



A Guide to **XRAYs** in **Orthopaedics**

SAMPLE

Part I

Section I - The anteroposterior view

The Ankle Joint

Other parameters:

◆ Medial Clear Space (MCS)

- Distance between medial malleolus and talus
- Normal: ≤ 4 mm
- Or equal to superior clear space
- > 4 mm $\rightarrow$ deltoid ligament rupture / unstable ankle

SAMPLE

◆ Superior Tibiotalar Joint Space

- Must be uniform
- Any asymmetry $\rightarrow$ talar shift or ligament injury

◆ Talar Position

- Should be centered
- No tilt
- No lateral translation

Section I - The anteroposterior view

The Ankle Joint

Lateral Malleolus (Fibula)

Check:

- Level of fracture (Weber)
- Shortening
- Lateral displacement
- Rotation

Key sign:

SAMPLE

Fibular shortening → talar lateral shift → mortise widening

Medial Malleolus

Look for:

- Transverse fracture
- Avulsion fragment
- Irregular medial cortex
- Widened MCS without fracture = deltoid tear

Section III - The lateral view

The Ankle Joint

The lateral view is particularly important for evaluating the posterior malleolus, which may be underestimated or missed on AP and mortise views. It also allows assessment of talar tilt in the sagittal plane, detection of joint effusion indicated by displacement of the anterior fat pad, and evaluation of soft tissue swelling around the ankle.

SAMPLE

In clinical practice, the lateral ankle radiograph plays a crucial role in both acute trauma and follow-up imaging. When properly obtained, it provides critical information regarding fracture morphology, joint alignment, and associated injuries, aiding in treatment planning and prognosis when interpreted alongside the AP and mortise views.

Section IV - Special views

The Ankle Joint

Clinical Uses

The Canale view is useful in:

- Suspected talar neck fractures
- Assessment following reduction
- Intraoperative evaluation
- Postoperative assessment of talar neck alignment

CONCLUSION

5. Have I checked the soft tissues?

- Swelling
- Kager's fat pad
- Achilles tendon silhouette
- Joint effusion or other indirect signs of injury

6. Do I need another view?

Ask whether the clinical question would be better answered by:

- Stress or weight-bearing imaging
- Saltzman view
- Broden view
- Canale view
- CT, MRI or other appropriate imaging

7. Does the X-ray fit the patient?

Finally, correlate the radiograph with the history, mechanism of injury and clinical examination.

Never let a measurement overrule the entire clinical picture.