

1 **Clinical Practice Guideline: Metatarsal Osteotomy**

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3 **Date of Implementation: August 20, 2015**

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5 **Product: Specialty**

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8 **GUIDELINES**

9 American Specialty Health – Specialty (ASH) considers services consisting of CPT® Code
 10 28112, 28113, and 28288 to be medically necessary for metatarsal osteotomy **upon**
 11 **meeting the following criteria:**

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13 1. When supported by **1 or more of the following diagnoses:**

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ICD-10 Code	ICD-10 Code Description
I70.235, I70.239, I70.245, I70.249	Atherosclerosis of native arteries of leg with ulceration of other part of foot or unspecified site
I70.335, I70.345, I70.435, I70.445, I70.535, I70.545, I70.635, I70.645, I70.735, I70.745	Atherosclerosis of bypass graft(s) of the leg with ulceration of other part of foot
I70.339, I70.349, I70.439, I70.449, I70.539, I70.549, I70.639, I70.649, I70.739, I70.749	Atherosclerosis of bypass graft(s) of the leg with ulceration of unspecified site
L89.891, L89.91	Pressure ulcer of other and unspecified site, stage I1
L89.892, L89.92	Pressure ulcer of other and unspecified site, stage 2
L89.893, L89.93	Pressure ulcer of other and unspecified site, stage 3
L89.894, L89.94	Pressure ulcer of other and unspecified site, stage 4
L89.899, L89.90	Pressure ulcer of other and unspecified site, unspecified stage
L89.890 - L89.899	Pressure ulcer of other site
L89.90 - L89.95	Pressure ulcer of unspecified site
L97.501 - L97.529	Non-pressure chronic ulcer of other part of foot
L98.491 - L98.499	Non-pressure chronic ulcer of skin of other sites

ICD-10 Code	ICD-10 Code Description
M05.471 - M05.479, M05.49, M05.571 - M05.579, M05.59, M05.771 - M05.779, M05.79 - M05.80, M05.871 - M05.879, M05.89, M05.9, M06.071 - M06.079, M06.09, M06.271 - M06.279, M06.29, M06.371 - M06.379, M06.39, M06.871 - M06.879, M06.89, M06.9	Rheumatoid arthritis with rheumatoid factor and other rheumatoid arthritis
M12.571 - M12.579	Traumatic arthropathy, ankle and foot
M12.871 - M12.879	Other specific arthropathies, not elsewhere classified, ankle and foot
M12.9	Arthropathy, unspecified
M19.071 - M19.079	Primary osteoarthritis, ankle and foot
M20.10 - M20.12	Hallux valgus (acquired), foot
M20.40 - M20.42	Other hammer toe(s) (acquired)
M20.5X1 - M20.5X9	Other deformities of toe(s), acquired (including claw toe)
M20.60 - M20.62	Acquired deformities of toe(s), unspecified
M25.774 - M25.776	Osteophyte, foot
M77.40 - M77.42	Metatarsalgia

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2. Failure of **at least 2 of the following** non-operative treatments with persistent pain and dysfunction
 - Physical therapy
 - Orthotics/bracing
 - Shoe modification
 - Activity modification
 - Medication

- 1 Cases of infection requiring urgent or emergent care are always allowed; thus, are **NOT**
 2 subject to the non-operative care criteria. The diagnoses of infections requiring urgent or
 3 emergent care are listed below:
 4

ICD-10 Code	ICD-10 Code Description
A18.03	Tuberculosis of other bones
M86.071 - M86.079, M86.171 - M86.179, M86.271 - M86.279	Osteomyelitis, ankle and foot – acute hematogenous, other acute and subacute
M86.08, M86.18, M86.28	Osteomyelitis, other site – acute hematogenous, other acute and subacute
M86.09, M86.19, M86.29	Osteomyelitis, multiple sites – acute hematogenous, other acute and subacute
M86.371 - M86.379, M86.471 - M86.479, M86.571 - M86.579, M86.671 - M86.679	Chronic osteomyelitis, ankle and foot
M86.38, M86.48, M86.58, M86.68	Chronic osteomyelitis, other site
M86.39, M86.49, M86.59, M86.69	Chronic osteomyelitis, multiple sites
M86.8X0, M86.8X7 - M86.8X9	Other osteomyelitis; ankle and foot, other site, multiple sites, unspecified sites
M86.9	Osteomyelitis, unspecified
M90.871 - M90.879	Osteopathy in diseases classified elsewhere, ankle and foot
M90.88	Osteopathy in diseases classified elsewhere, other site
M90.89	Osteopathy in diseases classified elsewhere, multiple sites

