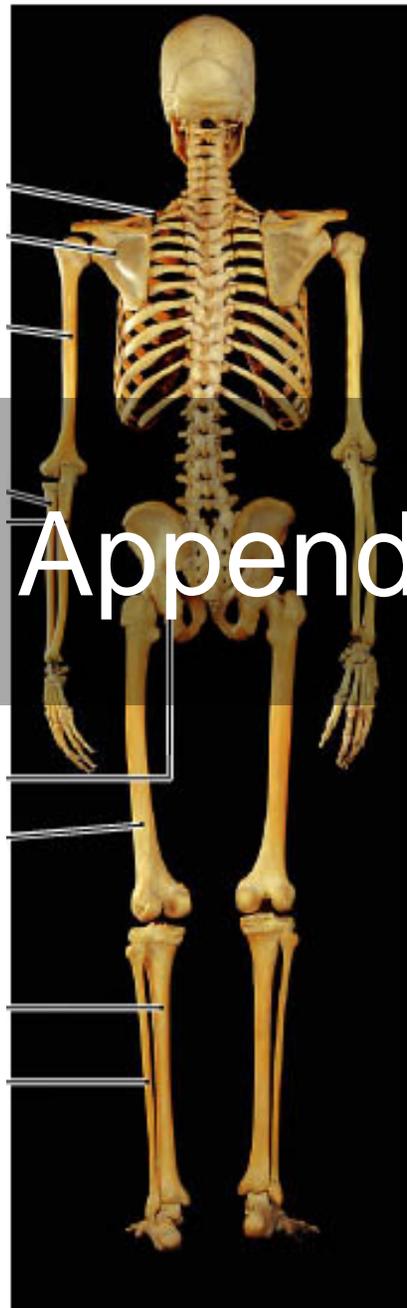


The Appendicular Skeleton

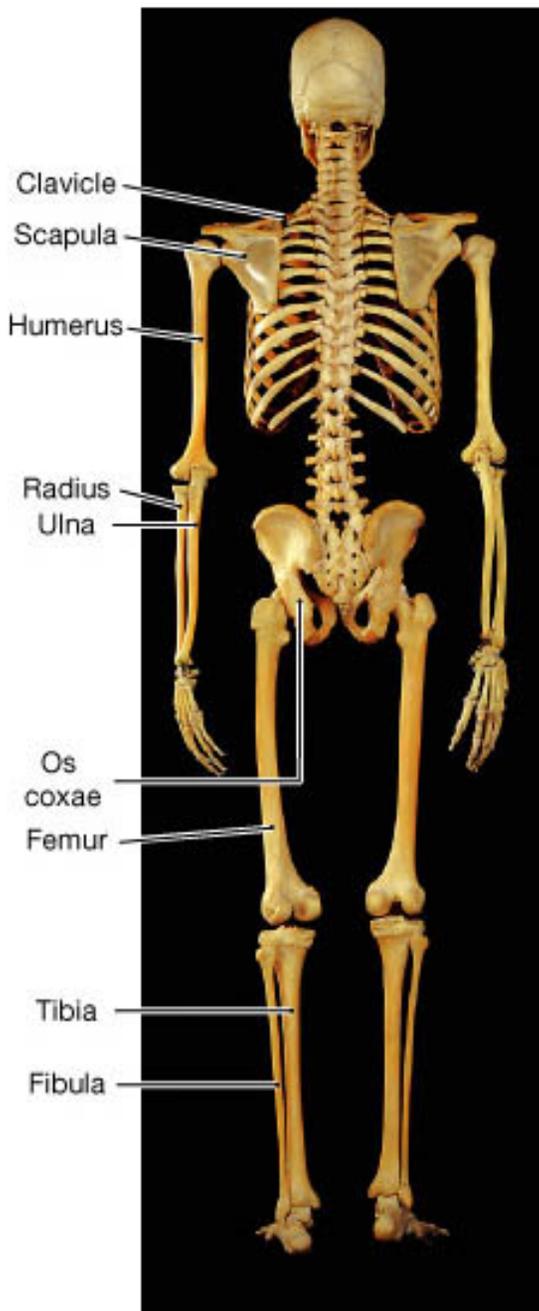


(a)



(b)

- Includes bones of the:
 - Limbs
 - Girdles, attach the limbs to the axial skeleton
 - Ligaments



(a)



(b)

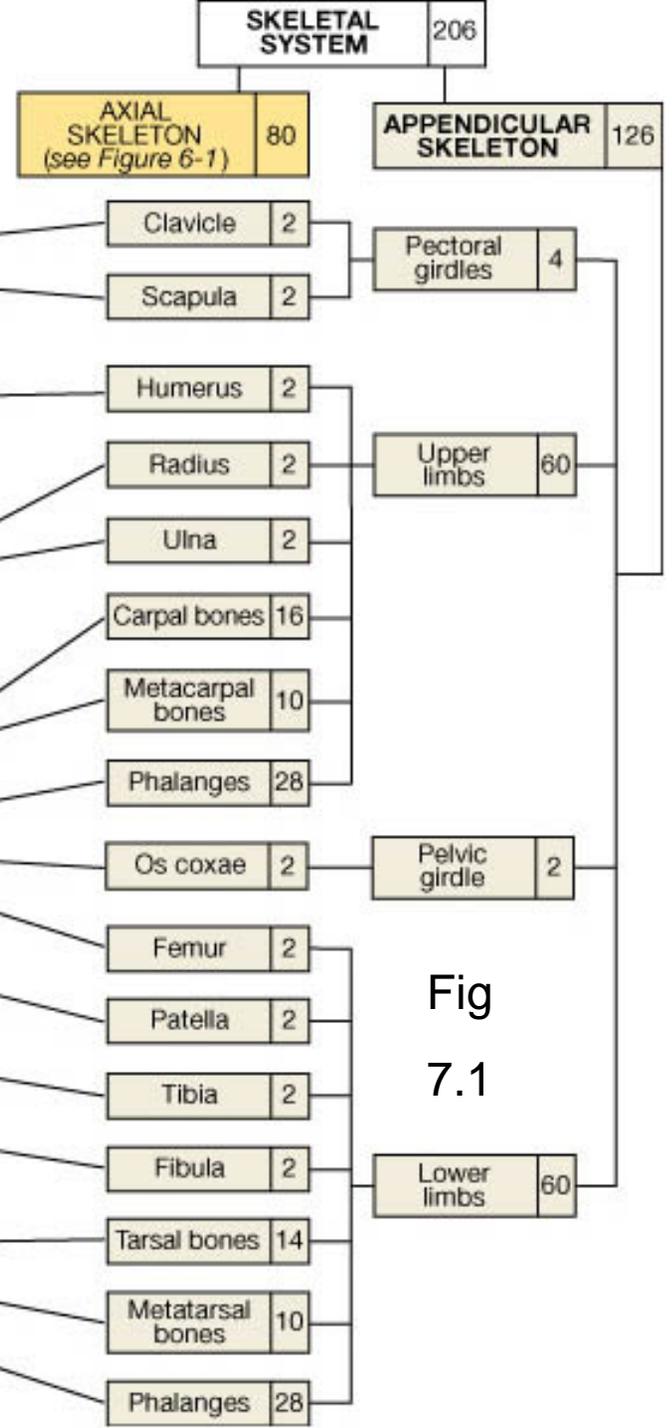


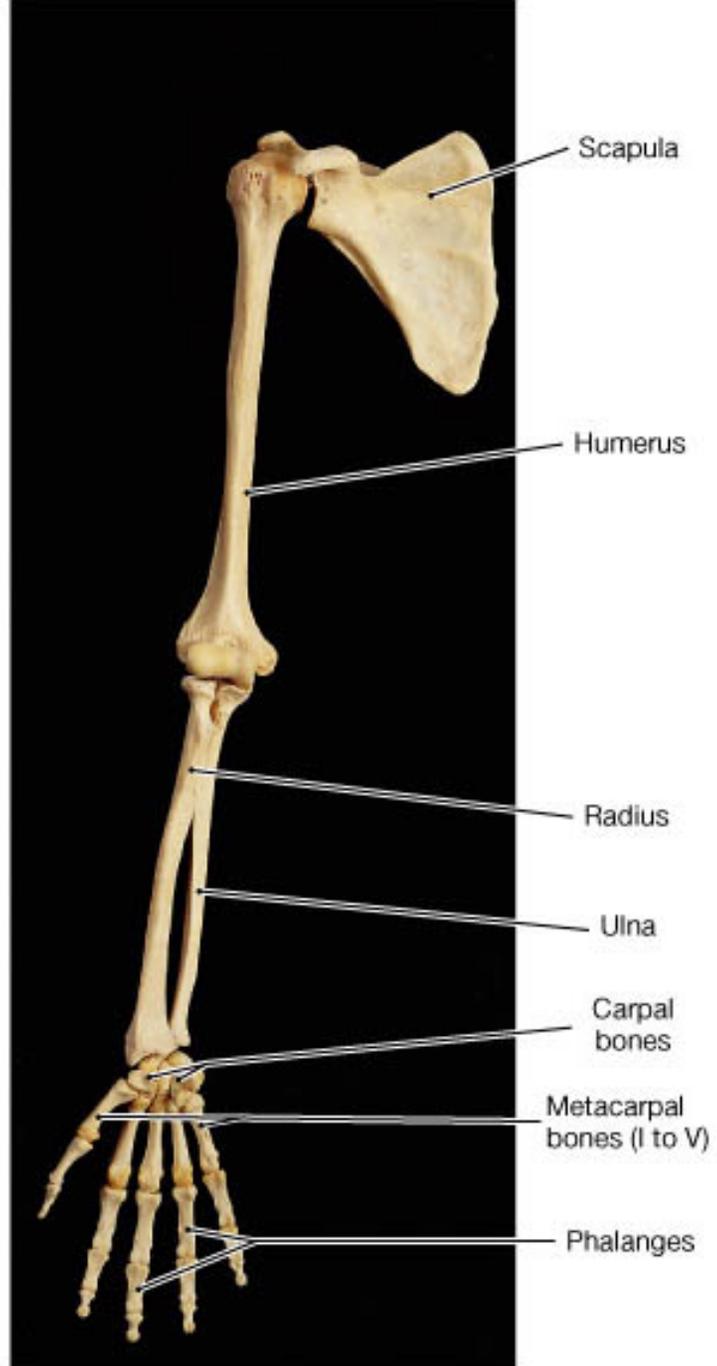
Fig
7.1

The pectoral girdle & upper limbs

- Bones of the pectoral girdle include:
 - Scapula & the Clavicle
- The sternoclavicular joint is the only direct connection to axial skeleton
- Muscles and tendons loosely hold the pectoral girdle in place

Glenohumeral joint

- The loose glenohumeral (scapula / humerus) joint has a wide range of flexibility but less stability
- The glenohumeral joint is a commonly dislocated joint



(a)

Fig
7.2

The pelvic girdle & lower limbs

- Bones of the pelvic girdle include:
 - Two coxal bones
 - Each coxal bone is made of three bones
 - Ilium, ischium, & pubis
- The symphysis pubis joins the coxal bones on the anterior side
- Pelvis = 2 coxal bones, sacrum, coccyx, symphysis pubis

- The sacroiliac joint connects the sacrum to the coxal bones on the posterior side (strongest joint in the body)

