Clinical Practice Guideline: **Non-Vascular Extremity Ultrasound**

Date of Implementation: **May 21, 2015**

Product: **Specialty**

GUIDELINES

Non-Vascular extremity ultrasound examination (complete and limited) may be medically reasonable and necessary for the following conditions:

- To detect cysts, abscesses and effusions;
- To distinguish solid tumors from fluid-filled cysts;
- To evaluate muscles, tendons (including tears, especially those that are partial, tendonitis and tenosynovitis), joints, ligaments, soft tissue masses, nerve compression and stress fractures;
- To aid in the diagnosis of and surgical removal of foreign bodies;
- To evaluate plantar fasciitis unrelated to spondyloarthropathy when all of the following are met:
    - When only used once; AND
    - Only after a failed course of at least 6 months of conservative treatment; AND
    - Only when the medical records indicate that another disease process or pathology is indicated.

Extremity ultrasound is limited to studies of the arms and legs. The upper extremity includes any part of the arm from the shoulder joint through the fingers including the clavicular and the scapular portions of the upper appendage but excluding the sternoclavicular joint. The lower extremity includes any part of the leg inferior to or below the inguinal ligament.

1. Extremity ultrasound including but not limited to the following conditions is considered not medically reasonable and necessary and therefore non-covered:
    - Avascular necrosis
    - Bunions
    - Chondromalacia patella
    - Cruciate ligament disorder
    - Hoffa's fat pad

- Intra articular loose bodies
- Labrum disorders of the hip or shoulder
- Marrow disorders
- Meniscal disorders
- Neuromas
- Os trigonum syndrome
- Osteochondritis dissecans or osteochondral defect
- Osteomyelitis
- Paronychia
- Peripheral nerve injections
- Plantar plate injuries
- Plantar warts
- Sesamoid complex disorders
- Shoulder dislocation
- Spurs (including shoulder spurs)
- Superficial abscesses
- Superficial ganglia

2. Bilateral studies are allowed only if there is pathology of both extremities dictating medical necessity for two distinct examinations. It is not reasonable and necessary to perform the contralateral extremity as a "control" or for comparison with normal.
3. In the case of plantar fasciitis unrelated to spondyloarthropathy, diagnostic ultrasound is NOT to be used in making an initial determination (diagnosis).
4. More than one complete ultrasound per joint, per extremity, in a 12 month period will be considered not medically necessary.
5. More than four extremity ultrasounds total in a 12 month period, complete or limited, will be considered not medically necessary.

Billing examples

Example A:
A complete examination of the elbow and shoulder on the right upper extremity would result in CPT code 76881 x 1 being submitted for reimbursement.

Example B:
A limited examination for an Achilles tendon injury would result in CPT code 76882 x 1 being submitted for reimbursement.

Example C:
The following example is of appropriate documentation for a **complete** non-vascular ultrasound of the ankle. According to the CPT Changes, ALL of the following must be documented to submit CPT code 76881 for reimbursement:

1. "Evaluation of the lateral structures of the ankle including:
    a. The peroneus longus and peroneus brevis tendons for tears, tendinosis, or tenosynovitis. Dynamic imaging is also performed with circumduction of the ankle to assess for peroneal subluxation in real time.
    b. The anterior talofibular ligament, calcaneofibular ligament, and anterior inferior tibiofibular ligament for tears or scarring. Stress maneuvers are performed to evaluate for ligamentous laxity and anterolateral ankle impingement.
2. Evaluation of the medial structures of the ankle including:
    a. The posterior tibial, flexor digitorum longus, and flexor hallucis longus tendons for tears, tendinosis, or tenosynovitis.
    b. The deltoid ligament for tears or scarring.
    c. The neurovascular bundle for signs of nerve swelling or compression.
3. Evaluation of the anterior structures of the ankle including:
    a. The tibialis anterior tendon for tears, tendinosis, or tenosynovitis.
    b. The ankle joint for effusions, synovitis, arthritic changes, and adjacent ganglion cysts.
4. Evaluation of the posterior structures of the ankle including:
    a. The Achilles tendon for tears, tendinosis, or peritendinitis.
    b. The retrocalcaneal and retroachilles bursa for fluid collections or inflammation.
5. A report is dictated for the patient's chart."