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CPT® Code	CPT® Code Description
28112	Ostectomy, complete excision; other metatarsal head (second, third or fourth)
28113	Ostectomy, complete excision; fifth metatarsal head
28288	Ostectomy, partial, exostectomy or condylectomy, metatarsal head, each metatarsal head

1 BACKGROUND

2 Conservative care is the first line of treatment for foot and toe deformity. However, surgery
3 is recommended when non-operative care does not relieve pain and/or restore function.
4 Osteotomy procedures entail removal of a portion of bone. These procedure codes consist
5 of excising bony prominences or sections of bone - either partial or complete.

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7 Diabetes results in multiple complications involving the foot, including compromised
8 circulation. Poor circulation to the feet can cause foot ulcers and prevent timely healing of
9 wounds and injuries in the patient with diabetes. Conservative off-loading techniques using
10 orthotics and shoe modifications can help minimize pressure and prevent ulcers associated
11 with deformity, however surgery may be required if non-operative measures fail to relieve
12 pain. If ulcers are intractable, osteotomy may be considered to resect the bone prominence.
13 This procedure can work well in such instances, provided that there is no associated
14 instability of the adjacent joints (Ahluwalia et al., 2021; Chiu et al., 2020; Sabathy &
15 Periasamy, 2016). Infections and Diabetic foot infections (DFIs) typically begin in a
16 wound, most often a neuropathic ulceration. Empiric antibiotic therapy can be targeted
17 toward organisms most commonly involved in these infections. Patients at risk for infection
18 with antibiotic-resistant organisms or with chronic, previously treated, or severe infections
19 usually require broader spectrum regimens. Osteomyelitis and other infections involving
20 bone can occur in diabetic patients and other patients with a foot wound and can be difficult
21 to diagnose (optimally defined by bone culture and histology) and treat (often requiring
22 surgical debridement or resection, and/or prolonged antibiotic therapy). These conditions
23 result in an emergency and do not require a trial of non-operative measures.

24 Toe Deformities

25 Hammertoes and claw toes are common lesser toe deformities that are often painful, and
26 limit function and shoe wear selection. Hammertoe deformity primarily comprises flexion
27 contracture/deformity of the proximal interphalangeal (PIP) joint of the toe, with
28 hyperextension of the metatarsophalangeal (MTP) and distal interphalangeal (DIP) joints.
29 It is often combined with a hallux valgus deformity. Claw toe is defined by flexion of both
30 the PIP and DIP joints and hyperextension of the MTP joint, resembling a claw. Claw toe
31 represents an imbalance between the intrinsic and extrinsic muscle units controlling the
32 positioning of the toe.
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35 A combination of osseous and soft tissue procedures is typically performed for manually
36 semi-reducible or rigid digital deformities. Osseous procedures of the toe include
37 phalangeal head resection metatarsal osteotomy, partial metatarsal head resection, or
38 phalangeal base resection to achieve complete correction of the digital deformity, with the
39 treatment of choice to be determined on a case-by-case basis. Exostectomy or
40 condylectomy may also be beneficial, particularly in addressing hyperkeratotic lesions
41 along the medial or lateral aspects of the toe (Campbell & Myerson, 2011; Marti-Martinez
42 et al., 2021).