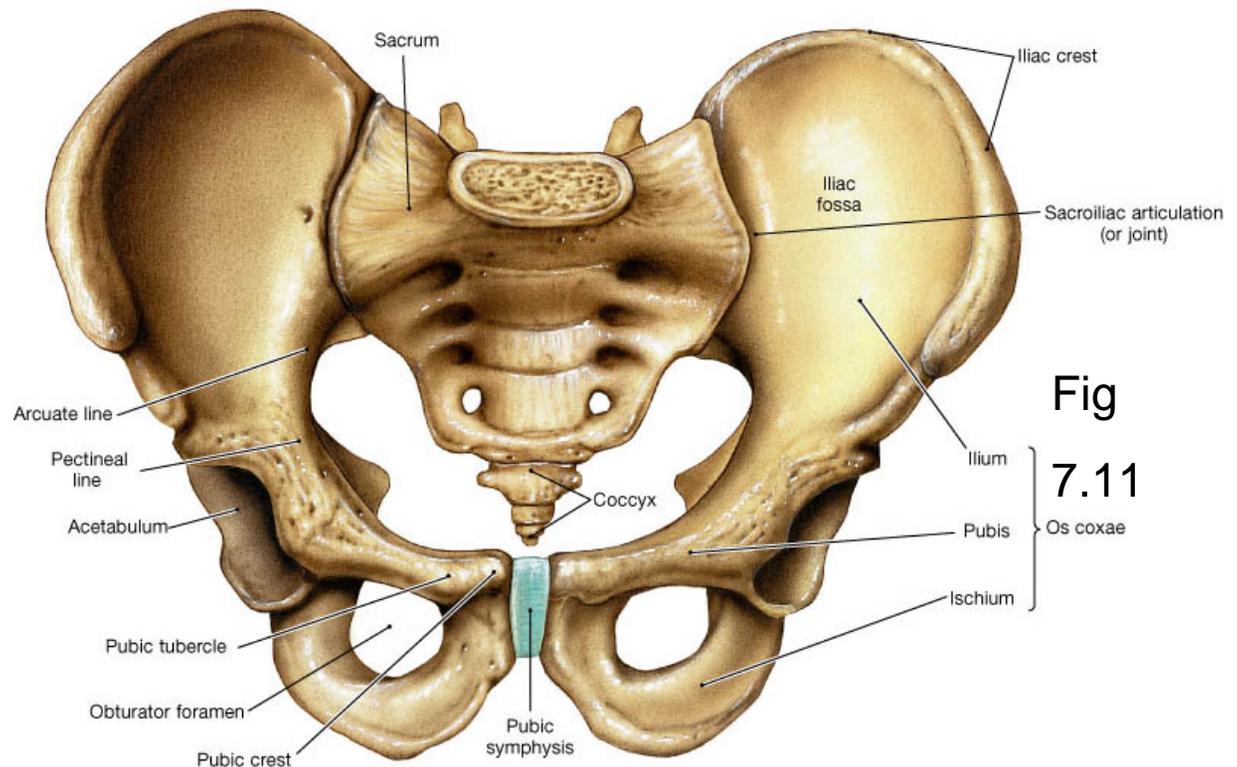
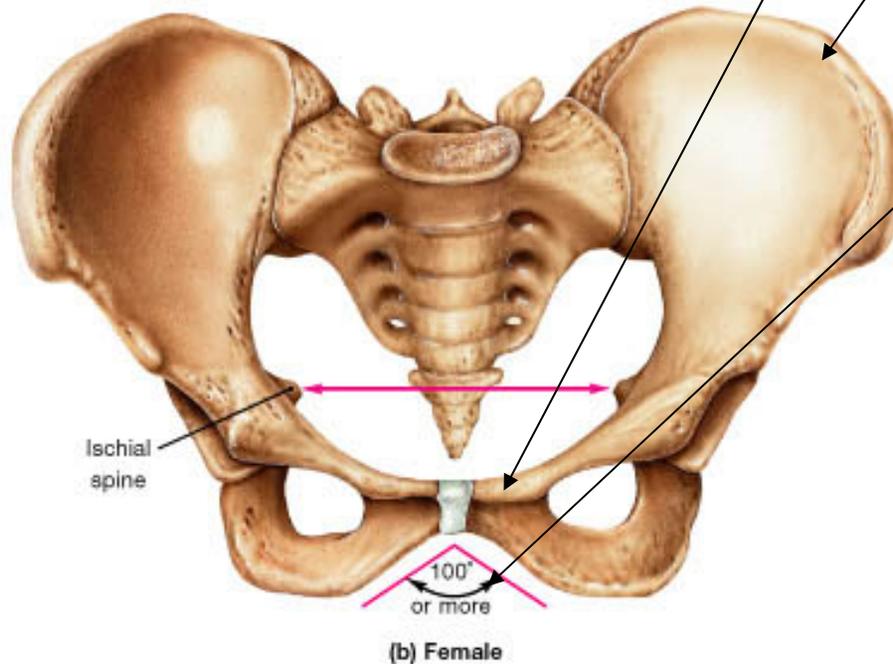
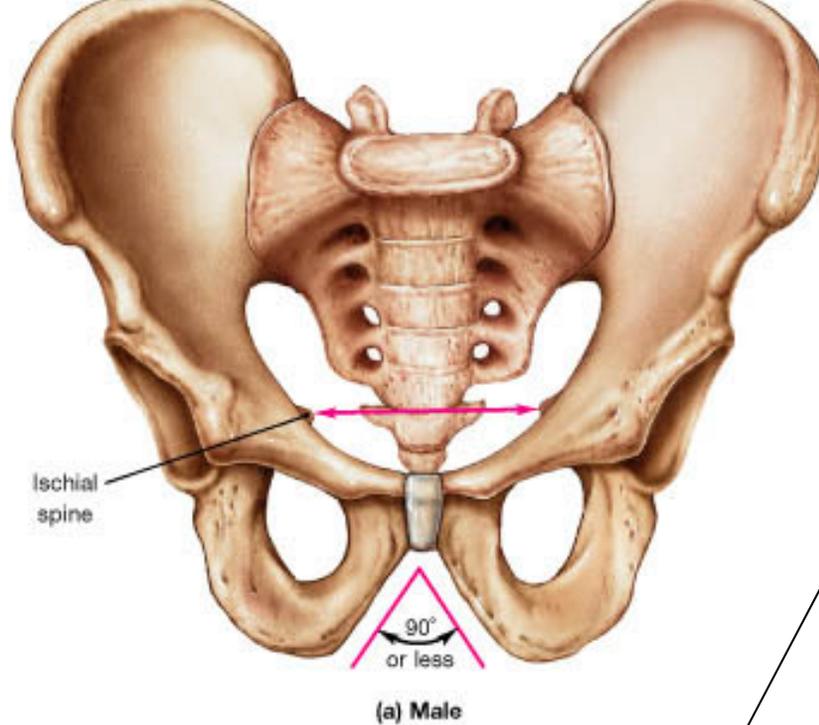


Fig
7.13

The female
pelvis has:

Wider pelvic inlet &
pelvic outlet

Less anterior curve
to the sacrum &
coccyx



Broad low
pubis

Ilia that
project
farther
laterally

Broader
pubic arch

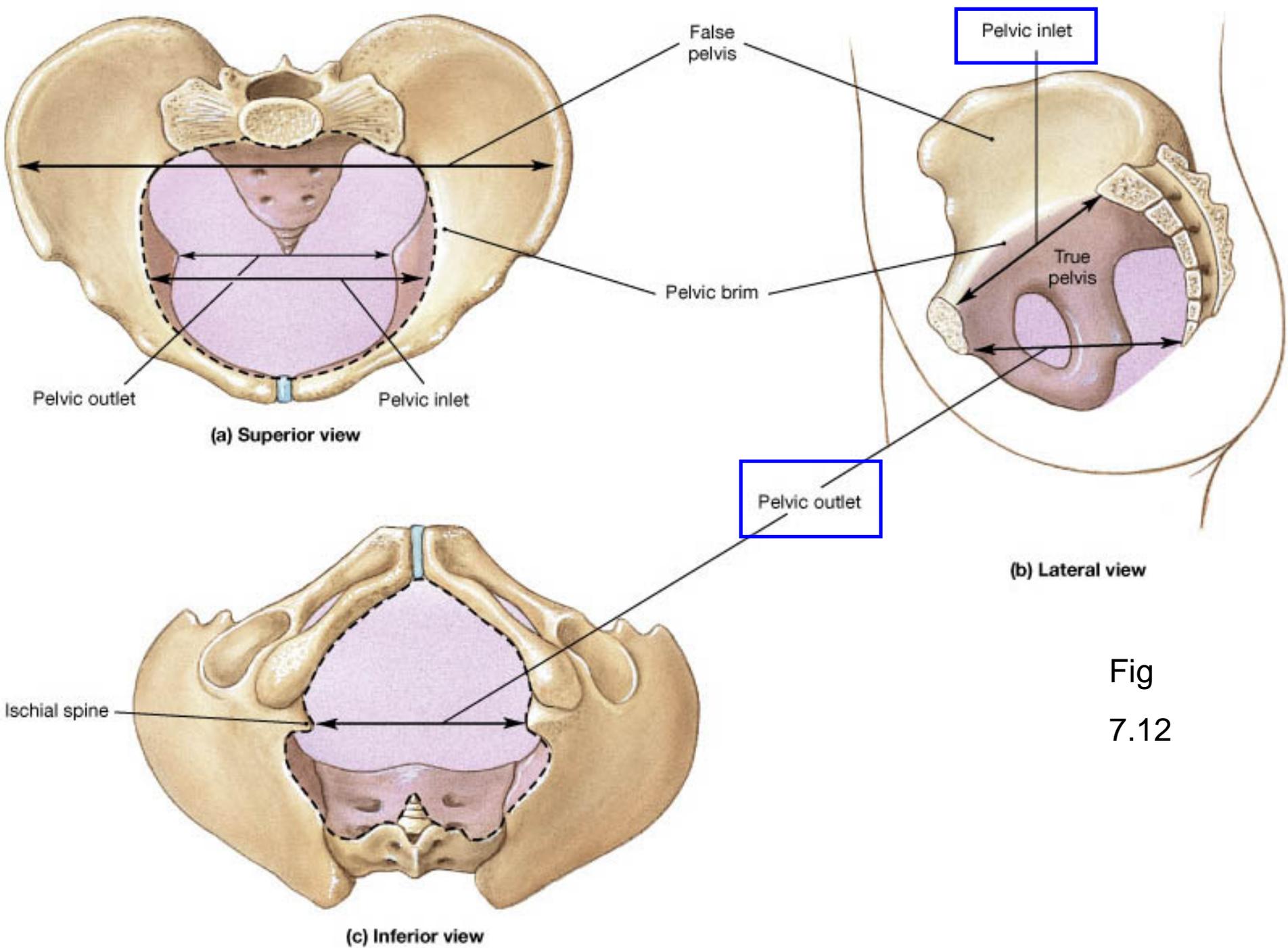


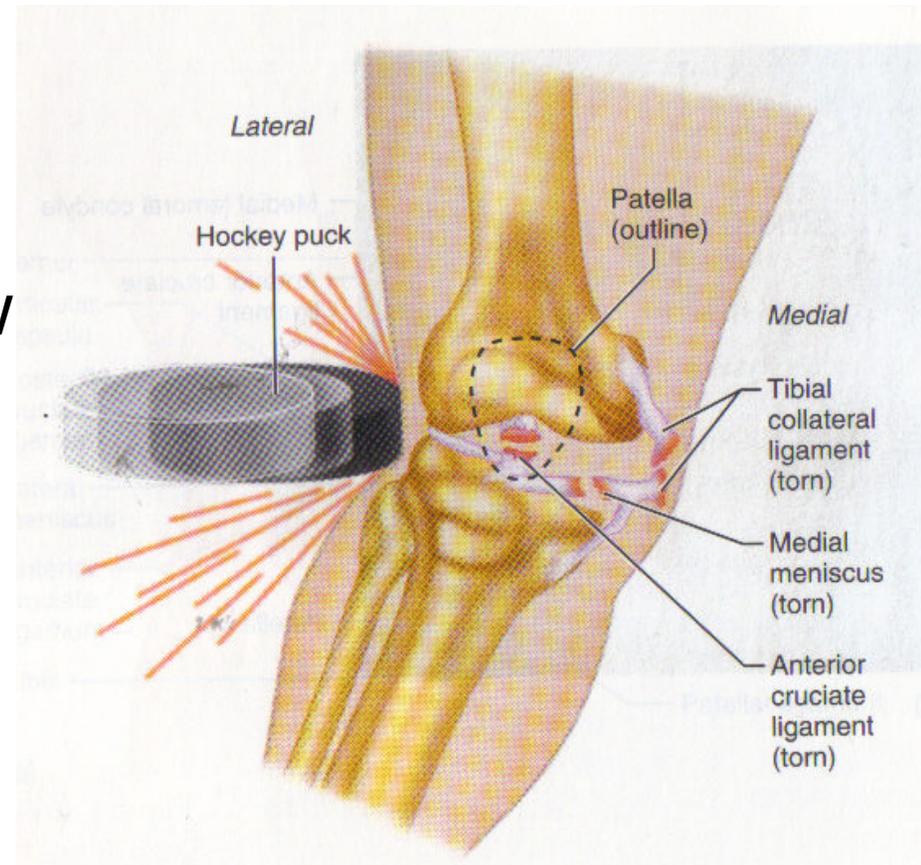
Fig
7.12

Knee injury

- Occurs when foot is planted flat on ground
- Blow on lateral side of the knee hinge joint causes medial side of joint to widen tearing ligaments
- Terrible triad:
 - Medial collateral lig.
 - Medial meniscus
 - Ant. Cruciate lig.

