Cigna Medical Coverage Policies – Radiology
Musculoskeletal Imaging Guidelines

Effective February 1, 2022

Instructions for use

The following coverage policy applies to health benefit plans administered by Cigna. Coverage policies are intended to provide guidance in interpreting certain standard Cigna benefit plans and are used by medical directors and other health care professionals in making medical necessity and other coverage determinations. Please note the terms of a customer's particular benefit plan document may differ significantly from the standard benefit plans upon which these coverage policies are based. For example, a customer's benefit plan document may contain a specific exclusion related to a topic addressed in a coverage policy.

In the event of a conflict, a customer's benefit plan document always supersedes the information in the coverage policy. In the absence of federal or state coverage mandates, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of:

1. The terms of the applicable benefit plan document in effect on the date of service
2. Any applicable laws and regulations
3. Any relevant collateral source materials including coverage policies
4. The specific facts of the particular situation

Coverage policies relate exclusively to the administration of health benefit plans. Coverage policies are not recommendations for treatment and should never be used as treatment guidelines.

This evidence-based medical coverage policy has been developed by eviCore, Inc. Some information in this coverage policy may not apply to all benefit plans administered by Cigna.

These guidelines include procedures eviCore does not review for Cigna. Please refer to the Cigna CPT code list for the current list of high-tech imaging procedures that eviCore reviews for Cigna.

Musculoskeletal Imaging Guidelines

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Procedure Codes Associated with Musculoskeletal Imaging	
MRI/MRA	**CPT®**
MRI Upper Extremity, other than joint, without contrast	73218
MRI Upper Extremity, other than joint, with contrast	73219
MRI Upper Extremity, other than joint, without and with contrast	73220
MRI Upper Extremity, any joint, without contrast	73221
MRI Upper Extremity, any joint, with contrast	73222
MRI Upper Extremity, any joint, without and with contrast	73223
MR Angiography Upper Extremity without or with contrast	73225
MRI Lower Extremity, other than joint, without contrast	73718
MRI Lower Extremity, other than joint, with contrast	73719
MRI Lower Extremity, other than joint, without and with contrast	73720
MRI Lower Extremity, any joint, without contrast	73721
MRI Lower Extremity, any joint, with contrast	73722
MRI Lower Extremity, any joint, without and with contrast	73723
MR Angiography Lower Extremity without or with contrast	73725
MRI Pelvis without contrast	72195
MRI Pelvis with contrast	72196
MRI Pelvis without and with contrast	72197
CT/CTA	**CPT®**
CT Upper Extremity without contrast	73200
CT Upper Extremity with contrast	73201
CT Upper Extremity without and with contrast	73202
CT Angiography Upper Extremity without and with contrast	73206
CT Lower Extremity without contrast	73700
CT Lower Extremity with contrast	73701
CT Lower Extremity without and with contrast	73702
CT Angiography Lower Extremity without and with contrast	73706
CT Pelvis without contrast	72192
CT Pelvis with contrast	72193
CT Pelvis without and with contrast	72194
Ultrasound	**CPT®**
Ultrasound, complete joint (ie, joint space and peri-articular soft tissue structures) real-time with image documentation	76881
Ultrasound, limited, joint or 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	76882
Ultrasound, pelvic (nonobstetric), real time with image documentation	76857

MS-1: General Guidelines

MS-1.0: General Guidelines

- Before advanced diagnostic imaging can be considered, there must be an initial face-to-face clinical evaluation as well as a clinical re-evaluation after a trial of failed conservative treatment; the clinical re-evaluation may consist of a face-to-face evaluation or other meaningful contact with the provider's office such as email, web or telephone communications.
- A face-to-face clinical evaluation is required to have been performed within the last 60 days before advanced imaging can be considered. This may have been either the initial clinical evaluation or the clinical re-evaluation.
- The initial face-to-face clinical evaluation should include a relevant history and physical examination, appropriate laboratory studies, and non-advanced imaging modalities. Other forms of meaningful contact (e.g., telephone call, electronic mail or messaging) are not acceptable as an initial evaluation.
- Prior to advanced imaging consideration, the results of plain x-rays performed after the current episode of symptoms started or changed is required for all musculoskeletal conditions, unless otherwise noted in the guidelines.
  - Initial plain x-ray can rule out those situations that do not often require advanced imaging, such as osteoarthritis, acute/healing fracture, dislocation, osteomyelitis, acquired/congenital deformities, and tumors of bone amenable to biopsy or radiation therapy (in known metastatic disease), etc.
  - X-ray may provide complementary clinical information regarding detailed bony anatomy, and may assist with preoperative planning when surgery is being contemplated.
  - X-ray may provide clinically significant details for soft tissue masses, such as soft tissue calcification, presence or absence of phleboliths, radiographic density, and effect on adjacent bone.
  - X-ray often has a larger field of view than MRI or CT and has the potential to identify more proximal or distal pathology in an extremity.
- Clinical re-evaluation is required prior to consideration of advanced diagnostic imaging to document failure of significant clinical improvement following a recent (within 3 months) six week trial of provider-directed conservative treatment. Clinical re-evaluation can include documentation of a face-to-face encounter or documentation of other meaningful contact with the requesting provider's office by the individual (e.g. telephone call, electronic mail or messaging).
- Provider-directed conservative treatment may include rest, ice, compression, and elevation (R.I.C.E.), non-steroidal anti-inflammatories (NSAIDs), narcotic and non-narcotic analgesic medications, oral or injectable corticosteroids, viscosupplementation injections, a provider-directed home exercise program, cross-training, and/or physical/occupational therapy or immobilization by splinting/casting/bracing.

- Orthopedic specialist evaluation can be helpful in determining the need for advanced imaging.
  - The need for repeat advanced imaging should be carefully considered and may not be indicated if prior imaging has been performed.
  - Serial advanced imaging, whether CT or MRI, for surveillance of healing or recovery from musculoskeletal disease is not supported by the medical evidence in the majority of musculoskeletal conditions.

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MS-2: Imaging Techniques

MS-2.1: Plain X-Ray

- The results of an initial plain x-ray are required prior to advanced imaging in all musculoskeletal conditions/disorders, unless otherwise noted in the guidelines, to rule out those situations that do not often require advanced imaging, such as osteoarthritis, acute/healing fracture, dislocation, osteomyelitis, acquired/congenital deformities, and tumors of bone amenable to biopsy or radiation therapy (in known metastatic disease), etc.

MS-2.2: MRI or CT

- Magnetic Resonance Imaging (MRI) is often the preferred advanced imaging modality in musculoskeletal conditions because it is superior in imaging the soft tissues and can also define physiological processes in some instances [e.g. edema, loss of circulation (AVN), and increased vascularity (tumors)].
- Computed Tomography (CT) is preferred for imaging cortical bone anatomy; thus, it is useful for studying complex fractures (particularly of the joints), dislocations, and assessing delayed union or non-union of fractures, if plain x-rays are equivocal. CT may be the procedure of choice in individuals who cannot undergo an MRI, such as those with pacemakers.
- Positional MRI: Positional MRI is also referred to as dynamic, standing, weight-bearing, or kinetic MRI. Currently, there is inadequate scientific evidence to support the medical necessity of this study. As such, it should be considered experimental or investigational.
- Positional CT: Positional CT is also refered to as weight-bearing or cone beam CT, may be useful in imaging of the foot and ankle.
  - If a request for foot or ankle imaging with positional CT meets medical necessity criteria for standard CT imaging (as defined in the condition-specific guidelines), the request may be approved.
    - Positional CT of anatomic areas other than the foot and ankle are considered experimental or investigational.
- dGEMRIC Evaluation of Cartilage: Delayed gadolinium enhanced Magnetic Resonance Imaging of Cartilage (dGEMRIC) is a technique where an MRI estimates joint cartilage glycosaminoglycan content after penetration of the contrast agent in order to detect cartilage breakdown. Currently, there is inadequate scientific evidence to support the medical necessity of this study. As such, it should be considered experimental or investigational for the diagnosis and surveillance of, or preoperative planning related to chondral pathology.

MS-2.3: Ultrasound

- Ultrasound (US) uses sound waves to produce images that can be used to evaluate a variety of musculoskeletal disorders. As with US in general, musculoskeletal US is highly operator-dependent, and proper training and experience are required to perform consistent, high quality evaluations.

MS-2.4: Contrast Issues

- Most musculoskeletal imaging (MRI or CT) is without contrast; however, the following examples may be considered with contrast:
  - Tumors, osteomyelitis, and soft tissue infection (without and with contrast)
  - MRI arthograpy (with contrast only)
  - MRI for rheumatoid arthritis and inflammatory arthritis (contrast as requested)
  - For individuals with a contrast contraindication, if the advanced imaging recommendation specifically includes contrast, the corresponding advanced imaging study without contrast may be approved as an alternative, although the non-contrast study may not provide an adequate evaluation of the condition of concern.