1 **Rheumatoid Arthritis**

2 Rheumatoid arthritis is a systemic autoimmune inflammatory disease. This chronic and
 3 progressive disease is polyarticular, usually with a symmetric distribution. The typical
 4 deformities encountered in the rheumatoid forefoot are joint and soft tissue swelling, hallux
 5 valgus, and dorsal subluxation or dislocation of the proximal phalanges on the metatarsal
 6 heads with or without fixed claw toe deformity. These forefoot deformities can often be
 7 associated with dorsal, medial, or lateral deviation of the toes; in fact, almost any
 8 conceivable deformity may occur in the toes. Clawing of the toes is usually present, and
 9 although initially flexible, these become progressively fixed in flexion at the proximal
 10 interphalangeal joint. These deformities are associated with plantar displacement of the
 11 metatarsal heads, distal displacement of the plantar fat pad, thick painful callosities, and
 12 possible ulceration under the prominent metatarsal heads. Based on a review of the
 13 literature, the authors concluded that lesser metatarsal head resection allows reduction of
 14 this increased pressure while providing a stable forefoot with a low rate of recurrence of
 15 deformity. This procedure has good success rates with an acceptable level of complications
 16 over long-term follow-up (Molloy & Myerson, 2007).

17 **PRACTITIONER SCOPE AND TRAINING**

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

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

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

36
 37 Depending on the practitioner's scope of practice, training, and experience, a member's
 38 condition and/or symptoms during examination or the course of treatment may indicate the
 39 need for referral to another practitioner or even emergency care. In such cases it is prudent
 40 for the practitioner to refer the member for appropriate co-management (e.g., to their
 41 primary care physician) or if immediate emergency care is warranted, to contact 911 as

1 appropriate. See the *Managing Medical Emergencies* (CPG 159 – S) clinical practice
2 guideline for information.

4 **References**

5 Ahluwalia, R., Maffulli, N., Lázaro-Martínez, J. L., Kirketerp-Møller, K., & Reichert, I.
6 (2021). Diabetic foot off loading and ulcer remission: Exploring surgical off-loading.
7 *The surgeon : journal of the Royal Colleges of Surgeons of Edinburgh and Ireland*,
8 19(6), e526–e535. <https://doi.org/10.1016/j.surge.2021.01.005>

9
10 American College of Foot and Ankle Surgeons (ACFAS) Cosmetic Surgery Position
11 Statement (2020). Retrieved on December 19, 2023 from:
12 [https://www.acfas.org/policy-advocacy/policy-position-statements/acfas-position-](https://www.acfas.org/policy-advocacy/policy-position-statements/acfas-position-statement-on-cosmetic-surgery)
13 [statement-on-cosmetic-surgery](https://www.acfas.org/policy-advocacy/policy-position-statements/acfas-position-statement-on-cosmetic-surgery)

14
15 American Medical Association. (current year). *Current Procedural Terminology (CPT)*
16 *Current year (rev. ed.)*. Chicago: AMA

17
18 American Medical Association. (current year). *ICD-10-CM*. American Medical
19 Association

20
21 Black, J., Baharestani, M., Cuddigan, J., Dorner, B., Edsberg, L., Langemo, D., ... National
22 Pressure Ulcer Advisory Panel (2007). National Pressure Ulcer Advisory Panel's
23 updated pressure ulcer staging system. *Dermatology Nursing*, 19(4), 343-350

24
25 Campbell, J. T., & Myerson, M. S. (2011). *Current Management of Lesser Toe*
26 *Deformities, An Issue of Foot and Ankle Clinics*: Elsevier Health Sciences

27
28 Chiu, W. K., Yang, T. F., Wang, H. J., & Chen, C. (2020). Assessment of Outcomes of a
29 Metatarsal Bone Ostectomy for Chronic Plantar Ulcers: A Preliminary Study. *Annals*
30 *of plastic surgery*, 84(1S Suppl 1), S112-S115.
31 <https://doi.org/10.1097/SAP.0000000000002174>

32
33 Dai, H., Zhai, W. T., Wang, L. C., Xu, Y. L., Ding, S., Xie, J., ... Ma, Y. H. (2012). Clinical
34 result of forefoot correction by the first ray stabilization combined with resection of
35 the lesser metatarsal head procedure for patient with rheumatoid arthritis. *Zhongguo*
36 *Gu Shang*, 25(10), 821-824

37
38 DiDomenico, L., Baze, E., & Gatalyak, N. (2013). Revisiting the tailor's bunion and
39 adductovarus deformity of the fifth digit. *Clinics in Podiatric Medicine and Surgery*,
40 30(3), 397-422. doi: 10.1016/j.cpm.2013.04.004