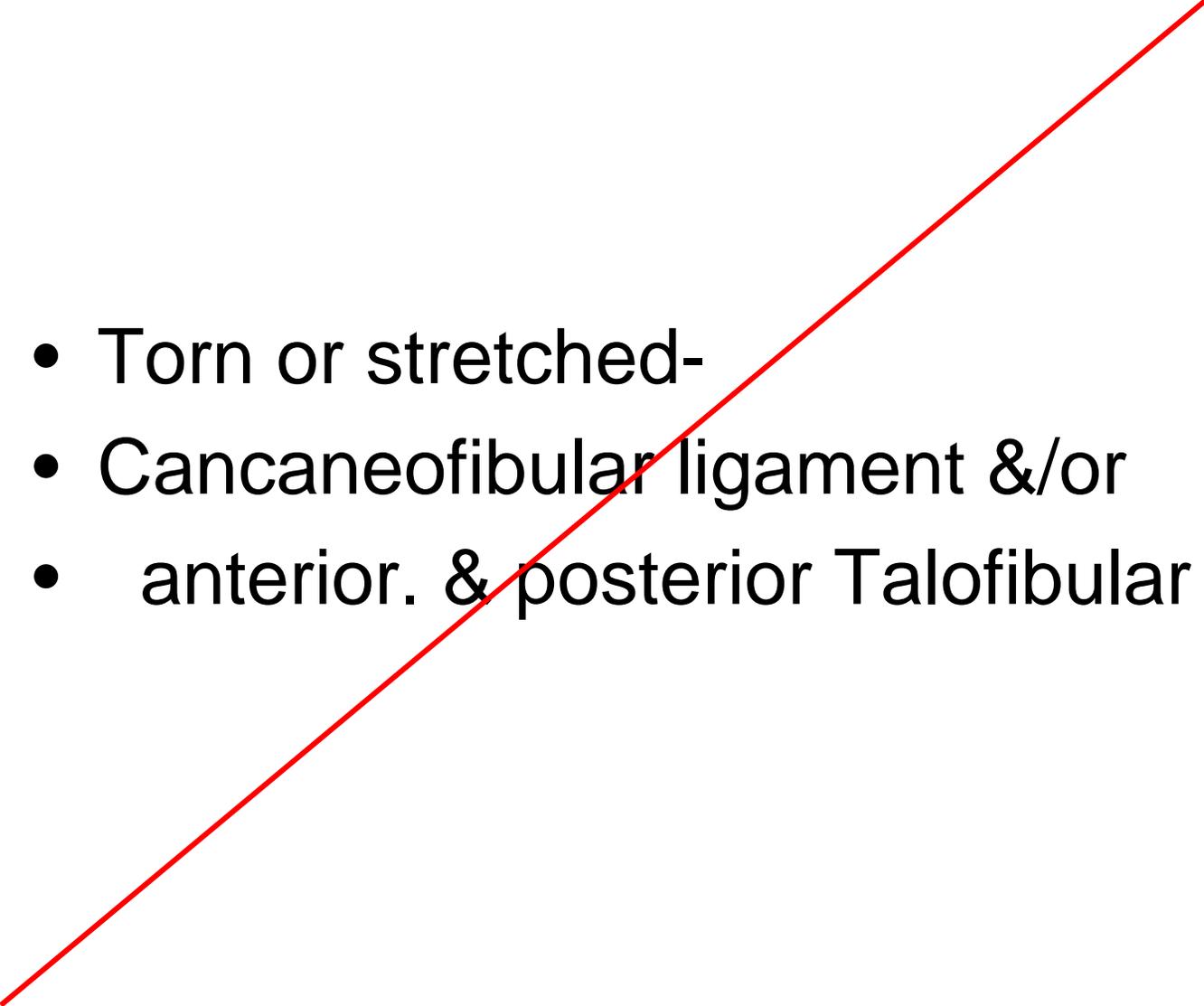


- Ligaments of the knee are mostly avascular ergo slow to heal from injury
- Surgery is need in most cases

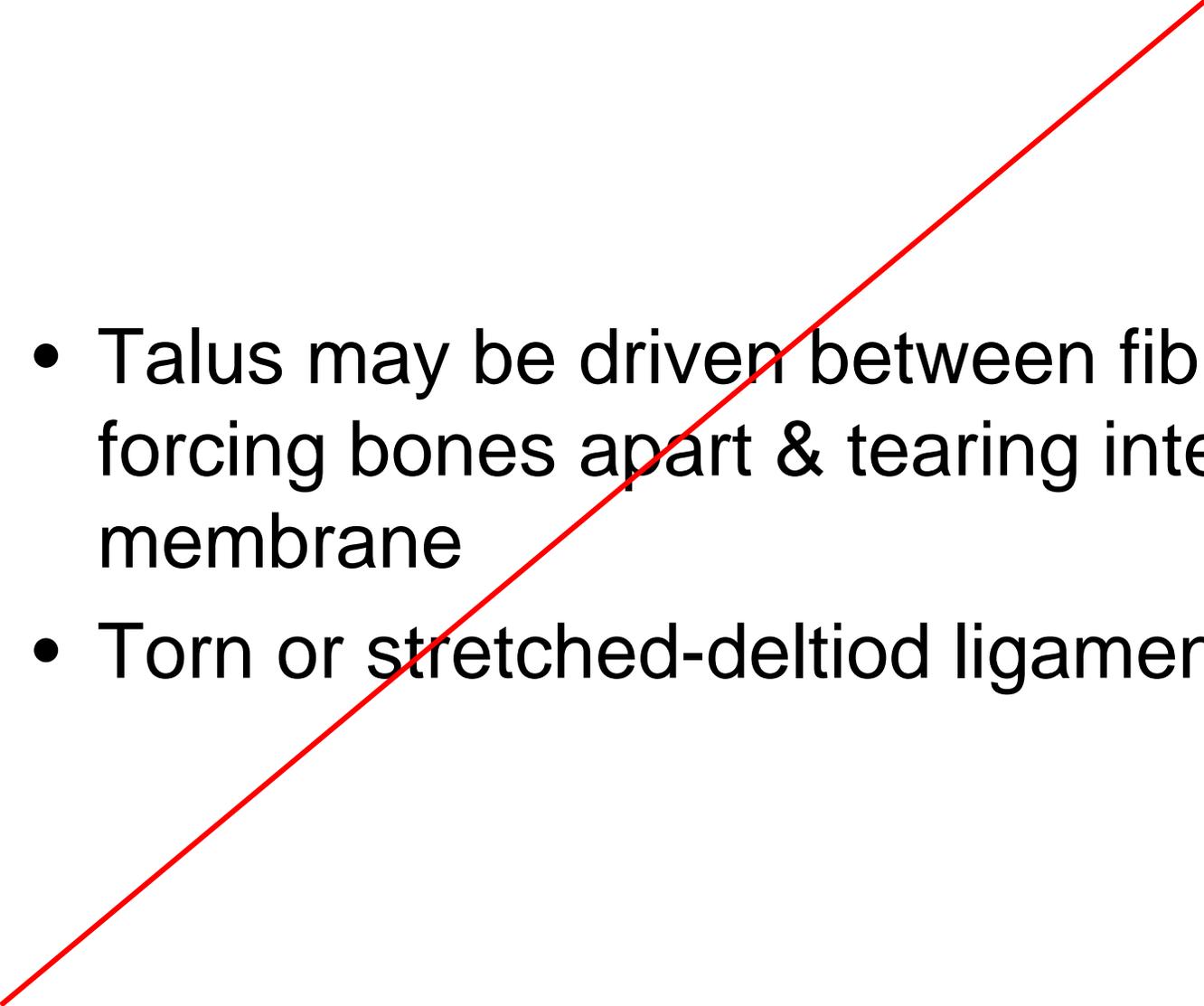


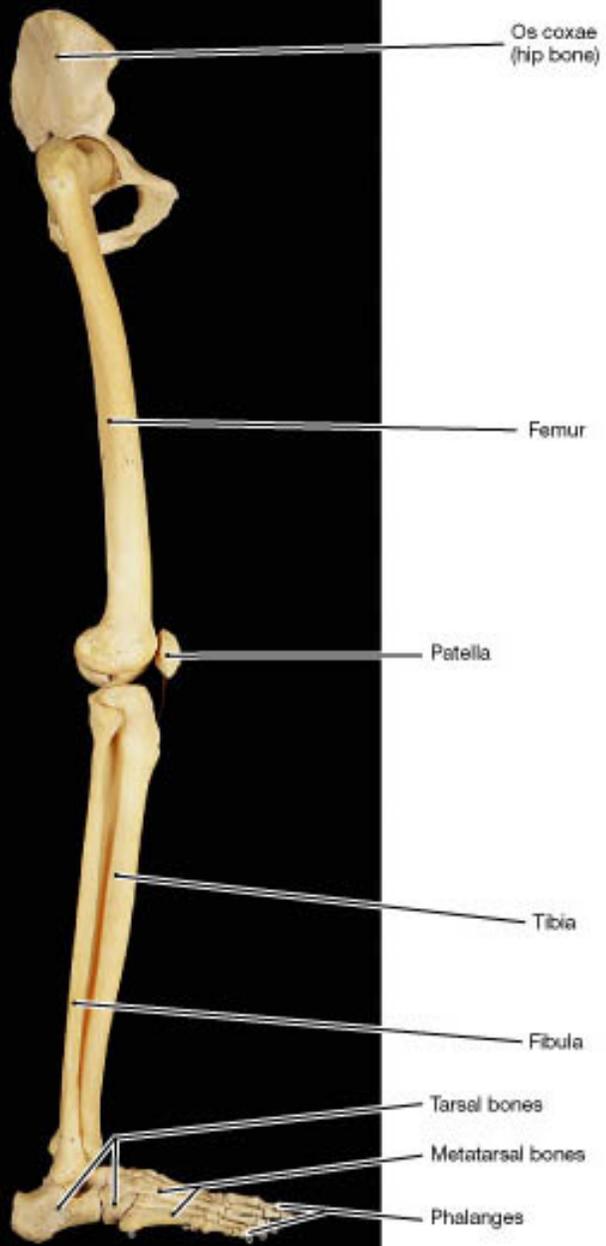
Ankle injury-Inversion-eversion injury

- Inversion injury-
- Forces plantar surface medially
- Talus is shoved into the medial malleolus of tibia
- Talus & calcaneus are forced away from the lateral malleolus of fibula

- 
- Torn or stretched-
 - Calcaneofibular ligament &/or
 - anterior. & posterior Talofibular ligament

- Eversion injury-
- Forces plantar surface laterally
- Talus is shoved into the lateral malleolus of fibula (fracture to lateral malleolus)
- Talus & calcaneus are forced away from the medial malleolus of tibia

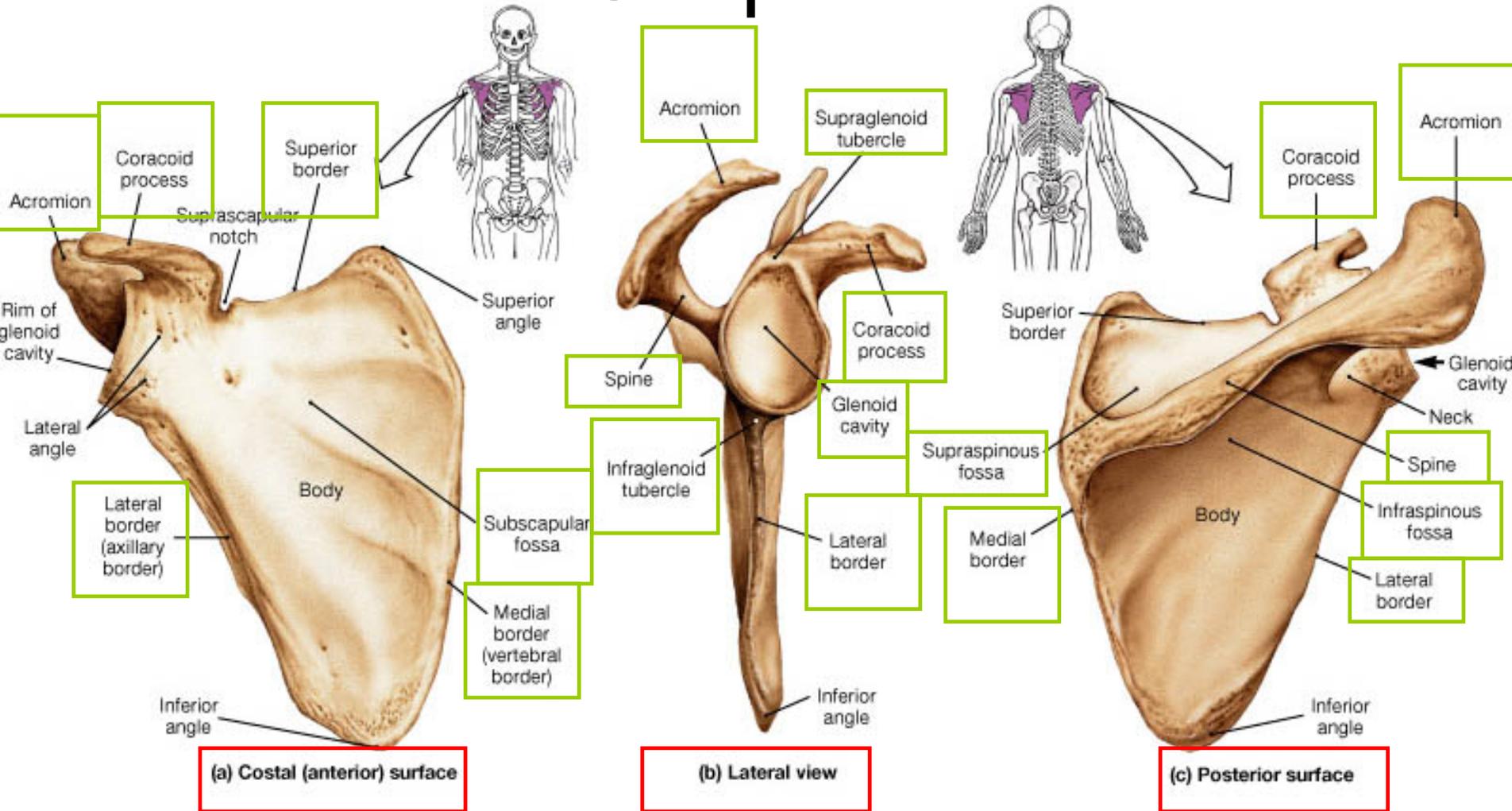
- 
- Talus may be driven between fibula & tibia forcing bones apart & tearing interosseus membrane
 - Torn or stretched-deltoid ligament

