
54. Pan W, Peng J, Elmofty D. Occipital Neuralgia. Curr Pain Headache Rep. 2021;25(9):61. Published 2021 Jul 21. doi:10.1007/s11916-021-00972-1
55. Aman MM, Mahmoud A, Deer T, et al. The American Society of Pain and Neuroscience (ASPN) Best Practices and Guidelines for the Interventional Management of Cancer-Associated Pain. J Pain Res. 2021;14:2139 to 2164. Published 2021 Jul 16. doi:10.2147/JPR.S315585
56. Filippiadis DK, Tselikas L, Tsitskari M, Kelekis A, de Baere T, Ryan AG. Percutaneous Neurolysis for Pain Management in Oncological Patients. Cardiovasc Intervent Radiol. 2019;42(6):791 to 799. doi:10.1007/s00270-019-02185-x

57. Evidence Analysis Research Brief. Greater occipital nerve block for treatment of occipital neuralgia. Hayes. www.hayesinc.com. Published July 11, 2023. Accessed April 1, 2024.

North Carolina Guidance

Eligibility Requirements

a. An eligible beneficiary shall be enrolled in the NC Medicaid Program (Medicaid is NC Medicaid program, unless context clearly indicates otherwise);
b. Provider(s) shall verify each Medicaid beneficiary's eligibility each time a service is rendered.
c. The Medicaid beneficiary may have service restrictions due to their eligibility category that would make them ineligible for this service.

EPSDT Special Provision: Exception to Policy Limitations for a Medicaid Beneficiary under 21 Years of Age

a. 42 U.S.C. § 1396d(r) [1905(r) of the Social Security Act]

Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) is a federal Medicaid requirement that requires the state Medicaid agency to cover services, products, or procedures for Medicaid beneficiary under 21 years of age if the service is medically necessary health care to correct or ameliorate a defect, physical or mental illness, or a condition [health problem] identified through a screening examination (includes any evaluation by a physician or other licensed practitioner).

This means EPSDT covers most of the medical or remedial care a child needs to improve or maintain his or her health in the best condition possible, compensate for a health problem, prevent it from worsening, or prevent the development of additional health problems.

Medically necessary services will be provided in the most economic mode, as long as the treatment made available is similarly efficacious to the service requested by the beneficiary's physician, therapist, or other licensed practitioner; the determination process does not delay the delivery of the needed service; and the determination does not limit the beneficiary's right to a free choice of providers.

EPSDT does not require the state Medicaid agency to provide any service, product or procedure:

1. that is unsafe, ineffective, or experimental or investigational.
2. that is not medical in nature or not generally recognized as an accepted method of medical practice or treatment.

Service limitations on scope, amount, duration, frequency, location of service, and other specific criteria described in clinical coverage policies may be exceeded or may not apply as long as the provider's documentation shows that the requested service is medically necessary "to correct or ameliorate a defect, physical or mental illness, or a condition" [health problem]; that is, provider documentation shows how the service, product, or procedure meets all EPSDT criteria, including to correct or improve or maintain the beneficiary's health

in the best condition possible, compensate for a health problem, prevent it from worsening, or prevent the development of additional health problems.

EPSDT and Prior Approval Requirements

1. If the service, product, or procedure requires prior approval, the fact that the beneficiary is under 21 years of age does NOT eliminate the requirement for prior approval.
2. **IMPORTANT ADDITIONAL INFORMATION** about EPSDT and prior approval is found in the *NCTracks Provider Claims and Billing Assistance Guide*, and on the EPSDT provider page. The Web addresses are specified below:

NCTracks Provider Claims and Billing Assistance Guide:
https://www.nctracks.nc.gov/content/public/providers/provider-manuals.html
EPSDT provider page: https://medicaid.ncdhhs.gov/

Provider(s) Eligible to Bill for the Procedure, Product, or Service
To be eligible to bill for the procedure, product, or service related to this policy, the provider(s) shall:

a. meet Medicaid qualifications for participation;
b. have a current and signed Department of Health and Human Services (DHHS) Provider Administrative Participation Agreement; and
c. bill only for procedures, products, and services that are within the scope of their clinical practice, as defined by the appropriate licensing entity.

