Medical Coverage Policy
Policy Number – MP22-029E
Original review date – 10/07/2022
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Bone Growth Stimulators

Background

Bone growth stimulation helps promote bone healing in difficult to heal fractures or fusions. Stimulation can be either electrical or ultrasonic. Ultrasonic stimulation is applied externally, while electrical stimulation can be either noninvasive or invasive.

Definitions

Nonunion and failed fusion is diagnosed if no progression of healing has occurred for 3 months.

Long bones are those that are longer than they are wide and have a shaft and two ends. All the bones of the arms and legs are considered long bones, other than the patella, and the bones of the wrist and ankle.

Policy Statement

Disclaimer: This policy is applicable to TRICARE Prime & Select beneficiaries, and may not apply to Active Duty Service Members (ADSM) under SHCP or TPR in accordance with TOM Chapter 17, Section 3. Please review TOM Chapter 17, Section 3, Paragraph 2.0 onwards, regarding SHCP coverage and any TRICARE specific exclusions included in this coverage policy to accurately determine the benefit for ADSMs

Electrical bone growth stimulators (invasive – E0749 and non-invasive – E0747 and E0748) may be approved for any of the following criteria:

1. Nonunion of long bone fractures (radiographic evidence at least 3 months post fracture shows nonunion)
2. Failed spinal fusion (radiographic evidence at least 3 months post-surgery shows no evidence of progression of healing)
3. Congenital pseudo-arthosis
4. Adjunct to spinal fusion surgery if one of the following conditions is met:
    a. Previously failed spinal fusion surgery
    b. Spinal fusions surgery planned for more than one level
    c. Grade 2 or 3 spondylolisthesis
    d. Patient has high risk comorbidities such as obesity, smoking, diabetes, osteoporosis

Ultrasonic bone growth stimulators (E0760) may be approved for any of the following conditions:

1. Fresh fractures, fusions, or delayed unions in the following high risk areas:
    a. Distal radius in skeletally mature individuals
    b. Fresh closed, or Grade 1 open, short oblique, or short spiral tibial diaphyseal fractures in skeletally mature individuals
    c. Scaphoid (carpal navicular)
    d. Fifth metatarsal

2. Nonunion of any bones in the appendicular skeleton, as evidenced by radiographs showing nonunion at least 3 months post fracture

Limitations of coverage
No malignancy at fracture or surgical site

TRICARE Policy Manual
Chapter 4, Section 6.2
4.0 POLICY
4.1 Use of the invasive and semi-invasive types of devices are covered for nonunion of long bone fractures.
4.2 Use of the noninvasive type of device is covered for the following procedures:
- Nonunion of long bone fractures.
- Failed fusion.
- Congenital pseudo-arthroses.

4.3 Use of the invasive or noninvasive type of device is covered as an adjunct to spinal fusions to increase the probability of fusion success for:
4.3.1 Patients at high risk for pseudo-arthrosis, including those patients with:
- One or more failed fusions;
- Grade 2 or 3 spondylolisthesis;
- Fusions at more than one level, or

4.3.2 Fusions performed on patients considered to be at high risk (i.e., smokers, obese, etc.).
4.4 Nonunion, for all types of devices. A nonunion is considered to be established when the fracture site shows no visibly progressive signs of healing.
4.5 Ultrasound bone growth stimulators (CPT procedure code 20979) are covered when medically necessary and appropriate (e.g., as a treatment to promote healing of some fresh fractures and to accelerate healing for nonunion of other fracture sites). See Chapter 8, Section 5.1 for TRICARE policy on medical devices.

Coding Information

Code	Description
E0747	Osteogenesis stimulator, electrical, noninvasive, other than spinal applications
E0748	Osteogenesis stimulator, electrical, noninvasive, spinal applications
E0749	Osteogenesis stimulator, electrical, surgically implanted
E0760	Osteogenesis stimulator, low intensity ultrasound, noninvasive
20974	Electrical stimulation to aid bone healing; noninvasive (nonoperative)
20975	Electrical stimulation to aid bone healing; invasive (operative)
20979	Low intensity ultrasound stimulation to aid bone healing, noninvasive (nonoperative)

References

1. TRICARE Policy Manual Chapter 4, Section 6.2 TRICARE Manuals - Display Chap 4 Sect 6.2 (Change 119, Nov 1, 2023) (health.mil)
2. MCG Health Bone Growth Stimulators, Electrical and Electromagnetic. Ambulatory Care 28th Edition ACG: A-0565 (AC). Last update: 03/14/2024
3. MCG Health Bone Growth Stimulators, Ultrasonic. Ambulatory Care 28th Edition ACG: A-0414 (AC). Last update: 03/14/2024
4. CGS Administrators, LLC Local Coverage Determination (LCD) Osteogenesis Stimulators. L33796. Revised effective date: 01/01/2024 LCD - Osteogenesis Stimulators (L33796) (cms.gov)

Revision History

December 2023: Updated references

November 2024: Updated references

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