MS-2.5: Positron Emission Tomography (PET)

- At the present time, there is inadequate evidence to support the medical necessity of PET for the routine assessment of musculoskeletal disorders. It should be considered experimental or investigational.
  - See: **MS-16: Post-Operative Joint Replacement Surgery**

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MS-3: 3D Rendering

- Indications for musculoskeletal 3-D image post-processing for preoperative planning when conventional imaging is insufficient for:
  - Complex fractures/dislocations (comminuted or displaced) of any joint.
  - Spine fractures, pelvic/acetabulum fractures, intra-articular fractures.
  - Preoperative planning for other complex surgical cases.
- The code assignment for 3-D rendering depends upon whether the 3-D post-processing is performed on the scanner workstation (CPT® 76376) or on an independent workstation (CPT® 76377).
  - 2-D reconstruction (i.e. reformatting axial images into the coronal plane) is considered part of the tomography procedure, is not separately reportable, and does not meet the definition of 3-D rendering.
  - It is not appropriate to report 3-D rendering in conjunction with CTA and MRA because those procedure codes already include the post-processing.
  - In addition to the term "3-D," the following terms may also be used to describe 3-D post-processing:
    - Maximum intensity projection (MIP)
    - Shaded surface rendering
    - Volume rendering
- The 3-D rendering codes require concurrent supervision of image post-processing 3-D manipulation of volumetric data set and image rendering.

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MS-4: Avascular Necrosis (AVN)/Osteonecrosis

MS-4.1: AVN

- MRI of the area of concern without contrast can be performed when plain x-ray findings are non-confirmatory or equivocal and clinical symptoms warrant further investigation for suspected avascular necrosis.
- Advanced imaging for AVN confirmed by plain x-ray is appropriate in the following situations:
  - Femoral head collapse:
    - MRI Hip without contrast (CPT® 73721) or CT Hip without contrast (CPT® 73700) for preoperative planning. See **MS-24: Hip**.
  - Distal Femur:
    - MRI Knee without contrast (CPT® 73721) if needed for treatment planning. See **MS-25: Knee**.
  - Talus:
    - MRI Ankle without contrast (CPT® 73721) if needed for treatment planning. See **MS-26: Ankle**.
  - Tarsal navicular (Kohler Disease):
    - MRI Foot without contrast (CPT® 73718) if needed for treatment planning.See **MS-27: Foot**.
  - Metatarsal head (Frieberg's Infraction):
    - MRI Foot without contrast (CPT® 73718) if needed for treatment planning. See: **MS-27: Foot**.
  - Humeral head:
    - CT Shoulder without contrast (CPT® 73200) and/or MRI Shoulder without contrast (CPT® 73221) for preoperative planning prior to shoulder replacement: See **MS-19: Shoulder**.
  - Lunate (Kienbock's Disease)/Scaphoid (Preiser's Disease):
    - CT Wrist without contrast (CPT® 73200) or MRI Wrist without contrast (CPT® 73221). See **MS-21: Wrist**.
- Individuals with acute lymphoblastic leukemia and known or suspected osteonecrosis should be imaged according to guidelines in **PEDONC-3.2: Acute Lymphoblastic Leukemia (ALL)** in the Pediatric Oncology Imaging Guidelines
- Known or suspected osteonecrosis in long-term cancer survivors should be imaged according to guidelines in **PEDONC-19.4: Osteonecrosis in Long Term Cancer Survivors** in the Pediatric Oncology Imaging Guidelines

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MS-5: Fractures

MS-5.1: Acute

- CT or MRI without contrast if ANY of the following:
  - Complex (comminuted or displaced) fracture with or without dislocation on plain x-ray.
    - CT is preferred unless it is associated with neoplastic disease when MRI without/with contrast is preferred unless MRI contraindicated.
  - Individual presents initially to the requesting provider with a documented history of an acute traumatic event at least two weeks prior with a negative plain x-ray at the time of this face-to-face encounter and a clinical suspicion for an occult/stress/insufficiency fracture See **MS-5.2: Suspected Occult/Stress/Insufficiency Fracture/Stress Reaction and Shin Splints**.
- MRI without contrast, MRI with contrast (arthrogram), or CT with contrast (arthrogram) of the area of interest if:
  - Plain x-rays are negative and an osteochondral fracture is suspected, OR
  - Plain x-rays and clinical exam suggest an unstable osteochondral injury. See **MS-13.1: Chondral/Osteochondral Lesions, Including Osteochondritis Dissecans and Fractures**

MS-5.2: Suspected Occult/Stress/Insufficiency Fracture/Stress Reaction and Shin Splints

- MRI without contrast for suspected hip/femoral neck, tibia, pelvis/sacrum, tarsal navicular, proximal fifth metatarsal, or scaphoid occult/stress/insufficiency fractures, and suspected atypical femoral shaft fractures related to bisphosphonate use if initial evaluation of history, physical exam, and plain x-ray fail to establish a definitive diagnosis.
  - CT without contrast can be performed as an alternative to MRI for suspected occult/insufficiency fractures of the pelvis/hip and suspected atypical femoral shaft fractures related to bisphosphonate See **MS-23: Pelvis** and **MS-24: Hip**, and suspected occult fractures of the scaphoid See **MS-21: Wrist**.
- MRI or CT without contrast for all other suspected occult/stress/insufficiency fractures with EITHER of the following:
  - Repeat plain x-rays remain non-diagnostic for fracture after a minimum of 10 days of provider-directed conservative treatment
  - Initial plain x-rays obtained a minimum of 14 days after the onset of symptoms are non-diagnostic for fracture
- MRI Lower Leg without contrast (CPT® 73718) for suspected shin splints when ALL of the following:
  - Initial plain x-ray
  - Failure of a 6-week trial of provider-directed conservative treatment
- For stress reaction, advanced imaging is not medically necessary for surveillance or “return to play” decisions regarding a stress reaction identified on an initial imaging study.

- MRI without contrast of the area of interest for stress fracture follow-up imaging for "return to play" evaluation at least 3 months after the initial imaging study for stress fracture.
- For periprosthetic fractures related to joint replacement See **MS-16.1: Post-Operative Joint Replacement Surgery**, **MS-19: Shoulder**, **MS-20: Elbow**, **MS-24: Hip**, **MS-25: Knee**, and **MS-26: Ankle**.

MS-5.3: Other Indications

- CT or MRI without contrast after recent (within 30 days) plain x-ray if **ONE** of the following:
  - Concern for delayed union or non-union of fracture, osteotomy, or joint fusions.
  - Part of preoperative evaluation for a planned surgery of a complex fracture with or without dislocation.

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MS-6: Foreign Body

MS-6.1: Foreign Body - General

- Ultrasound (CPT® 76881 or CPT® 76882) or CT without contrast or MRI without and with contrast or MRI without contrast of the area of interest after plain x-rays rule out the presence of radiopaque foreign bodies.
  - Ultrasound (CPT® 76881 or CPT® 76882) is the preferred imaging modality for radiolucent (non-radiopaque) foreign bodies (e.g. wood, plastic).
  - CT without contrast is recommended when plain x-rays are negative and a radiopaque foreign body is still suspected, as CT is favored over MRI for the identification of foreign bodies.
  - MRI without and with contrast is an alternative to US and CT for assessing the extent of infection associated with a suspected foreign body.

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MS-7: Ganglion Cysts

MS-7.1: Ganglion Cysts – General

- Plain x-ray is the initial imaging study for ganglion cysts.
- MRI without contrast or MRI without and with contrast or US (CPT® 76881 or CPT® 76882) is appropriate for surgical planning.
- Advanced imaging is not indicated for ganglions that can be diagnosed by history and physical examination.

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MS-8: Gout/Calcium Pyrophosphate Deposition Disease (CPPD)/ Pseudogout/Chondrocalcinosis

MS-8.1: Gout-General

- CT without contrast, MRI without contrast or MRI without and with contrast of the area of interest is indicated when BOTH of the following are met:
  - Initial plain x-ray to rule out other potential disease processes
  - Infection or neoplasm is in the differential diagnosis for soft tissue tophi.

Background and Supporting Information

- Early stages of gout can be diagnosed clinically since radiographic findings are not present early in the disease course

MS-8.2: CPPD (Pseudogout/Chondrocalcinosis)-General

- Calcium pyrophosphate deposition disease (CPPD), also called pseudogout, can often be diagnosed from plain x-rays; advanced diagnostic imaging is generally not medically necessary.

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MS-9: Infection/Osteomyelitis

MS-9.1: Infection – General

- MRI without and with contrast after plain x-ray(s) and:
  - Plain x-ray(s) are negative or do not suggest alternative diagnoses such as neuropathic arthropathy or fracture,and soft tissue or bone infection (osteomyelitis) is suspected; *or*
  - Plain x-ray(s) are positive for osteomyelitis, and the extent of infection into the soft tissues and any skip lesions require evaluation.
- CT without and with contrast can replace an MRI:
  - To assess the extent of bony destruction from osteomyelitis; CT can guide treatment decisions.
  - For preoperative planning
  - If MRI is contraindicated
- Individuals with suspected spinal infections
  - See: **SP-1.2: Red Flag Indications** for advanced imaging guidelines
- Individuals with diabetic foot infections after plain x-ray(s)
  - See: **MS-27: Foot** for advanced imaging guidelines

MS-9.2: Septic Joint

- MRI joint, without and with contrast is appropriate when standard or image-guided arthrocentesis is contraindicated, unsuccessful, or non-diagnostic, and the clinical documentation satisfies ALL of the following criteria:
  - History and physical examination findings [ONE of the following]:
    - Development of an acutely hot and swollen joint (<2 weeks)
    - Decreased range of motion due to pain
    - Documented fever
  - Laboratory tests [ONE of the following]:
    - Leukocytosis
    - Elevated ESR or C-reactive protein
    - Analysis of the joint fluid is non-diagnostic
  - Plain x-ray of the joint
- MRI without and with contrast is appropriate after plain x-rays if the arthrocentesis is diagnostic and if there is a confirmed septic joint, to evaluate the extent of infection into the soft tissues and any skip lesions that would require evaluation.
- CT with contrast can replace MRI without and with contrast if MRI is contraindicated.

