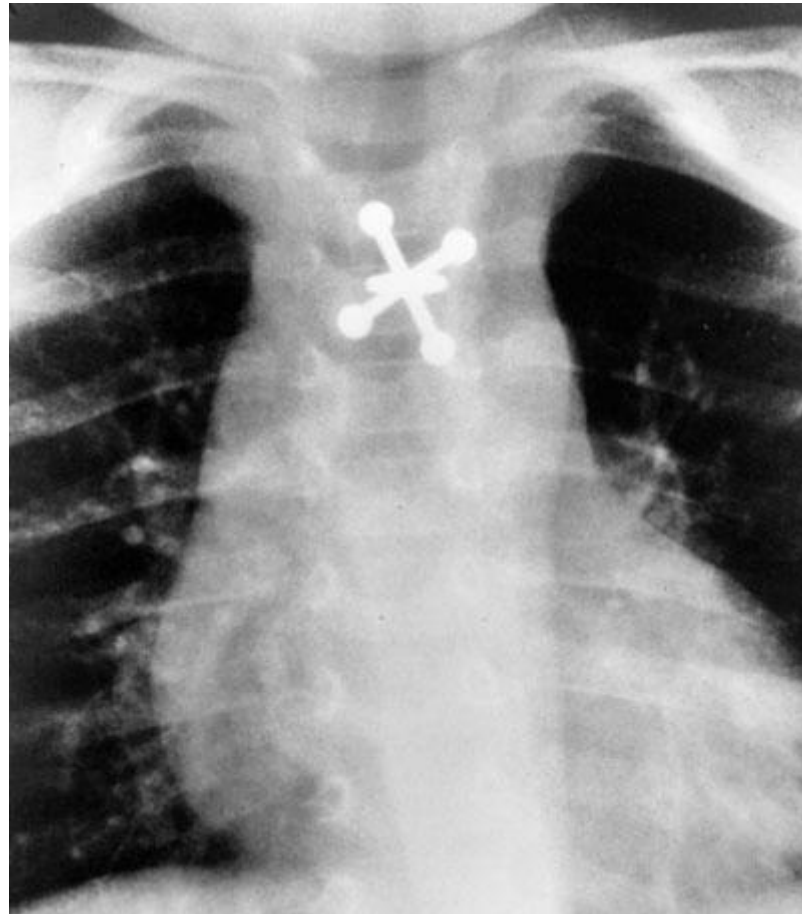


# Radiographs of the Skeletal System

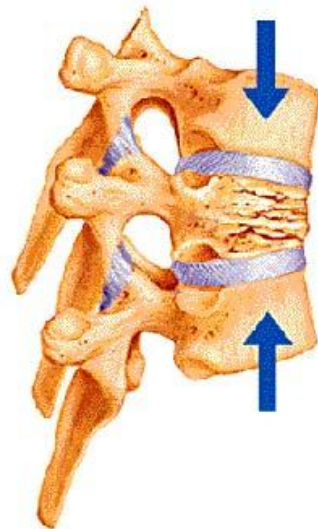
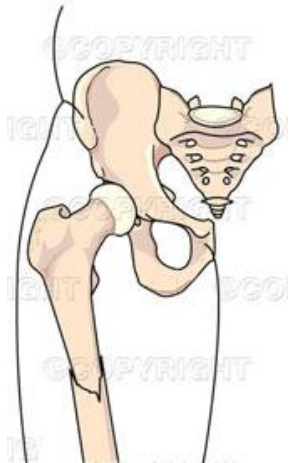
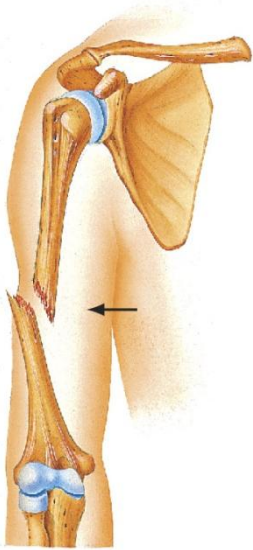


X-rays can locate metal objects your child has swallowed, such as this jack.

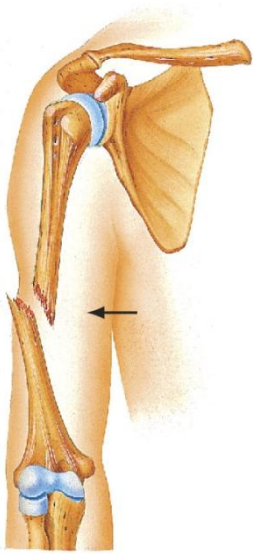
# Radiographs

- You should be able to identify the following fractures.
- You should be able to identify the following bones and selected structures of those bones shown on the following radiographs.