When billing CPT code 76881, documentation must include this level of detailed information for each joint or for an entire extremity (depending on what was imaged). Failure to document at this level of detail would then only meet the billing requirements for CPT code 76882.

Utilization Parameters

Regardless of the number of joints examined in a single extremity, CPT code 76881 or 76882 can only be billed once per extremity. Both codes require a permanently recorded image(s) and written report containing a description of each of the required elements or the reason that an element(s) could not be visualized.

It is not expected that there will be routine cascading of tests from ultrasound to MRI and vice versa when imaging of extremities is medically necessary.

Provider Training/Qualifications

Physicians who perform or interpret diagnostic musculoskeletal (MSK) ultrasound (US) examinations must be licensed medical practitioners who have a thorough understanding of the indications and guidelines for MSK US examinations as well as a familiarity with the basic physical principles and limitations of the technology of US imaging. They must be familiar with the best method of imaging for extremity abnormalities. They must have an understanding of US technology, instrumentation, power output, equipment calibration, and safety. Physicians responsible for diagnostic MSK US examinations must be able to demonstrate familiarity with the anatomy, physiology, and pathophysiology of the anatomic areas that are being examined. These physicians must provide evidence of the training and competence needed to perform or interpret diagnostic MSK US examinations successfully, upon request. The training should also include methods of documentation and reporting of US studies.

The diagnostic medical sonographer must be qualified, by appropriate training, to perform diagnostic US. This qualification can be demonstrated by certification for same by a nationally recognized certifying body.

Refer to Sconfienza LM et al. Clinical indications for musculoskeletal ultrasound updated in 2017 by European Society of Musculoskeletal Radiology (ESSR) consensus. Eur Radiol. 2018 Dec;28(12):5338-5351. doi: 10.1007/s00330-018-5474-3 for specifics on each joint and extremity.

Bilateral studies are allowed only if there is pathology of both extremities dictating medical necessity for two distinct examinations. It is not reasonable and necessary to perform the contralateral extremity as a "control."

CPT CODES AND DESCRIPTIONS

CPT Code	Description
76881	Ultrasound, complete joint (i.e., joint space and peri-articular soft tissue structures) real-time with image documentation
76882	Ultrasound, limited, joint or focal evaluation of other nonvascular extremity structure(s) (e.g., joint space, peri-articular tendon[s], muscle[s], nerve[s], other soft tissue structure[s], or soft tissue mass[es]), real-time with image documentation

BACKGROUND

Ultrasound of the extremity is a non-invasive imaging technique that uses high-frequency sound waves to evaluate the extremities (arms and legs), providing real-time, two-dimensional images. Longitudinal, transverse and oblique images of the area of interest are obtained. Ultrasound, echography and sonography are all terms that may be used interchangeably to describe this particular imaging technique. Ultrasound, however, is operator dependent and has a number of artifacts that can result in misinterpretation. Ultrasound services should only be performed/assessed by an appropriately qualified specialist.

Musculoskeletal Ultrasound uses a number of modes to characterize joint pathology, including grey scale, color and power Doppler, spectral Doppler, 3D imaging, elastography. Musculoskeletal ultrasound may detect and monitor multiple joint pathologies including synovitis, tenosynovitis, and tendon pathologies, entheseal processes, bone erosions and osteophytes, cartilage changes and bursal pathologies. (Joshua, 2012).

