

Image Diagnosis: Foot Fractures

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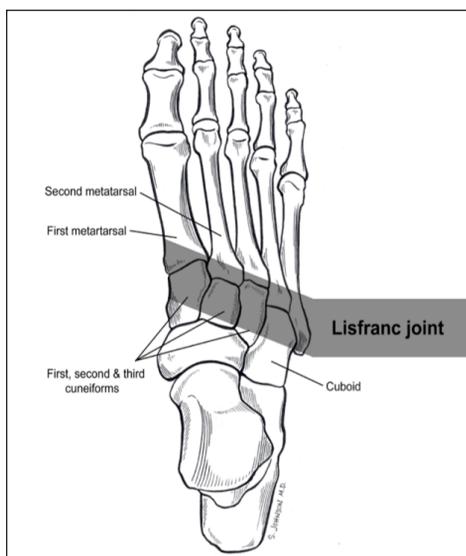


Figure 1. (above, left) Anteroposterior (AP) view of the foot and Figure 2. (above, right) Oblique radiograph of the same foot.

Two views of an injured foot demonstrates disruption of the Lisfranc joint consistent with a Lisfranc fracture-dislocation. Although it is difficult to see a fracture fragment in these films, significant force is needed to disrupt this strong joint which stabilizes the midfoot, often resulting in a fracture at the base of the 2nd metatarsal or one of the cuneiforms. If the diagnosis is in question, a weight-bearing anteroposterior view or a computed tomography scan of the foot may identify this injury. Surgical repair is generally necessary. Compartment syndrome of the foot is a possible complication.

Figure 3. (left) Lisfranc joint illustration. *Used with permission, Sonia Y Johnson, MD.*

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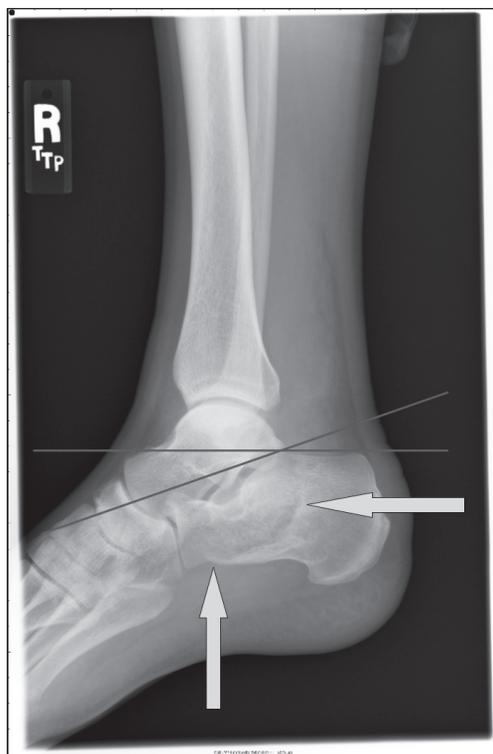


Figure 4. (left) Arrows identify a fracture through the calcaneus.

Angle formed by the intersection of the line connecting the tuberosity and the highest point of the posterior facet with the line connecting the posterior facet and the posterior process of the calcaneus determine Bohler's angle. This angle is normally 20-40 degrees, but can be reduced in some fractures of the calcaneus. In this image, Bohler's angle measures just less than 20 degrees, as this fracture is only minimally displaced.

Clinical Pearl: Calcaneus fractures can be associated with vertebral body fractures of the spine. They carry the eponym "lover's fracture" due to jumping from a height (such as a balcony or second-floor window).

Figure 5. (right) Arrow points to a horizontal fracture line as well as surrounding soft tissue swelling. As this fracture is due to an acute injury, the area of swelling is likely to be tender to palpation.

Jones fracture is due to an acute injury to the lateral midfoot. The fracture line should be located within 1.5 cm distal to the tuberosity of the 5th metatarsal in a horizontal plane. This fracture should not be confused with the more common avulsion fracture at the base of the 5th metatarsal styloid, as treatment differs.