Background and Supporting Information

Analysis of joint fluid is most often sufficient to diagnose a septic joint.

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MS-10: Soft Tissue Mass or Lesion of Bone

MS-10.1: Soft Tissue Mass

- History and physical exam should include documentation of: location, size, duration, growing or stable, solid/cystic, fixed/not fixed to the bone, discrete or ill-defined, and an association with pain.
- MRI without and with contrast or without contrast or US of the area of interest (CPT® 76881 or 76882) is appropriate when ANY of the following are met after plain x-ray:
  - Soft tissue mass(es)
  - Surgical planning
  - Known or suspected soft tissue mass in an individual with a cancer predisposition syndrome if a recent ultrasound is inconclusive. Plain x-ray is not required for these individuals. See **PEDONC-2: Screening Imaging in Cancer Predisposition Syndromes** in the Pediatric Oncology Imaging Guidelines.
- CT with contrast or CT without and with contrast is appropriate when MRI is contraindicated or after a metal limiting MRI evaluation.
- Advanced imaging is not indicated for:
  - Subcutaneous lipoma with no surgery planned
  - Ganglia, See **MS-7: Ganglion Cysts**
  - Sebaceous cyst

Background and Supporting Information

Plain x-rays can determine if an advanced imaging procedure is indicated, and if so, which modality is most appropriate. If non-diagnostic, these initial plain x-rays can provide complementary information if advanced imaging is indicated.

MS-10.2: Lesion of Bone

- History and physical exam should include documentation of: location, size, duration, growing or stable, discrete or poorly defined, and an association with pain.
- Complete radiograph of the entire bone containing the lesion of bone is required prior to consideration of advanced imaging. Many benign bone tumors have a characteristic appearance on plain x-ray and advanced imaging is not necessary.
- MRI without and with contrast, MRI without contrast, or CT without contrast may be indicated if ONE of the following applies:
  - Diagnosis uncertain based on plain x-ray appearance
  - Imaging requested for preoperative planning.
- MRI without and with contrast or without contrast is appropriate when plain x-ray reveals an osteochondroma with clinical concern of malignant transformation.
- For Paget's Disease:
  - Bone scan OR
  - MRI (contrast as requested) can be considered if the diagnosis (based on plain x-rays and laboratory studies) is in doubt OR
  - MRI (contrast as requested) can be considered if malignant degeneration, which occurs in up to 10% of cases, is suspected.

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MS-11: Muscle/Tendon Unit Injuries/Diseases

MS-11.1: Muscle/Tendon Unit Injuries/Diseases

- Plain x-ray is the initial imaging study for Muscle/Tendon Unit Injuries.
- MRI without contrast or US (CPT® 76881 or CPT® 76882) for **EITHER** of the following:
  - Suspected partial tendon rupture of a specific (named) tendon.
  - Complete tendon ruptures for preoperative planning (for example, Achilles tendon rupture, posterior tibial tendon rupture, humeral insertion of the pectoralis major rupture, proximal and distal biceps tendon rupture, patellar ligament/tendon rupture, proximal/distal hamstring tendon rupture).
- MRI is not medically necessary for muscle belly strains/muscle tears.
- See **MS-19: Shoulder** for clinical suspicion of a partial or complete rotator cuff tear.
- See **PN-6.2: Inflammatory Muscle Diseases** in the Peripheral Nerve Disorders Imaging Guidelines and **PEDMS-10.3: Inflammatory Muscle Diseases** in the Pediatric Musculoskeletal Imaging Guidelines.

MS-11.2: Acute Compartment Syndrome

- Advanced imaging is not indicated. Diagnosis is made clinically and by direct measurement of compartment pressure and is a surgical emergency.

Background and Supporting Information

- Noninvasive methods of measuring compartment pressures and diagnosing acute compartment syndrome are under study, but are currently experimental, investigational, and unproven.

MS-11.3: Chronic Exertional Compartment Syndrome

- Advanced imaging should only be considered when ruling out other potential causes of extremity pain following a plain x-ray and conservative treatment as indicated.

Background and Supporting Information

- Direct measurement of compartment pressure remains the diagnostic standard. Noninvasive methods of measuring compartment pressures and diagnosing chronic exertional compartment syndrome are under study, but are currently experimental, investigational, and unproven.

References

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MS-12: Osteoarthritis

MS-12.1: Osteoarthritis

- Plain x-ray is the initial imaging study for osteoarthritis
- CT without contrast for treatment planning when congenital or significant atypical post-traumatic arthritic deformities are present in the shoulder, elbow, wrist, hip, knee, or ankle that would require further evaluation of the clinical significance of the deformity already identified on plain x-rays.
  - CT Shoulder without contrast (CPT® 73200) and/or MRI Shoulder without contrast (CPT® 73221) are considered medically necessary for preoperative planning prior to shoulder replacement
- Preoperative non-contrast CT/MRI requests (for either a diagnostic or unlisted CPT code) of the shoulder, elbow, wrist, hip, knee, or ankle to be utilized as part of treatment planning for customized-to-individual joint replacement surgery or as an integral part of surgical planning using intraoperative navigation for joint replacement surgery (e.g. MAKOplasty) are considered medically necessary once the joint replacement surgery has been approved or if the joint replacement surgery does not require prior authorization.
  - Preoperative imaging is considered not medically necessary if the surgery, customized-to-patient implant, and/or computer aaassssisted navigation (e.g. MAKOplasty) has been deemed not medically necessary or experimental, investigational, or unproven.
  - See: **Preface-4.3: Unlisted Procedures/Therapy Treatment Planning** in the Preface Imaging Guidelines
- MRI arthrogram or CT arthrogram is appropriate when joint sparing/salvage reconstructive surgery is planned for the following:
  - Suspected concomitant rotator cuff tear of the shoulder – See: **MS-19: Shoulder**
  - Suspected concomitant labral tear of the shoulder – See: **MS-19: Shoulder**
  - Suspected concomitant labral tear of the hip – See: **MS-24: Hip**
  - Suspected concomitant internal derangement of the knee – See: **MS-25: Knee**

Note:

- Refer to the Anatomic Area Tables **MS-19: Shoulder**, **MS-20: Elbow**, **MS-21: Wrist**, **MS-24: Hip**, **MS-25: Knee**, and **MS-26: Ankle** for the clinical imaging criteria regarding preoperative joint replacement surgery for each anatomic area,
- MRI Knee without contrast (CPT® 73721) is appropriate in a individual with osteoarthritis for clinical suspicion of a symptomatic degenerative meniscus tear following plain x-rays and conservative treatment. See **MS-25: Knee**

Background and Supporting Information

Plain x-rays are performed initially and will reveal characteristic joint space narrowing, osteophyte formation, cyst formation, and subchondral sclerosis.

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MS-13: Chondral/Osteochondral Lesions

MS-13.1: Chondral/Osteochondral Lesions, Including Osteochondritis Dissecans and Fractures

- MRI without contrast, MRI with contrast (arthrogram), or CT with contrast (arthrogram) of the area of interest with EITHER of the following:
  - Plain x-rays are negative and an osteochondral fracture is still suspected
  - Plain x-ray and clinical exam suggest an unstable osteochondral injury.
- See: **MS-26: Ankle** for suspected osteochondral injury of the ankle
- If plain x-rays show a non-displaced osteochondral fragment, follow-up imaging should be with plain x-rays. Advanced imaging is not necessary.
- MRI without contrast or CT without contrast is indicated when healing (including post-operative fixation) cannot be adequately assessed on follow-up plain x-rays.

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MS-14: Osteoporosis

- Plain x-ray is not required for **MS-14: Osteoporosis**.
- Quantitative CT (CPT® 77078) can be approved for screening when DXA scanner is unavailable or known to be inaccurate for ANY of the following populations:
  - Women age ≥65 years
  - Postmenopausal women younger than 65 years who are at increased risk of osteoporosis, as determined by a formal clinical risk assessment tool (e.g., FRAX*)
  - Man, age >50 years with at least one factor related to an increased risk of osteoporosis (i.e., age >70, low body weight, weight loss >10%, physical inactivity, corticosteroid use, androgen deprivation therapy, hypogonadism and previous fragility fracture)
    *Fracture Risk Assessment (FRAX) tool, developed by the World Health Organization (Sheffield, United Kingdom)
    Note: Repeat screening quantitative computed tomography (QCT) can be approved no sooner than every two years
- Quantitative CT scan (CPT® 77078) can be approved for non-screening/monitoring when DXA scanner is unavailable or known to be inaccurate for ANY of the following circumstances:
  - Follow-up in cases where QCT was the original study
  - Multiple healed vertebral compression fractures
  - Significant scoliosis
  - Advanced arthritis of the spine due to increased cortical sclerosis often with large marginal osteophytes.
  - Obese individual over the weight limit of the dual-energy x-ray absorptiometry (DXA) exam table
  - Severely obese individuals (BMI >35kg/m2)
  - Extremes in body height (i.e. very large and very small individuals)
  - Individuals with extensive degenerative disease of the spine
  - A clinical scenario that requires sensitivity to small changes in trabecular bone density (parathyroid hormone and glucocorticoid treatment monitoring).

