

**MRI Ankle Guidelines****DEPARTMENT: Utilization Management Physician Practice Guidelines****EFFECTIVE DATE: 05/08****DATE LAST REVIEWED: 06/21****SOURCES:** Milliman Inc.

<https://acsearch.acr.org/docs/69436/Narrative/>  
<https://acsearch.acr.org/docs/69436/EvidenceTable/>  
<https://acsearch.acr.org/docs/69422/Narrative/>  
<https://acsearch.acr.org/docs/69422/EvidenceTable/>  
<https://acsearch.acr.org/list> (appropriateness criteria)

**RECOMMENDED GUIDELINES:**

An MRI is not indicated for ankle pain alone. A plain film of the ankle should be performed prior to MRI.

- 1) Indications: Ankle Pain
- 2) Ankle MRI is indicated for Chronic ankle pain with Normal Radiographs and ONE of the following:
  - a) Persistent pain of unclear etiology.
  - b) Suspected osteochondral injuries.
  - c) Suspected inflammatory arthritis.
  - d) Suspected osteonecrosis as indicated by ANY ONE of the following:
    - i) Pain, stiffness and swelling associated with localized tenderness to pressure.
    - ii) Persistent pain in patient with sickle cell anemia or chronic corticosteroid usage.
    - iii) Bone scan demonstrating well-localized increased uptake.
  - e) Suspected ankle impingement syndrome
  - f) Suspected ankle instability
  - g) Suspected tendon abnormality
  - h) Indeterminate lesions seen on plain x-ray or CT scan.
- 3) Ankle trauma and ANY ONE of the following
  - a) Radiographs suspicious for osteochondral injury
  - b) Radiographs or physical exam suspicious for syndesmotic injury
- 4) Suspected fatigue stress fracture and ALL of the following:
  - a) History of overuse or excessive activity.
  - b) Localized pain.
  - c) Symptoms persist or recur despite rest.
  - d) Normal findings on plain x-ray.
  - e) Bone scan contraindicated, suboptimal or nonspecific due to possibility of infectious or inflammatory process.
- 5) Suspected insufficiency stress fracture and ALL of the following:
  - a) Localized pain.
  - b) Osteopenia
  - c) Negative findings on plain x-ray.

- d) Bone scan negative, contraindicated or nonspecific due to possibility of infectious or inflammatory process.
- 6) Indications: Bone Neoplasms.
- 7) Ankle MRI is indicated for bone neoplasm and ANY ONE of the following:
  - a) Abnormal finding on plain x-ray.
  - b) Palpable bone abnormality with normal finding on plain x-ray.
  - c) Current diagnosis of cancer located elsewhere and ANY ONE of the following:
    - i) Unexplained localized signs and symptoms.
    - ii) Abnormal findings on plain x-ray or bone scan.
  - d) Persistent pain of unclear etiology.
  - e) Ewing sarcoma or osteosarcoma and ANY ONE of the following:
    - i) Initial staging.
    - ii) Monitoring response after treatment completed.
    - iii) Surveillance for tumor recurrence, including ANY ONE of the following:
      - (1) Every 3 months for years 1 and 2.
      - (2) Every 4 months for year 3.
      - (3) Every 6 months for year 4 and 5.
      - (4) Annually after 5 years.
- 8) Indications: Osteomyelitis
- 9) Ankle MRI is indicated for osteomyelitis and ANY ONE of the following:
  - a) Localized bone pain associated with chills or fever, particularly after trauma or orthopedic surgery.
  - b) Cellulitis that responds poorly to antibiotics.
  - c) Diabetes or severe peripheral vascular disease and ANY ONE of the following:
    - i) Persistent ankle pain, even without ulcer present.
    - ii) Persistent or worsening ulcer.
  - d) Focal lesion seen on bone scan.
  - e) Suspected sinus tract infection from ulcer.
- 10) Indications: Tendon Injury
- 11) Ankle MRI is indicated for soft tissue mass, tumor or other abnormalities and ANY one of the following:
  - a) Soft tissue mass and ANY ONE of the following:
    - i) Deep or large masses.
    - ii) Concern for effect on adjacent anatomic structures.
    - iii) Vascular lesions, particularly in child and ANY ONE of the following:
      - (1) Growth.
      - (2) Change in color of overlying skin.
      - (3) Causing pain.
      - (4) Progressively enlarging.
  - b) Soft tissue sarcoma and ANY ONE of the following:
    - i) Initial staging.
    - ii) Within 3 months after treatment completed.
    - iii) Post-treatment surveillance annually.
    - iv) Abnormal physical findings after treatment completed.
    - v) Soft tissue muscle abscess, when performed for planning biopsy or surgical treatment.
  - c) Evaluation of synovial pathology: examples include:
    - i) Chronic synovitis secondary to ankle hemarthrosis of hemophilia.
    - ii) Surveillance following synovectomy for pigmented villonodular synovitis.