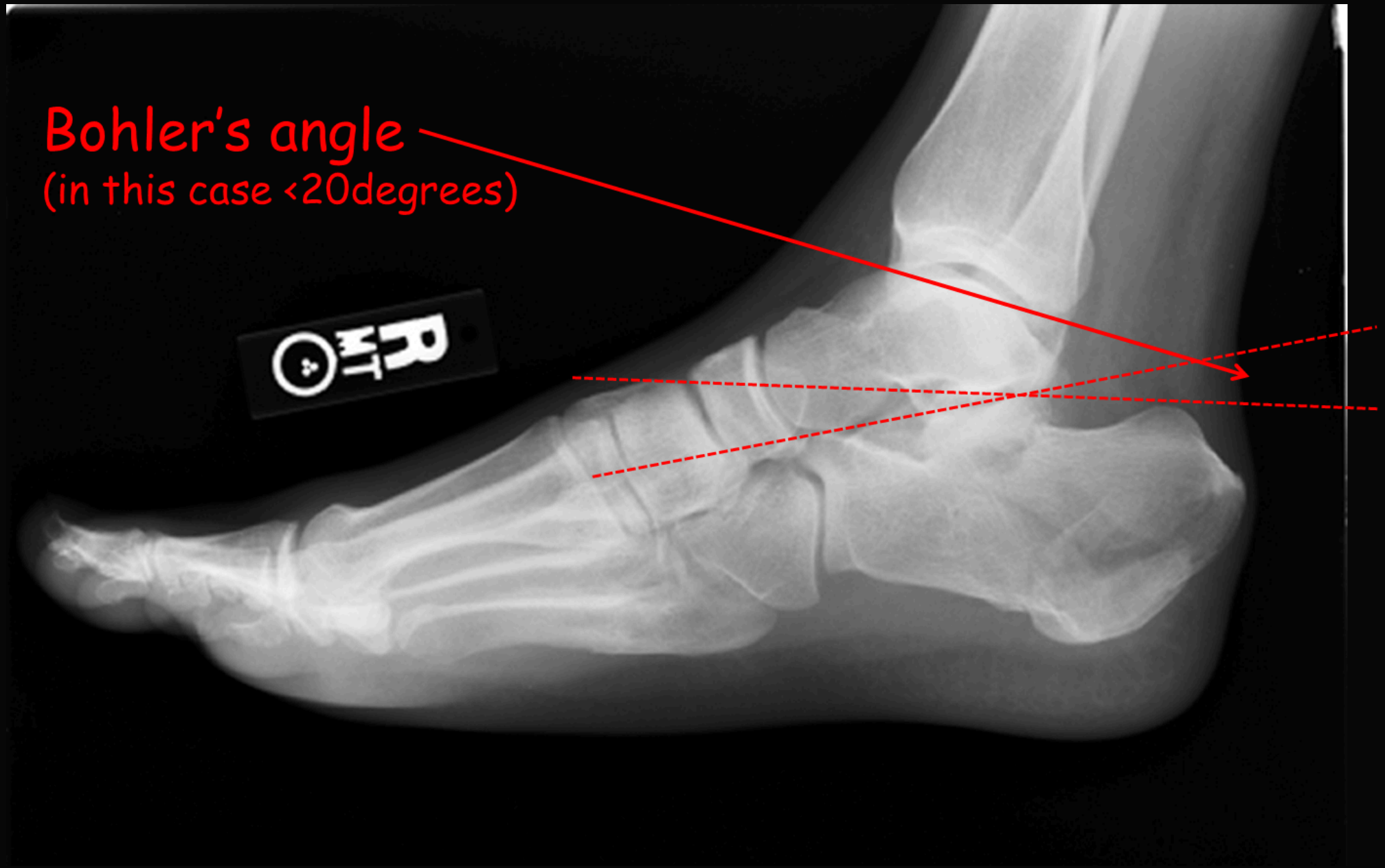
TRAUMA CASE OF THE WEEK

Case Three

A 33 year old carpenter fell approximately 3 metres off a ladder and injured his right foot. His foot is swollen, generally tender and he is unable to weight bear.

- Describe and interpret the Xray
- What issues should be considered in the ED?
- What is the likely treatment and long term outcome?

The appearance is that of a displaced calcaneal fracture. This is due to a severe compressive force (falling off a ladder onto the heel). It has previously been called a lover's fracture (suffered while jumping out of a second storey window!). In this lateral view the heel is significantly flattened with loss of the normal curve that usually extends across the inferior margins of the calcaneus, cuboid and metatarsals. The flattening can be more accurately measured using Bohler's angle which should be 20-40 degrees but in this case is substantially less (see picture underneath this answer which demonstrates how it is measured). This injury is often very painful, requiring significant analgesia. There is often marked swelling which requires elevation. There are often associated fractures (of the other heel, pelvis and lumbar spine) due to the axial compressive forces and these should be sought. Generally further imaging is required (usually CT) to characterise the fracture; key issues being the degree of the displacement and presence of articular involvement. The degree of displacement in the fracture shown makes surgical reducation and stabilisation almost certain. This is often deliberately delayed a week or so until swelling settles. Even with surgery, long term pain and disability are common.



The lines of Bohler's angle run from the posterior articular surface of the talus to the anterior calcaneal articular surface and the tuberosity of the calcaneus respectively.