



Fracture ankle dislocation

Dr . Mostafa Ali

ILOs

- 1- Anatomy
- 2- Range of motion
- 3- Mechanism of injury
- 4- Classification of ankle fracture
- 5- Diagnosis
- 6- Treatment
- 7- complications

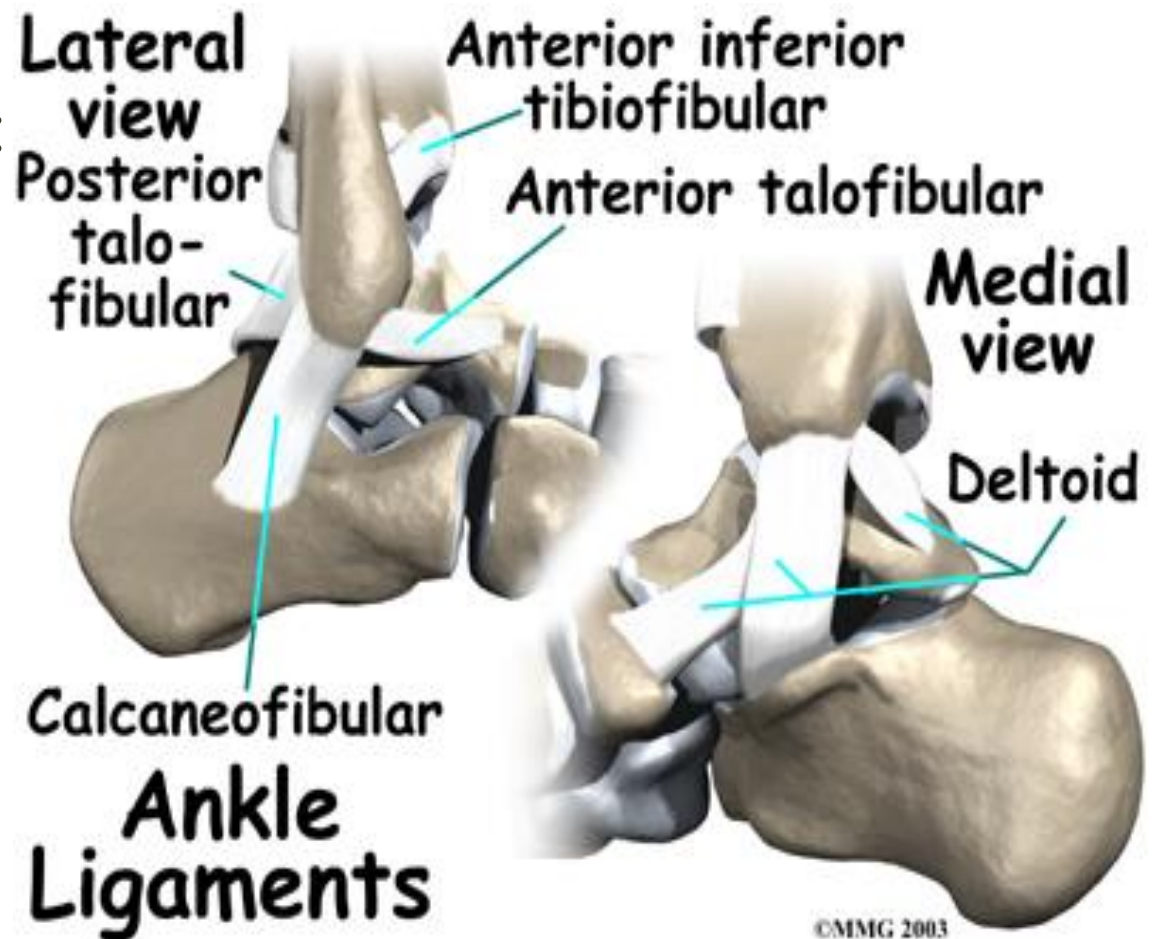
Anatomy of ankle joint

1- Bony :