# Identify the following types of fractures



# Identify the following types of fractures



Compound



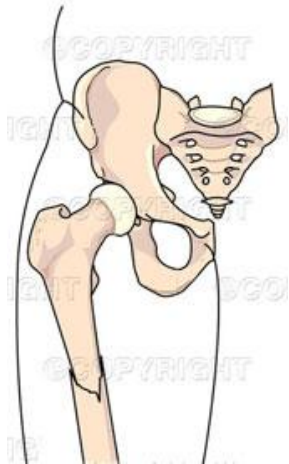
Greenstick



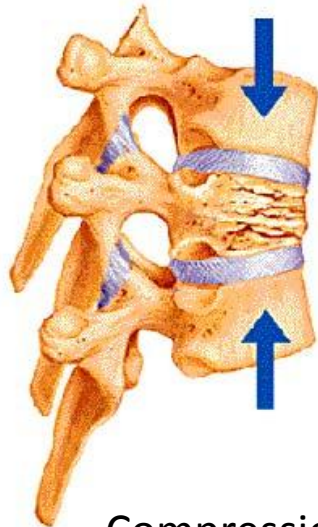
Comminuted



Spiral



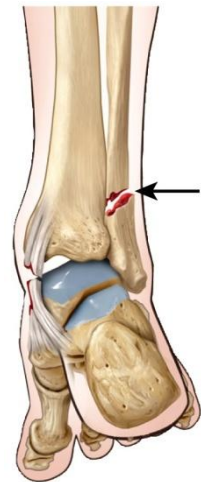
Impacted



Compression

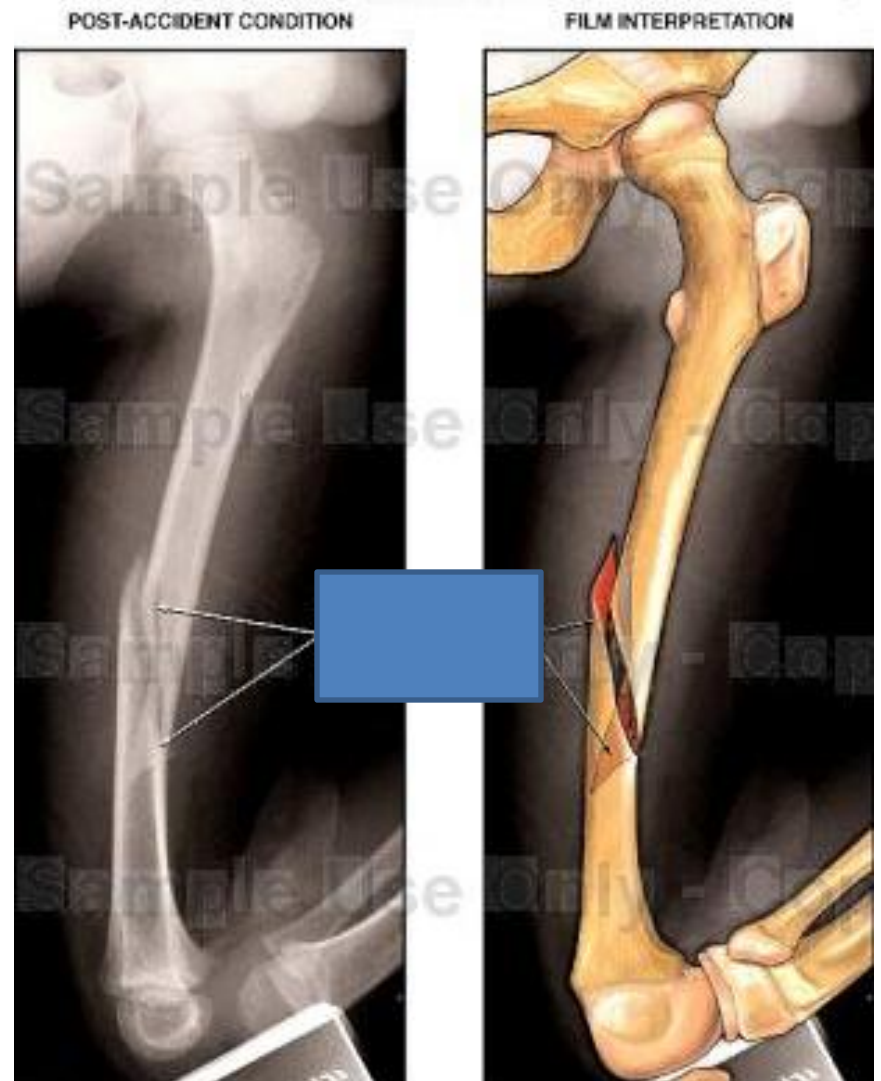


Stress



Pott's

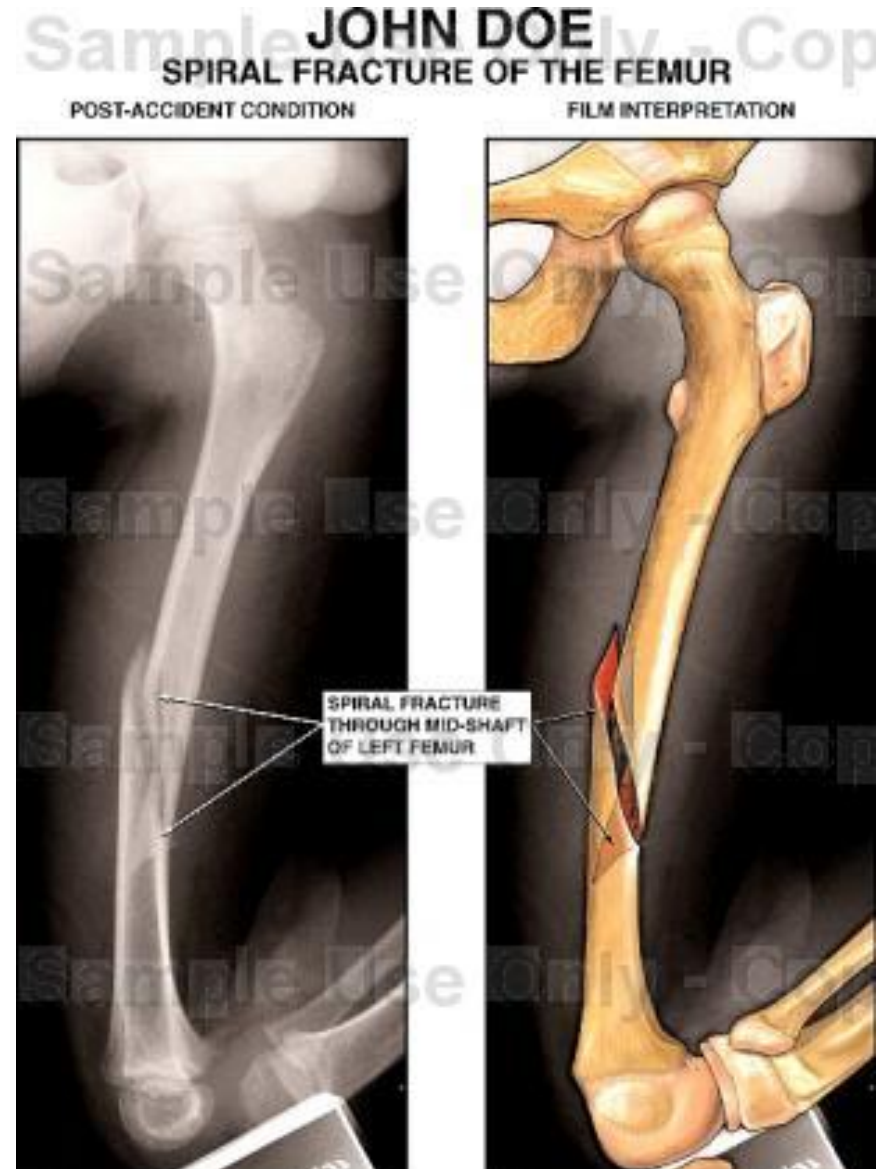
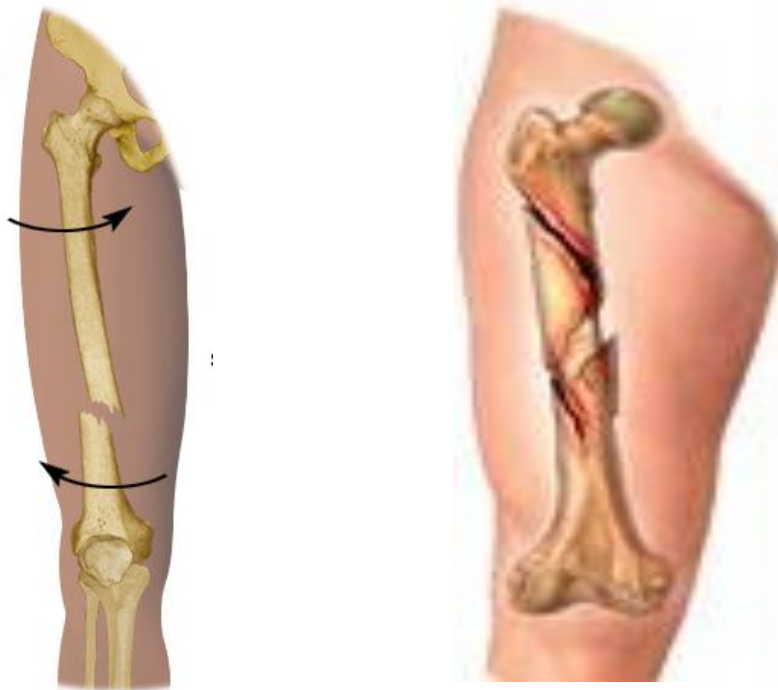
# Type of Fracture





# Type of Fracture

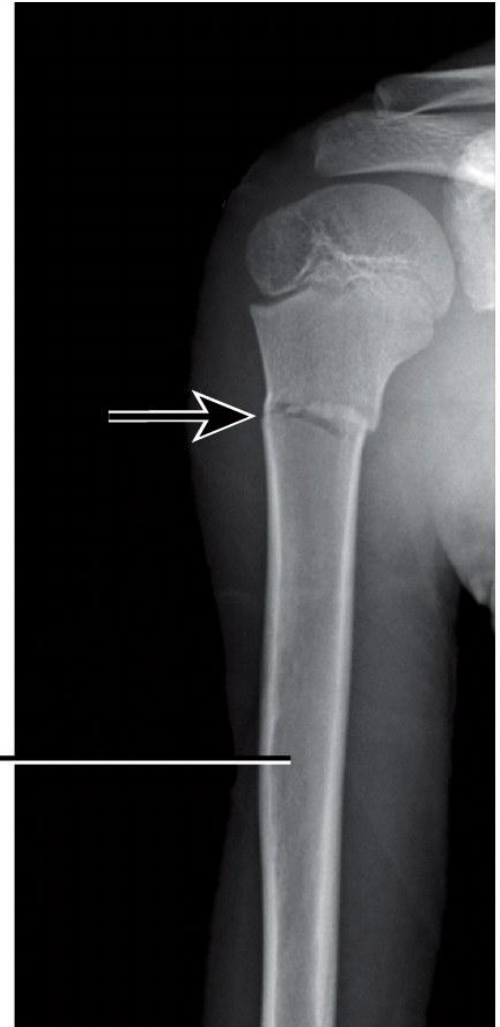
- **Spiral:** Ragged break caused by excessive twisting forces.
- Common in sports injury/Injury of abuse.



# Type of Fracture



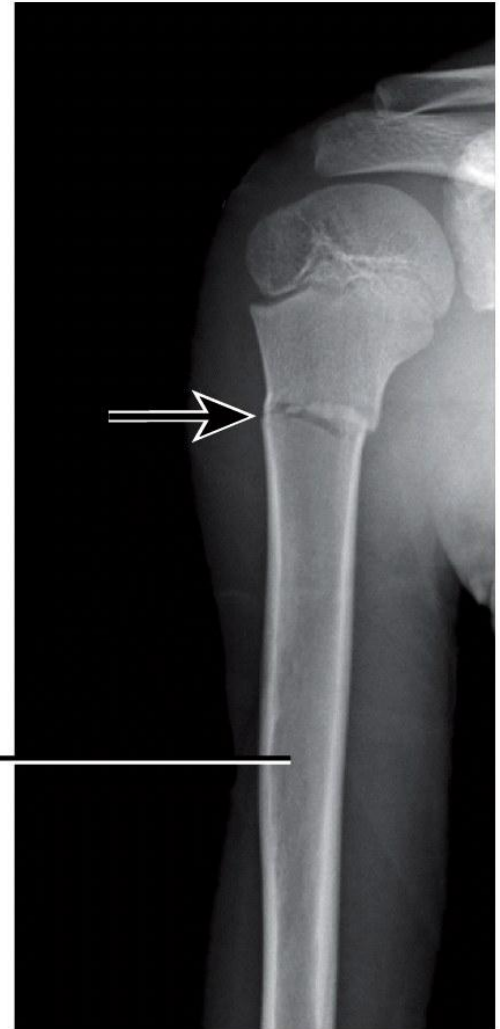
Humerus



# Impacted Fracture

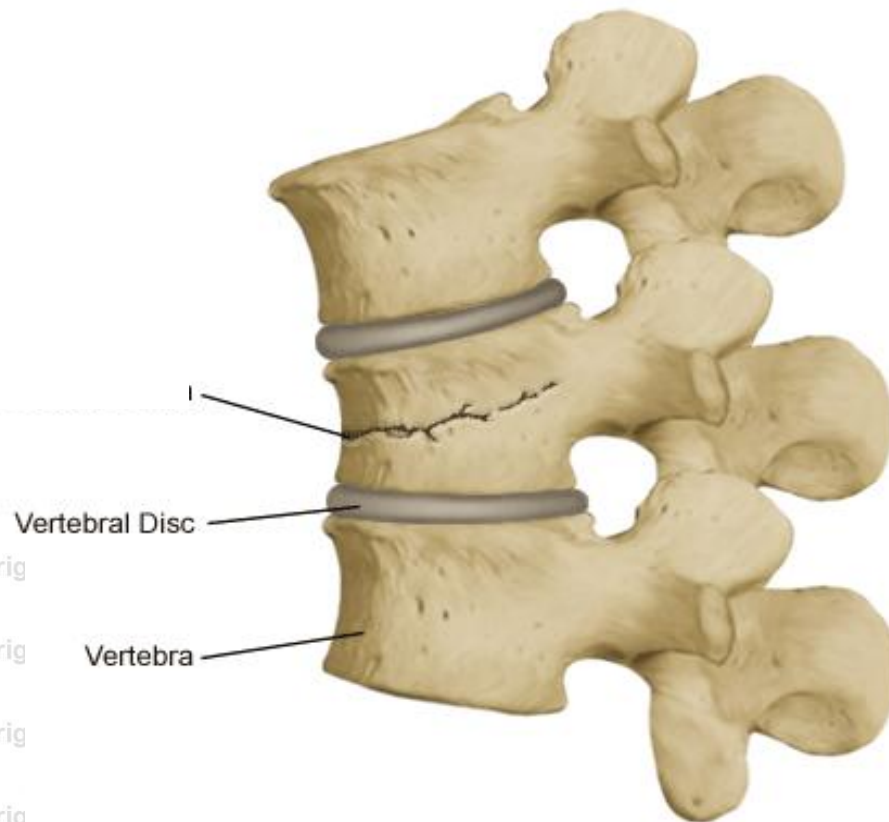
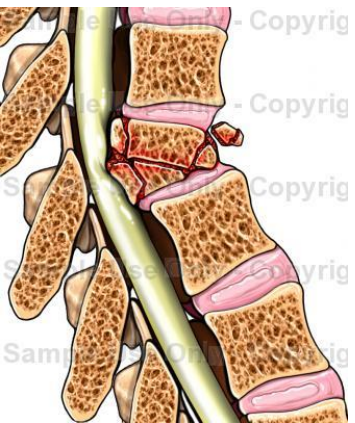
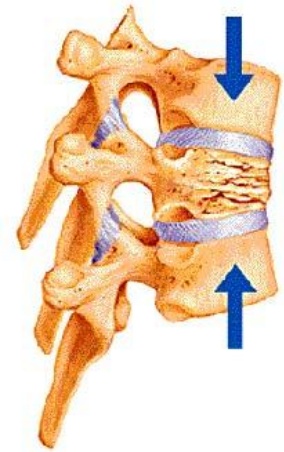


