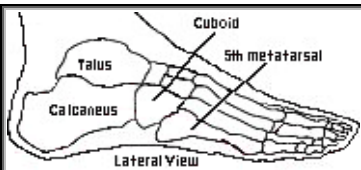


Ensure extremity of interest is as isocenter as possible **SHIM all Fat sat scans!!**  
**Make Sure to have patient's foot positioned in Dorsi Flexion**  
 Include in Study notes: **Date of injury? previous surgery?**

### NON SPECIFIC FOOT PAIN



**Request:** MRI Foot w/o  
 Center at cuboid.  
 Cover maximum foot & ankle using the prescribed FOV.

- |  |       |        |
|--|-------|--------|
| 1. 3 Plane loc                                       |       |        |
| 2. Straight Sag T1                                   | 3/1.5 | 20 FOV |
| 3. Straight Sag FSTIR                                | 3/1.5 | 20 FOV |
| 4. Oblique Ax T1                                     | 3/1.5 | 20 FOV |
| 5. Oblique Ax T2 FLEX (IDEAL if flex not available)  | 3/1.5 | 20 FOV |
| 6. Oblique Cor T1                                    | 3/1.5 | 16 FOV |
| 7. Oblique Cor T2 FLEX (IDEAL if flex not available) | 3/1.5 | 16 FOV |

### OCD - LOOSE BODY - LIGAMENT TEAR

- |                                |       |        |
|--------------------------------|-------|--------|
| 1. 3 Plane loc                 |       |        |
| 2. Mortise Sag T1              | 3/0.5 | 14 FOV |
| 3. Mortise Sag T2 85% dark fat | 3/0.5 | 14 FOV |

**Request:** MRI Ankle w/o  
**MARKER** at site of maximum pain  
Optional Contrast:  
 Vueway 0.05mmol/kg Max 10

- Use **SAGITTAL T1** to GRx AXIAL scans
- |                                   |       |        |
|-----------------------------------|-------|--------|
| 4. Straight Ax PD                 | 3/0.5 | 14 FOV |
| 5. Straight Ax T2 classic fat sat | 3/0.5 | 14 FOV |
- Use **Sag and AXIAL** images to GRx CORONAL scans
- |   |       |        |
|---|-------|--------|
| 6. Mortise Cor T1   | 3/0.5 | 16 FOV |
| 7. Mortise Cor T2 cl fat sat                                  | 3/0.5 | 16 FOV |
| 8. Mortise Cor PD (2/.5 or 2/2 10 FOV) High rez for cartilage |       |        |
- keep TR @ 3000 (give or take 100)  
 ► cover joint only (about 20 slices)

**Synovitis Optional Contrast (Copy GRx from pre):**

- |                       |                           |                       |
|-----------------------|---------------------------|-----------------------|
| 9. Pre Strt Ax T1 FAT | 10. Mortise Sat T1 cl Fat | 11. Strt Ax T1 cl Fat |
|-----------------------|---------------------------|-----------------------|

**Peds under 2yo**  
 Multihance  
 0.1 mmol/kg  
 Max 20 mL  
 Low eGFR inpatient  
 Dose: No Change

### PLANTAR FASCIITIS - FIBROMA - HEEL PAIN

- |                                   |       |        |
|-----------------------------------|-------|--------|
| 1. 3 Plane loc                    |       |        |
| 2. Mortise Sag PD THIN            | 3/0.5 | 14 FOV |
| 3. Mortise Sag T2 85% dk fat THIN | 3/0.5 | 14 FOV |
| 4. Straight Cor T1                | 3/0.5 | 16 FOV |
| 5. Straight Cor T2 cl fat sat     | 3/0.5 | 16 FOV |
| 6. Straight Ax T2 cl fat sat      | 4/1   | 16 FOV |