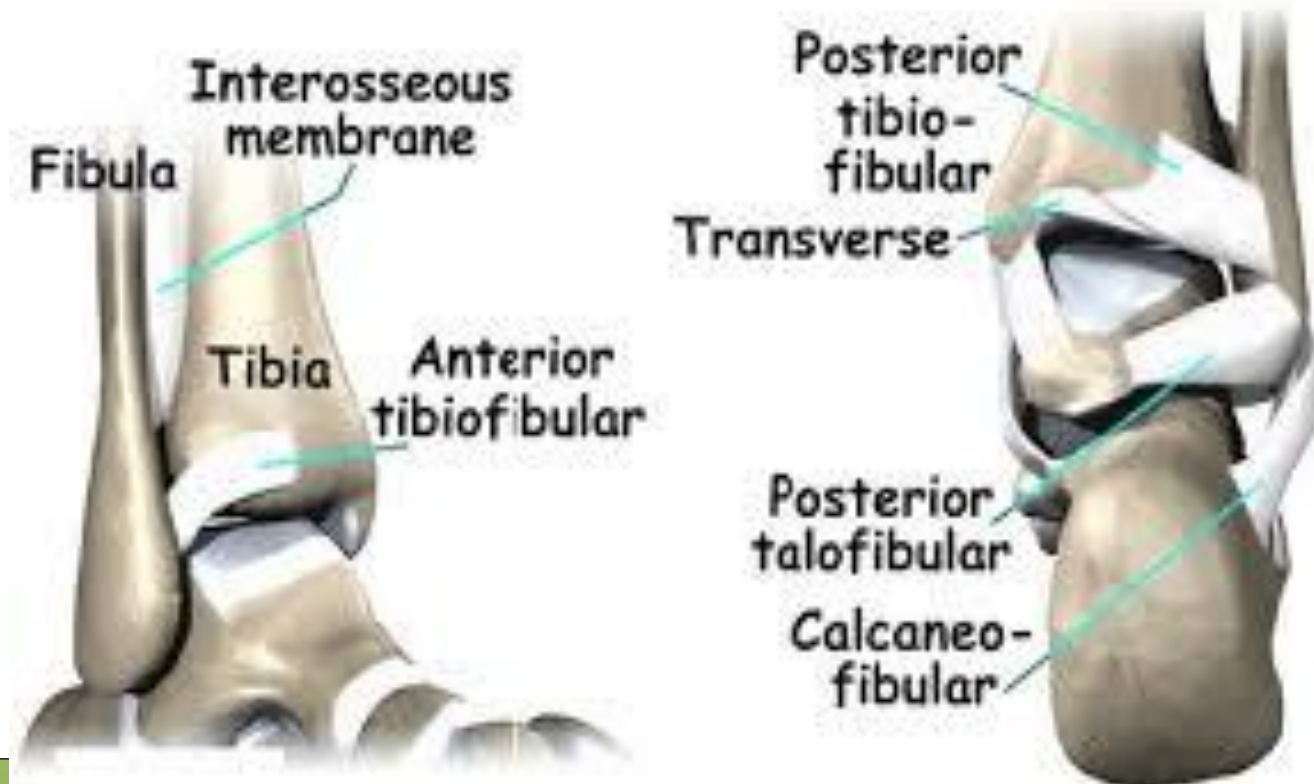
Anatomy of ankle joint

2- Ligaments :