- 1 European Pressure Ulcer Advisory Panel & National Pressure Injury Advisory Panel
 2 (Washington D.C.). (2009). *Prevention and Treatment of Pressure Ulcers Quick*
 3 *Reference Guide*. National Pressure Ulcer Advisory Panel. Retrieved December 19,
 4 2023 from http://www.epuap.org/guidelines/Final_Quick_Prevention.pdf
 5
- 6 Haesler E. National Pressure Ulcer Advisory Panel (U.S.) European Pressure Ulcer
 7 Advisory Panel & Pan Pacific Pressure Injury Alliance. (2014). *Prevention and*
 8 *treatment of pressure ulcers : clinical practice guideline* (2nd ed.). Cambridge Media
 9
- 10 Joint Commission International. (2020). Joint Commission International Accreditation
 11 Standards for Hospitals (7th ed.): Joint Commission Resources
 12
- 13 Khan, T. (2020). Diabetic Foot Ulcers Treatment & Management. *Drugs & Diseases*.
 14 Retrieved on December 19, 2023 from
 15 <http://emedicine.medscape.com/article/460282-treatment#aw2aab6b6b4aa>
 16
- 17 Laborde, J. M. (2010). Tendon Lengthening for Neuropathic Foot Problems. *Orthopedics*,
 18 33(5), 319-326. doi: 10.3928/01477447-20100329-26
 19
- 20 Lipsky, B. A., Senneville, É., Abbas, Z. G., Aragón-Sánchez, J., Diggle, M., Embil, J. M.,
 21 International Working Group on the Diabetic Foot (IWGDF). (2020). Guidelines on
 22 the diagnosis and treatment of foot infection in persons with diabetes (IWGDF 2019
 23 update). *Diabetes/Metabolism Research and Reviews*, 36 Suppl 1, e3280.
 24 <https://doi.org/10.1002/dmrr.3280>
 25
- 26 Marti-Martinez, L. M., Lorca-Gutierrez, R., Sánchez-Pérez, S. P., Garcia-Campos, J.,
 27 Fernández Ehrling, N., & Ferrer-Torregrosa, J. (2021). Efficacy and safety of
 28 condylectomy with minimally invasive surgery in the treatment of interdigital corns
 29 of the lesser toes compared to conservative treatment. *Journal of foot and ankle*
 30 *research*, 14(1), 1-10. <https://doi.org/10.1186/s13047-021-00460-0>
 31
- 32 Molloy, A. P., & Myerson, M. S. (2007). Surgery of the Lesser Toes in Rheumatoid
 33 Arthritis: Metatarsal Head Resection. *Foot and Ankle Clinics*, 12(3), 417-433. doi:
 34 10.1016/j.fcl.2007.05.001
 35
- 36 Ramanujam, C. L., Facaros, Z., & Zgonis, T. (2011). Abductor hallucis muscle flap with
 37 circular external fixation for Charcot foot osteomyelitis: a case report. *Diabetic Foot*
 38 *& Ankle*, 2. doi: 10.3402/dfa.v2i0.6336
 39
- 40 Sabapathy, S. R., & Periasamy, M. (2016). Healing ulcers and preventing their recurrences
 41 in the diabetic foot. *Indian journal of plastic surgery: official publication of the*

- 1 *Association of Plastic Surgeons of India*, 49(3), 302–313.
2 <https://doi.org/10.4103/0970-0358.197238>
3
- 4 Shirzad, K., Kiesau, C. D., DeOrio, J. K., & Parekh, S. G. (2011). Lesser toe deformities.
5 *The Journal of the American Academy of Orthopaedic Surgeons*, 19(8), 505–514.
6 <https://doi.org/10.5435/00124635-201108000-00006>
7
- 8 Varma, A. K. (2011). Reconstructive foot and ankle surgeries in diabetic patients. *Indian*
9 *Journal of Plastic Surgery*, 44(3), 390-395. doi: 10.4103/0970-0358.90806
10
- 11 Vuorisalo, S., Venermo, M., & Lepantalo, M. (2009). Treatment of diabetic foot ulcers.
12 *The Journal of Cardiovascular Surgery*, 50(3), 275-291