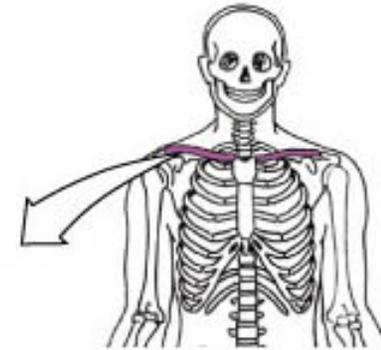
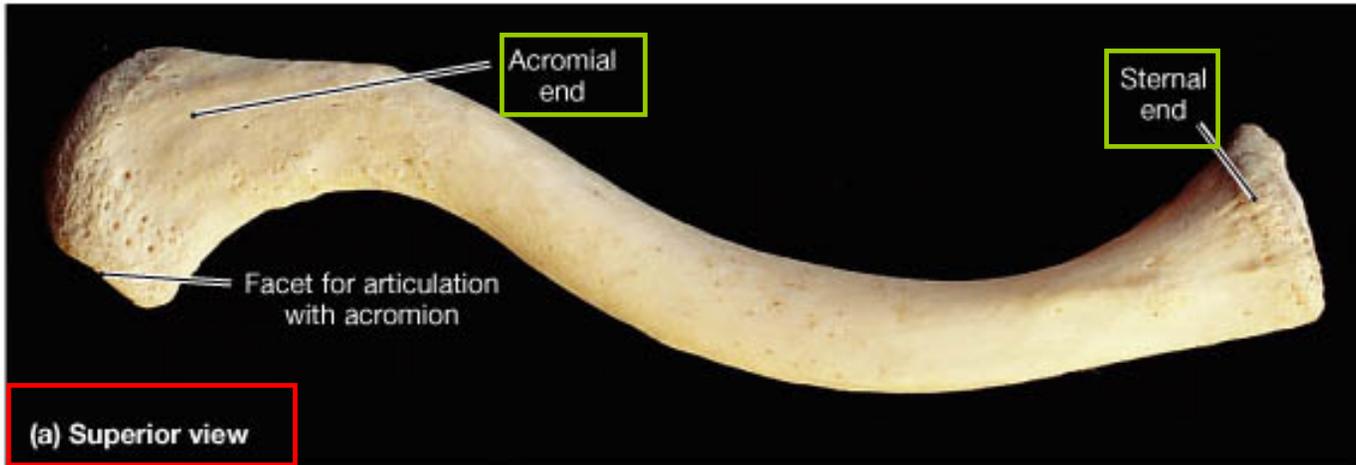


