

1 **Clinical Practice Guideline: Metatarsectomy**

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3 **Date of Implementation: September 17, 2015**

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5 **Product: Specialty**

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8 **GUIDELINES**

9 American Specialty Health – Specialty (ASH) considers services consisting of codes 28140
10 to be medically necessary **if indicated for the treatment of at least one of the following**
11 **conditions:**

- 12 • Bone Tumor (Malignant neoplasm of long bones of lower limb (C40.20 – C40.22)
13 and benign neoplasm of long bones of lower limb (D16.20 – D16.22))
- 14 • Diagnosis of infection
 - 15 ○ Acute osteomyelitis, ankle and foot (M86.071 - M86.079, M86.171 - M86.179,
16 M86.271 - M86.279)
 - 17 ○ Chronic osteomyelitis, ankle and foot (M86.371 - M86.379,
18 M86.471 - M86.479, M86.571 - M86.579, M86.671 - M86.679, M86.8X7)
 - 19 ○ Osteomyelitis, unspecified (ankle and foot) (M86.9)
 - 20 ○ Osteopathy in diseases classified elsewhere, ankle and foot
21 (M90.871 - M90.879)
- 22 • Non-union (Stress fracture of the foot and other site, and fracture of metatarsal
23 bone, with nonunion (M84.374K, M84.375K, M84.376K, M84.38XX,
24 S92.301K - S92.356K))

25
26 Conservative treatment options include debridement, padding, shoe modifications, oral
27 non-steroidal anti-inflammatory medications (NSAIDS), anti-inflammatory injectables,
28 and orthotics.

29
30 **CPT® Codes and Descriptions**

CPT® Code	CPT® Code Description
28140	Metatarsectomy

31
32 **BACKGROUND**

33 Metatarsectomy procedures consist of dissection of the metatarsal bone with removal of
34 the affected part of the metatarsal. Metatarsectomy may be indicated for the treatment of
35 bone tumors, infections, including osteomyelitis, and non-union of fractured metatarsals.

36
37 **Bone Tumors**

38 Osseous tumors of the metatarsals are rare. Relevant literature to date has mostly been
39 confined to case reports. Bone tumors of the metatarsals may include giant cell tumors,

1 chondrosarcoma, metastases (i.e., lung, prostate gland), chondroblastoma, aneurysmal
 2 bone cyst, Ewing's sarcoma, clear cell carcinoma, osteosarcoma, intraosseous ganglion,
 3 osteochondroma, enchondromas, chondromyxoid fibroma and granuloma (Jarkiewicz-
 4 Kochman et al., 2007; Ritchie, 2009; Rhee et al, 2008). The majority of these lesions can
 5 confidently be diagnosed based on a combination of clinical findings, lesion location and
 6 imaging characteristics.

7
 8 Intralesional resection, such as curettage, is appropriate for benign lesions that demonstrate
 9 a low risk of recurrence or good healing potential. Marginal resection is the excision
 10 through the reactive zone and is appropriate for most benign lesions that show a certain
 11 potential for recurrence or do not heal spontaneously. Wide resection, which is the removal
 12 of tumor surrounded on all sides with healthy tissue, is adequate for most malignant tumors.
 13 Finally, radical resection includes resection of the entire anatomic compartment
 14 (metatarsals are the only compartmental boundaries). Since recurrence free survival after
 15 wide and radical resection is similar for most malignant cases, and radical resection is often
 16 associated with severe functional impairment, wide resection is typically the resection of
 17 choice in most malignant tumors. However, due to the smaller anatomic situation at the
 18 foot with only limited boundaries, radical resection is more common at the foot than in
 19 other areas of the body (Gollwitzer et al., 2012).

20 21 **Osteomyelitis and Other Foot Infections**

22 Osteomyelitis is inflammation of the bone caused by an infecting organism. Although bone
 23 is normally resistant to bacterial colonization, events such as trauma, surgery, presence of
 24 foreign bodies, or prostheses may disrupt bony integrity and lead to the onset of bone
 25 infection. Osteomyelitis can also result from hematogenous spread after bacteremia. Acute
 26 osteomyelitis presents with acute inflammatory cells, edema, vascular congestion, and
 27 small-vessel thrombosis. In early disease, infection extends into the surrounding soft tissue,
 28 which compromises the vascular supply to the bone, leading to interference with healing.
 29 Chronic osteomyelitis presents with pathologic findings of necrotic bone, formation of new
 30 bone, and polymorphonuclear leukocyte exudation, which is joined by large numbers of
 31 lymphocytes, histiocytes, and occasional plasma cells.

32
 33 Surgery is indicated to treat osteomyelitis when the patient has not responded to specific
 34 antimicrobial treatment, if there is evidence of a persistent soft tissue abscess or
 35 subperiosteal collection, or if concomitant joint infection is suspected. Debridement of
 36 necrotic tissues, removal of foreign materials, and sometimes skin closure of chronic
 37 unhealed wounds is necessary in some cases (Gandhi, 2022).

38
 39 Foot infections are a common and serious problem in persons with diabetes. The Infectious
 40 Disease Society of America (IDSA) guideline for the treatment of diabetic foot infections
 41 (Lipsky et al., 2020) advises that osteomyelitis occurs in many diabetic patients with a foot
 42 wound and can be difficult to diagnose (optimally defined by bone culture and histology)

1 and treat - often requiring surgical debridement or resection, and/or prolonged antibiotic
 2 therapy. Most diabetic foot infections require some surgical intervention, ranging from
 3 minor (debridement) to major (resection, amputation).

5 **PRACTITIONER SCOPE AND TRAINING**

6 Practitioners should practice only in the areas in which they are competent based on their
 7 education, training, and experience. Levels of education, experience, and proficiency may
 8 vary among individual practitioners. It is ethically and legally incumbent on a practitioner
 9 to determine where they have the knowledge and skills necessary to perform such services
 10 and whether the services are within their scope of practice.

11
 12 It is best practice for the practitioner to appropriately render services to a member only if
 13 they are trained, equally skilled, and adequately competent to deliver a service compared
 14 to others trained to perform the same procedure. If the service would be most competently
 15 delivered by another health care practitioner who has more skill and training, it would be
 16 best practice to refer the member to the more expert practitioner.

17
 18 Best practice can be defined as a clinical, scientific, or professional technique, method, or
 19 process that is typically evidence-based and consensus driven and is recognized by a
 20 majority of professionals in a particular field as more effective at delivering a particular
 21 outcome than any other practice (Joint Commission International Accreditation Standards
 22 for Hospitals, 2020).

23
 24 Depending on the practitioner’s scope of practice, training, and experience, a member’s
 25 condition and/or symptoms during examination or the course of treatment may indicate the
 26 need for referral to another practitioner or even emergency care. In such cases it is prudent
 27 for the practitioner to refer the member for appropriate co-management (e.g., to their
 28 primary care physician) or if immediate emergency care is warranted, to contact 911 as
 29 appropriate. See the *Managing Medical Emergencies (CPG 159 – S)* policy for
 30 information.

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