Humerus



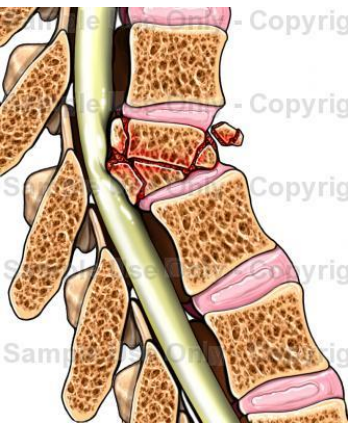
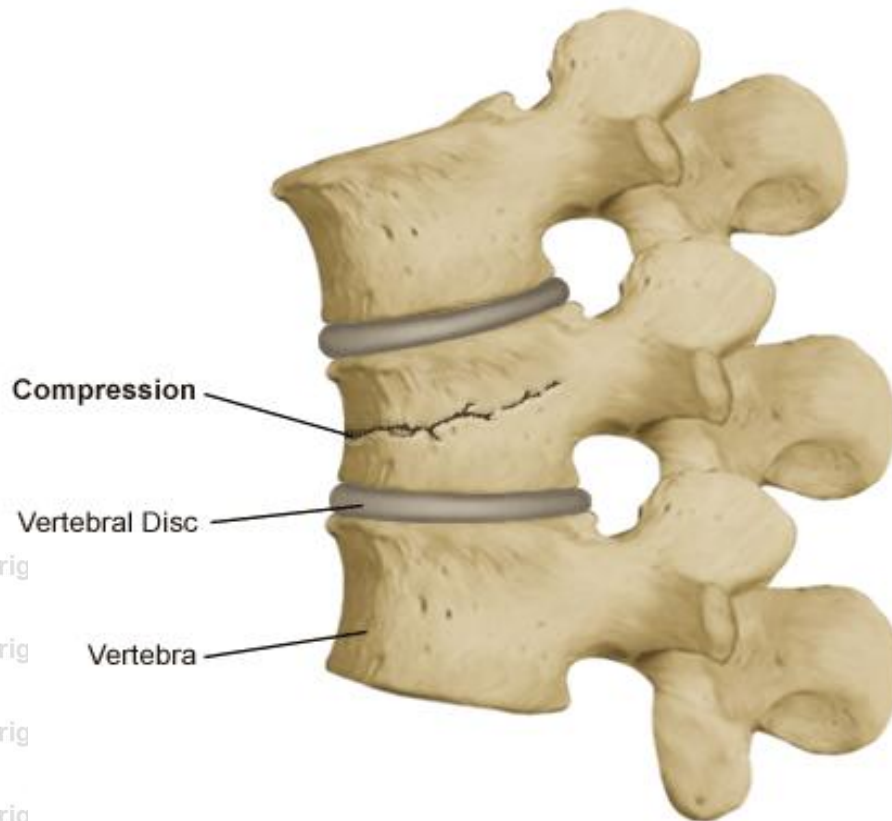
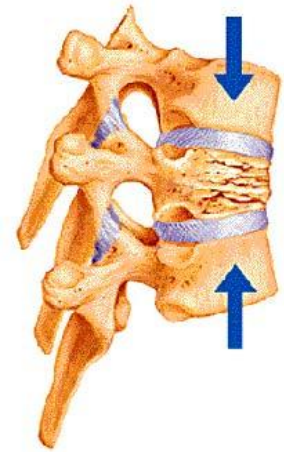


# Type of Fracture

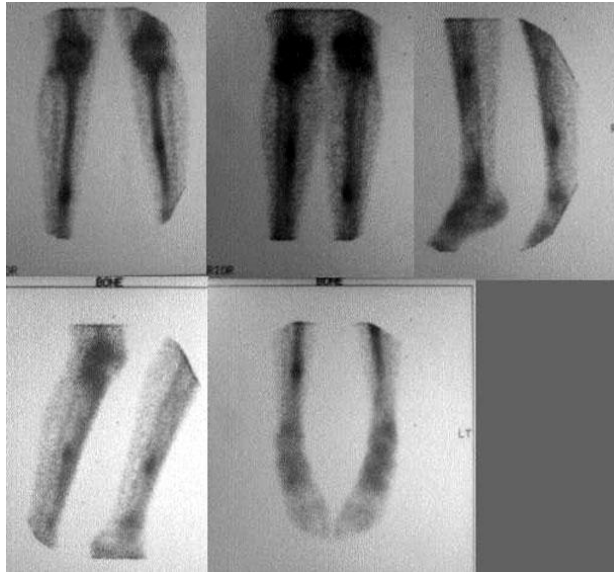


# Type of Fracture

- **Compression:** The bone is crushed, causing the broken bone to be wider or flatter in appearance.



# Type of Fracture



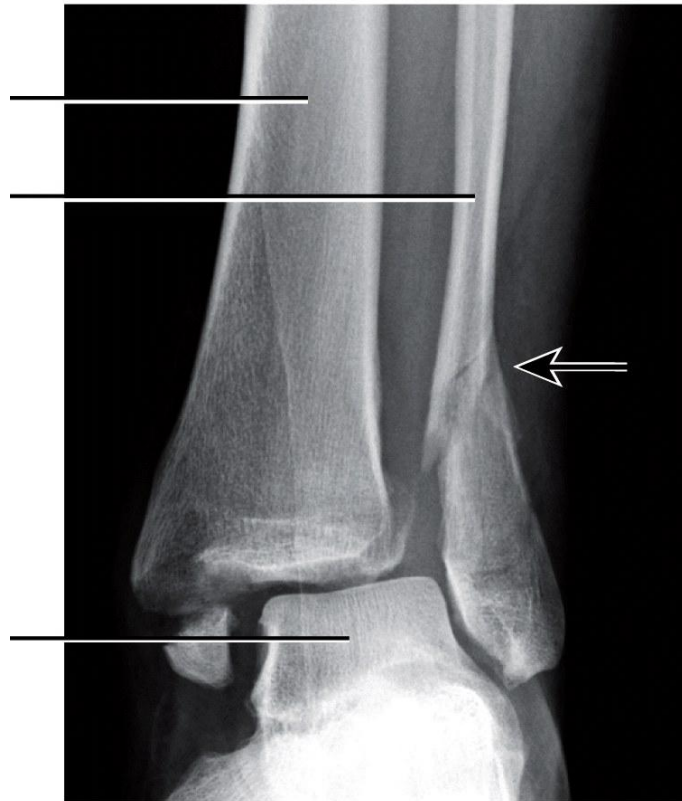
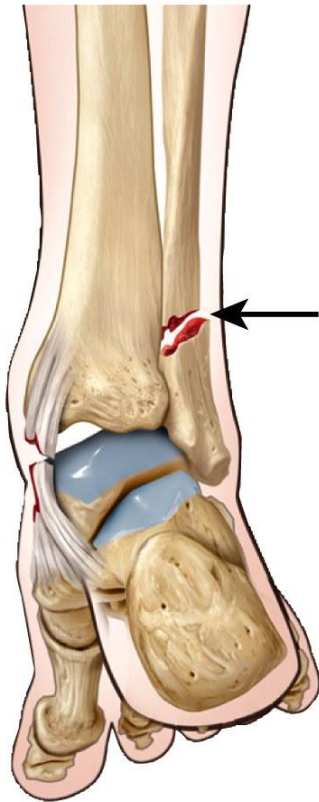
# Type of Fracture

- **Stress:** Bone fractures (microscopic fissures) without visible breaking.
  - Difficult to detect with x-rays – can see them in a **bone scan**
  - Result from repeated strenuous activities (running, jumping, etc) or disorders such as osteoporosis.