(a) Lateral view

Fig
7.9

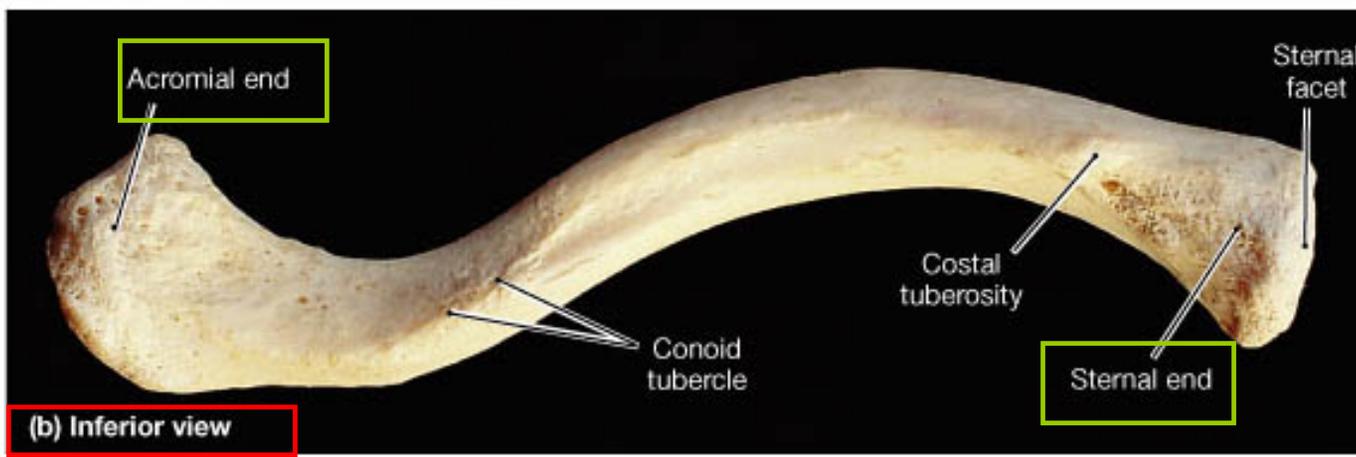
Scapula



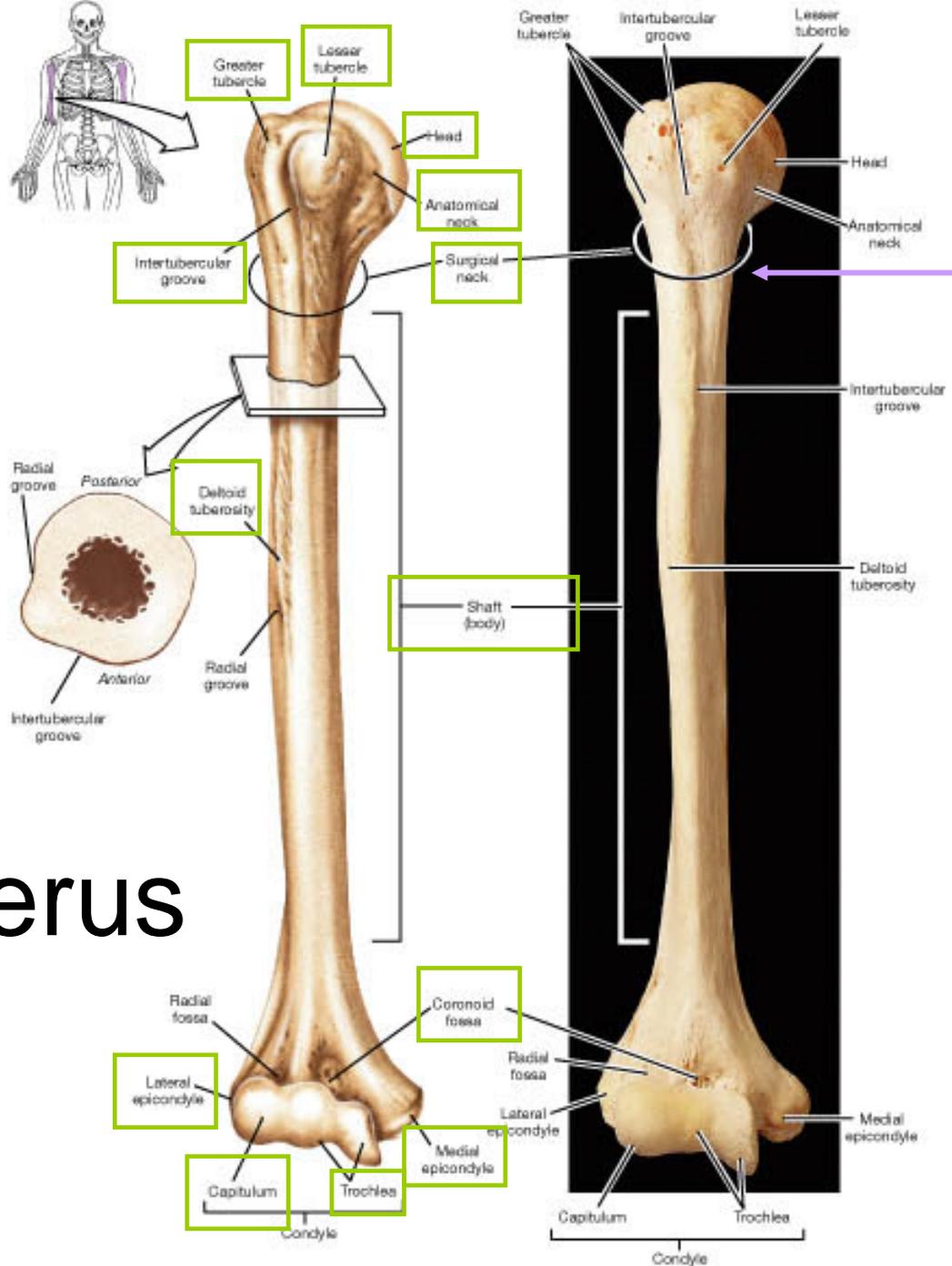


Lateral

Medial



Clavicle

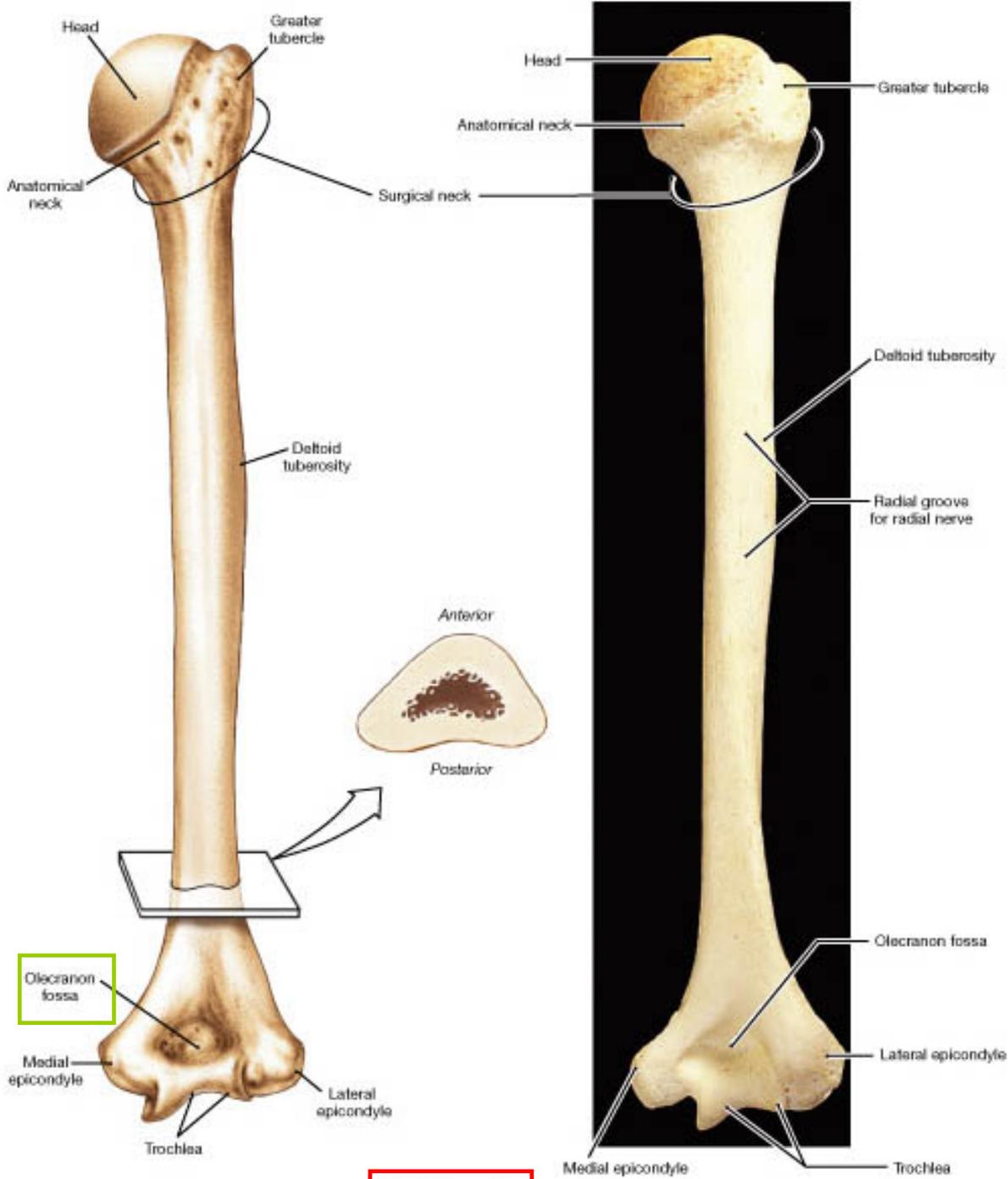


The surgical neck is a common site of fracture on the humerus

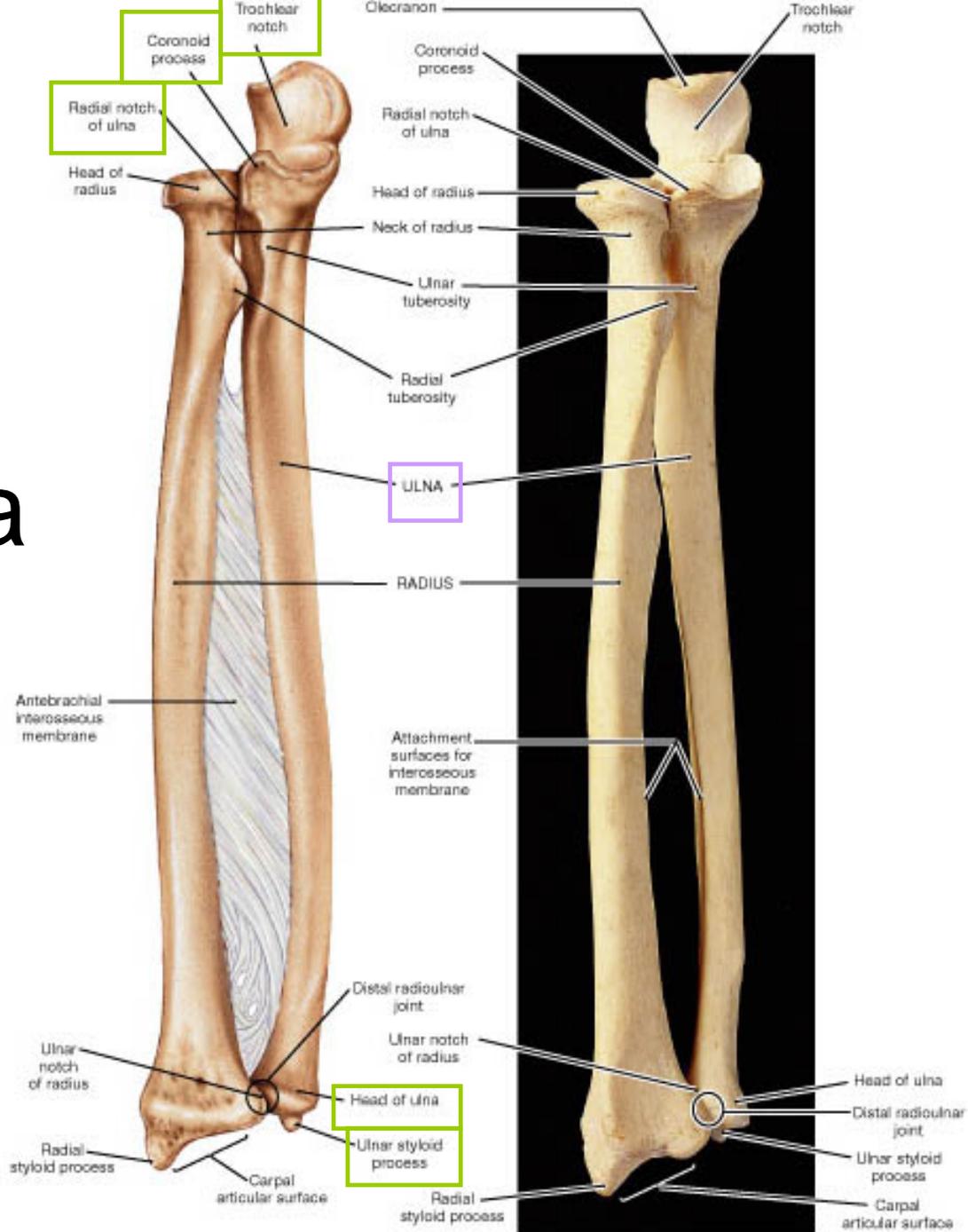
Humerus

(a) Anterior surface

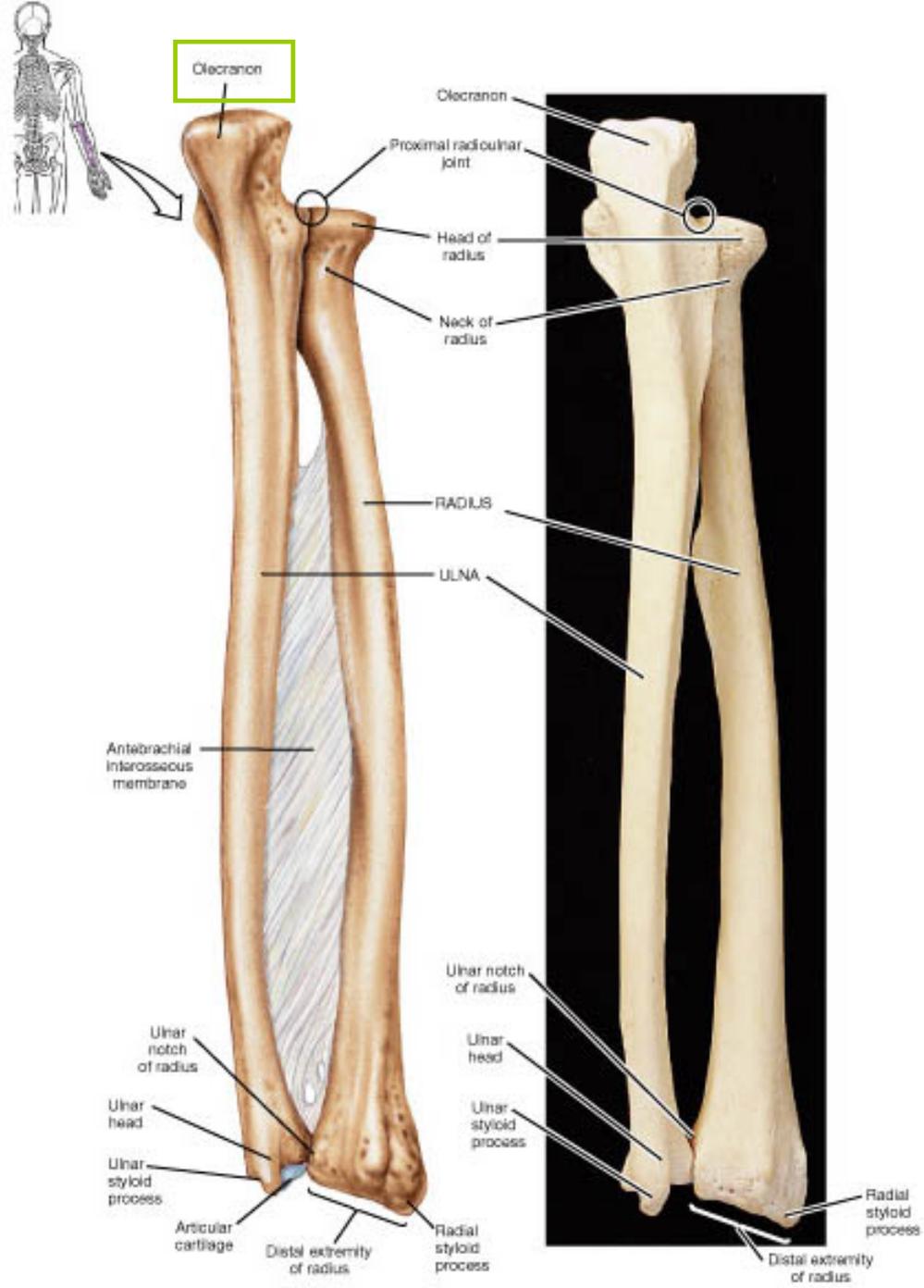