**Request:** MRI Foot w/o  
**MARKER** at site of max pain  
**COVER:** Hindfoot, ankle, calcaneus, cuboid, soft tissue

### STRESS FX - MIDFOOT

- |  |       |        |
|--|-------|--------|
| 1. 3 Plane loc                                       |       |        |
| 2. Mortise Sag T1                                    | 4/1   | 16 FOV |
| 3. Mortise Sag FSTIR                                 | 4/1   | 16 FOV |
| 4. Oblique Ax T1                                     | 3/1   | 14 FOV |
| 5. Oblique Ax T2 cl fat sat                          | 3/1   | 14 FOV |
| 6. Oblique Cor T1                                    | 3/0.5 | 14 FOV |
| 7. Oblique Cor T2 FLEX (IDEAL if flex not available) | 3/0.5 | 14 FOV |
- Opt: Rad to specify coverage: THIN SA T1 2/0.2, Thin Sag PD FS 2/.2, or Thin LA PD FS 2/.2

**Request:** MRI Foot w/o  
**MARKER** at site of maximum pain  
 Ant ankle joint through proximal metatarsals

### STRESS FX - METATARSALS

- |                       |     |        |
|-----------------------|-----|--------|
| 1. 3 Plane loc        |     |        |
| 2. Straight Sag T1    | 4/1 | 16 FOV |
| 3. Straight Sag FSTIR | 4/1 | 16 FOV |
- Use **SAGITTAL T1** to GRx SHORT AXIS
- |                             |     |        |
|-----------------------------|-----|--------|
| 4. Short Axis T1            | 3/1 | 16 FOV |
| 5. Short Axis T2 cl fat sat | 3/1 | 16 FOV |
- Use **SHORT AXIS** to GRx LONG AXIS
- |  |       |        |
|--|-------|--------|
| 6. Long Axis T1                                    | 3/0.2 | 16 FOV |
| 7. Long Axis T2 FLEX (IDEAL if flex not available) | 3/0.2 | 16 FOV |
| 8. LA oZTEo Bone (if Available)                    |       |        |
- Opt: Rad to specify coverage: THIN SA T1 2/0.2, Thin Sag PD FS 2/.2, or Thin LA PD FS 2/.2

**Request:** MRI Foot w/o  
**MARKER** at site of max pain  
**COVER:** Bases of proximal phalanges to the talonavicular joint.

### TENDON: PERONEAL or FLEXOR

- |                                |       |        |
|--------------------------------|-------|--------|
| 1. 3 Plane loc                 |       |        |
| 2. Mortise Sag T1              | 3/1.5 | 16 FOV |
| 3. Mortise Sag T2 85% dark fat | 3/1.5 | 16 FOV |

**Request:** MRI Foot w/o or MRI Ankle w/o

- Use **SAGITTAL T1** to GRx AXIAL scans
- |                                   |       |        |
|-----------------------------------|-------|--------|
| 4. Straight Ax PD                 | 3/0.5 | 16 FOV |
| 5. Straight Ax T2 classic fat sat | 3/0.5 | 16 FOV |
| 6. Oblique Cor T2 classic fat sat | 3/0.5 | 16 FOV |

**MARKER** at site of maximum pain

- Use **Sag and AXIAL** images to GRx **MORTISE CORONAL PD**
- |                                   |       |        |
|-----------------------------------|-------|--------|
| 7. Mortise Cor PD classic fat sat | 3/0.5 | 16 FOV |
|-----------------------------------|-------|--------|

### ACHILLES (Tendon)

- |                                     |       |        |
|-------------------------------------|-------|--------|
| 1. 3 Plane loc                      |       |        |
| 2. Mortise Sag T1 THIN              | 3/0.2 | 16 FOV |
| 3. Mortise Sag T2 85% dark fat THIN | 3/0.2 | 16 FOV |

**Request:** MRI Ankle w/o

► Use **SAGITTAL T1** to GRx AXIAL scans

**MARKER** at site of maximum pain

► A 2nd set of axials should be done to cover marker if needed

- |                                   |     |        |
|-----------------------------------|-----|--------|
| 4. Straight Ax PD                 | 4/1 | 14 FOV |
| 5. Straight Ax T2 classic fat sat | 4/1 | 14 FOV |

**COVER:** All of Achilles tendon, heel, & to the metatarsal bases

- Use **Sag and Ax** images to GRx **MORTISE CORONAL**
- |                                   |       |        |
|-----------------------------------|-------|--------|
| 6. Mortise Cor T2 classic fat sat | 3/1.5 | 16 FOV |
|-----------------------------------|-------|--------|