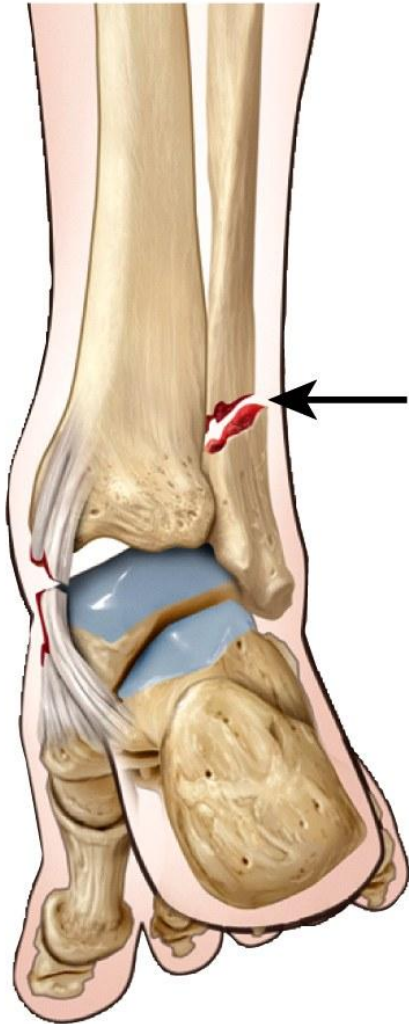


# Type of Fracture





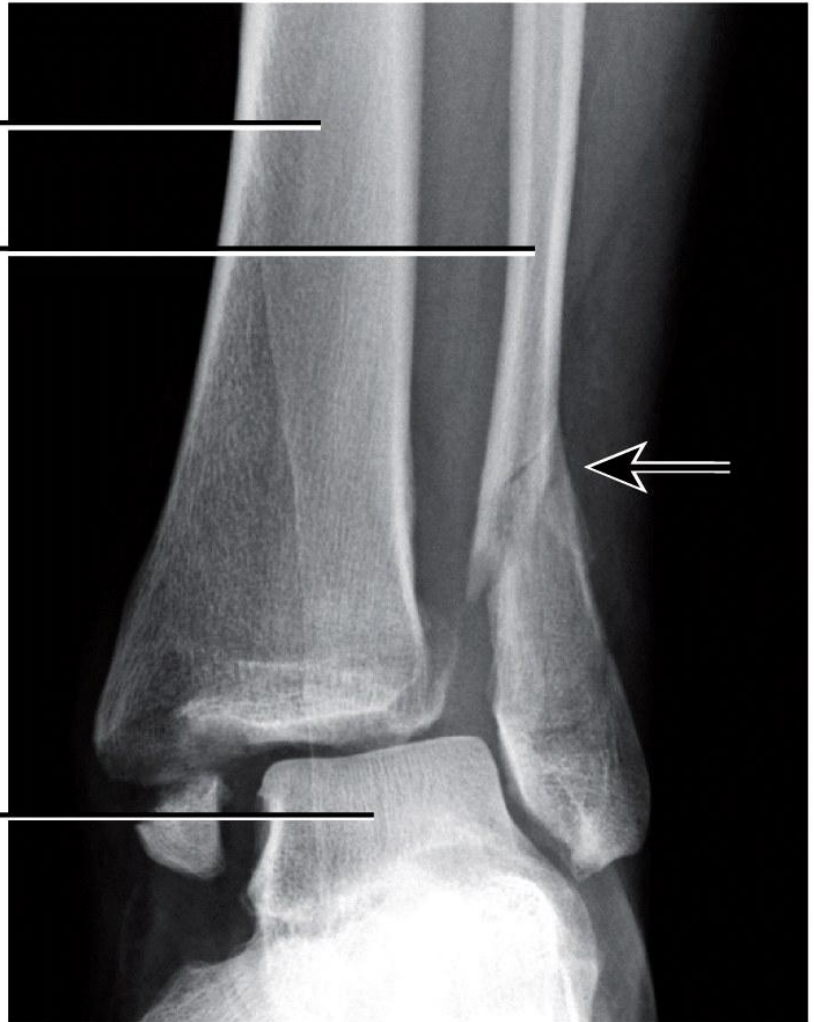
# Pott's Fracture



Tibia

Fibula

Ankle  
bones



# Type of Fractures

Fracture types



## Fracture types



Comminuted



Spiral



Compound

*What kind of fracture is this?*



*It's kind of tough to tell, but  
this is a \_ \_ \_ \_ \_ fracture.*



*What kind of fracture is this?*

**Comminuted Fracture**



*It's kind of tough to tell, but this is a **Spiral** fracture.*

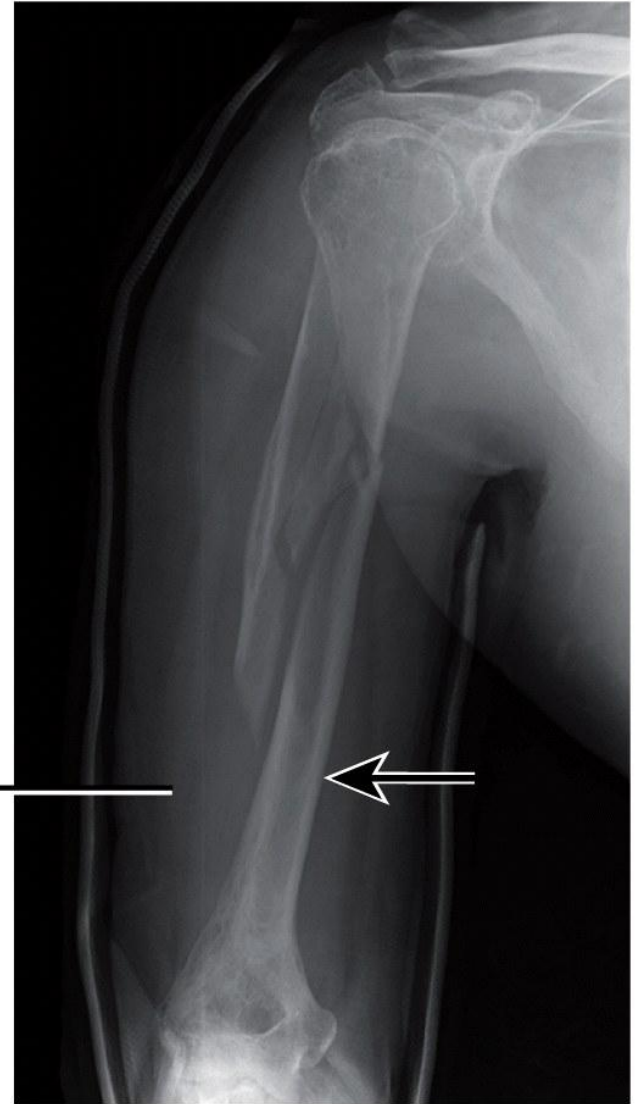




# Type of Fracture



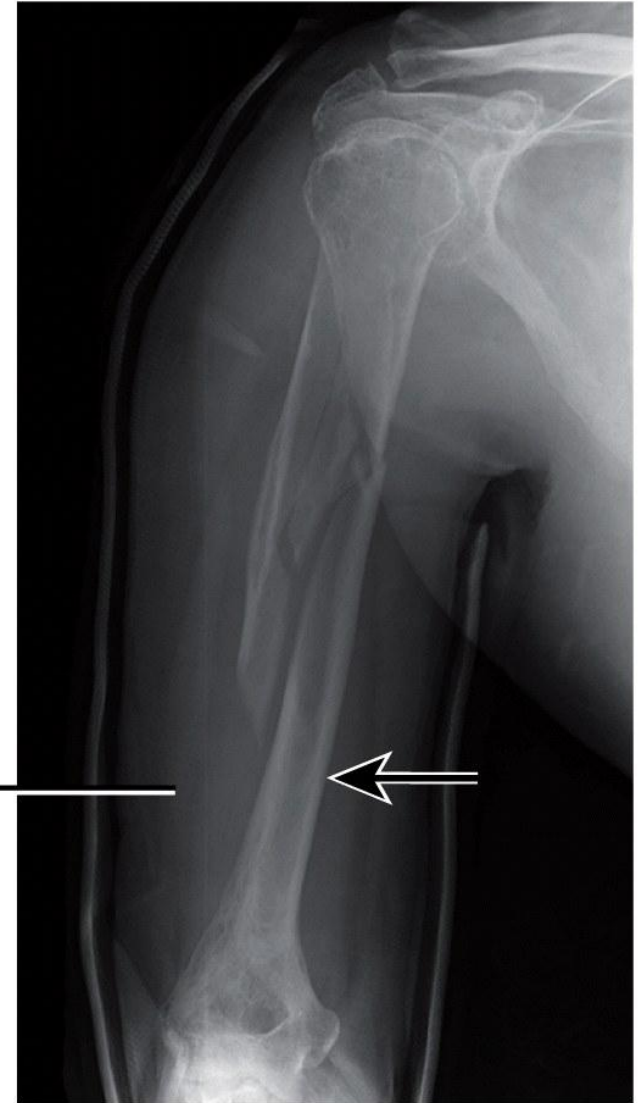
Humerus



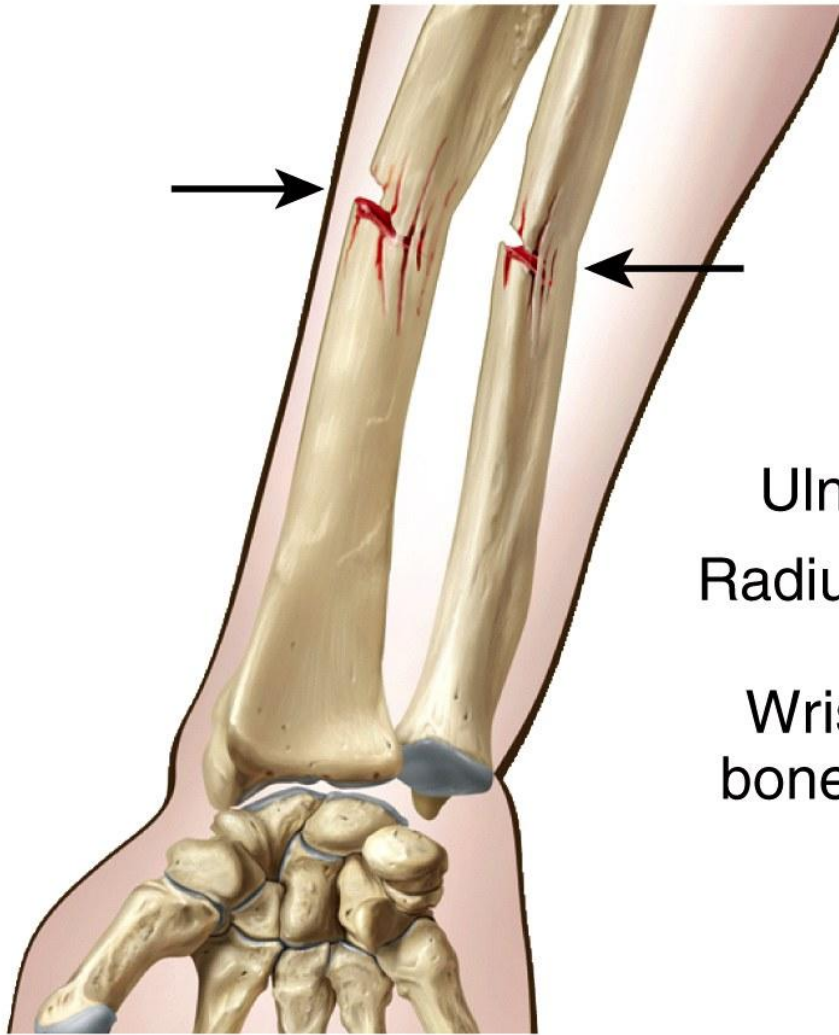
# Comminuted Fracture



Humerus



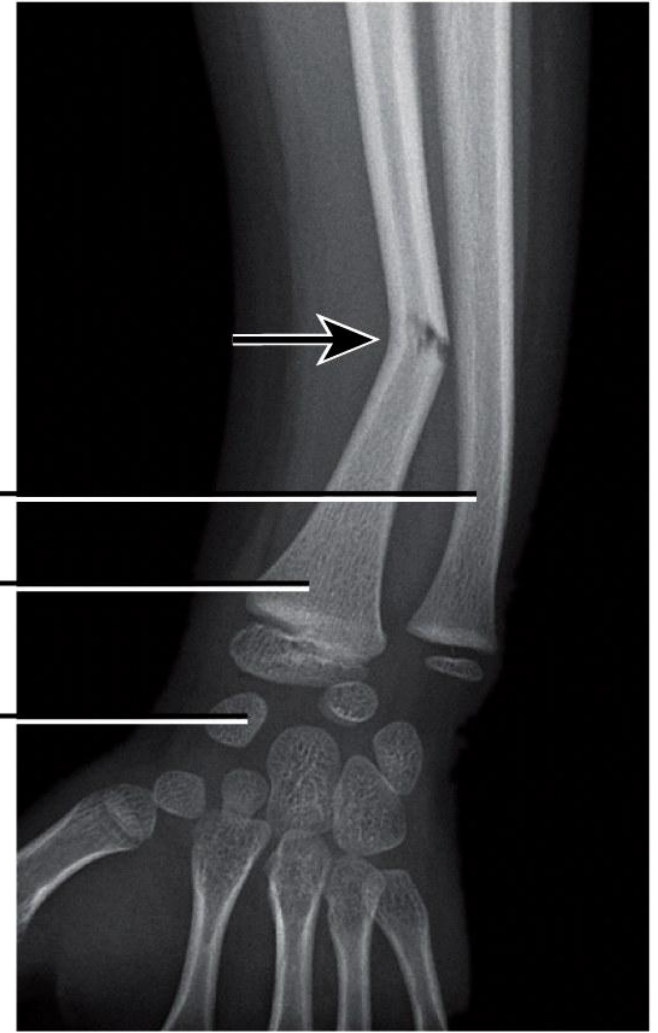
# Type of Fracture



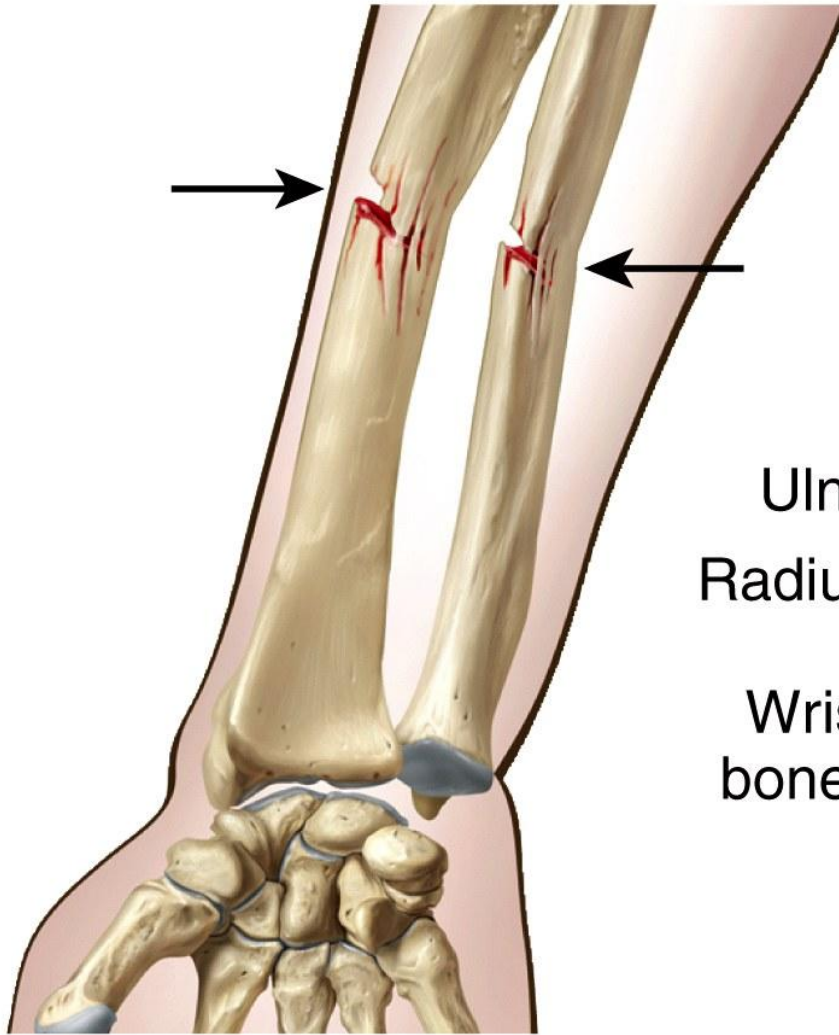
Ulna

Radius

Wrist  
bones



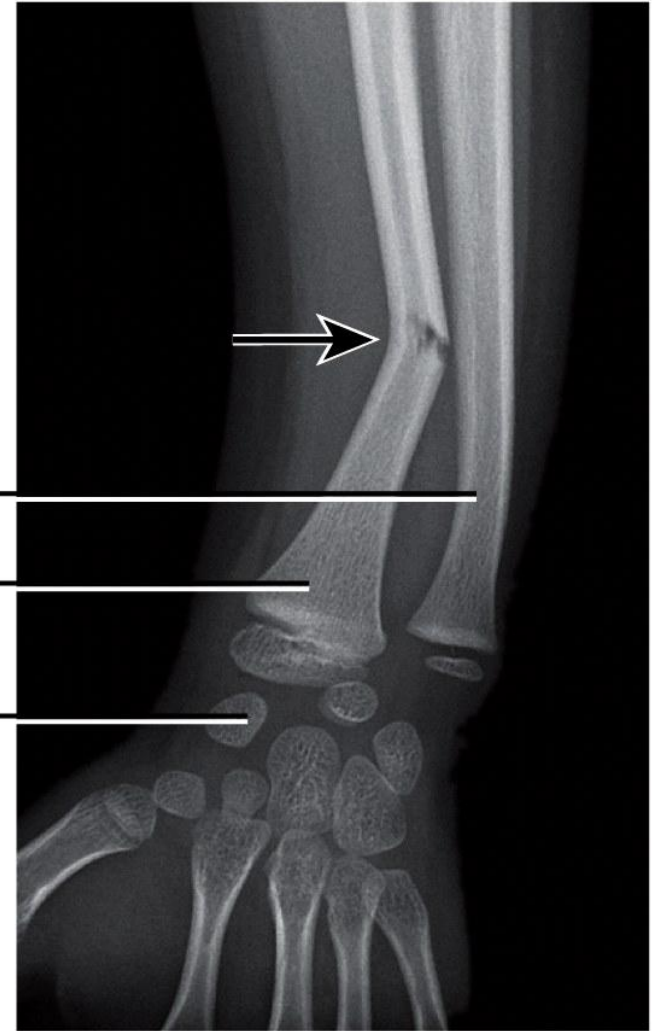