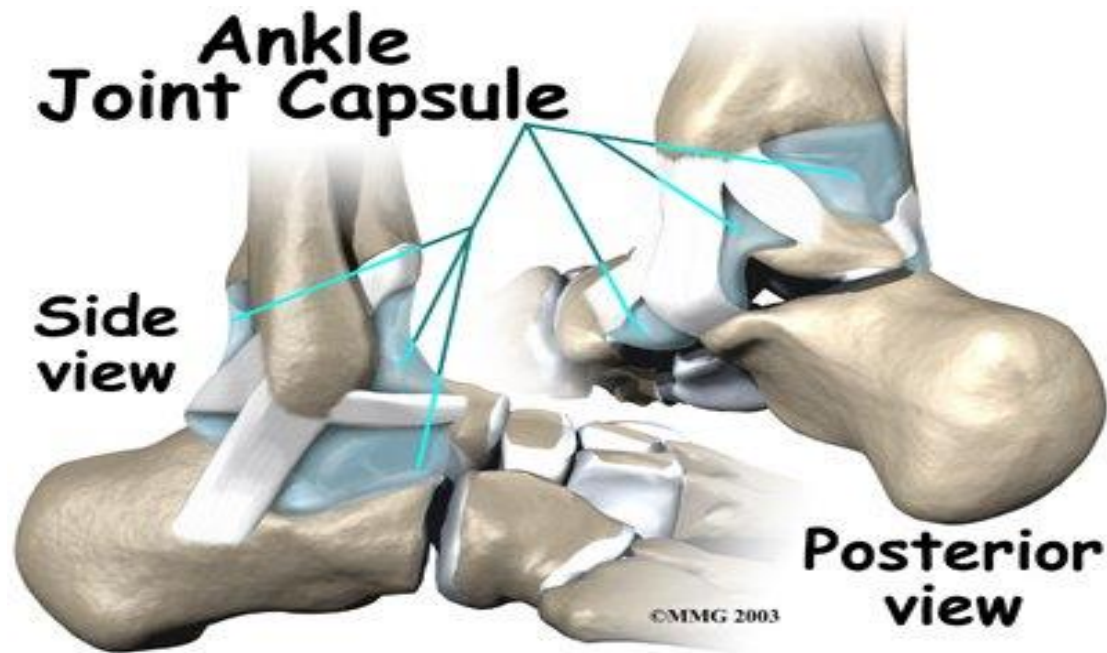
Anatomy of ankle joint

3- Syndesmotic ligament :



Anatomy of ankle joint

Capsule of ankle joint :



Range of ankle motion

Plantar flexion & Dorsiflexion:

