Department of Radiology
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

**Musculoskeletal Imaging and Intervention Section Procedures**
Subtalar Corticosteroid Joint Injection

**INDICATION**
Frequently performed as a therapeutic or diagnostic injection to treat or rule out subtalar osteoarthritis as a pain generator.

**RISKS**
- Bleeding
- Infection
- Pain

**MODALITY**
- Fluoroscopy

**PRE-OPERATIVE WORKUP**
- Informed consent

**Department of Radiology**
Musculoskeletal Imaging and Intervention
University of Wisconsin School of Medicine and Public Health Clinical Science Center 600 Highland Ave Madison, Wisconsin 53792-3252
608/263-9387 Fax: 608/263-5112 radiology.wisc.edu/sections/musculoskeletal-imaging-and-intervention

**MATERIALS**

- Alcohol, ChloraPrep applicator, sterile drape
- 10 mL syringes for skin anesthetic and steroid/anesthetic mixture
- 5 mL syringe for Omnipaque 300
- 1% lidocaine (for skin numbing); buffered with 8.4% sodium bicarbonate
- 1 mL triamcinolone acetonide (Kenalog 40 mg/mL) or 1 mL dexamethasone sodium phosphate (10 mg/mL)
- Ropivacaine HCL 0.5% (Naropin 5 mg/mL)
- 1% preservative-free lidocaine HCL (10 mg/mL)
- 30G 0.5", 25G 1.5", & 22G 1.5" needles

**TECHNIQUE**

1. Have the patient positioned lateral decubitus, with the targeted ankle facing up. The angle of approach will be laterally, beneath the fibular tip. For patient comfort, the bottom leg can be flexed 90° at the knee, and padding can be placed under the targeted ankle.
2. Angle the tube slightly cranially to profile the posterior subtalar joint – this is where you will mark your skin entry site, which should be inferior to the distal fibula.
3. Prep and drape as per usual and perform local anesthesia.
4. It may be easiest to use the 25G 1.5" needle for both local anesthesia and steroid injection. After the site is anesthetized, pass the needle down using the bulls-eye technique until you feel it 'fall' into the joint space.
5. Confirm intra-articular needle tip placement with a small injection of Omnipaque 300. Save the image.
6. If performing a therapeutic injection, inject 1-2 mL of a mixture containing 1 mL 1% preservative-free lidocaine, 1 mL 0.5% ropivacaine HCL, and 1 mL dexamethasone sodium phosphate (or 1 mL Kenalog).

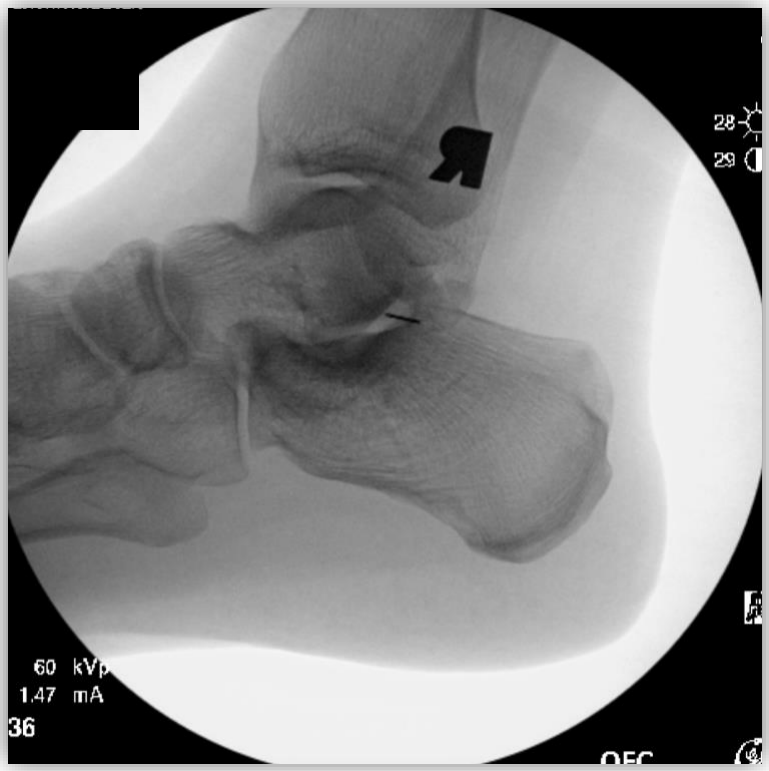


Fig 1. Lateral fluoroscopic view of the right ankle demonstrating proper needle tip positioning within the posterior subtalar joint.