# Greenstick Fracture



Ulna

Radius

Wrist  
bones





**This is an  
anteroposterior  
view of the right  
shoulder.**

# X Ray of Shoulder

The upper end of the humerus can  
be seen with its parts:

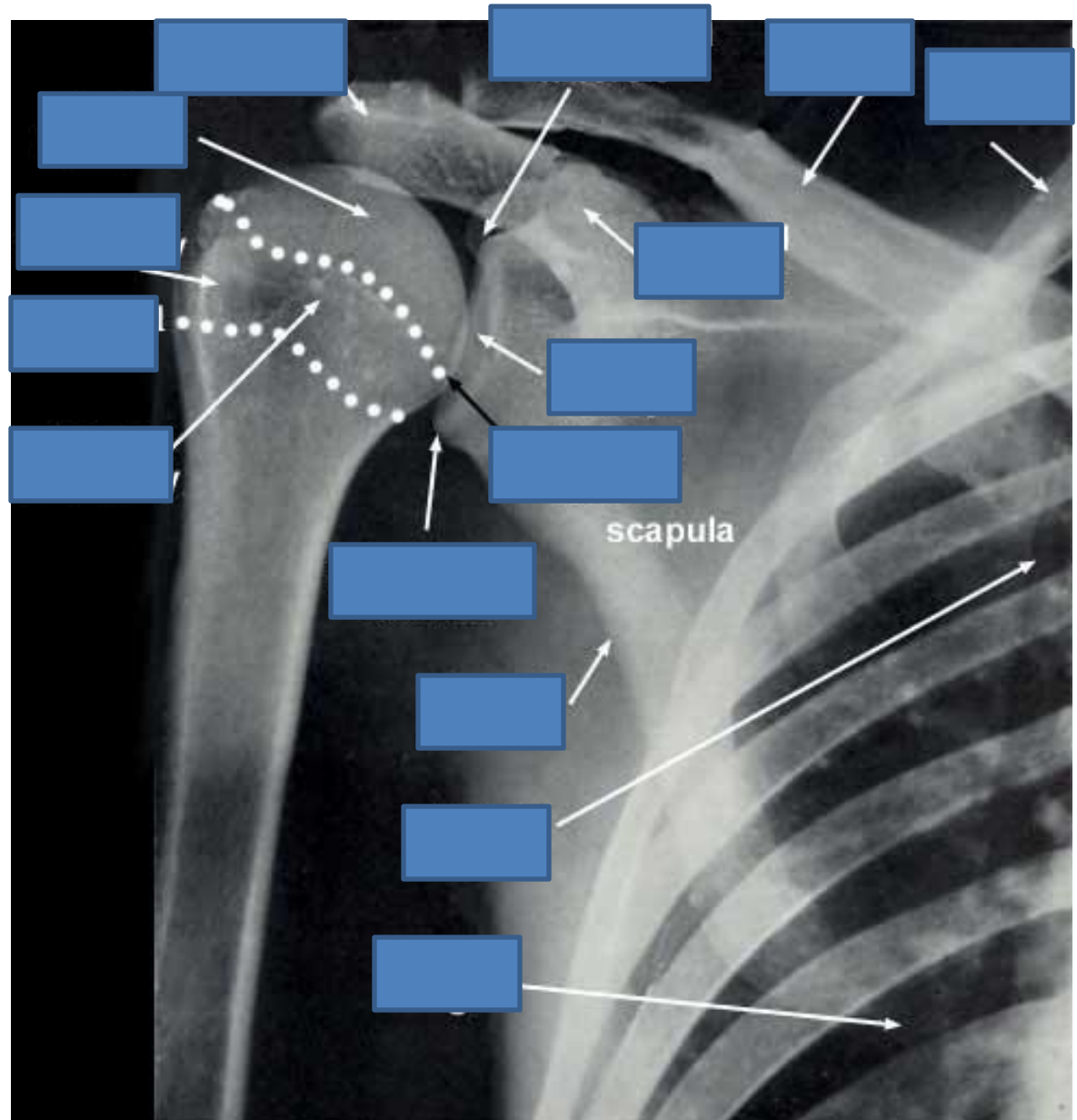
- greater tuberosity
- lesser tuberosity
- head
- surgical neck
- anatomical neck

The parts of the scapula that are  
fairly obvious are the:

- glenoid cavity
- supraglenoid tubercle
- infraglenoid tubercle
- coracoid process
- acromion process
- lateral (or axillary) border

Finally you should see the:

- clavicle
- upper ribs





# X Ray of Shoulder

This is an anteroposterior view of the right shoulder.

The upper end of the humerus can be seen with its parts:

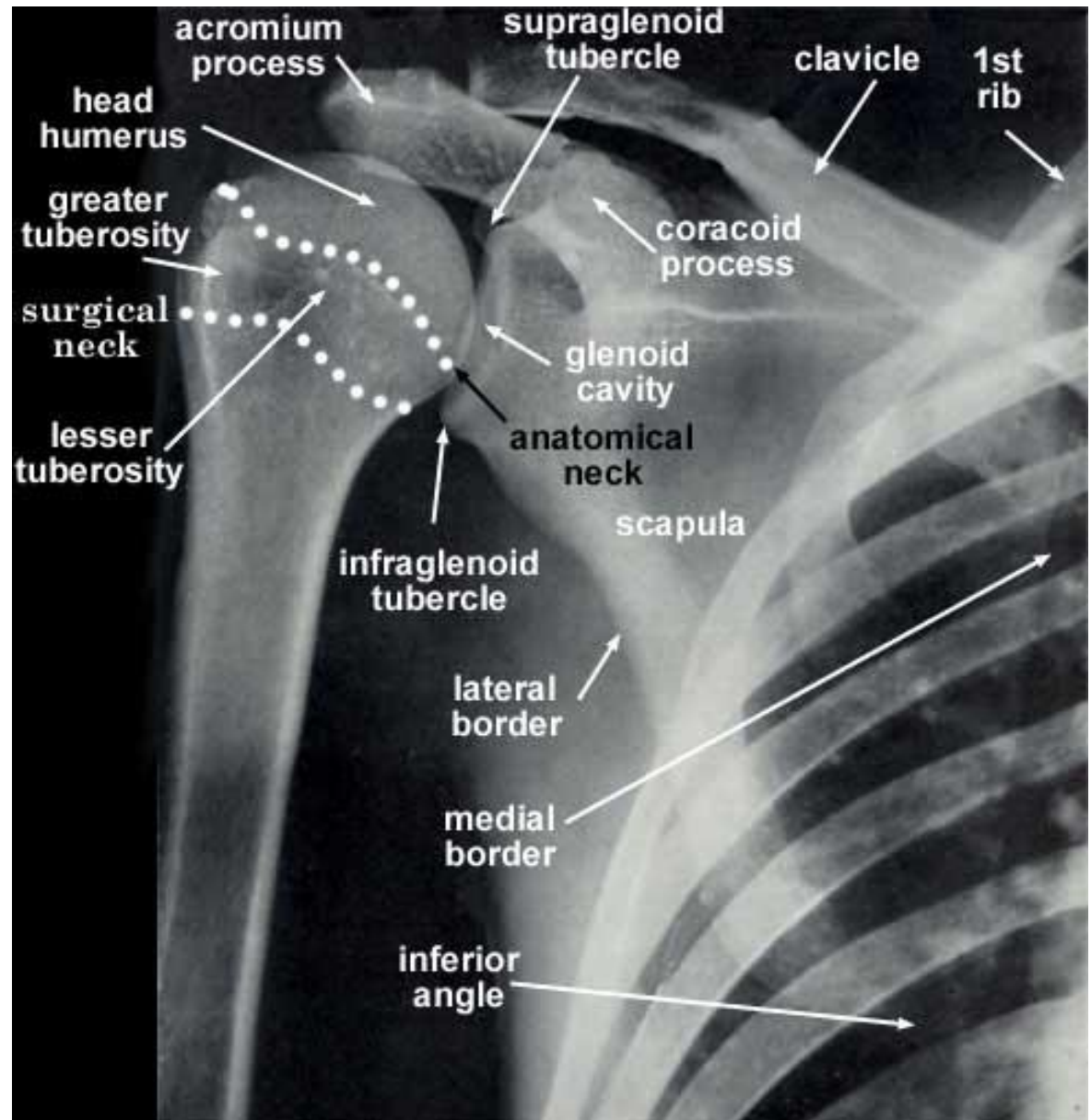
- greater tuberosity
- lesser tuberosity
- head
- surgical neck
- anatomical neck