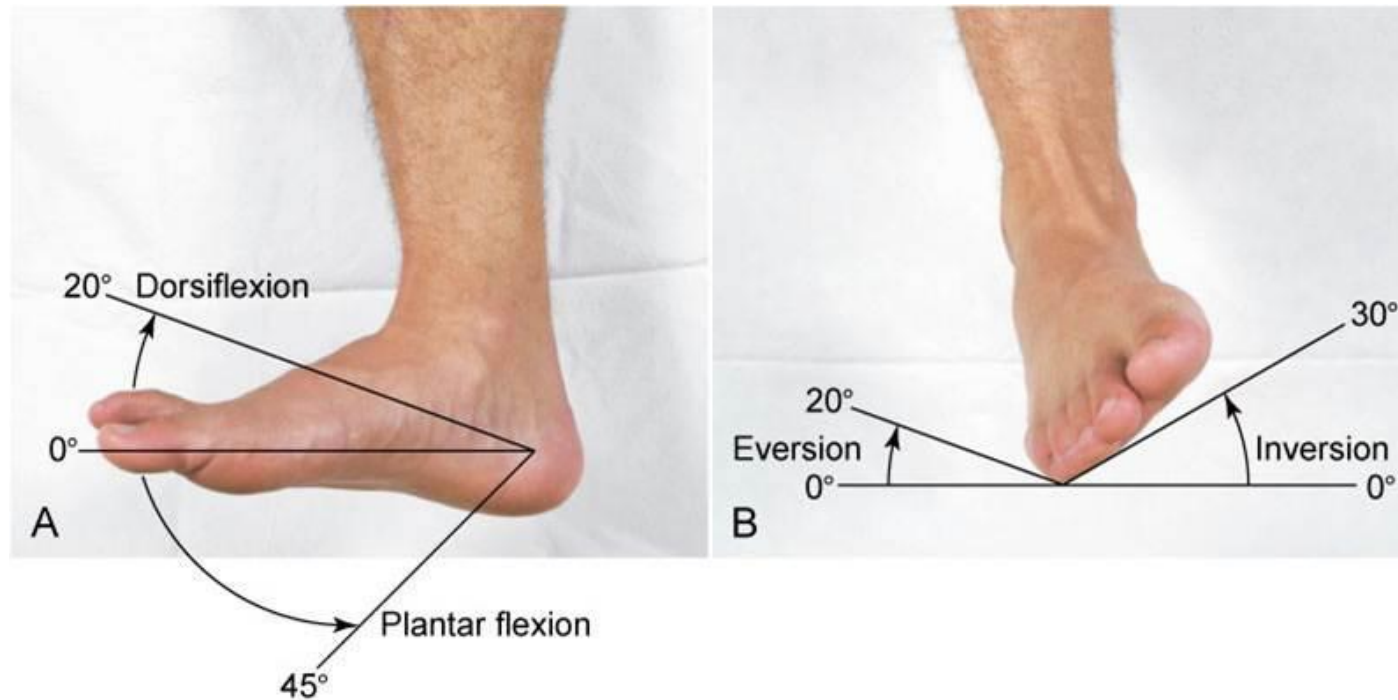


Range of ankle motion

Inversion & Eversion :
at subtalar joint
inversion 30 degree
eversion 20 degree

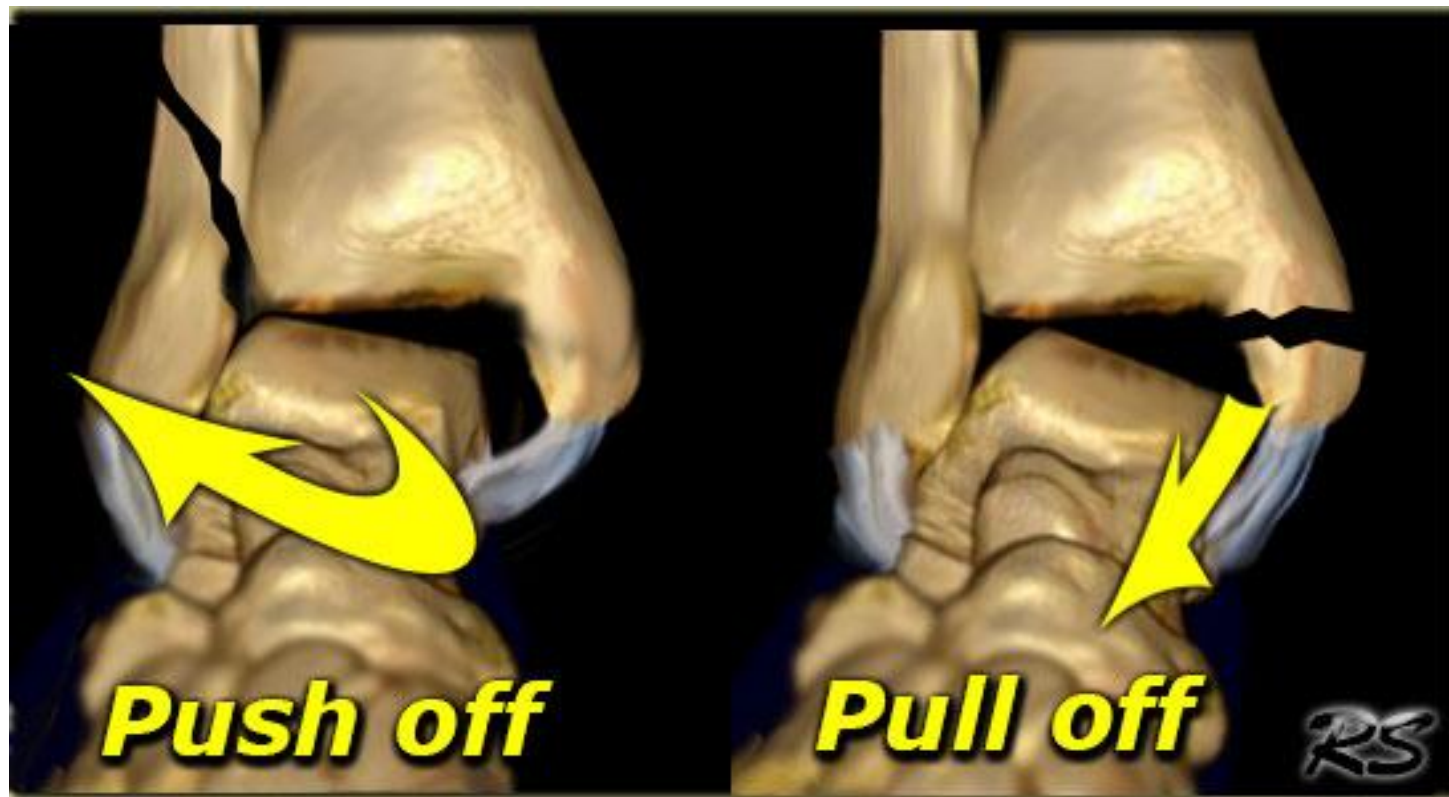


Range of motion