PRACTITIONER SCOPE AND TRAINING

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

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

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

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

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

References

Alcalde, M., D'Agostino, M. A., Bruyn, G. A., Moller, I., Iagnocco, A., Wakefield, R. J.,Naredo, E. (2012). A systematic literature review of US definitions, scoring systems and validity according to the OMERACT filter for tendon lesion in RA and other inflammatory joint diseases. Rheumatology (Oxford), 51(7), 1246-1260. doi: 10.1093/rheumatology/kes018

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

Centers for Medicare and Medicaid Services. Publication 100-03, Medicare National Coverage Determinations Manual, Chapter 1: 220.5 Ultrasound Diagnostic Procedures

Centers for Medicare and Medicaid Services. Local Coverage Determination (LCD): Non-Vascular Extremity Ultrasound (L35409). Retreived on February 10, 2023 from https://www.cms.gov/medicare-coverage-database/details/lcd-details.aspx?LCDId=35409&ver=64&articleId=55037&bc=AAAAAAAAEAAA&

Centers for Medicare and Medicaid Services. Local Coverage Article: Billing and Coding: Non-Vascular Extremity Ultrasound (A55037). Retrieved on February 10, 2023 from https://www.cms.gov/medicare-coverage-database/details/article-details.aspx?articleId=55037

Feuerstein, C. A., Weil, L., Jr., Weil, L. S., Sr., Klein, E. E., Fleischer, A., & Argerakis, N. G. (2014). Static Versus Dynamic Musculoskeletal Ultrasound for Detection of Plantar Plate Pathology. Foot Ankle Spec, 7(4), 259-265. doi: 10.1177/1938640014537300

Irwin, L. R., Konstantoulakis, C., Hyder, N. U., & Sapherson, D. A. (2000). Ultrasound in the diagnosis of Morton's neuroma. Foot, 10(4), 186-189.

JCI. (2020). Joint Commission International Accreditation Standards for Hospitals (7th ed.): Joint Commission Resources.

Joshua, F. (2012). Ultrasound applications for the practicing rheumatologist. Best Practice & Research Clinical Rheumatology, 26(6), 853-867. doi: http://dx.doi.org/10.1016/j.berh.2012.10.002

Klauser, A. S., Tagliafico, A., Allen, G. M., Boutry, N., Campbell, R., Court-Payen, M., Martinoli, C. (2012). Clinical indications for musculoskeletal ultrasound: A Delphi-based consensus paper of the European society of musculoskeletal radiology. European Radiology, 22(5), 1140-1148. doi: 10.1007/s00330-011-2356-3

Micu, M. C., Nestorova, R., Petranova, T., Porta, F., Radunovic, G., Vlad, V., & Iagnocco, A. (2012). Ultrasound of the ankle and foot in rheumatology. Med Ultrason, 14(1), 34-41.

Mohseni-Bandpei, M. A., Nakhaee, M., Mousavi, M. E., Shakourirad, A., Safari, M. R., & Vahab Kashani, R. (2014). Application of Ultrasound in the Assessment of Plantar Fascia in Patients With Plantar Fasciitis: A Systematic Review. Ultrasound in Medicine & Biology, 40(8), 1737-1754.

Molini, L., & Bianchi, S. (2014). US in peroneal tendon tear. J Ultrasound, 17(2), 125-134. doi: 10.1007/s40477-014-0072-y

Rettedal, D. D., Graves, N. C., Marshall, J. J., Frush, K., & Vardaxis, V. (2013). Reliability of ultrasound imaging in the assessment of the dorsal Lisfranc ligament. J Foot Ankle Res, 6(1), 7. doi: 10.1186/1757-1146-6-7

Sconfienza LM, Albano D, Allen G, Bazzocchi A, Bignotti B, Chianca V, Facal de Castro F, Drakonaki EE, Gallardo E, Gielen J, Klauser AS, Martinoli C, Mauri G, McNally E, Messina C, Mirón Mombiela R, Orlandi D, Plagou A, Posadzy M, de la Puente R, Reijnierse M, Rossi F, Rutkauskas S, Snoj Z, Vucetic J, Wilson D, Tagliafico AS. Clinical indications for musculoskeletal ultrasound updated in 2017 by European Society of Musculoskeletal Radiology (ESSR) consensus. Eur Radiol. 2018 Dec;28(12):5338-5351. doi: 10.1007/s00330-018-5474-3.