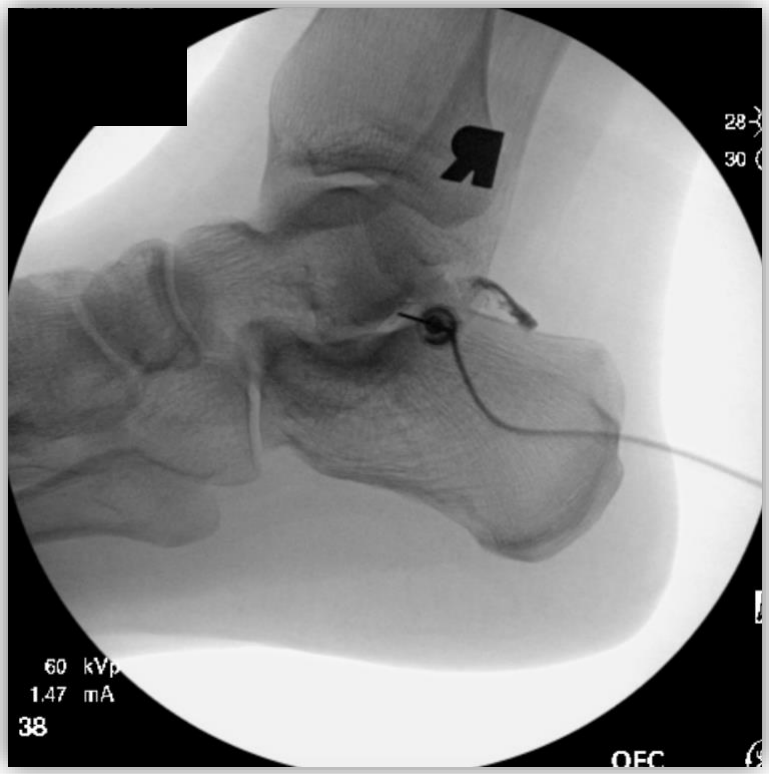


Fig 2. Lateral fluoroscopic view of the right ankle demonstrating contrast within the subtalar joint and distributing within the posterior recess.