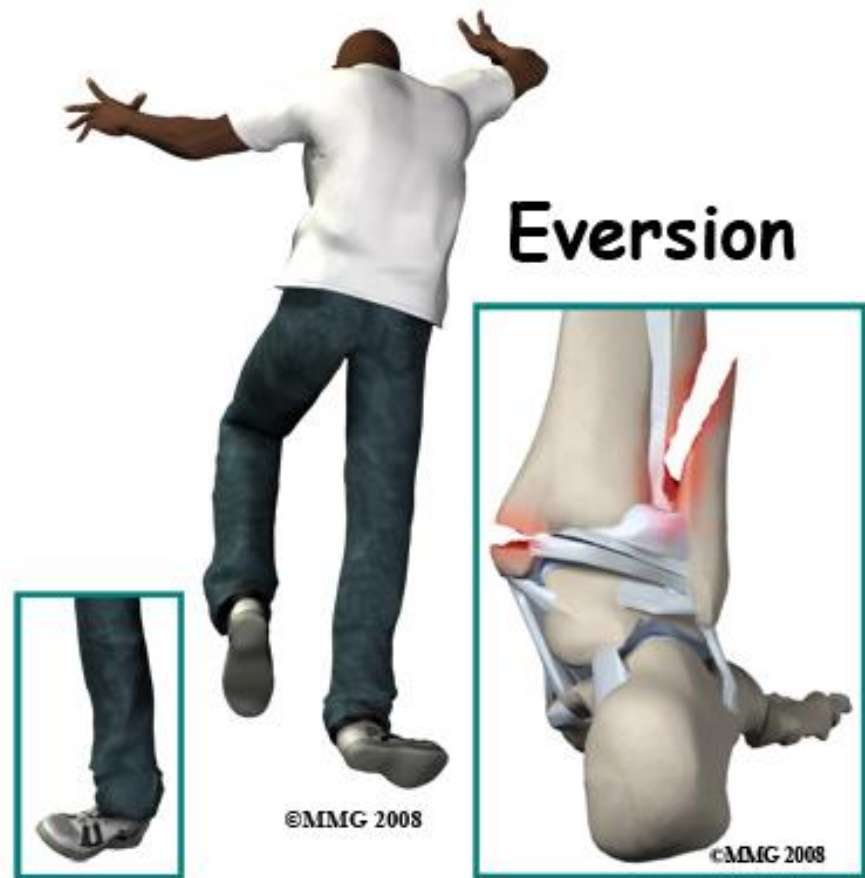
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Mechanism of injury



Mechanism of injury

Excessive eversion :



Mechanism of injury

Excessive inversion :