The parts of the scapula that are fairly obvious are the:

- glenoid cavity
- supraglenoid tubercle
- infraglenoid tubercle
- coracoid process
- acromion process
- lateral (or axillary) border

Finally you should see the:

- clavicle
- upper ribs



# X Ray of the Elbow

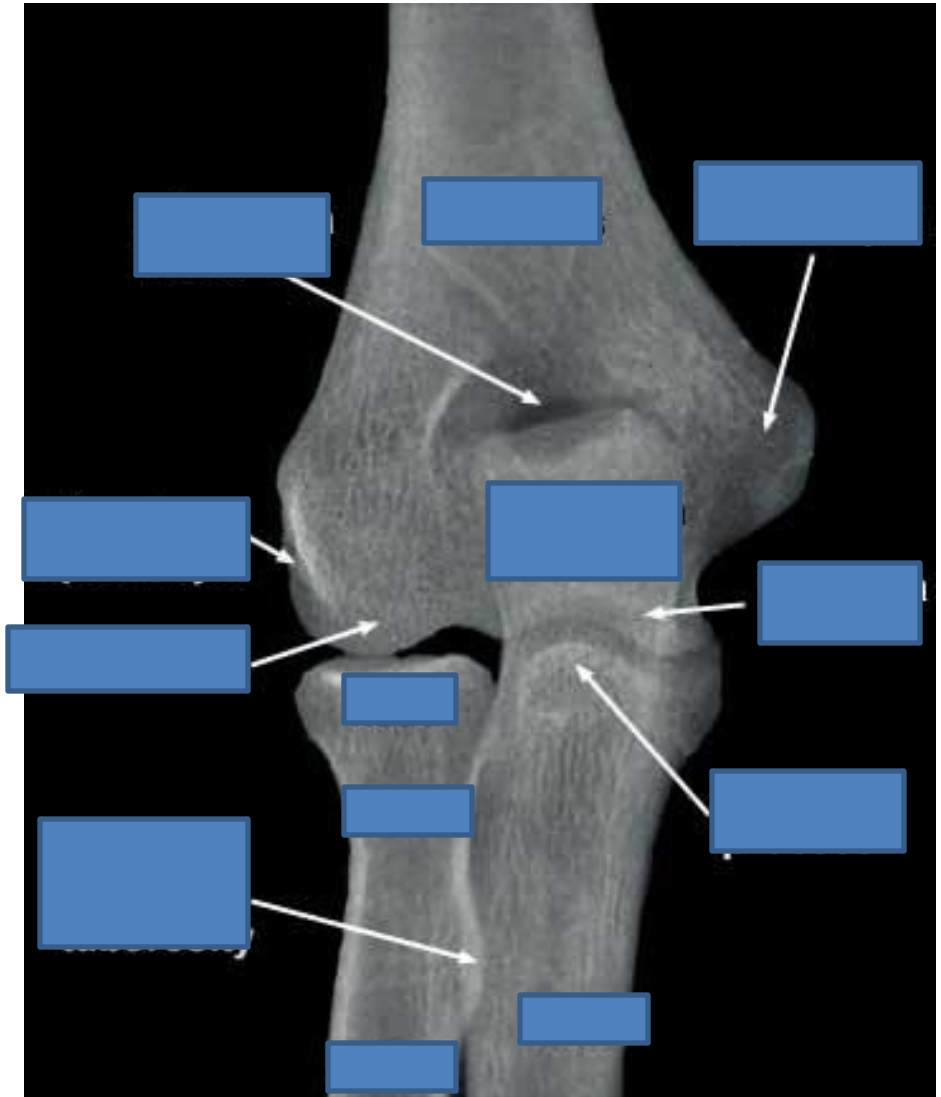
Identify the:

## **humerus**

- medial epicondyle
- lateral epicondyle
- olecranon fossa
- trochlea
- capitulum

## **radius**

- radial (or bicipital) tuberosity
- head
- neck
- ulna
- olecranon process
- coronoid process



# X Ray of the Elbow

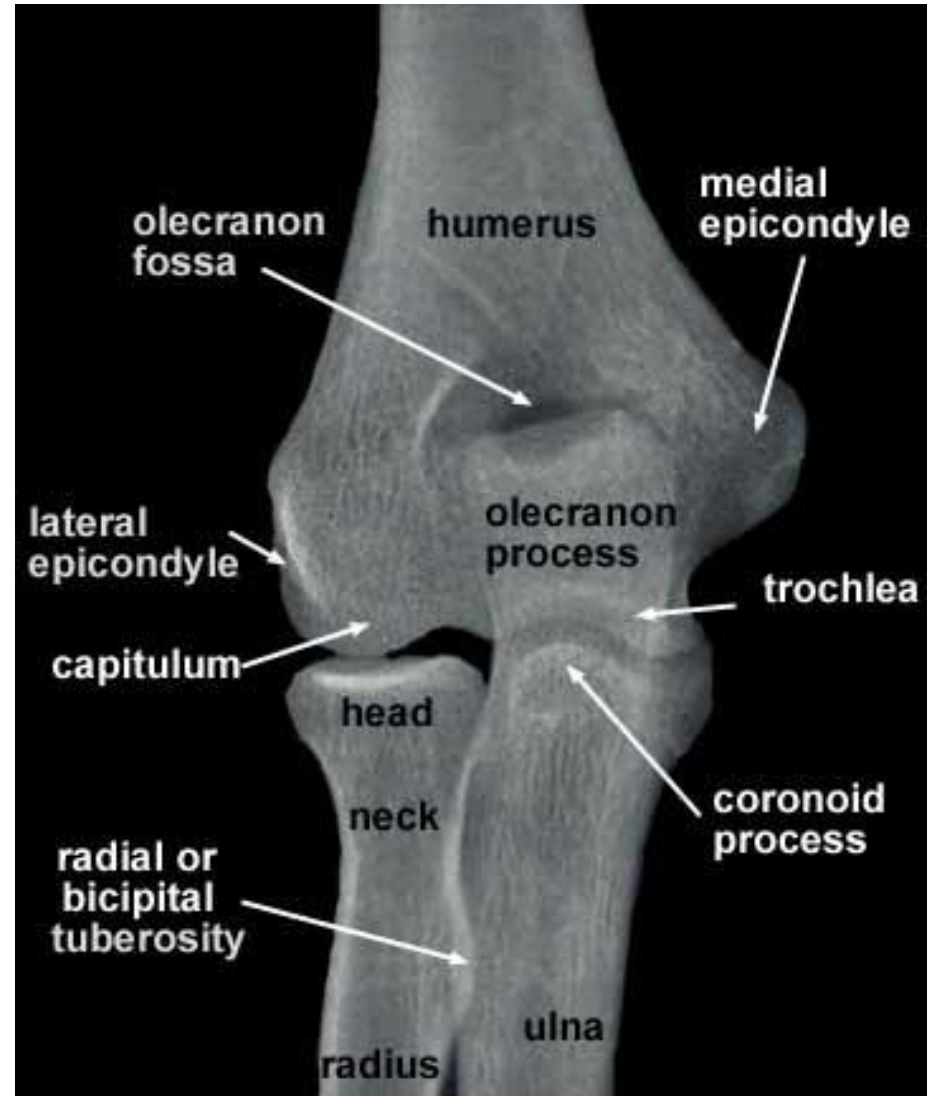
Identify the:

## **humerus**

- medial epicondyle
- lateral epicondyle
- olecranon fossa
- trochlea
- capitulum

## **radius**

- radial (or bicipital) tuberosity
- head
- neck
- ulna
- olecranon process
- coronoid process



# X Ray of Hand

- radius (1)
- ulna (2)
  - styloid process (SP)
- Proximal row of carpals from lateral to medial
- scaphoid (3)
- lunate (4)
- triquetral (5)
- pisiform (6)
- Distal row of carpals from lateral to medial
- trapezium (7)
- trapezoid (8)
- capitate (9)
- hamate (10)
  - hook (11)
- metacarpals I, II, III, IV, V from lateral to medial
- proximal phalanx (PP)
- middle phalanx (MP)
- distal phalanx (DP)
- Every now and then you will see an extra bone and these are called sesamoid bones (S)



# X Ray of Hand

- radius (1)
- ulna (2)
  - styloid process (SP)
- Proximal row of carpals from lateral to medial
  - scaphoid (3)
- lunate (4)
- triquetrum (5)
- pisiform (6)
- Distal row of carpals from lateral to medial
  - trapezium (7)
  - trapezoid (8)
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    - hook (11)
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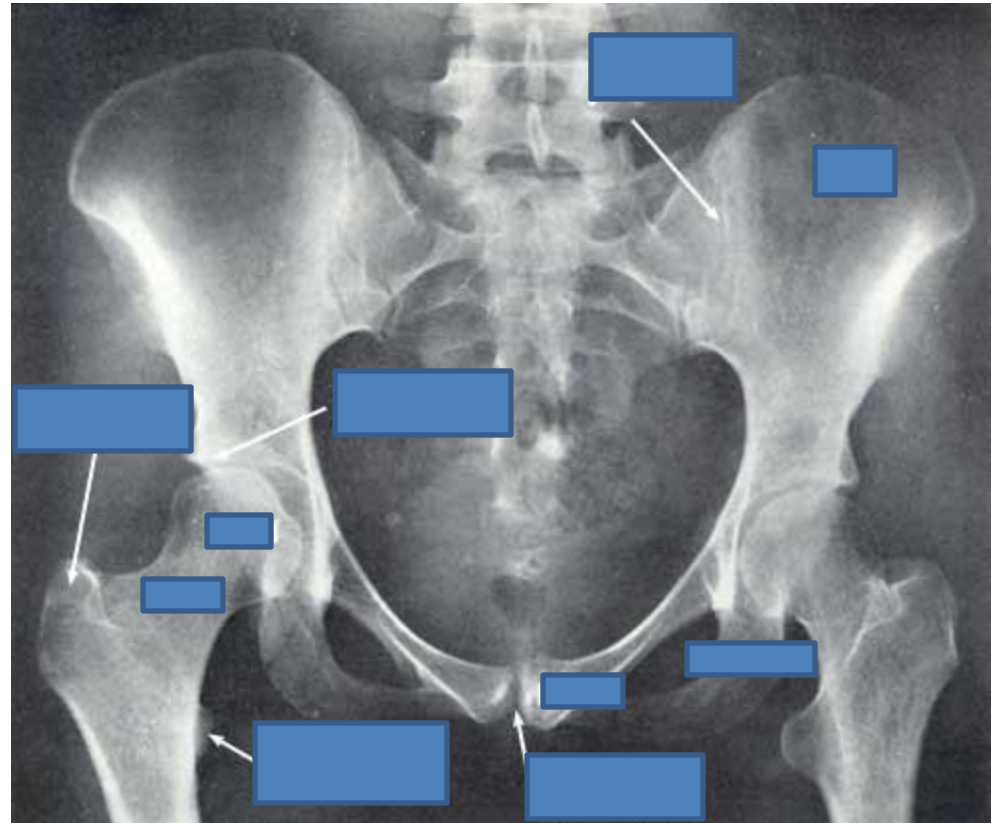