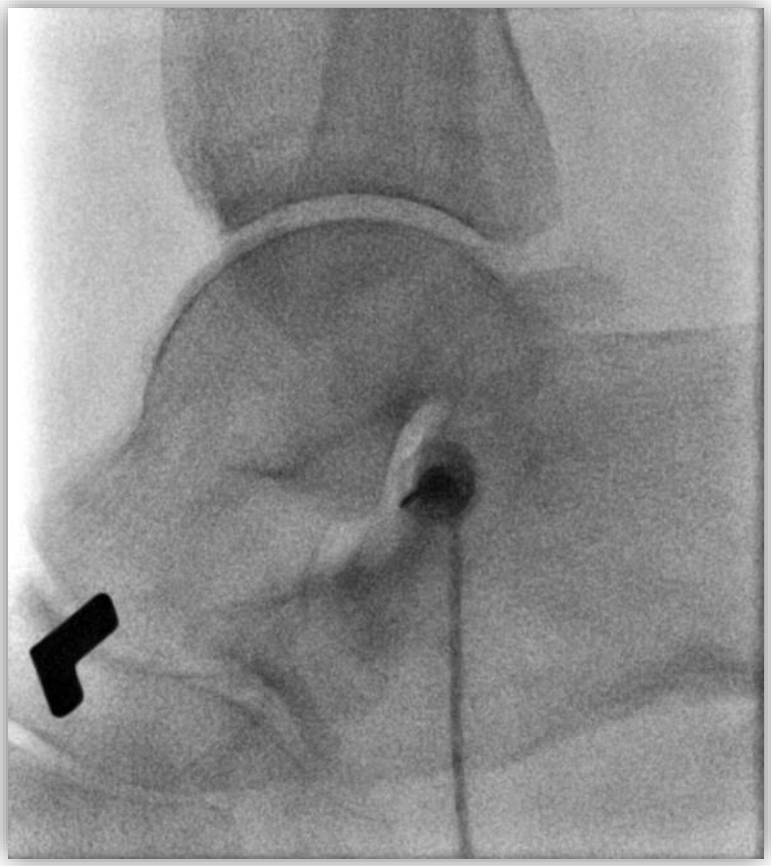

Fig 3. Lateral fluoroscopic view of the left ankle demonstrating proper needle tip positioning within the posterior subtalar joint.

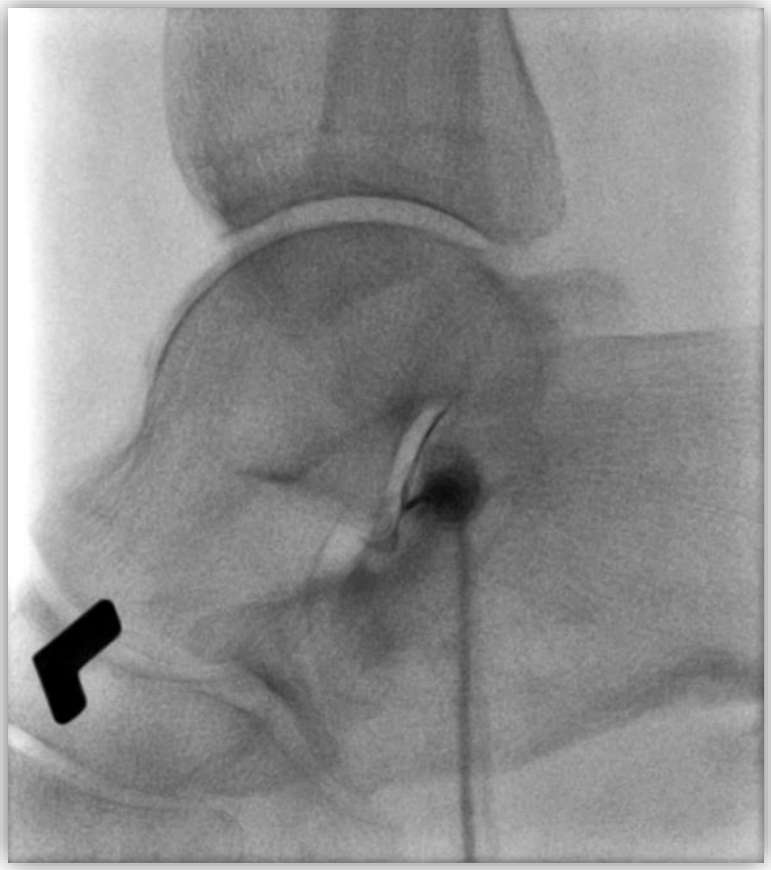

Fig 4. Lateral fluoroscopic view of the left ankle demonstrating contrast within the subtalar joint.