Compliance
Provider(s) shall comply with the following in effect at the time the service is rendered:

a. All applicable agreements, federal, state and local laws and regulations including the Health Insurance Portability and Accountability Act (HIPAA) and record retention requirements; and
b. All NC Medicaid's clinical (medical) coverage policies, guidelines, policies, provider manuals, implementation updates, and bulletins published by the Centers for Medicare and Medicaid Services (CMS), DHHS, DHHS division(s) or fiscal contractor(s).

Claims-Related Information
Provider(s) shall comply with the NC Tracks Provider Claims and Billing Assistance Guide, Medicaid bulletins, fee schedules, NC Medicaid's clinical coverage policies and any other relevant documents for specific coverage and reimbursement for Medicaid:

a. Claim Type - as applicable to the service provided:
   Professional (CMS-1500/837P transaction)
   Institutional (UB-04/837I transaction)
   Unless directed otherwise, Institutional Claims must be billed according to the National Uniform Billing Guidelines. All claims must comply with National Coding Guidelines.
b. International Classification of Diseases and Related Health Problems, Tenth Revisions, Clinical Modification (ICD-10-CM) and Procedural Coding System (PCS) - Provider(s) shall report the ICD-10-CM and Procedural Coding System (PCS) to the highest level of

specificity that supports medical necessity. Provider(s) shall use the current ICD-10 edition and any subsequent editions in effect at the time of service. Provider(s) shall refer to the applicable edition for code description, as it is no longer documented in the policy.

c. Code(s) - Provider(s) shall report the most specific billing code that accurately and completely describes the procedure, product or service provided. Provider(s) shall use the Current Procedural Terminology (CPT), Health Care Procedure Coding System (HCPCS), and UB-04 Data Specifications Manual (for a complete listing of valid revenue codes) and any subsequent editions in effect at the time of service. Provider(s) shall refer to the applicable edition for the code description, as it is no longer documented in the policy. If no such specific CPT or HCPCS code exists, then the provider(s) shall report the procedure, product or service using the appropriate unlisted procedure or service code.
   Unlisted Procedure or Service
   CPT: The provider(s) shall refer to and comply with the Instructions for Use of the CPT Codebook, Unlisted Procedure or Service, and Special Report as documented in the current CPT in effect at the time of service.
   HCPCS: The provider(s) shall refer to and comply with the Instructions For Use of HCPCS National Level II codes, Unlisted Procedure or Service and Special Report as documented in the current HCPCS edition in effect at the time of service
d. Modifiers - Providers shall follow applicable modifier guidelines.
e. Billing Units - Provider(s) shall report the appropriate code(s) used which determines the billing unit(s).
f. Co-payments -
   For Medicaid refer to Medicaid State Plan:
   https://medicaid.ncdhhs.gov/get-involved/nc-health-choice-state-plan

g. Reimbursement - Provider(s) shall bill their usual and customary charges. For a schedule of rates, refer to: https://medicaid.ncdhhs.gov/.

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering

benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members/enrollees. This clinical policy is not intended to recommend treatment for members/enrollees. Members/enrollees should consult with their treating physician in connection with diagnosis and treatment decisions.

Providers referred to in this clinical policy are independent contractors who exercise independent judgment and over whom the Health Plan has no control or right of control. Providers are not agents or employees of the Health Plan.

This clinical policy is the property of the Health Plan. Unauthorized copying, use, and distribution of this clinical policy or any information contained herein are strictly prohibited. Providers, members/enrollees and their representatives are bound to the terms and conditions expressed herein through the terms of their contracts. Where no such contract exists, providers, members/enrollees and their representatives agree to be bound by such terms and conditions by providing services to members/enrollees and/or submitting claims for payment for such services.