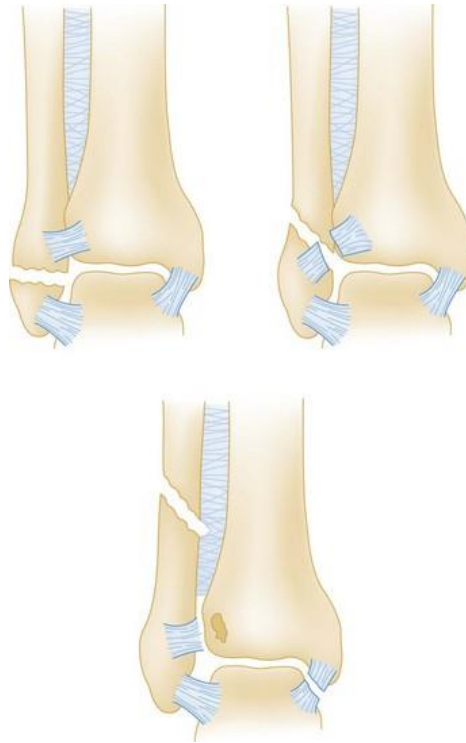
Inversion



Weber classification



Weber classification

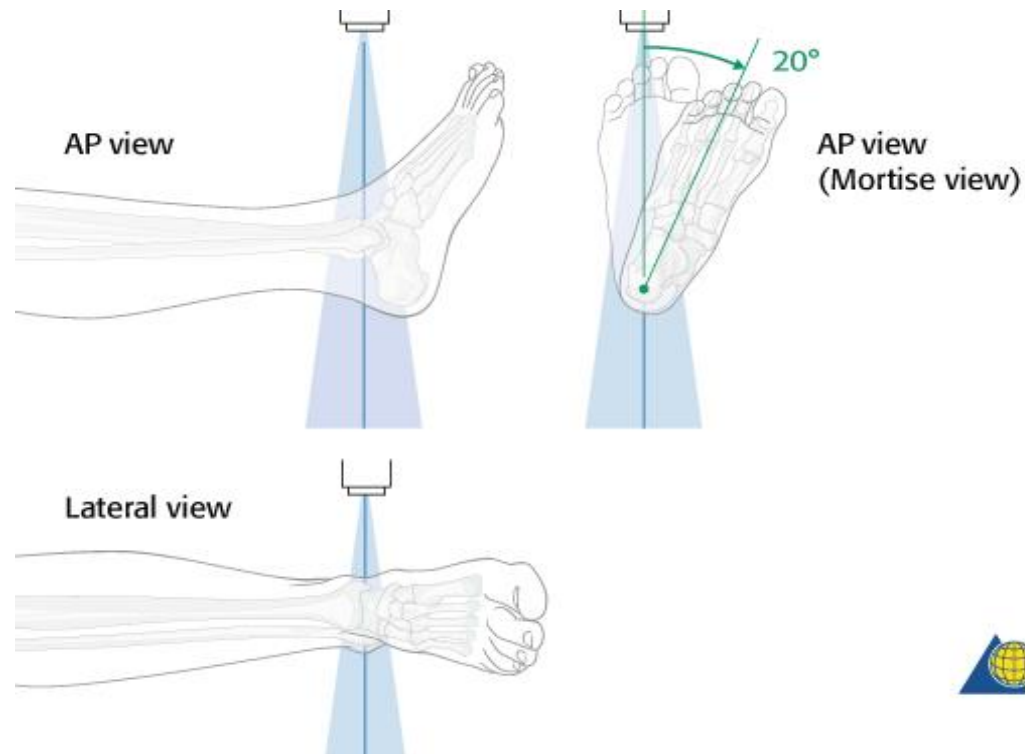


Diagnosis



Diagnosis

Radiological :



Diagnosis

Normal values at standard X-ray

AP



Distal tibiofibular overlap $> 6\text{mm}$
Equal horizontal and medial CS
(1mm)