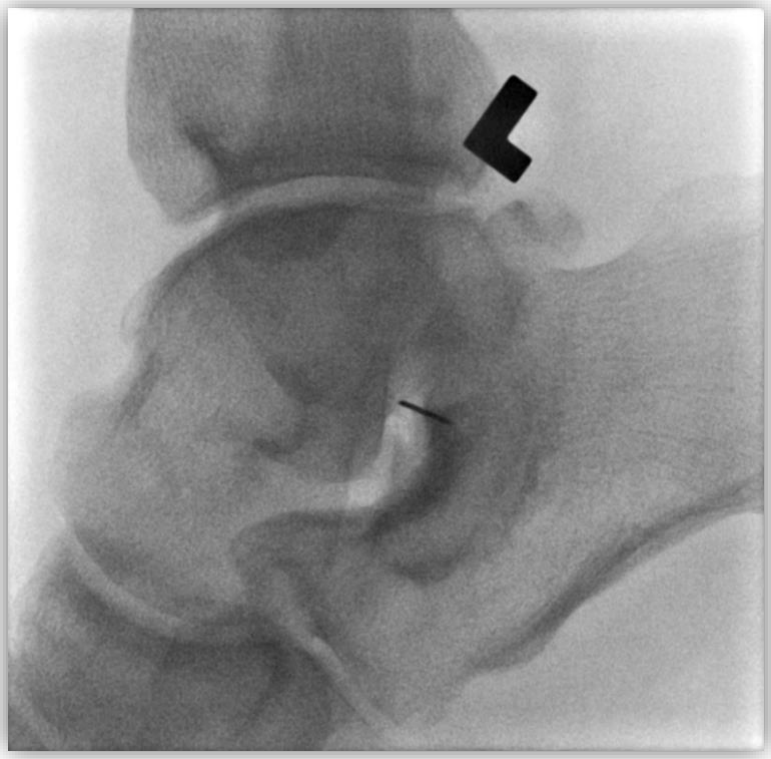

Fig 5. Lateral fluoroscopic view of the left ankle demonstrating proper needle tip positioning within the posterior subtalar joint.

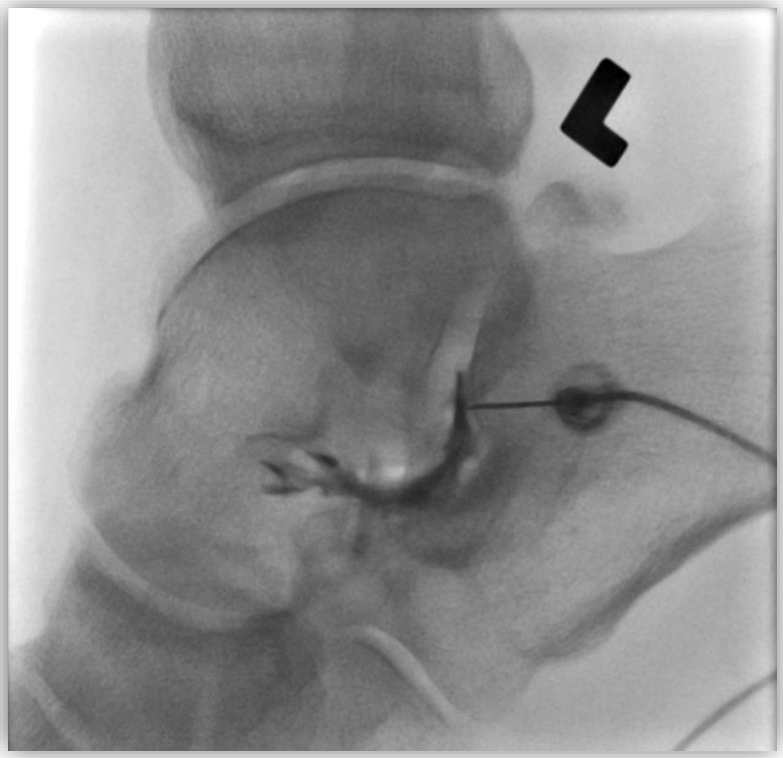

Fig 6. Lateral fluoroscopic view of the left ankle demonstrating contrast within the subtalar joint and distributing within the anterior recess.