(b) Posterior surface



Ulna

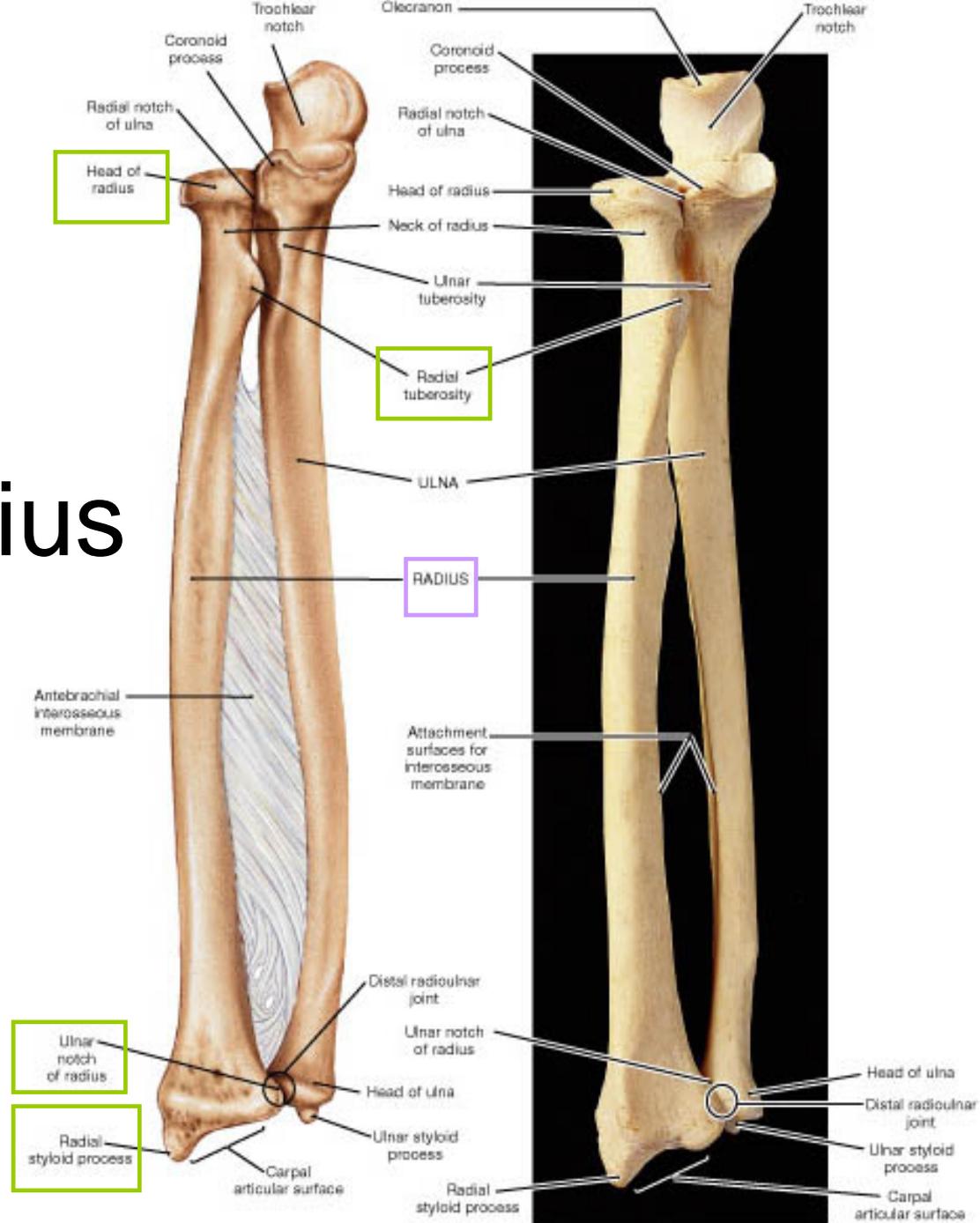


(d) Anterior view

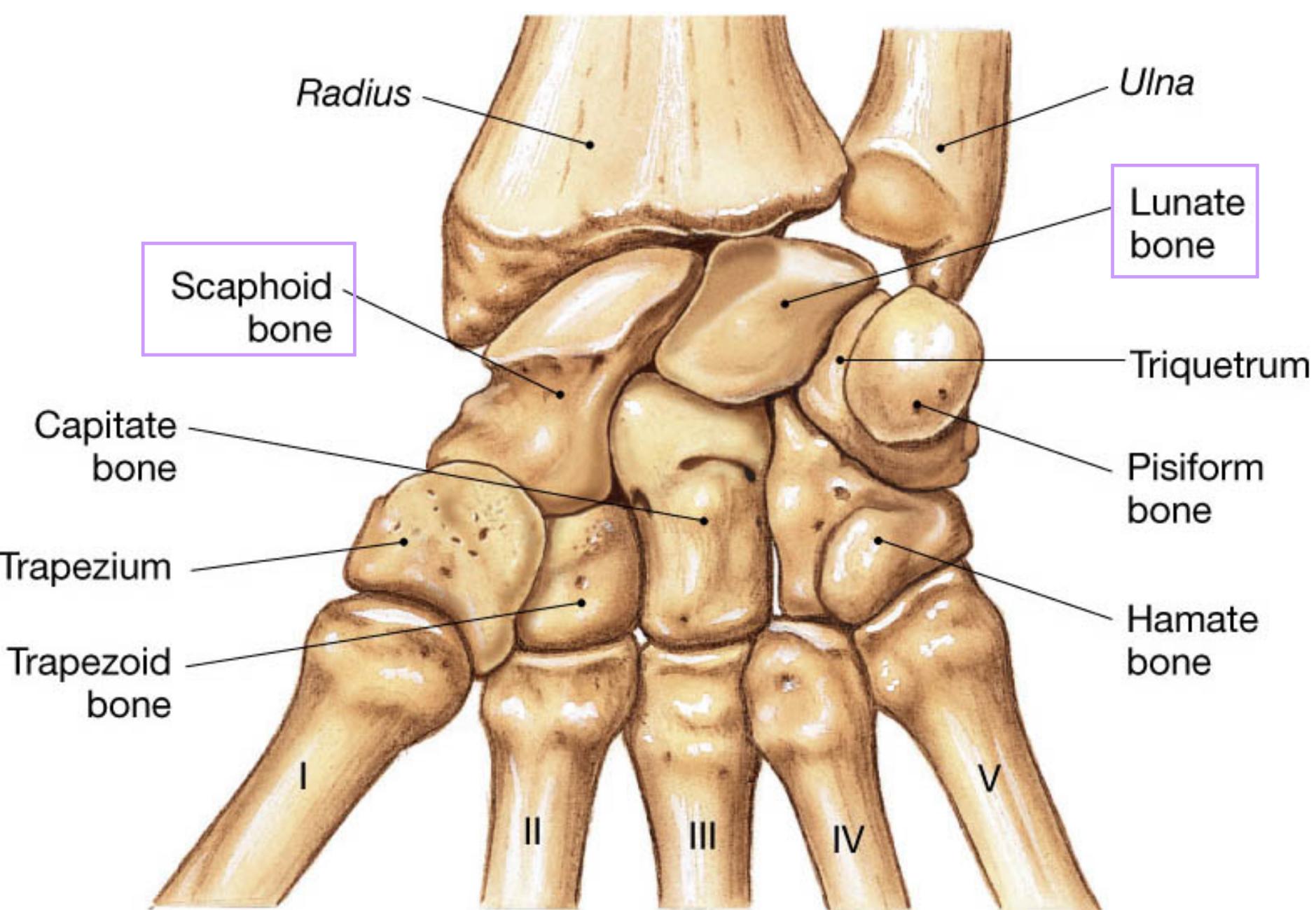


(a) Posterior view

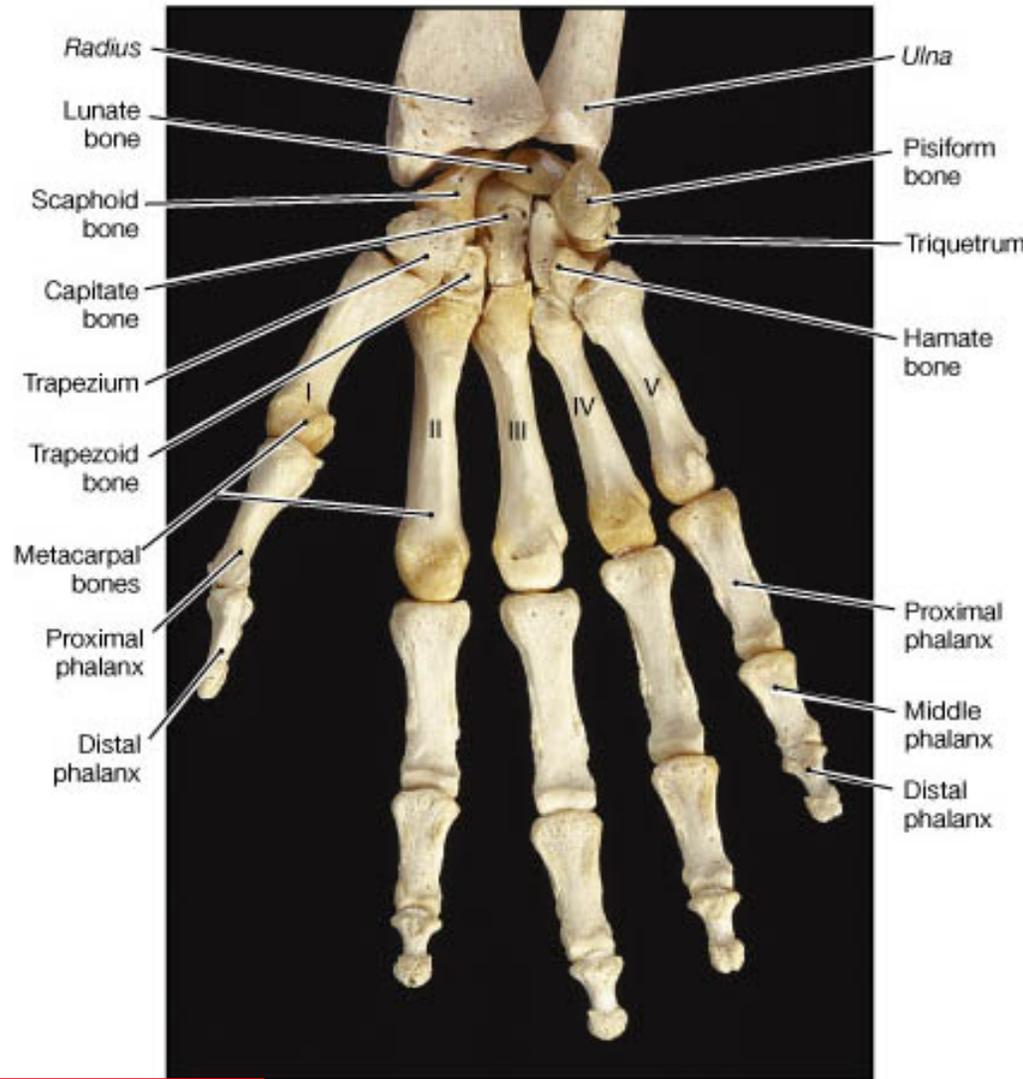
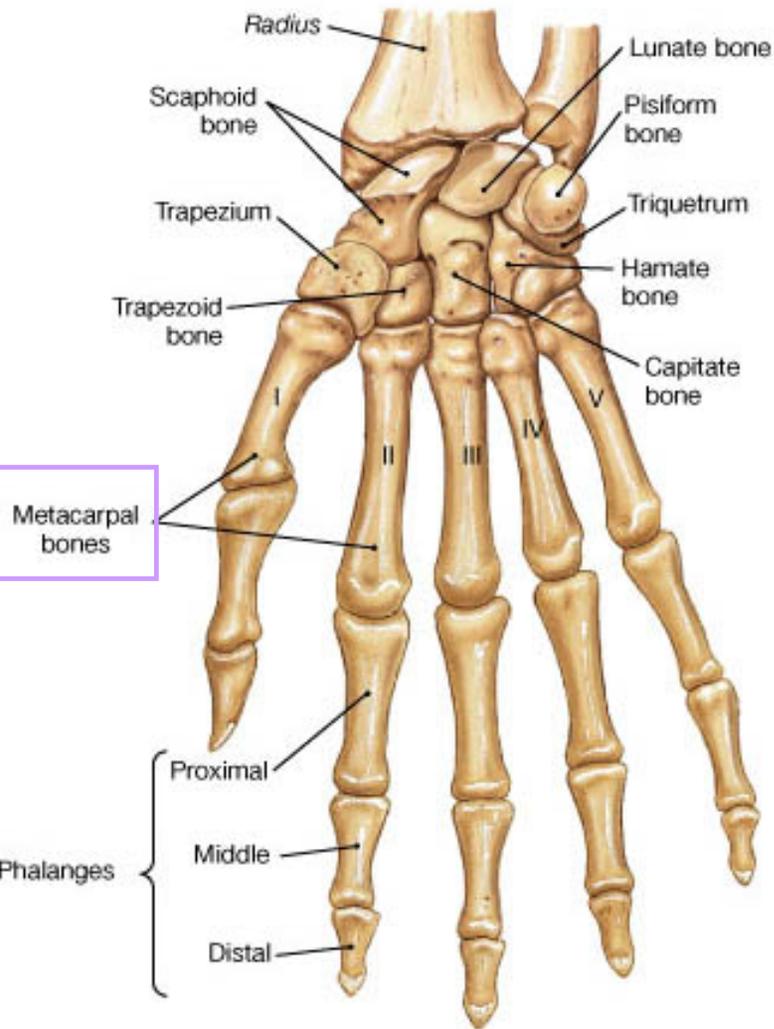
Radius



(d) Anterior view

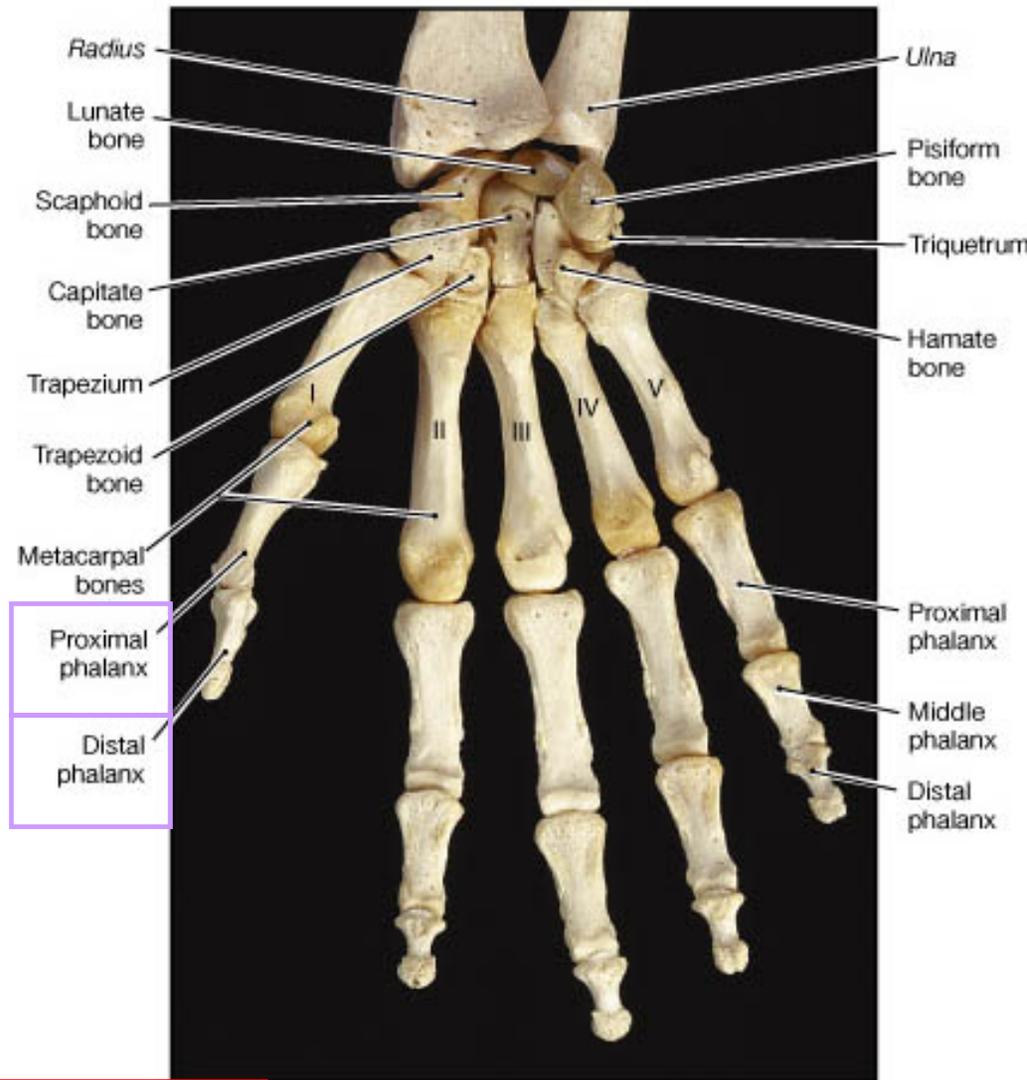
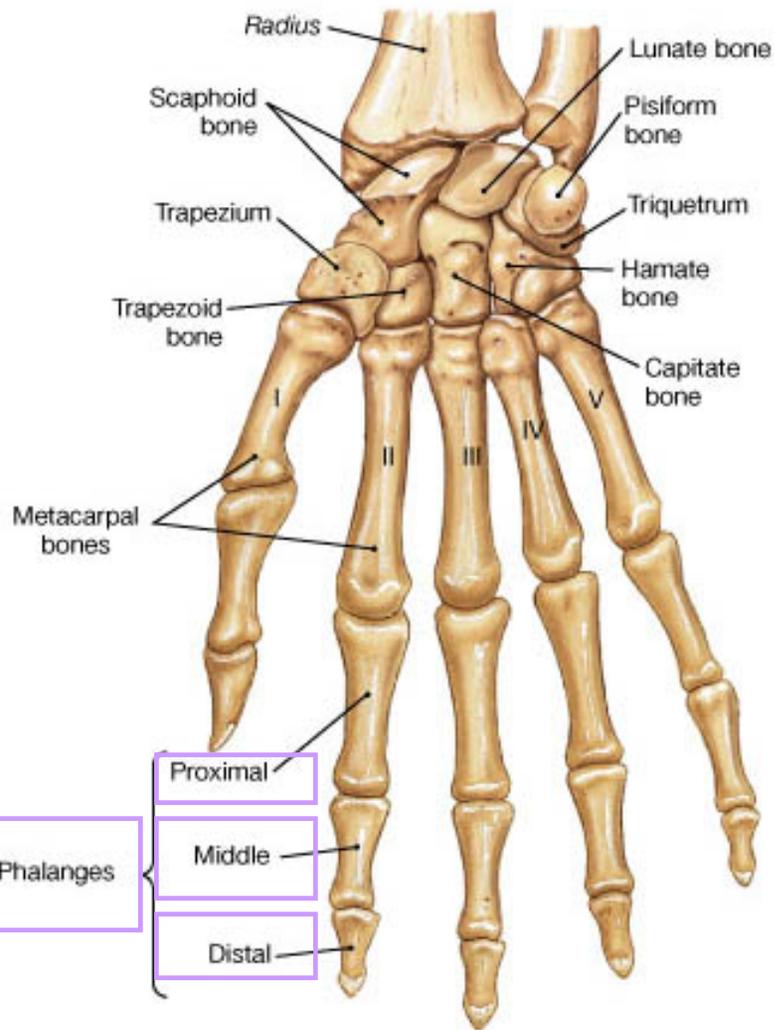