Note: Repeat non-screening/monitoring QCT can be approved no earlier than one year following a change in treatment regimen, and only when the results will directly impact a treatment decision.

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MS-15: Rheumatoid Arthritis (RA) and Inflammatory Arthritis

MS 15.1: Rheumatoid Arthritis (RA) and Inflammatory Arthritis

- Plain x-ray, physical exam and appropriate laboratory studies* are required prior to advanced imaging
- MRI without contrast or MRI without and with contrast or US (CPT® 76881 or CPT® 76882) is appropriate for the most symptomatic joint, or of the dominant hand or wrist, in **ALL** the following situations:
  - When diagnosis is uncertain prior to initiation of drug therapy.
  - To study the effects of treatment with disease modifying anti-rheumatic drug (DMARD) therapy.
  - To identify seronegative RA individuals that might benefit from early DMARD therapy.
  - To determine change in treatment, such as:
    - Switching from standard DMARD therapy to tumor necrosis factor (TNF) therapy.
    - Changing to a different TNF drug therapy, then one MRI (contrast as requested) of a single joint can be performed.
    - Addition of other treatments, including joint injections
- MRI or US should NOT be considered for routine follow-up of treatment.

Background and Supporting Information

*Examples of appropriate laboratory studies may include Lyme titers, rheumatoid factor (RF), anti-cyclic citrullinated peptide (anti-CCP), sedimentation rate (ESR), C-reactive protein (CRP), and antinuclear antibody (ANA)], joint fluid analysis and plain x-rays should be performed initially.

MS-15.2: Pigmented Villonodular Synovitis (PVNS)

- MRI of the affected joint without contrast, or CT of the affected joint with contrast (arthrogram) if MRI contraindicated following plain x-rays.

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MS-16: Post-Operative Joint Replacement Surgery

MS-16.1: Post-Operative Joint Replacement Surgery - General

- CT without contrast with **ALL** of the following:
  - Recent plain x-ray is nondiagnostic
  - Suspected aseptic loosening of orthopaedic joint replacements
    - CT Shoulder without contrast (CPT® 73200) can be performed as additional imaging following plain x-rays regardless of plain x-ray findings. See: **MS-19: Shoulder**
- CT without contrast with **ALL** of the following
  - Negative plain x-ray.
  - High suspicion for a periprosthetic fracture
    - CT Shoulder without contrast (CPT® 73200) can be performed as additional imaging following plain x-rays regardless of plain x-ray findings. See: **MS-19: Shoulder**
- Joint aspiration is the initial evaluation after plain x-ray for a painful joint replacement when periprosthetic infection is suspected.
- MRI Hip without contrast (CPT® 73721) or Ultrasound (CPT® 76881 or CPT® 76882) for **EITHER** of the following:
  - Diagnosis of ALVAL (aseptic lymphocytic-dominated vasculitis-associated lesion) pseudotumors surrounding metal-on-metal (MoM) hip prostheses. One of these two imaging modalities can be approved but not both. See: **MS-10: Soft Tissue Mass or Lesion of Bone**
  - Metal-On-Metal (MoM) Hip Prostheses that are considered high risk for implant performance issues from THA (Total hip arthroplasty) cup-neck impingement and subsequent ALTR (adverse local tissue reaction) with Co and Cr ion levels greater than 10 ppb.
- CT Hip without contrast (CPT® 73700) or MRI Hip without contrast (CPT® 73721):
  - Evaluate suspected particle disease (aggressive granulomatous disease) of the hip when infection has been excluded.
- For specific joints post-operative from replacement surgery:
  - See: **MS-19: Shoulder**
  - See: **MS-20: Elbow**
  - See: **MS-24: Hip**
  - See: **MS-25: Knee**
  - See: **MS-26: Ankle**

Background and Supporting Information

- Complications following joint replacement surgery include (not limited to) periprosthetic fracture, infection, aseptic loosening, failure of fixation/component malposition, and wear.

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MS-17: Limb Length Discrepancy

MS-17.1: Limb Length Discrepancy

- Either plain radiographic or "CT scanogram," both reported with CPT® 77073, is appropriate to radiographically evaluate limb length discrepancy due to congenital anomalies, acquired deformities, growth plate (physeal injuries or surgery), or inborn errors of metabolism.

Reference

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MS-18: Anatomical Area Tables – General Information

The imaging guidelines for each anatomical area are presented in table format. The table below includes a description of how each column header should be utilized for each guideline **MS-19: Shoulder** through **MS-27: Foot**.

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.

MS-19: Shoulder				
Condition	**Plain X-Ray?**	**Conservative Treatment**	**Advanced Imaging**	**Comments**
Individual's condition	**Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)**	**Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)**	**The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.**	**Additional comments related to the condition.**
General Shoulder Pain	Yes	Yes	➢ MRI Shoulder without contrast (CPT® 73221) OR ➢ US Shoulder (CPT® 76881 or CPT® 76882) OR ➢ CT Shoulder with contrast (arthrogram) (CPT® 73201) if MRI contraindicated	
Symptomatic Loose Bodies	Yes	No	➢ MRI Shoulder without contrast (CPT® 73221)	
Impingement	Yes	Yes	➢ MRI Shoulder without contrast (CPT® 73221) OR ➢ MRI Shoulder with contrast (arthrogram) (CPT® 73222) OR ➢ US Shoulder (CPT® 76881 or CPT® 76882) ➢ CT Shoulder with contrast (CPT® 73201) if MRI is contraindicated	
Tendonitis/ Bursitis	Yes	Yes	➢ MRI Shoulder without contrast (CPT® 73221) OR ➢ US Shoulder (CPT® 76881 or CPT® 76882)	
Tendon Rupture (Biceps Long Head)	Yes	No	➢ When clinical exam is inconclusive due to inability to visualize a "Popeye" sign clinically, or for preoperative planning: ◆ MRI Shoulder without contrast (CPT® 73221) OR ◆ US Shoulder (CPT® 76881 or CPT® 76882)	
Tendon Rupture (Pectoralis Major/Minor)	Yes	No	➢ When clinical exam is inconclusive or for preoperative planning: ◆ MRI Shoulder without contrast (CPT® 73221) OR ◆ MRI Chest without contrast (CPT® 71550) OR ◆ US Shoulder (CPT® 76881 or CPT® 76882)	

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Shoulder Rotator Cuff Tear (Complete and Partial)	Yes	Yes*	➢ MRI Shoulder without contrast (CPT® 73221) OR ➢ MRI Shoulder with contrast (arthrogram) (CPT® 73222) OR ➢ US Shoulder (CPT® 76881 or CPT® 76882) OR ➢ CT Shoulder with contrast (arthrogram) (CPT® 73201) if MRI is contraindicated	*Conservative treatment is not required with an acute shoulder injury prior to the onset of symptoms and consideration of surgery.If surgery is being considered, MRI or CT arthrogram are required per **CMM-315: Shoulder Surgery-Arthroscopic and Open Procedures**.
Partial Tendon Rupture (Excluding Partial Rotator Cuff Tears)	Yes	No	➢ For a suspected partial tendon rupture of a specific named tendon not otherwise specified: ◆ MRI Shoulder without contrast (CPT® 73221) OR ◆ US Shoulder (CPT® 76881 or CPT® 76882)	MRI is *NOT* needed for muscle belly strains/muscle tears.

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Shoulder Labral Tear (e.g., SLAP, ALPSA, HAGL)	Yes	Yes	➢ MRI Shoulder with contrast (arthrogram) (CPT® 73222) OR ➢ MRI Shoulder without contrast (CPT® 73221) OR ➢ CT Shoulder with contrast (arthrogram) (CPT® 73201)	For surgery criteria, See **CMM-315: Shoulder Surgery-Arthroscopic and Open Procedures**.

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Shoulder Dislocation/ Subluxation/ Instability, or Bankart/ Hill-Sachs lesions	Yes	Yes*	➢ Individuals 40 years of age or younger with a first time dislocation, and in individuals with recurrent dislocations, conservative treatment not required: ◆ MRI Shoulder with contrast (arthrogram) (CPT® 73222) OR ◆ MRI Shoulder without contrast (CPT® 73221) ➢ CT Shoulder with contrast (arthrogram) (CPT® 73201) or CT Shoulder without contrast (CPT® 73200) if MRI is contraindicated	*Conservative treatment is required in individuals over age 40 with a first time dislocation. For surgery criteria, See **CMM-315: Shoulder Surgery-Arthroscopic and Open Procedures.**
Frozen Shoulder/ Adhesive Capsulitis	Yes	Yes	➢ Advanced imaging is rarely indicated – in those rare situations, MRI Shoulder without contrast (CPT® 73221).	For surgery criteria, See **CMM-310: Manipulation Under Anesthesia** and **CMM-315: Shoulder Surgery-Arthroscopic**

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Avascular Necrosis (AVN) of the Humeral Head	Yes	No	➢ MRI Shoulder without contrast (CPT® 73221) when suspected and plain x-ray is negative or equivocal ➢ CT Shoulder without contrast (CPT® 73200) and/or MRI Shoulder without contrast (CPT® 73221) for preoperative planning prior to shoulder replacement	See: **MS-4.1: AVN**
Acromio-clavicular (AC) Separation	Yes	No	➢ MRI Shoulder without contrast (CPT® 73221) to rule out possible rotator cuff tear following AC separation	
Sterno-clavicular (SC) Dislocation	Yes	No	➢ CT Chest without contrast (CPT® 71250) if posterior SC dislocation is evident or suspected	