Mortise



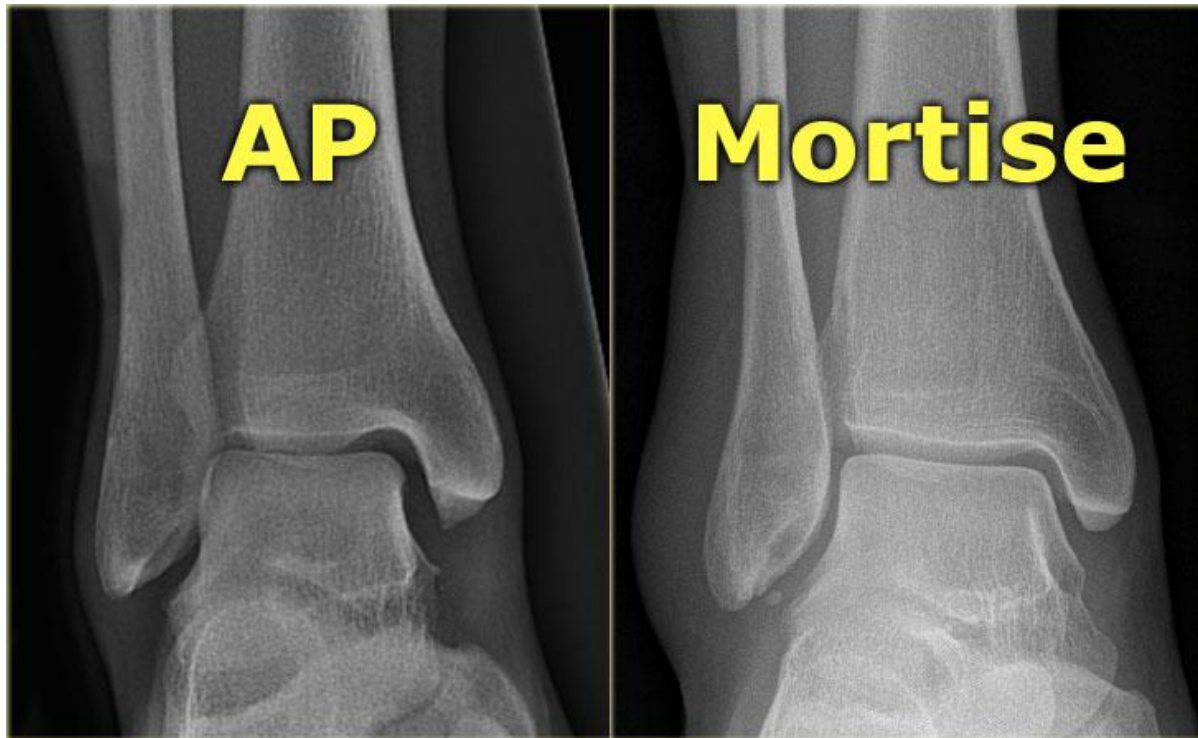
Distal tibiofibular overlap $> 1\text{mm}$
Lateral CS $< 3-6\text{mm}$
Fibular fossa clearly visible

Lateral

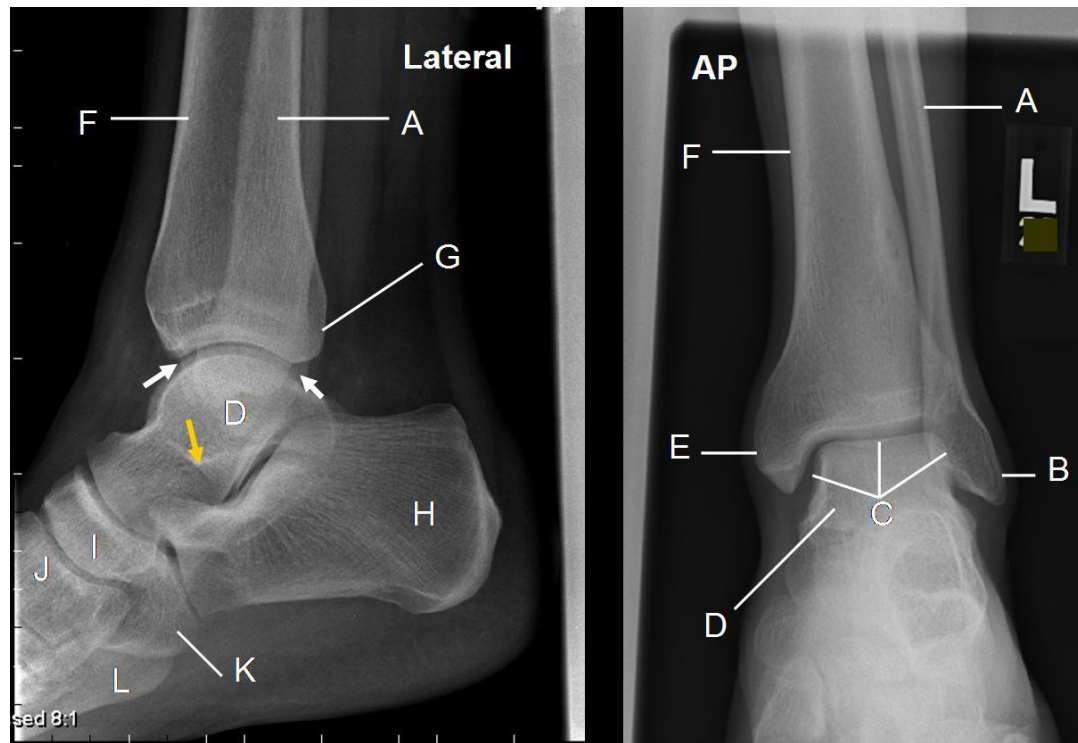


Projection of the distal fibula
over the posterior 1/3 of the
distal tibia

Diagnosis



Diagnosis



Treatment

1- conservative ttt :
fracture ankle type A
&B



Treatment

2- surgical ttt :