(a) Right wrist, anterior (palmar) view



(b) Right hand, anterior (palmar) view

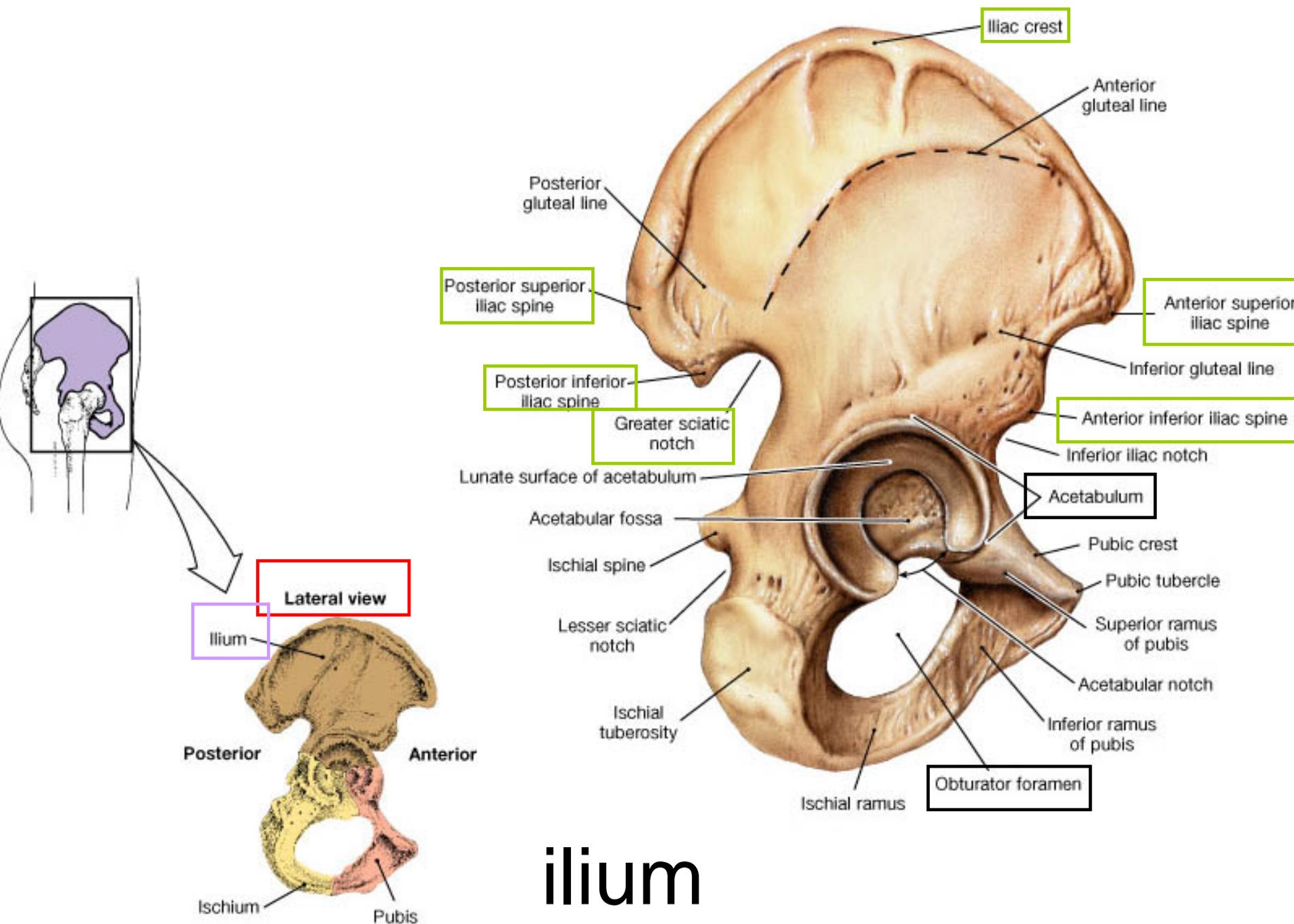
Metacarpals numbered 1 – 5, lateral to medial



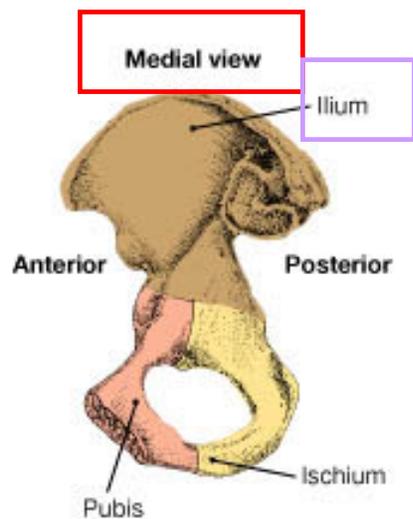
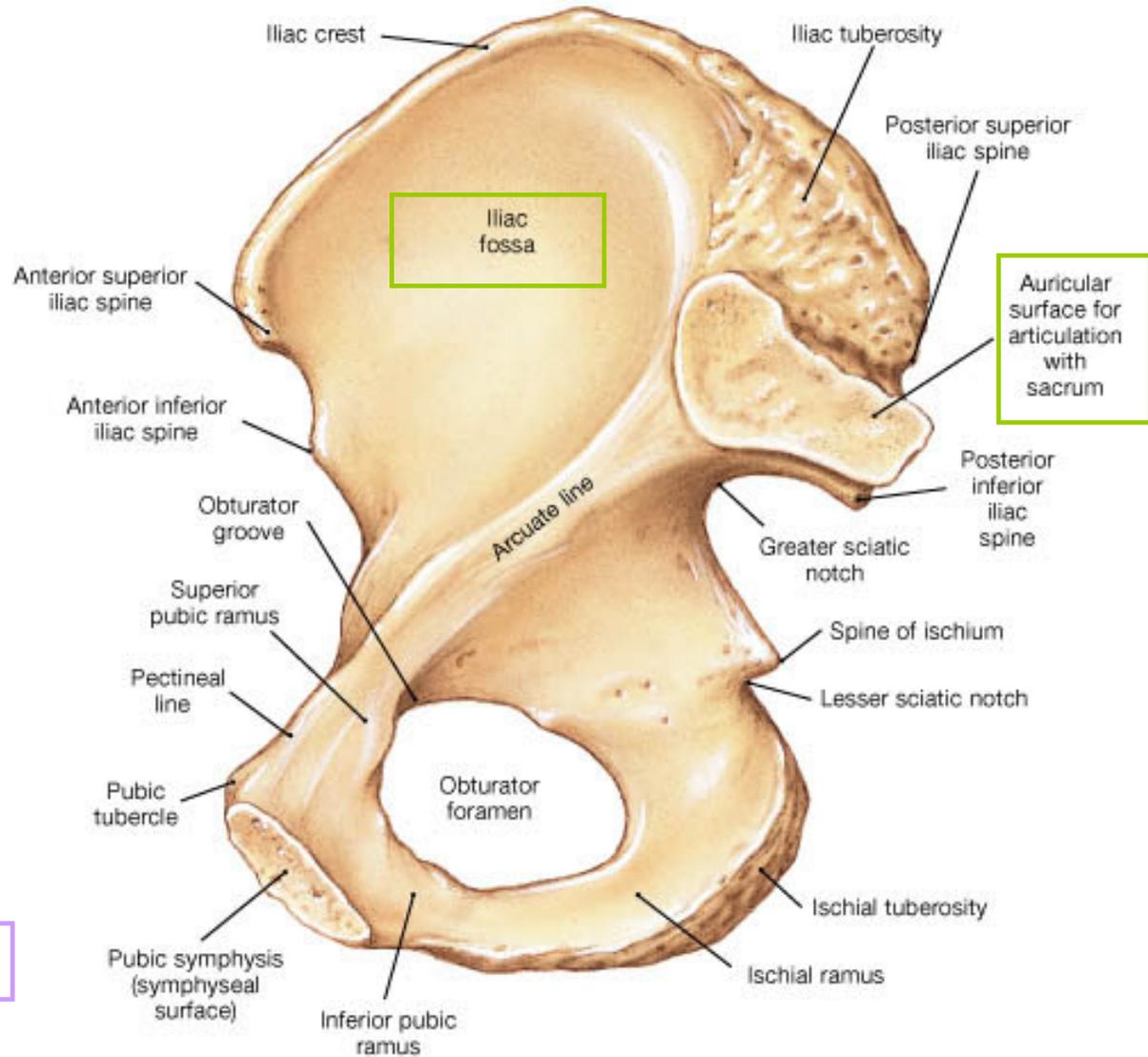
(b) Right hand, anterior (palmar) view

