Advanced Imaging Checklist: Lower Extremity February 12, 2010

I. Chronic Ankle Pain

Note: X-ray of the ankle is the preferred method of imaging for chronic ankle pain. X-rays should be obtained and interpreted prior to consideration of other imaging modalities.

MRI without contrast:

- ☐ Plain films of the ankle(s) have been obtained and interpreted, and additional imaging information is required:
  - ☐ Multiple sites of degenerative joint disease by ankle radiographs
  - ☐ Osteochondral injury is suspected clinically
  - ☐ Tendon abnormality is suspected clinically
  - ☐ Ankle instability is suspected clinically
  - ☐ Ankle impingement syndrome is suspected clinically
  - ☐ Suspect stress fracture
  - ☐ Suspect infection or neoplasm

II. Chronic Foot Pain

Note: X-ray of the foot is the preferred initial imaging method for assessing chronic foot pain. X-rays should be obtained and interpreted prior to consideration of other imaging modalities.

MRI

- ☐ Plain films of the foot (feet) have been obtained and interpreted, and additional imaging information is required:
  - ☐ Patient is a child or adolescent:
    - ☐ Tarsal coalition is suspected, AND
    - ☐ CT without contrast is contraindicated
  - ☐ Patient has pain and tenderness over the navicular tuberosity:
    - ☐ Condition has been unresponsive to non-surgical therapy, AND
    - ☐ Radiographs show an accessory navicular
  - ☐ Patient is clinically suspected to have one of the following conditions:
    - ☐ Inflammatory arthropathy
    - ☐ Plantar fasciitis
    - ☐ Tarsal tunnel syndrome
    - ☐ Morton's neuroma
    - ☐ Tendinopathy
    - ☐ Osteomyelitis
    - ☐ Avascular necrosis
    - ☐ Neoplasm
    - ☐ Stress fracture

Checklist above is based on ACR Appropriateness Criteria, updated 2008, and upon the medical literature cited by the ACR as forming the basis for its criteria.

III. Acute Trauma to the Knee

MRI is indicated if there is clinical suspicion for any of the following:

- ☐ Internal derangement (including meniscal or cruciate ligament injury).
- ☐ Occult fracture
- ☐ Dislocation
- ☐ Collateral ligament injury
- ☐ Patellar subluxation or dislocation
- ☐ Cartilage injury
- ☐ Extensor mechanism injury

IV. Non-Traumatic Knee Pain

MRI is indicated if there is clinical suspicion for any of the following:

- ☐ Internal derangement (including meniscal or cruciate ligament injury), AND
  - ☐ Severe osteoarthritis is NOT present on radiography
- ☐ Occult fracture
- ☐ Dislocation
- ☐ Collateral ligament injury
- ☐ Patellar subluxation or dislocation
- ☐ Cartilage injury
- ☐ Extensor mechanism injury
- ☐ Osteonecrosis
- ☐ Inflammatory arthritis (with negative radiographs)
- ☐ Tendinopathy (including the iliotibial band)-not responsive to conventional therapy
- ☐ Bursitis (including the pes anserinus)-not responsive to conventional therapy
- ☐ Stress or insufficiency fracture
- ☐ Hemarthrosis

V. Chronic hip pain, including Avascular Necrosis (Osteonecrosis) of the Hip and Post-Hip Arthroplasty;

Note: X-ray of the hip is the preferred method of imaging for assessing avascular necrosis of the hip, hip status post arthroplasty, and chronic hip pain. X-rays should be obtained and interpreted prior to consideration of other imaging modalities.

MRI, or MRI with contrast:

- ☐ Plain films of the hip(s) have been obtained and interpreted, and additional imaging information is required; AND
  - ☐ One or more of the following is present or suspected:
    - ☐ Radiographically occult condition
    - ☐ Septic arthritis or osteomylitis
    - ☐ Stress or insufficiency fracture
    - ☐ Severe muscle or tendon injury (including adductor aponeurosis)
    - ☐ Radiographic findings are equivocal for osteonecrosis of the femoral head; or
    - ☐ Radiographic findings are normal, but avascular necrosis of the femoral head is suspected clinically; or

- ☐ Radiographic findings are negative, and an osseous or surrounding soft-tissue abnormality is suspected clinically; or
- ☐ Radiographic findings are negative or reveal only mild osteoarthritis, and the hip is the suspected source of referred pain; or
- ☐ Radiographic findings are positive for monoarticular or atypical arthritis; or
- ☐ Radiographic findings are suggestive of pigmented villonodular synovitis or osteochondromatosis; or
- ☐ Surgical planning would be adversely affected were MR information not available

Checklist above is based on ACR Appropriateness Criteria, updated 2005, 2007, 2008 and 2009, and upon the medical literature cited by the ACR as forming the basis for its criteria.