### QUICK HIGH ANKLE SPRAIN

- |                                   |       |        |
|-----------------------------------|-------|--------|
| 1. 3 Plane loc                    |       |        |
| 2. Straight Sag SSFSE             | 4/0   | 24 FOV |
| 3. Straight Ax T2 classic fat sat | 3/0.5 | 16 FOV |
- **30 slices** with the most inferior slice at the distal tip of fibula

**Request:** MRI Ankle w/o

**Coil:** Foot/Ankle coil

**MARKER** at site of maximum pain

### Ankle Tumor or Osteo-Abscess

If ER or IP, ensure there has been an x-ray within the last 6 months. If not, request that one be ordered. OK to proceed with MRI if x-rays are ordered and not completed

**Contrast:**Vueway 0.05mmol/kg Max 10  
**Peds under 2yo Multihance** 0.1 mmol/kg Max 20 mL

#### HEEL ULCER or MALLEOLAR ULCER

- |                                    |       |        |
|------------------------------------|-------|--------|
| 1. 3 Plane loc                     |       |        |
| 2. Mortise Sag T1                  | 3/1.5 | 16 FOV |
| 3. Mortise Sag FSTIR               | 3/1.5 | 16 FOV |
| 4. Straight Ax T1                  | 3/1.5 | 14 FOV |
| 5. Straight Ax T2 classic fat sat  | 3/1.5 | 14 FOV |
| 6. Straight Cor T1                 | 3/1.5 | 14 FOV |
| 7. Straight Cor T2 classic fat sat | 3/1.5 | 14 FOV |
- Add FOR TUMOR ONLY—PRE AX T1 FAT** (1 nex, ok if grainy)
- |  |       |        |
|--|-------|--------|
| 8. +C Mortise Sag T1 classic fat sat   | 3/1.5 | 16 FOV |
| 9. +C Straight Ax T1 classic fat sat   | 3/1.5 | 14 FOV |
| 10. +C Straight Cor T1 classic fat sat | 3/1.5 | 14 FOV |

**Request:** MRI Ankle w/o & w **MARKER** over ulcer (It is not necessary to remove dressing)

Low eGFR inpatient  
 Dose: No Change

### Foot Tumor or Osteo-Abscess

If ER or IP, ensure there has been an x-ray within the last 6 months. If not, request that one be ordered. OK to proceed with MRI if x-rays are ordered and not completed

**Contrast:**Vueway 0.05mmol/kg Max 10  
**Peds under 2yo Multihance** 0.1 mmol/kg Max 20 mL

#### TOE ULCER

- |                       |       |        |
|-----------------------|-------|--------|
| 1. 3 Plane loc        |       |        |
| 2. Straight Sag T1    | 3/1.5 | 16 FOV |
| 3. Straight Sag FSTIR | 3/1.5 | 16 FOV |
- Use **SAGITTAL T1** to GRx SHORT AXIS
- |   |       |        |
|---|-------|--------|
| 4. Short Axis T1                                    | 3/1.5 | 16 FOV |
| 5. Short Axis T2 FLEX (IDEAL if flex not available) | 3/1.5 | 16 FOV |
- Use **SHORT AXIS** to GRx LONG AXIS (near area of pain)
- |  |       |        |
|--|-------|--------|
| 6. Long Axis T1                                    | 3/1.5 | 16 FOV |
| 7. Long Axis T2 FLEX (IDEAL if flex not available) | 3/1.5 | 16 FOV |
- Add FOR TUMOR ONLY—PRE AX T1 FAT** (1 nex, ok if grainy)
- |  |       |        |
|--|-------|--------|
| 8. +C Straight Sag T1 classic fat sat                  | 3/1.5 | 16 FOV |
| 9. +C Short Axis T1 classic fat sat                    | 3/1.5 | 16 FOV |
| 10. +C Long Axis T1 FLEX (IDEAL if flex not available) | 3/1.5 | 16 FOV |

**Request:** MRI Foot w/o & w **MARKER** over ulcer (It is not necessary to remove dressing)  
**Include Metatarsals through toes**