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Post-Operative Shoulder Surgery for Impingement, Rotator Cuff Tear, and/or Labral Tear	Yes	Yes	➢ In symptomatic individuals: ◆ MRI Shoulder without contrast (CPT® 73221) OR ◆ MRI Shoulder with contrast (arthrogram) (CPT® 73222) ➢ US Shoulder (CPT® 76881 or CPT® 76882) is also appropriate in symptomatic individuals following rotator cuff repair ➢ CT Shoulder with contrast (arthrogram) (CPT® 73201) if MRI contraindicated	
Preoperative Shoulder (Glenohumeral) Replacement Surgery	Yes	Yes	➢ CT Shoulder without contrast (CPT® 73200) and/or MRI Shoulder without contrast (CPT® 73221) for preoperative planning prior to shoulder replacement	See: **MS-12: Osteoarthritis** For joint surgery criteria, see: **CMM-318: Shoulder Arthroplasty/ Arthrodesis**

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Post-Operative Shoulder (Glenohumeral) Replacement Surgery	Yes	No	➢ For suspected aseptic loosening or fracture as additional imaging following plain x-rays: ◆ CT Shoulder without contrast (CPT® 73200) ➢ For possible rotator cuff tear: ◆ CT Shoulder with contrast (arthrogram) (CPT® 73201) OR ◆ US Shoulder (CPT® 76881 or CPT® 76882) ➢ For possible nerve injury: ◆ MRI Shoulder without contrast (CPT® 73221) OR ◆ US Shoulder (CPT® 76881 or CPT® 76882)	See: **MS-16: Post-Operative Joint Replacement Surgery**

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MS-20: Elbow				
Condition	**Plain X-Ray?**	**Conservative Treatment**	**Advanced Imaging**	**Comments**
Individual's condition	**Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)**	**Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)**	**The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.**	**Additional comments related to the condition.**
General Elbow Pain	Yes	Yes	➢ MRI Elbow without contrast (CPT® 73221) OR ➢ US Elbow (CPT® 76881 or 76882)	
Symptomatic Loose Bodies	Yes	No	➢ MRI Elbow without contrast (CPT® 73221) if effusion is present OR ➢ MRI Elbow with contrast (arthrogram) (CPT® 73222) if no effusion is present	
Tendonitis	Yes	Yes	➢ MRI Elbow without contrast (CPT® 73221) OR ➢ US Elbow (CPT® 76881 or CPT® 76882)	
Bursitis	Yes	Yes	➢ MRI Elbow without and with contrast (CPT® 73223) OR ➢ MRI Elbow without contrast (CPT® 73221) OR ➢ US Elbow (CPT® 76881 or CPT® 76882)	

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Lateral (tennis elbow) or Medial (golfer's elbow) Epicondylitis	Yes	Yes	➤ To confirm clinical diagnosis of epicondylitis if symptoms persist for longer than 6 months despite at least 6 weeks conservative treatment in the last 3 months: ◆ MRI Elbow without contrast (CPT® 73221) OR ◆ US Elbow (CPT® 76881 or CPT® 76882)	Epicondylitis, caused by tendon degeneration and tear of the common extensor tendon laterally or of the common flexor tendon medially, is a common clinical diagnosis for which imaging is not medically necessary except as noted.

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Suspected Osteochondral Injury	Yes	No	➢ If plain x-rays are negative and an osteochondral fracture is still suspected: ◆ MRI Elbow without contrast (CPT® 73221) OR ◆ MRI Elbow with contrast (arthrogram) (CPT® 73222) OR ◆ CT Elbow with contrast (arthrogram) (CPT® 73201)	See: **MS-13: Chondral/ Osteochondral Lesions**
Ruptured Biceps Insertion at Elbow	Yes	No	➢ When clinical exam is inconclusive or for preoperative planning: ◆ MRI Elbow without contrast (CPT® 73221) OR ◆ US Elbow (CPT® 76881 or CPT® 76882)	
Ruptured Triceps Insertion at Elbow	Yes	No	➢ When clinical exam is inconclusive or for preoperative planning: ◆ MRI Elbow without contrast (CPT® 73221) OR ◆ US Elbow (CPT® 76881 or CPT® 76882)	

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Partial Tendon Rupture	Yes	No	➢ For a suspected partial tendon rupture of a specific named tendon not otherwise specified: ◆ MRI Elbow without contrast (CPT® 73221) OR ◆ US Elbow (CPT® 76881 or CPT® 76882)	MRI is *NOT* needed for muscle belly strains/muscle tears.
Trauma	Yes	No	➢ When surgery is being considered: ◆ MRI Elbow without contrast (CPT® 73221) OR ◆ CT Elbow without contrast (CPT® 73200)	
Ulnar Collateral Ligament (UCL) Tear	Yes	No	➢ Following acute or repetitive (including overhead throwing athletes) elbow trauma: ◆ MRI Elbow with contrast (arthrogram) (CPT® 73222) OR ◆ MRI Elbow without contrast (CPT® 73221) OR ◆ US Elbow (CPT® 76881 or CPT® 76882)	
Suspected Nerve Abnormality	NA	NA	➢ See: **PN-2: Focal Neuropathy** in the Peripheral Nerve Disorders Imaging Guidelines	

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Post-Operative	Yes	Yes	➢ CT Elbow without contrast (CPT® 73200) in symptomatic post-operative individuals following surgical treatment of complex fractures; OR ➢ MRI Elbow without contrast (CPT® 73221) in symptomatic post-operative individuals following soft-tissue surgery	
Preoperative Elbow Replacement Surgery	Yes	Yes	➢ CT Elbow without contrast (CPT® 73200) for preoperative planning prior to elbow replacement when congenital or post-traumatic deformities exist	See: **MS-12: Osteoarthritis**
Post-Operative Elbow Replacement Surgery	Yes	No	➢ For suspected aseptic loosening or periprosthetic fracture when recent plain x-ray is nondiagnostic: ◆ CT Elbow without contrast (CPT® 73200)	

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MS-21: Wrist				
Condition	**Plain X-Ray?**	**Conservative Treatment**	**Advanced Imaging**	**Comments**
Individual's condition	**Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)**	**Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)**	**The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.**	**Additional comments related to the condition.**
General Wrist Pain	Yes	Yes	➢ MRI Wrist without contrast (CPT® 73221) OR ➢ US Wrist (CPT® 76881 or CPT® 76882)	
Tendonitis	Yes	Yes	➢ MRI Wrist without contrast (CPT®73221) OR ➢ US Wrist (CPT® 76881 or CPT® 76882)	
Kienbock's Disease (Avascular Necrosis (AVN) of the Lunate)/ Preiser's Disease (Avascular Necrosis (AVN) of the Scaphoid)	Yes	No	➢ MRI Wrist without contrast (CPT® 73221) when suspected and plain x-ray is negative or equivocal ➢ If diagnosed on plain x-ray, CT Wrist without contrast (CPT® 73200) or MRI Wrist without contrast (CPT® 73221)	See: **MS-4.1: AVN**
Suspected Navicular/ Scaphoid Fracture	Yes	No	➢ When suspected based on history and physical exam: ◆ MRI Wrist without contrast (CPT® 73221) OR ◆ CT Wrist without contrast (CPT® 73200)	See: **MS-5.2: Suspected Occult/ Stress/ Insufficiency Fracture/ Stress Reaction and Shin Splints**
Distal Radioulnar Joint (DRUJ) Instability	Yes	No	➢ CT Both Wrists without contrast (CPT® 73200) (should include wrists in supination and pronation)	

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Complex Distal Radius/ Ulna Fracture	Yes	No	➢ CT Wrist without contrast (CPT® 73200)	
Carpal Tunnel Syndrome/ Ulnar Tunnel Syndrome	NA	NA	➢ See: **PN-2: Focal Neuropathy** in the Peripheral Nerve Disorders Imaging Guidelines	
Intrinsic Ligament (e.g. scapholunate)/Triangular Fibrocartilage Complex (TFCC) Injuries	Yes	Yes	➢ MRI Wrist with contrast (arthrogram) (CPT® 73222) OR ➢ CT Wrist with contrast (arthrogram) (CPT® 73201)	
Complete Rupture of a Specific Named Tendon Not Otherwise Specified	Yes	No	➢ For preoperative planning: ◆ MRI Wrist without contrast (CPT® 73221) OR ◆ US Wrist (CPT® 76881 or CPT® 76882)	
Partial Tendon Rupture	Yes	No	➢ For a suspected partial tendon rupture of a specific named tendon not otherwise specified: ◆ MRI Wrist without contrast (CPT® 73221) OR ◆ US Wrist (CPT® 76881 or CPT® 76882)	MRI is NOT needed for muscle belly strains/muscle tears.