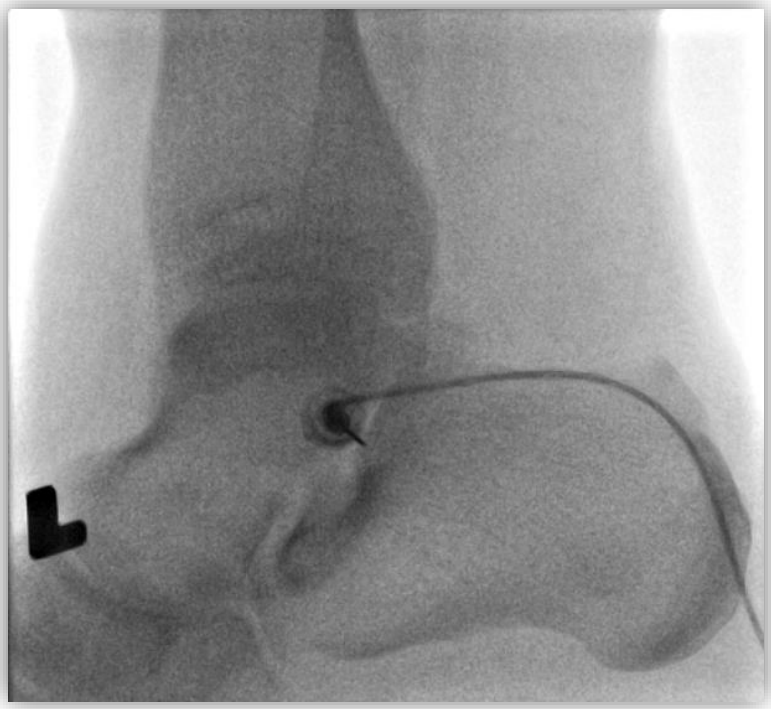

Fig 7. Lateral fluoroscopic view of the left ankle demonstrating proper needle tip positioning within the posterior subtalar joint.

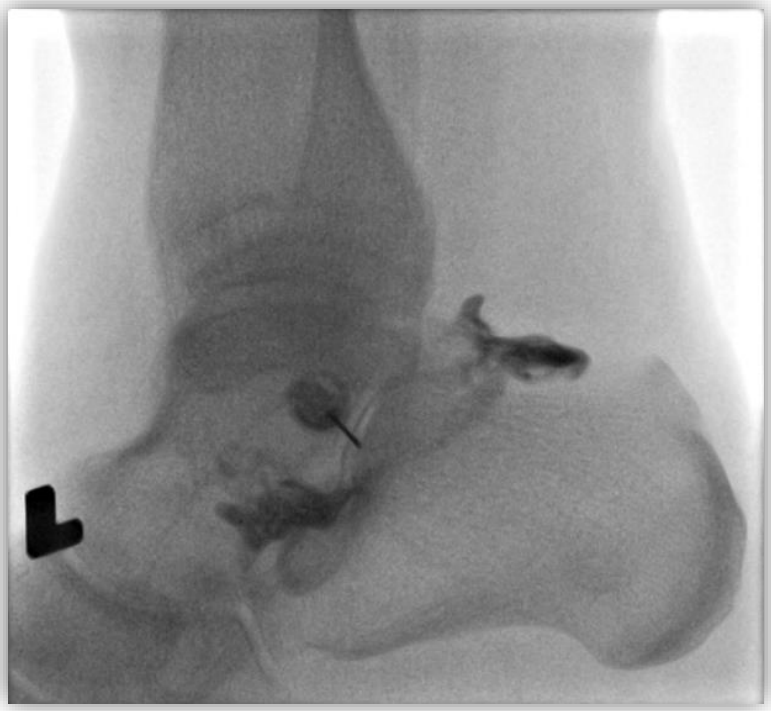

Fig 8. Lateral fluoroscopic view of the left ankle demonstrating contrast within the subtalar joint and distributing within both the anterior and posterior recesses.

Prepared by: Mitchell Fox, MD – 06/2022

**Department of Radiology**

Musculoskeletal Imaging and Intervention

University of Wisconsin School of Medicine and Public Health Clinical Science Center 600 Highland Ave Madison, Wisconsin 53792-3252

608/263-9387 Fax: 608/263-5112 https://radiology.wisc.edu/sections/musculoskeletal-imaging-and-intervention/