# Hip Radiograph

Identify the following on a radiograph of the hip region:

- ilium
- ischium
- pubis
- pubic symphysis
- sacroiliac joint
- acetabular lip
- head of femur
- neck of femur
- greater trochanter
- lesser trochanter



# Hip Radiograph

Identify the following on a radiograph of the hip region:

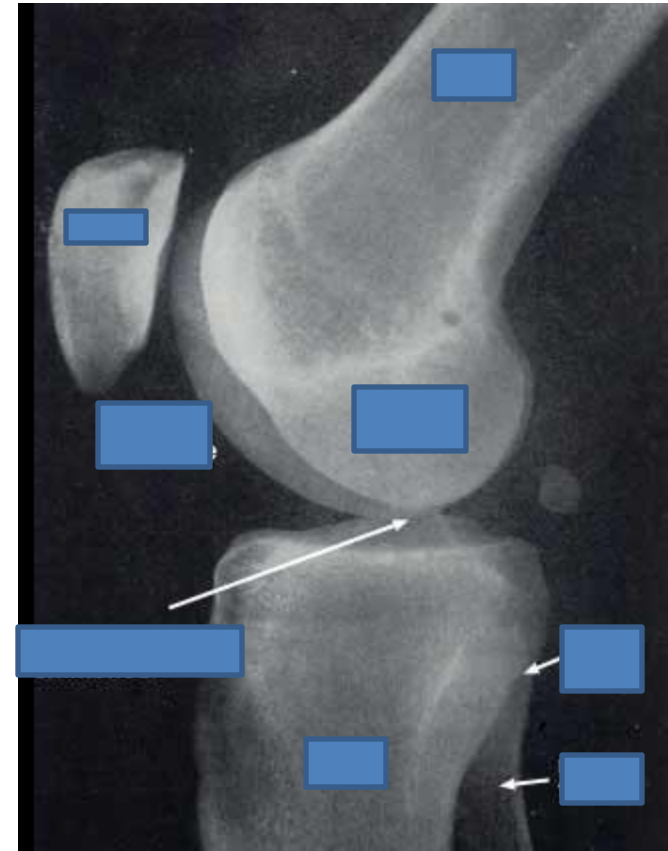
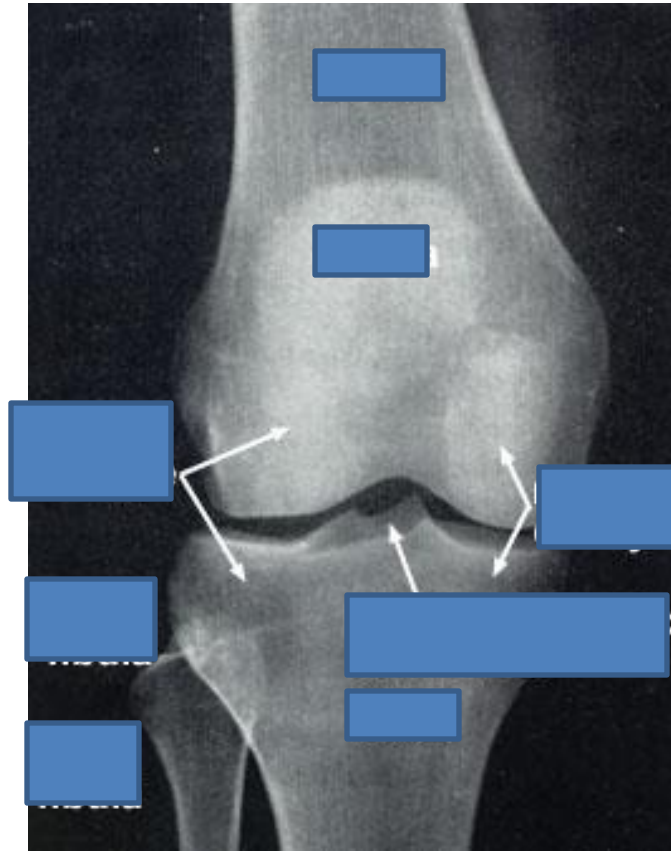
- ilium
- ischium
- pubis
- pubic symphysis
- sacroiliac joint
- acetabular lip
- head of femur
- neck of femur
- greater trochanter
- lesser trochanter



# Radiographs of Knee

Examine the radiograph of the knee in a couple of views and identify the:

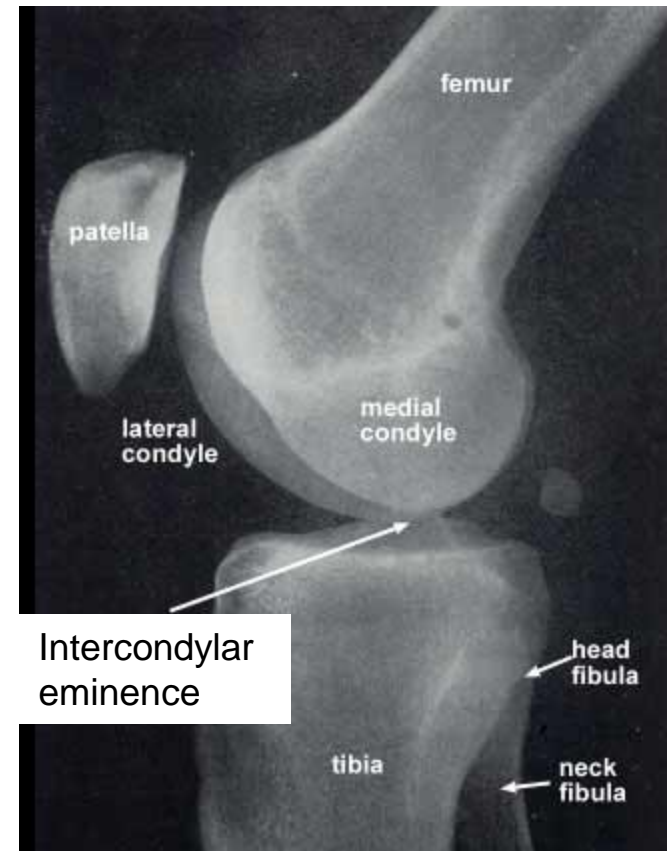
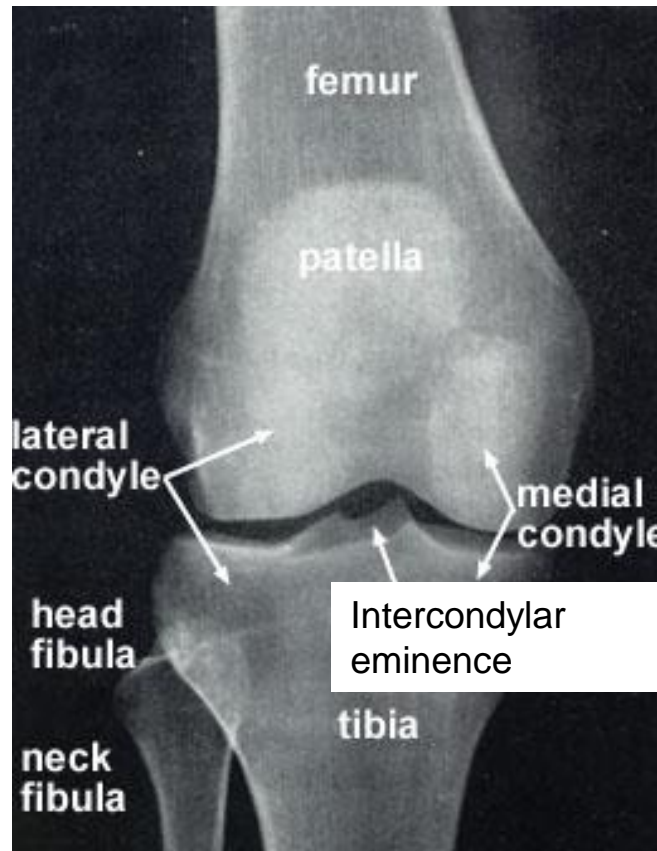
- Femur
- medial condyle
- lateral condyle
- patella
- tibia
- medial condyle
- lateral condyle
- intercondylar eminence
- head of fibula
- neck of fibula