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Post-Operative	Yes	Yes	➢ CT Wrist without contrast (CPT® 73200) in symptomatic individuals following surgery for navicular/ scaphoid fractures and complex distal radius/ulna fractures; OR ➢ MRI Wrist with contrast (arthrogram) (CPT® 73222) in symptomatic individuals following DRUJ or TFCC surgery	
Preoperative Wrist Replacement Surgery	Yes	Yes	➢ CT Wrist without contrast (CPT® 73200) for preoperative planning prior to wrist replacement when congenital or post-traumatic deformities exist	See: **MS-12: Osteoarthritis**
Post-Operative Wrist Replacement Surgery	Yes	No	➢ For suspected aseptic loosening or periprosthetic fracture when recent plain x-ray is nondiagnostic: ◆ CT Wrist without contrast (CPT® 73200)	

One Study/Area Only

In hand and wrist advanced imaging, studies are frequently ordered of both areas. This is unnecessary since wrist MRI will image from above the wrist to the mid-metacarpal area. **Only one CPT® code should be reported**.

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MS-22: Hand				
Condition	**Plain X-Ray?**	**Conservative Treatment**	**Advanced Imaging**	**Comments**
Individual's condition	**Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)**	**Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)**	**The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.**	**Additional comments related to the condition.**
General Hand Pain	Yes	Yes	➢ MRI Hand or Finger without contrast (CPT® 73218) OR ➢ US Hand (CPT® 76881 or CPT® 76882)	
Tendonitis	Yes	Yes	➢ MRI Hand or Finger without contrast (CPT® 73218) OR ➢ US Hand or Finger (CPT® 76881 or CPT® 76882)	
Occult Fracture	Yes	No	➢ Advanced imaging guided by: **MS-5.2: Suspected Occult/Stress/ Insufficiency Fracture/Stress Reaction and Shin Splints**	
Complex Fracture	Yes	No	➢ CT Hand or Finger without contrast (CPT® 73200) when plain x-ray shows a complex fracture	
Ulnar Collateral Ligament (UCL) Thumb Injury	Yes	No	➢ If rule out for Stener lesion or complete tear of UCL of the thumb MCP joint: ◆ MRI Thumb without contrast (CPT® 73218) OR ◆ US Thumb (CPT® 76881 or CPT® 76882)	Also called "Gamekeeper's Thumb" or "Skier's Thumb"
Complete Rupture of a Specific Named Tendon not Otherwise Specified	Yes	No	➢ For preoperative planning: ◆ MRI Hand or Finger without contrast (CPT® 73218) OR ◆ US Hand or Finger (CPT® 76881 or CPT® 76882)	

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Partial Tendon Rupture	Yes	No	➢ For a suspected partial tendon rupture of a specific named tendon not otherwise specified: ◆ MRI Hand or Finger without contrast (CPT® 73218) OR ◆ US Hand or Finger (CPT® 76881 or CPT® 76882)	MRI is *NOT* needed for muscle belly strains/muscle tears.
Post-Operative	Yes	Yes	➢ In symptomatic post-operative individuals following surgical treatment for complex hand or finger fractures or following soft-tissue surgery: ◆ CT Hand or Finger without contrast (CPT® 73200) OR ◆ MRI Hand or Finger without contrast (CPT® 73218)	

One Study/Area Only

In hand and wrist advanced imaging, studies are frequently ordered of both areas. This is unnecessary since wrist MRI will image from above the wrist to the mid-metacarpal area. **Only one CPT® code should be reported**.

References

1. Bruno MA, Weissman BN, Kransdorf MJ, et. al. Expert Panel on Musculoskeletal Imaging. ACR Appropriateness Criteria® Acute Hand and Wrist Trauma. *Am Coll Radiol (ACR);* Date of Origin: 1995. Last Review: 2018. https://acsearch.acr.org/docs/69418/Narrative/.
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MS-23: Pelvis				
Condition	**Plain X-Ray?**	**Conservative Treatment**	**Advanced Imaging**	**Comments**
Individual's condition	**Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)**	**Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)**	**The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.**	**Additional comments related to the condition.**
General Pain - Pelvis	Yes	Yes	➢ MRI Pelvis without contrast (CPT® 72195) OR ➢ MRI RT and/or LT Hip without contrast (CPT® 73721)	
Tendonitis	Yes	Yes	➢ MRI Pelvis without contrast (CPT® 72195) OR ➢ MRI RT and/or LT Hip without contrast (CPT® 73721)	
Occult/ Insufficiency Fracture	Yes	No	➢ MRI Pelvis without contrast (CPT® 72195) OR ➢ CT Pelvis without contrast (CPT® 72192)	See: **MS-5.2: Suspected Occult/ Stress/ Insufficiency Fracture/ Stress Reaction and Shin Splints** for occult and stress fractures of the pelvis
Complex Fracture/ Dislocation - Pelvis, Sacrum and Acetabulum	Yes	No	➢ CT Pelvis without contrast (CPT® 72192)	Additionally, 3D rendering may be appropriate for preoperative planning. See: **MS-3: 3D Rendering**
Sacro-iliac (SI) Joint Pain, Sacroiliitis, Coccydynia	Yes	Yes	➢ Advanced imaging guided by: ◆ **SP-10.1: Sacroiliac (SI) Joint Pain/Sacroiliitis** in the Spine Imaging Guidelines ◆ **SP-5.2: Coccydynia without Neurological Features** in the Spine Imaging Guidelines	
Complete Rupture of a Specific Named Tendon	Yes	No	➢ MRI Pelvis without contrast (CPT® 72195) for preoperative planning	

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Partial Tendon Rupture	Yes	No	➢ MRI Pelvis without contrast (CPT® 72195) for a suspected partial tendon rupture of a specific named tendon not otherwise specified	MRI is *NOT* needed for muscle belly strains/muscle tears.
Osteitis Pubis/Symphysis Pubis Diastasis	Yes	Yes	➢ MRI Pelvis without contrast (CPT® 72195)	
Athletic Pubalgia (Sports Hernia)	Yes	Yes	➢ To evaluate for the cause of suspected athletic pubalgia: ◆ MRI Pelvis without contrast (athletic pubalgia protocol) (CPT® 72195) OR ◆ Dynamic pelvic ultrasound (CPT® 76857)	
Post-Operative	Yes	Yes	➢ CT Pelvis without contrast (CPT® 72192) in symptomatic individuals following surgery for complex pelvic ring/acetabular fractures	

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MS-24: Hip				
Condition	**Plain X-Ray?**	**Conservative Treatment**	**Advanced Imaging**	**Comments**
Individual's condition	**Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)**	**Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)**	**The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.**	**Additional comments related to the condition.**
General Hip Pain	Yes	Yes	➢ MRI Hip without contrast (CPT® 73721) OR ➢ US Hip (CPT® 76881 or CPT® 76882)	
Symptomatic Loose Bodies	Yes	No	➢ MRI Hip without contrast (CPT® 73721)	
Tendonitis/ Bursitis	Yes	Yes	➢ MRI Hip without contrast (CPT® 73721) OR ➢ US Hip (CPT® 76881 or CPT® 76882)	
Hip Abductor Tendon Tear/Avulsion	Yes	No	➢ MRI Hip without contrast (CPT® 73721) OR ➢ US Hip (CPT® 76881 or CPT® 76882)	
Complete Rupture of a Specific Named Tendon	Yes	No	➢ For preoperative planning: ◆ MRI Hip without contrast (CPT® 73721) OR ◆ US Hip (CPT® 76881 or CPT® 76882)	
Partial Tendon Rupture	Yes	No	➢ For a suspected partial tendon rupture of a specific named tendon not otherwise specified: ◆ MRI Hip without contrast (CPT® 73721) OR ◆ US Hip (CPT® 76881 or CPT® 76882)	MRI is *NOT* needed for muscle belly strains/muscle tears.
Occult/ Insufficiency Fracture	Yes	No	➢ MRI Hip without contrast (CPT® 73721) OR ➢ CT Hip without contrast (CPT® 73700)	See: **MS-5.2: Suspected Occult/Stress/ Insufficiency Fracture/Stress Reaction and Shin Splints** for occult and stress fractures of the hip

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Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Avascular Necrosis (AVN) of the Femoral Head	Yes	No	➢ MRI Hip without contrast (CPT® 73721) when suspected and plain x-ray is negative or equivocal ➢ MRI Hip without contrast (CPT® 73721) or CT Hip without contrast (CPT® 73700) with femoral head collapse for preoperative planning	See: **MS-4.1: AVN**
Labral Tear	Yes	Yes	➢ MRI Hip with contrast (arthrogram) (CPT® 73722) OR ➢ CT Hip with contrast (arthrogram) (CPT® 73701) OR ➢ MRI Hip without contrast (CPT® 73721)	For surgery criteria, see: **CMM-314: Hip Surgery-Arthroscopic and Open Procedures**
Femoroacetabular Impingement	Yes	Yes	➢ For preoperative planning for femoroacetabular impingement: ◆ MRI Hip without contrast (CPT® 73721) OR ◆ MRI Hip with contrast (arthrogram) (CPT® 73722) IN ADDITION TO: ➢ CT Hip without contrast (CPT® 73700) OR ➢ CT Pelvis without contrast (CPT® 72192)	For surgery criteria, see: **CMM-314: Hip Surgery-Arthroscopic and Open Procedures**