Low eGFR inpatient  
 Dose: No Change

### FOREFOOT

- |                       |     |        |
|-----------------------|-----|--------|
| 1. 3 Plane loc        |     |        |
| 2. Straight Sag T1    | 4/1 | 16 FOV |
| 3. Straight Sag FSTIR | 4/1 | 16 FOV |
- Use **SAGITTAL T1** to GRx SHORT AXIS
- |                             |     |        |
|-----------------------------|-----|--------|
| 4. Short Axis T1            | 3/1 | 16 FOV |
| 5. Short Axis T2 cl fat sat | 3/1 | 16 FOV |
- Use **SHORT AXIS** to GRx LONG AXIS
- |  |       |        |
|--|-------|--------|
| 6. Long Axis T1                                    | 3/0.2 | 16 FOV |
| 7. Long Axis T2 FLEX (IDEAL if flex not available) | 3/0.2 | 16 FOV |

**Request:** MRI Foot w/o

**MARKER** at site of max pain

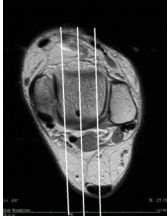
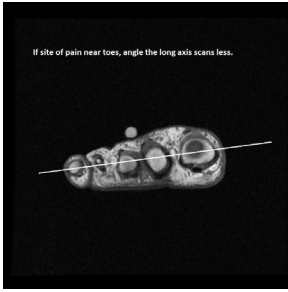
**COVER:** Entire phalanges and most of metatarsals

Rad to choose specific optional sequence and will specify coverage:

Morton's Neuromas: THIN SA T1 2/0.2

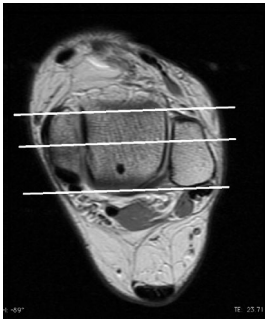
Plantar Plate or Sesamoiditis: Thin Sag PD FS 2/.2 or Thin LA PD FS 2/.2

**Forefoot LA:**



**Mortise Sagittal**

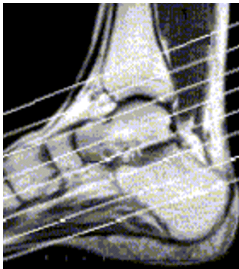
**Angle parallel to the talus bone (will also end up being the Cover skin to skin)**



**Mortise Coronal:**

**Angle Perpendicular to the talus bone (Will also end up being perpendicular to the calcaneus)**

**Cover entire calcaneus to metatarsals**

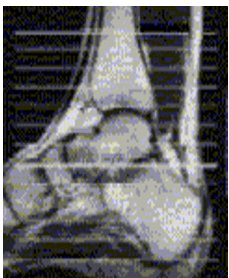


**OBQ Axial:**

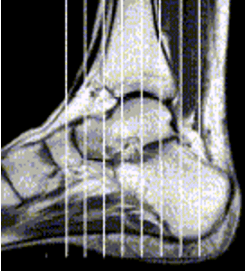
**Angle parallel to the sustentaculum tali (between the talus and calcaneus bones)**

**Cover a 5 slices above the ankle joint through the entire calcaneus**

**Straight Axial:**

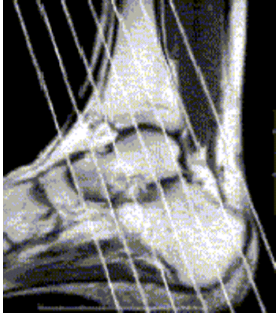


**Cover 5 slices above ankle joint through the entire calcaneus.**



**Straight Coronal**

**Cover posterior to calcaneus to the metatarsal bones**

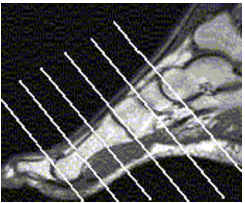


**OBQ Coronal:**

**Angle perpendicular to the sustentaculum tali (between the talus and calcaneus bones)**

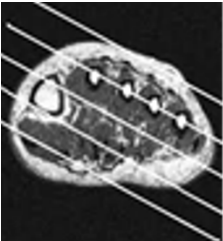
**Tendon Protocol: Cover posterior to calcaneus to the metatarsal bones**

**Metatarsal Stress Fx: Ant ankle joint through proximal metatarsals**



**Short Axis:**

**Prescribe off of Sagittal Scan. Try to angle perpendicular to metatarsals.**



**Long Axis:**

**Prescribe off of Short Axis Scan. Try to angle so the metatarsals are in one plane.**