# Radiographs of Knee

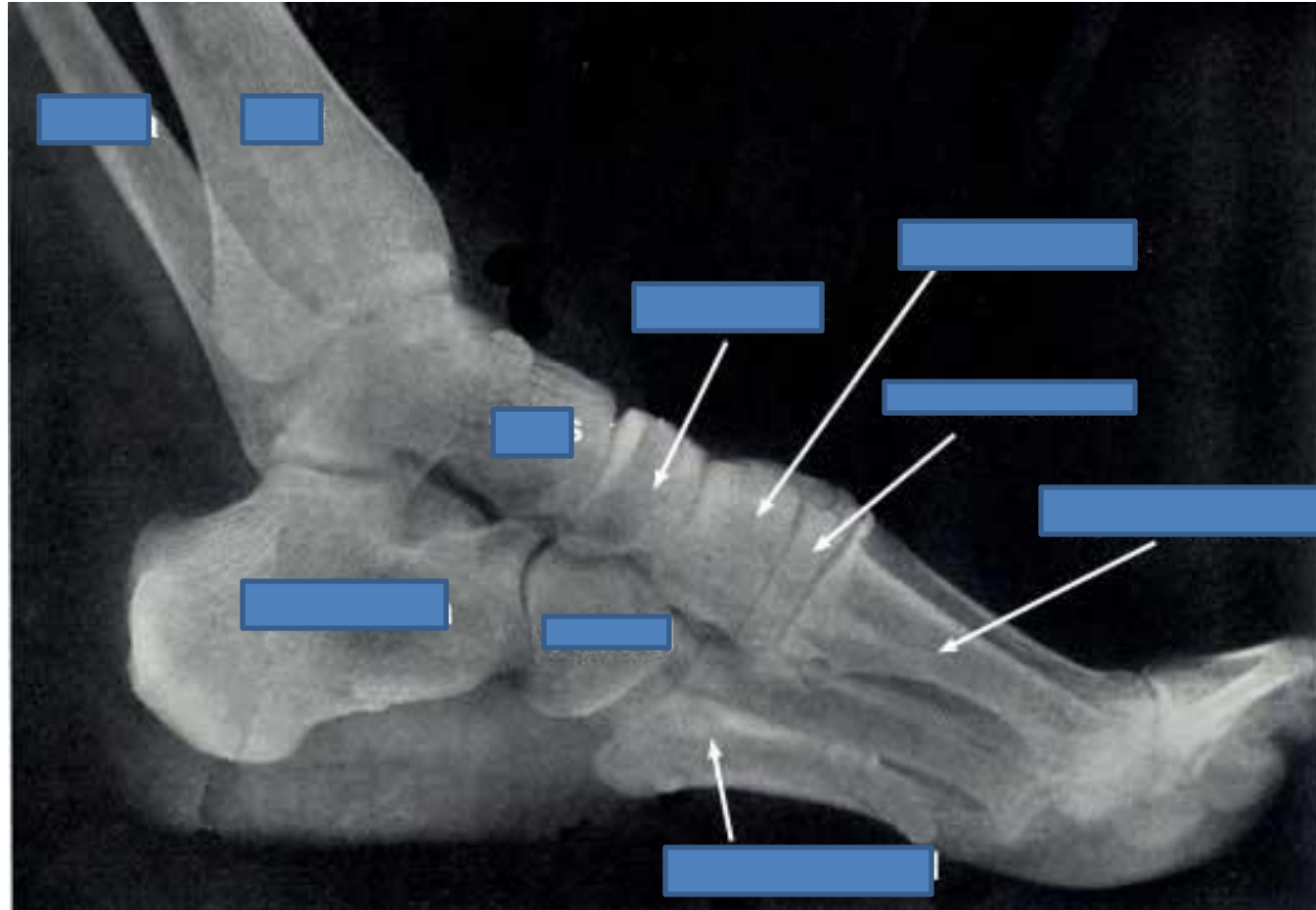
Examine the radiograph of the knee in a couple of views and identify the:

- femur
- medial condyle
- lateral condyle
- patella
- tibia
- medial condyle
- lateral condyle
- intercondylar eminence
- head of fibula
- neck of fibula



# Radiograph of the Foot

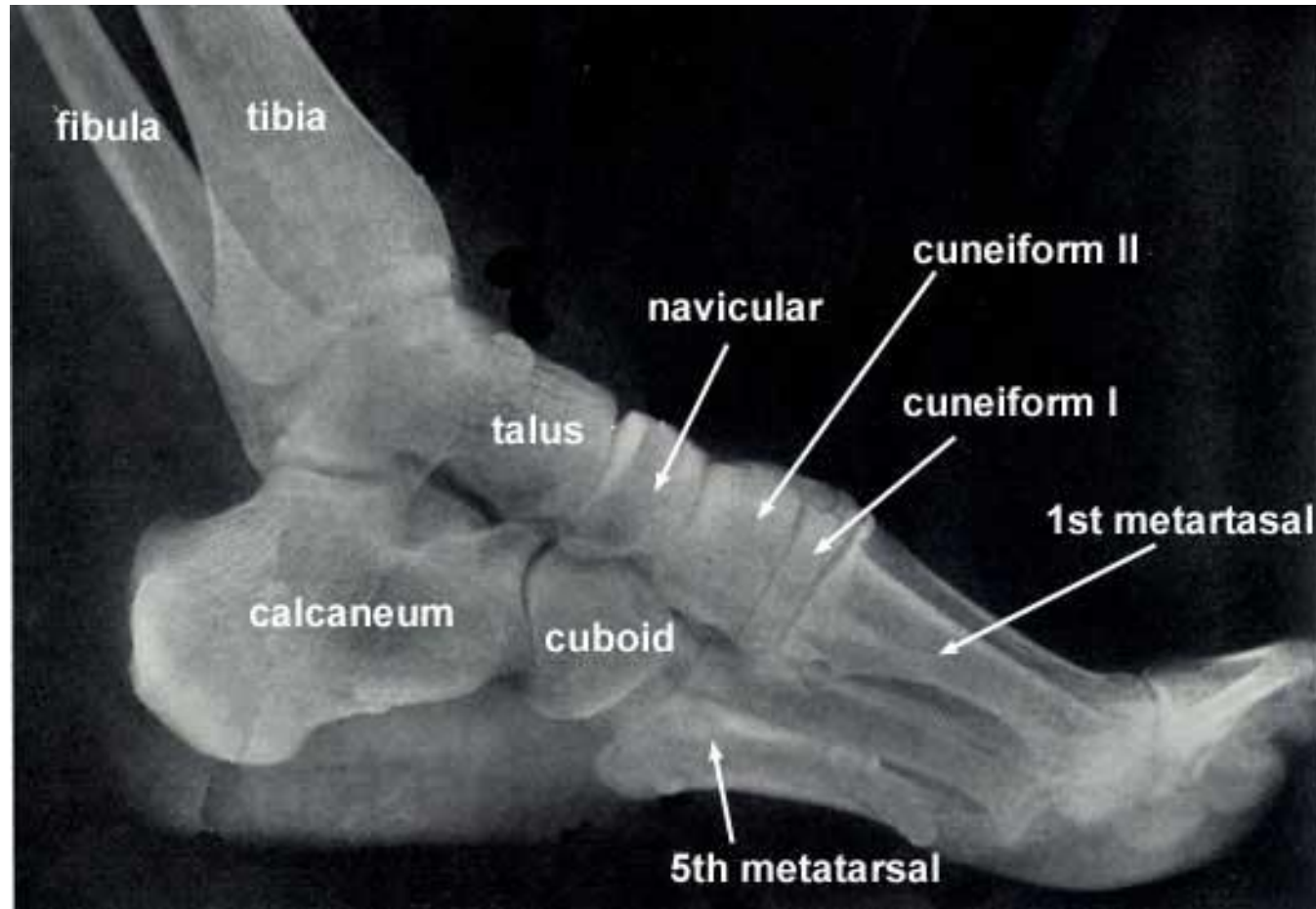
- Examine a medial view of the foot and identify the:
- Tibia
- fibula
- talus
- calcaneus
- cuboid
- navicular
- cuneiforms
- metatarsals





# Radiograph of the Foot

- Examine a medial view of the foot and identify the:
- Tibia
- fibula
- talus
- calcaneus
- cuboid
- navicular
- cuneiforms
- metatarsals



# Radiograph of the Foot

- From a dorsal view, identify the:
- Tibia
- calcaneum
- talus
- cuboid
- navicular
- cuneiforms
- sesamoid bones
- metatarsals
- phalanges



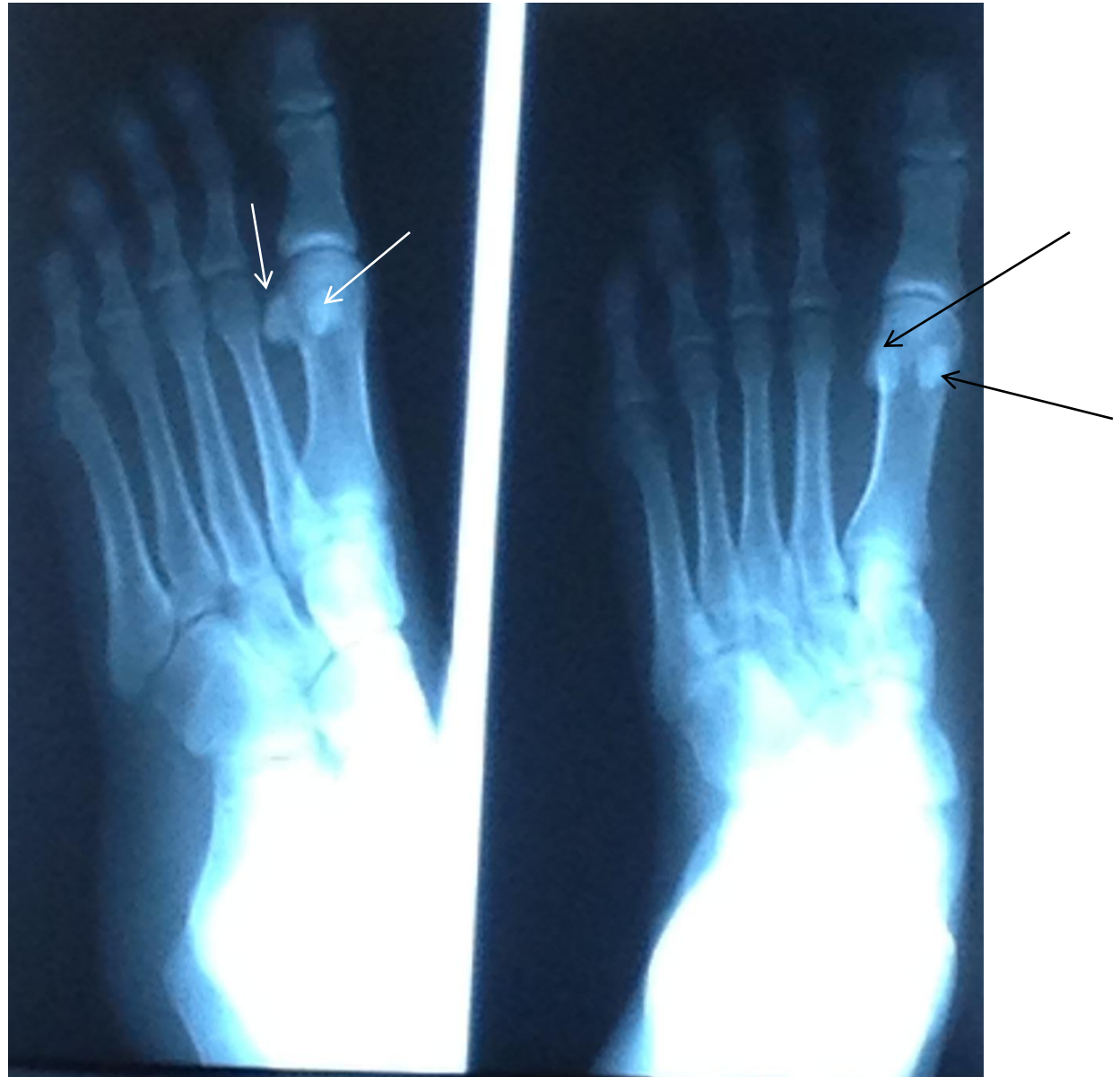
# Radiograph of the Foot

- From a dorsal view, identify the:
- Tibia
- calcaneum
- talus
- cuboid
- navicular
- cuneiforms
- sesamoid bones
- metatarsals
- phalanges



# Radiograph of the Foot

Name the structures indicated by the arrows



# Radiograph of the Foot

Name the structures indicated by the arrows

Sesamoid Bones