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Piriformis Syndrome	Yes	Yes	➢ For preoperative planning: ◆ MRI Pelvis without contrast (CPT® 72195) OR ◆ CT Pelvis without contrast (CPT® 72192)	EMG/NCV may confirm the diagnosis. See **PN-2: Focal Neuropathy** in the Peripheral Nerve Disorders Imaging Guidelines
Post-Operative	Yes	Yes	➢ Symptomatic individuals following surgery for labral tears and femoroacetabular impingement: ◆ MRI Hip with contrast (arthrogram) (CPT® 73722) ➢ Symptomatic individuals following surgery for hip fracture and/or hip avascular necrosis: ◆ CT Hip without contrast (CPT® 73700) OR ◆ MRI Hip without contrast (CPT® 73721)	
Preoperative Hip Replacement Surgery	Yes	Yes	➢ CT Hip without contrast (CPT® 73700) for preoperative planning prior to hip replacement when congenital or post-traumatic deformities exist	See **MS-12: Osteoarthritis** For surgery criteria, See **CMM-313: Hip Arthroplasty-Total and Partial**

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Post-Operative Hip Replacement Surgery	Yes	No*	➢ For suspected aseptic loosening of hip replacement when recent plain x-ray is nondiagnostic: ◆ CT Hip without contrast (CPT® 73700) ➢ For suspicion of a periprosthetic fracture when recent plain x-ray is nondiagnostic: ◆ CT Hip without contrast (CPT® 73700) ➢ To evaluate component malposition or heterotopic bone after plain x-ray: ◆ CT Hip without contrast (CPT® 73700) ➢ For possible nerve injury: ◆ MRI Hip without contrast (CPT® 73721) ➢ For suspected for suspected tendinitis/bursitis (*requires conservative treatment): ◆ MRI Hip without contrast (CPT® 73721) OR ◆ US Hip (CPT® 76881 or CPT® 76882)	See: **MS-16: Post-Operative Joint Replacement Surgery**

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MS-25: Knee				
Condition	**Plain X-Ray?**	**Conservative Treatment**	**Advanced Imaging**	**Comments**
Individual's condition	**Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)**	**Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)**	**The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.**	**Additional comments related to the condition.**
General Knee Pain	Yes	Yes	➢ MRI Knee without contrast (CPT® 73721) OR ➢ US Knee (CPT® 76881 or CPT® 76882)	
Symptomatic Loose Bodies	Yes	No	➢ MRI Knee without contrast (CPT® 73721) ➢ CT Knee with contrast (arthrogram) (CPT® 73701) if MRI cannot be performed	
Tendonitis	Yes	Yes	➢ MRI Knee without contrast (CPT® 73721) OR ➢ US Knee (CPT® 76881 or CPT® 76882)	
Complex Knee Fracture	Yes	No	➢ MRI knee without contrast (CPT® 73721) OR ➢ CT Knee without contrast (CPT® 73700)	See **MS-5: Fractures**
Meniscus Tear	Yes	Yes*	➢ MRI Knee without contrast (CPT® 73721) *Conservative treatment is not required if at least 2 of following 4 criteria are met: 1) Positive McMurray's, positive Thessaly, or positive Apley's Compression Test 2) twisting or acute injury of the knee 3) locked knee/inability to fully extend the knee 4) knee effusion ➢ MRI Knee without contrast (CPT® 73721) for clinical suspicion of a symptomatic degenerative meniscus tear in a individual with osteoarthritis following conservative treatment	For surgery criteria, See **CMM-312: Knee Surgery-Arthroscopic and Open Procedures**

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Ligament Tear	Yes	Yes*	➢ MRI Knee without contrast (CPT® 73721) *Conservative treatment is not required if any of the following signs are positive in comparison to the normal knee: ◆ Anterior drawer ◆ Lachman ◆ Pivot shift ◆ Posterior drawer ◆ Posterior sag ◆ Valgus stress ◆ Varus stress	For surgery criteria, See **CMM-312: Knee Surgery-Arthroscopic and Open Procedures**
Knee Joint Dislocation	Yes	No	➢ Following significant trauma to evaluate for ligament and vascular injury: ◆ MRI Knee without contrast (CPT® 73721) AND EITHER ◆ MR Angiography lower extremity without and with contrast (CPT® 73725) OR ◆ CT Angiography lower extremity without and with contrast (CPT® 73706)	
Patellar Dislocation/ Subluxation	Yes	No	➢ MRI Knee without contrast (CPT® 73721) with acute knee injury, consideration of surgery and concern for osteochondral fracture or loose osteochondral fracture fragment	For surgery criteria, See **CMM-312: Knee Surgery-Arthroscopic and Open Procedures**
Recurrent Patellar Instability	Yes	Yes	➢ MRI Knee without contrast (CPT® 73721) if consideration for surgery	For surgery criteria, See **CMM-312: Knee Surgery-Arthroscopic and Open Procedures**

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Patellofemoral Pain Syndrome/ Anterior Knee Pain/ Tracking Disorder	Yes	Yes	➢ MRI Knee without contrast (CPT® 73721) if consideration for surgery	
Suspected Osteochondral Injury	Yes	No	➢ If plain x-rays are negative and an osteochondral fracture is still suspected: ◆ MRI Knee without contrast (CPT® 73721) OR ◆ MRI Knee with contrast (arthrogram) (CPT® 73722) OR ◆ CT Knee with contrast (arthrogram) (CPT® 73701)	See: **MS-13: Chondral Osteochondral Lesions** for other osteochondral injury scenarios. For surgery criteria, see: **CMM-312: Knee Surgery-Arthroscopic and Open Procedures**
Avascular Necrosis (AVN) of the Distal Femur	Yes	No	➢ MRI Knee without contrast (CPT® 73721) when suspected and plain x-ray is negative or equivocal or with AVN confirmed by plain x-ray if needed for treatment planning	See: **MS-4.1: AVN**
Baker's Cyst (Popliteal Cyst)	Yes	Yes	➢ US Knee (CPT® 76881 or CPT® 76882) is the initial imaging study ➢ MRI Knee without contrast (CPT® 73721) for preoperative planning	See: **PVD-12: Acute Limb Swelling** in the Peripheral Vascular Disease Imaging Guidelines

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Plica (Symptomatic Synovial Plica/Medial Synovial Shelf)	Yes	Yes	➢ MRI Knee without contrast (CPT® 73721)	
Hemarthrosis	Yes	No	➢ MRI Knee without contrast (CPT® 73721) for clinical suspicion of cruciate ligament tear (requires a positive objective sign for ACL/PCL tear) or patellar dislocation (requires a positive apprehension sign) ➢ CT Knee without contrast (CPT® 73700) for clinical suspicion of non-displaced intra-articular fracture	
Complete Rupture of the Distal Quadriceps Tendon or Patellar Ligament/ Tendon	Yes	No	➢ For preoperative planning: ◆ MRI Knee without contrast (CPT® 73721) OR ◆ US Knee (CPT® 76881 or CPT® 76882)	
Partial Tendon Rupture	Yes	No	➢ For a suspected partial tendon rupture of a specific named tendon not otherwise specified: ◆ MRI Knee without contrast (CPT® 73721) OR ◆ US Knee (CPT® 76881 or CPT® 76882)	MRI is NOT needed for muscle belly strains/muscle tears.

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Post-Operative	Yes	Yes	➢ In symptomatic individuals following surgery for meniscus tears and reconstruction of the anterior cruciate ligament: ◆ MRI Knee with contrast (arthrogram) (CPT® 73722) OR ◆ MRI Knee without contrast (CPT® 73721) ➢ In symptomatic individuals following surgery for fracture/dislocation: ◆ CT Knee without contrast (CPT® 73700)	
Preoperative Knee Replacement Surgery	Yes	Yes	➢ CT Knee without contrast (CPT® 73700) for preoperative planning prior to knee replacement when congenital or post-traumatic deformities exist of the patella, distal femur and/or proximal tibia	See: **MS-12: Osteoarthritis** For surgery criteria, see: **CMM-311: Knee Arthroplasty-Total and Partial**

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Post-Operative Knee Replacement Surgery	Yes	No*	➢ For suspected aseptic loosening when recent plain x-ray is nondiagnostic: ◆ CT Knee without contrast (CPT® 73700) ➢ Following plain x-ray for suspected periprosthetic fracture: ◆ CT Knee without contrast (CPT® 73700) ➢ For suspected osteolysis or component instability, rotation, or wear: ◆ CT Knee without contrast (CPT® 73700) OR ◆ MRI Knee without contrast (CPT® 73721) ➢ For suspected periprosthetic soft tissue abnormality unrelated to infection (e.g., tendinopathy, arthrofibrosis, patellar clunk syndrome, impingement of nerves or other soft tissue) *requires conservative treatment: ◆ MRI Knee without contrast (CPT® 73721) OR ◆ US Knee (CPT® 76881 or CPT® 76882)	See: **MS-16: Post-Operative Joint Replacement Surgery**