- Fracture type B & C



Treatment

Fixation of lateral malleolus : plating



Fixation of lateral malleolus : plating



Fixation of lateral malleolus : plating

Syndesmotic screw :



A



B

Treatment

Fixation of medial malleolus

Tension band



Fixation of medial malleolus

Screws : cortical 3.5 mm& cancellous 4 mm



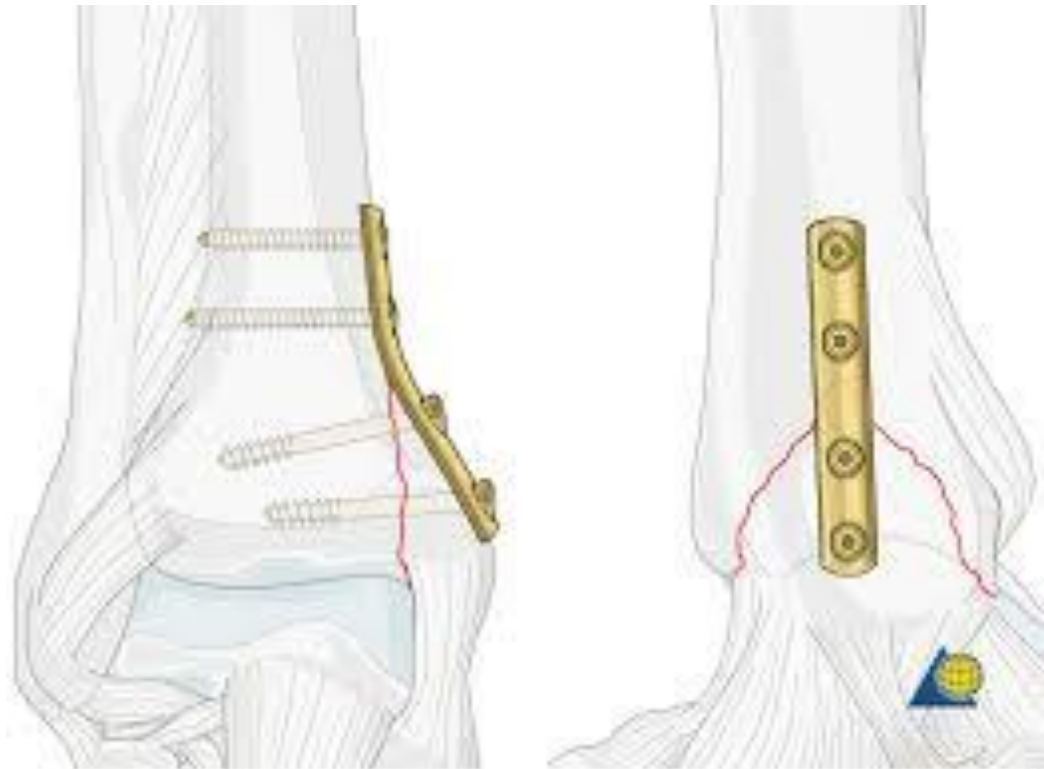
Fixation of medial malleolus

Malleolar screw : 4.5 mm partial threads



Fixation of medial malleolus

Buttress plate



Complications :

1- early :

Neurovascular injury

Compartmental syndrome

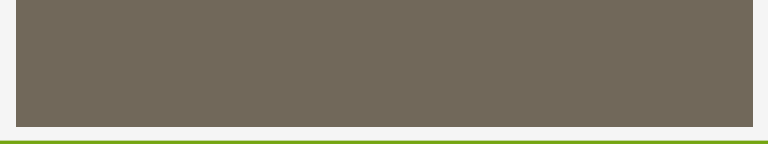
Complications :

2- late complications :

Non union – malunion

Sudek





Thanks