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MS-26: Ankle				
Condition	**Plain X-Ray?**	**Conservative Treatment**	**Advanced Imaging**	**Comments**
Individual's condition	**Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)**	**Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)**	**The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.**	**Additional comments related to the condition.**
General Ankle Pain	Yes	Yes	➢ MRI Ankle without contrast (CPT® 73721) OR ➢ US Ankle (CPT® 76881 or CPT® 76882)	
Symptomatic Loose Bodies	Yes	No	➢ MRI Ankle without contrast (CPT® 73721)	
Complex Fracture	Yes	No	➢ MRI Ankle without contrast (CPT® 73721) OR ➢ CT Ankle without contrast (CPT® 73700)	
Ankle Sprain, Including Avulsion Fracture	Yes	Yes	➢ MRI Ankle without contrast (CPT® 73721) OR ➢ CT Ankle without contrast (CPT® 73700)	
High Ankle Sprain (Syndesmosis Injury)	Yes	No	➢ MRI Ankle without contrast (CPT® 73721) OR ➢ CT Ankle without contrast (CPT® 73700)	
Suspected Osteochondral Injury	Yes	No	➢ If plain x-rays are negative and an osteochondral fracture is still suspected, ONE of the following: ◆ MRI Ankle without contrast (CPT® 73721) ◆ CT Ankle without contrast (CPT® 73700)	See: **MS-13: Chondral/ Osteochondral Lesions** for other osteochondral injury scenarios
Avascular Necrosis (AVN) of the Talus	Yes	No	➢ MRI Ankle without contrast (CPT® 73721) when suspected and plain x-ray is negative or equivocal or with plain x-ray-confirmed AVN if needed for treatment planning	See: **MS-4.1: AVN**

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Anterior Impingement Anterior-Lateral Impingement Posterior Impingement (e.g., Os Trigonum Syndrome)	Yes	Yes	➢ MRI Ankle with contrast (arthrogram) (CPT® 73722) OR ➢ CT Ankle with contrast (arthrogram) (CPT® 73701) OR ➢ MRI Ankle without contrast (CPT® 73721)	
Tendonitis	Yes	Yes	➢ For suspected posterior tibial dysfunction, peroneal tendon or subluxation, Achilles tendonitis: ◆ MRI Ankle without contrast (CPT® 73721) OR ◆ US Ankle (CPT® 76881 or CPT®76882)	
Ruptured Achilles Tendon	Yes	No	➢ For preoperative evaluation: ◆ MRI Ankle without contrast (CPT® 73721) OR ◆ US Ankle (CPT® 76881 or CPT® 76882)	
Complete Rupture -Tear of a Specific Named Tendon	Yes	No	➢ For preoperative planning: ◆ MRI Ankle without contrast (CPT® 73721) OR ◆ US Ankle (CPT® 76881 or CPT® 76882)	
Partial Tendon Rupture	Yes	No	➢ For a suspected partial tendon rupture of a specific named tendon not otherwise specified: ◆ MRI Ankle without contrast (CPT® 73721) OR ◆ US Ankle (CPT® 76881 or CPT® 76882)	MRI is *NOT* needed for muscle belly strains/muscle tears.

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Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Instability	Yes	Yes	➢ For preoperative evaluation: ◆ MRI Ankle without contrast (CPT® 73721) OR ◆ MRI Ankle with contrast (arthrogram) (CPT® 73722)	
Charcot Ankle	Yes	Yes	➢ MRI Ankle without contrast (CPT® 73721)	
Post-Operative	Yes	Yes	➢ In symptomatic individuals following surgery for ligament/tendon injuries, one of the following: ◆ MRI Ankle without contrast (CPT® 73721) OR ◆ US Ankle (CPT® 76881 or CPT® 76882) ➢ For symptomatic individuals following surgery for complex fractures: ◆ CT Ankle without contrast (CPT® 73700)	
Preoperative Ankle Replacement Surgery	Yes	Yes	➢ CT Ankle without contrast (CPT® 73700) for preoperative planning prior to ankle replacement when congenital or post-traumatic deformities exist	See: **MS-12: Osteoarthritis**.

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Post-Operative Ankle Replacement Surgery	Yes	No	➢ For suspected aseptic loosening or periprosthetic fracture when recent plain x-ray is nondiagnostic: ◆ CT Ankle without contrast (CPT® 73700)	See **MS-16: Post-Operative Joint Replacement Surgery**

One Study/Area Only

In foot and ankle advanced imaging, studies are frequently ordered of both areas. This is unnecessary since ankle MRI will image from above the ankle to the mid- metatarsal area. Only one CPT® code should be reported.

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MS-27: Foot				
Condition	**Plain X-Ray?**	**Conservative Treatment**	**Advanced Imaging**	**Comments**
Individual's condition	**Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)**	**Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)**	**The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.**	**Additional comments related to the condition.**
General Foot Pain	Yes	Yes	➢ MRI Foot without contrast (CPT® 73718)	
Complex Fractures	Yes	No	➢ CT Foot without contrast (CPT® 73700)	
Plantar Plate Disorders, Including Turf Toe Injuries	Yes	Yes	➢ MRI Foot without contrast (CPT® 73718)	
Sesamoid Disorders	Yes	Yes	➢ MRI Foot without contrast (CPT® 73718) OR ➢ CT Foot without contrast (CPT® 73700)	
Lisfranc Tarsometatarsal Fracture or Dislocation	Yes	No	➢ MRI Foot without contrast (CPT® 73718) OR ➢ CT Foot without contrast (CPT® 73700)	
Tarsal Navicular Stress/Occult Fracture	Yes	No	➢ MRI Foot without contrast (CPT® 73718) ➢ CT Foot without contrast (CPT® 73700) for follow-up of healing fractures	See: **MS-5.2: Suspected Occult/Stress/ Insufficiency Fracture/Stress Reaction and Shin Splints**
Avascular Necrosis (AVN) of the Tarsal Navicular (Kohler Disease) or Metatarsal Head (Frieberg's Infraction)	Yes	No	➢ MRI Foot without contrast (CPT® 73718) when suspected and plain x-ray is negative or equivocal or with AVN confirmed by plain x-ray if needed for treatment planning	See: **MS-4.1: AVN**

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Tendonitis	Yes	Yes	➢ MRI Foot without contrast (CPT® 73718) OR ➢ US Foot (CPT® 76881 or CPT® 76882)	
Complete rupture/tear of a specific named tendon	Yes	No	➢ For preoperative planning: ◆ MRI Foot without contrast (CPT® 73718) OR ◆ US Foot (CPT® 76881 or CPT® 76882)	
Partial Tendon Rupture	Yes	No	➢ For a suspected partial tendon rupture of a specific named tendon not otherwise specified: ◆ MRI Foot without contrast (CPT® 73718) OR ◆ US Foot (CPT® 76881 or CPT® 76882)	MRI is *NOT* needed for muscle belly strains/muscle tears.
Morton's Neuroma	Yes	Yes	➢ For preoperative planning: ◆ MRI Foot without contrast (CPT® 73718) OR ◆ US Foot (CPT® 76881 or CPT® 76882)	

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Plantar Fasciitis	Yes	Yes*	➢ For preoperative planning: ◆ MRI Foot without contrast (CPT® 73718) OR ◆ US Foot (CPT® 76881 or CPT® 76882)	*Provider-directed conservative treatment must be for 6 months or more.
Suspected Plantar Fascia Rupture or Tear	Yes	Yes	➢ MRI Foot without contrast (CPT® 73718) OR ➢ US Foot (CPT® 76881 or CPT® 76882)	
Diabetic Foot Infection	Yes*	No	➢ For suspected osteomyelitis or soft tissue infection as a complement to plain x-ray (both plain x-ray and MRI are indicated): ◆ MRI Foot without and with contrast (CPT® 73720) OR ◆ MRI Foot without contrast (CPT® 73718)	* Plain x-ray results do not preclude the necessity for advanced imaging studies. See **MS 9.1: Infection - General**

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Tarsal Tunnel Syndrome including Baxter's Neuropathy	Yes	Yes	➢ For preoperative planning if mass/lesion is suspected as etiology of entrapment: ◆ MRI Foot without contrast (CPT® 73718) OR ◆ US Foot (CPT® 76881 or CPT® 76882)	
Tarsal Coalition	Yes	Yes	➢ For preoperative planning: ◆ MRI Ankle without contrast (CPT® 73721) OR ◆ CT Ankle without contrast (CPT® 73700)	
Sinus Tarsi Syndrome	Yes	Yes	➢ MRI Ankle without contrast (CPT® 73721) if diagnosis is unclear or for preoperative evaluation	
Charcot Foot	Yes	Yes	➢ MRI Foot without contrast (CPT® 73718) OR ➢ MRI Foot without and with contrast (CPT® 73720)	
CRPS Type I	Yes	Yes	➢ Triple phase bone scan (CPT® 78315) OR ➢ MRI foot without contrast (CPT® 73718)	

Condition	Plain X-Ray?	Conservative Treatment	Advanced Imaging	Comments
Individual's condition	Are the results of an initial plain x-ray required before advanced imaging can be approved? (Yes or No)	Is failure of 6 weeks of provider-directed conservative treatment within the past 12 weeks with clinical re-evaluation required? (Yes or No)	The appropriate advanced imaging indicated for this condition. In some scenarios, advanced imaging may not be indicated.	Additional comments related to the condition.
Post-Operative	Yes	Yes	➢ In symptomatic individuals following surgery for conditions including the tendons, ligaments and plantar plate: ◆ MRI Foot without contrast (CPT® 73718) OR ◆ US Foot (CPT® 76881 or CPT® 76882) ➢ In symptomatic individuals following surgery for complex fractures, sesamoid fractures and subtalar arthrodesis: ◆ CT Foot without contrast (CPT® 73700)	Other requests for advanced imaging will be forwarded to Medical Director Review.

One Study/Area Only

In foot and ankle advanced imaging, studies are frequently ordered of both areas. This is unnecessary since ankle MRI will image from above the ankle to the mid- metatarsal area. Only one CPT® code should be reported.

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