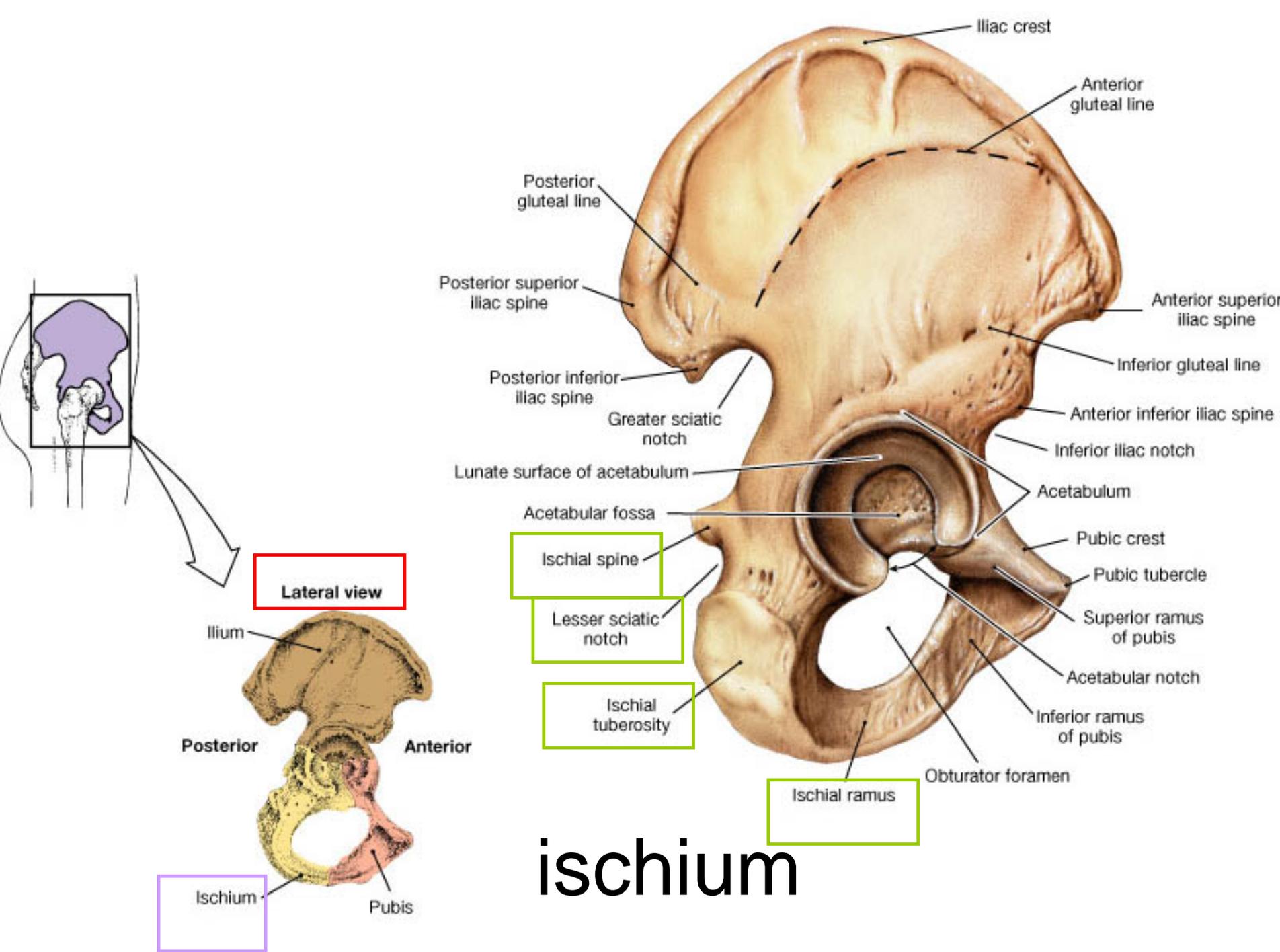
Phalanges

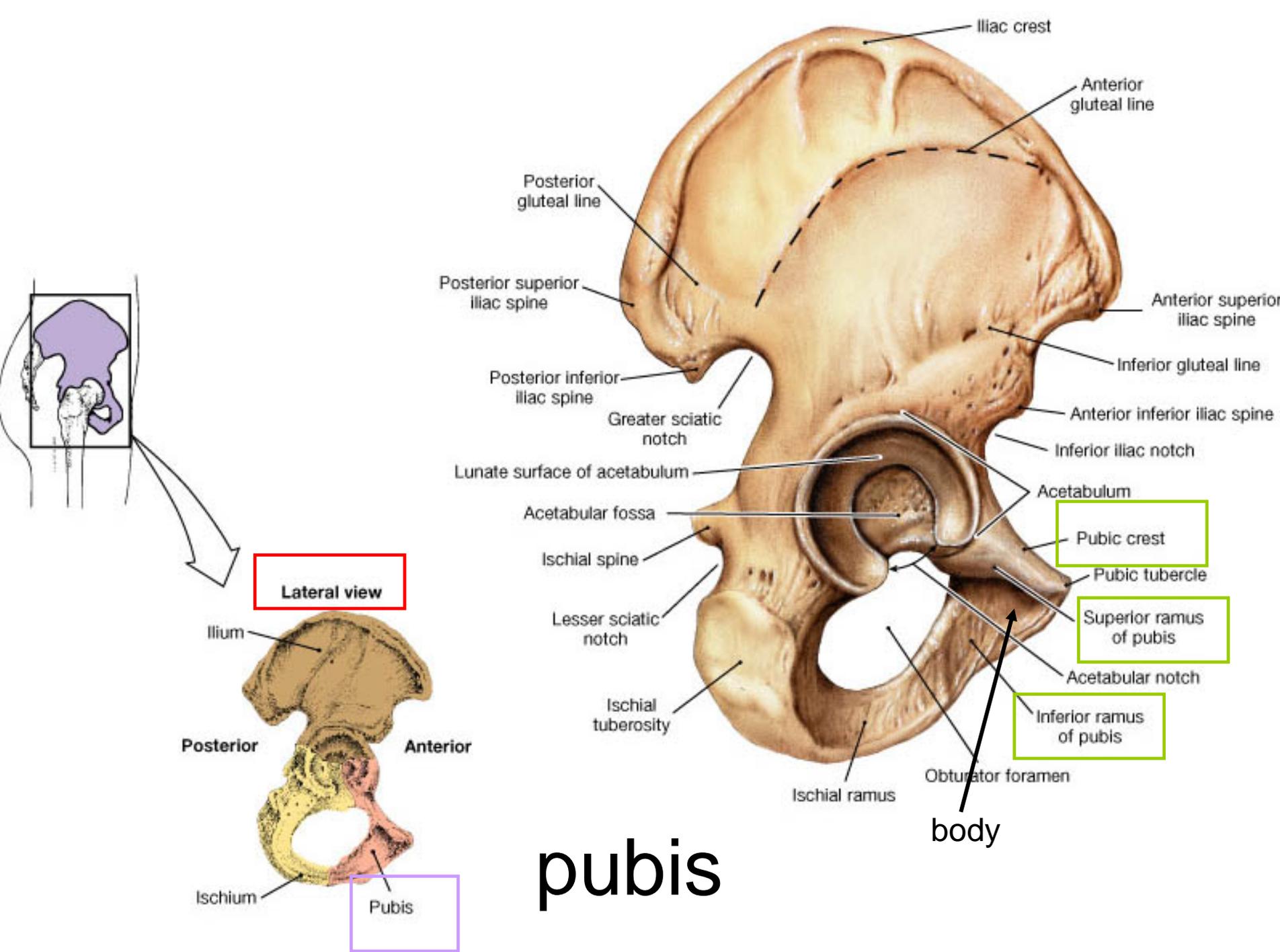
numbered 1 – 5, lateral to medial

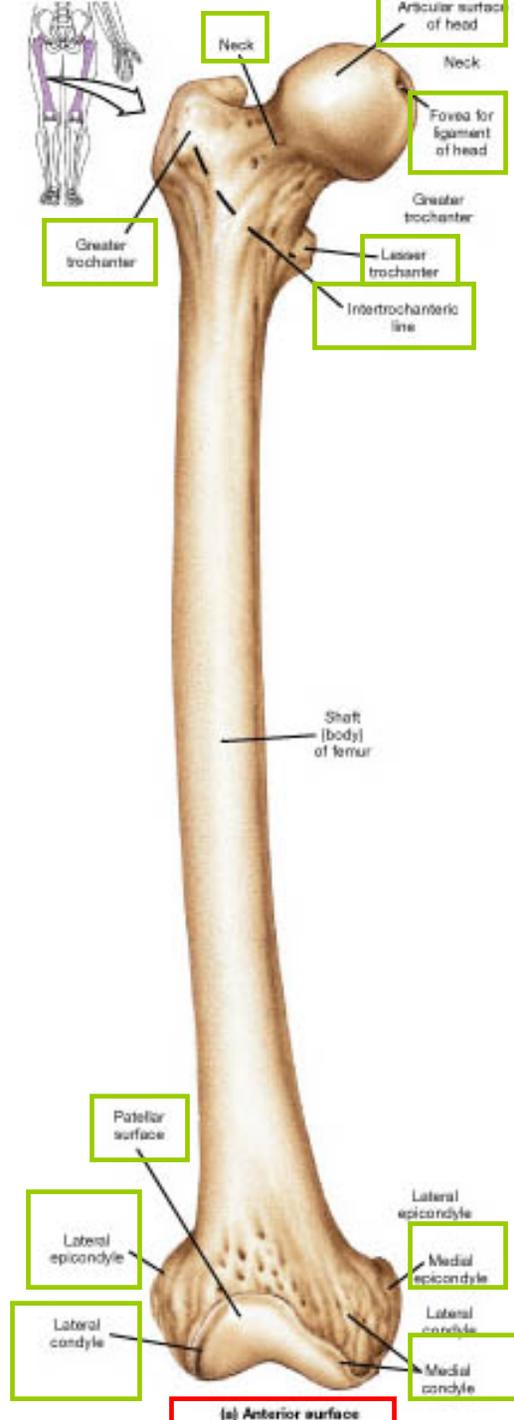


ilium



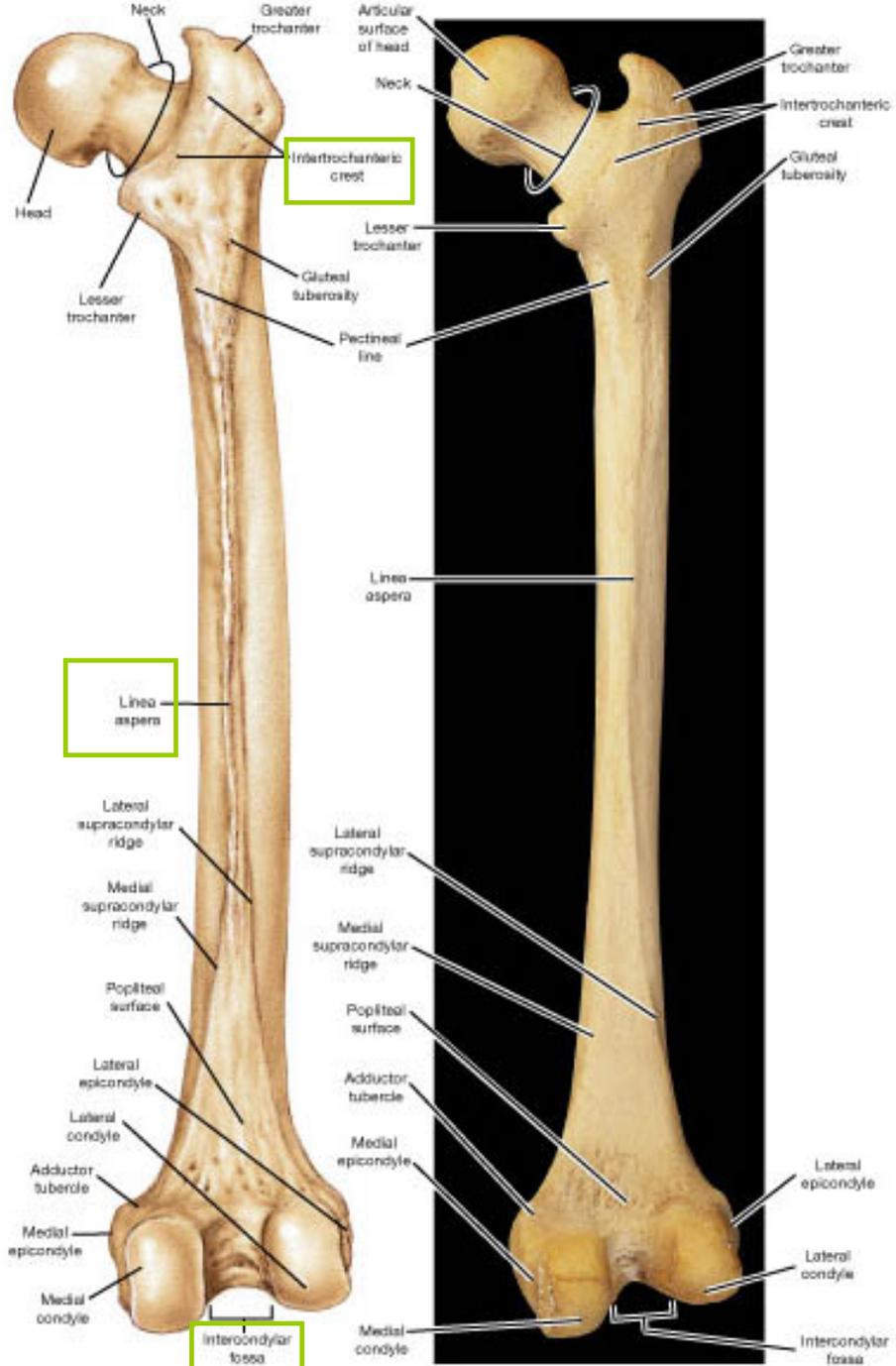






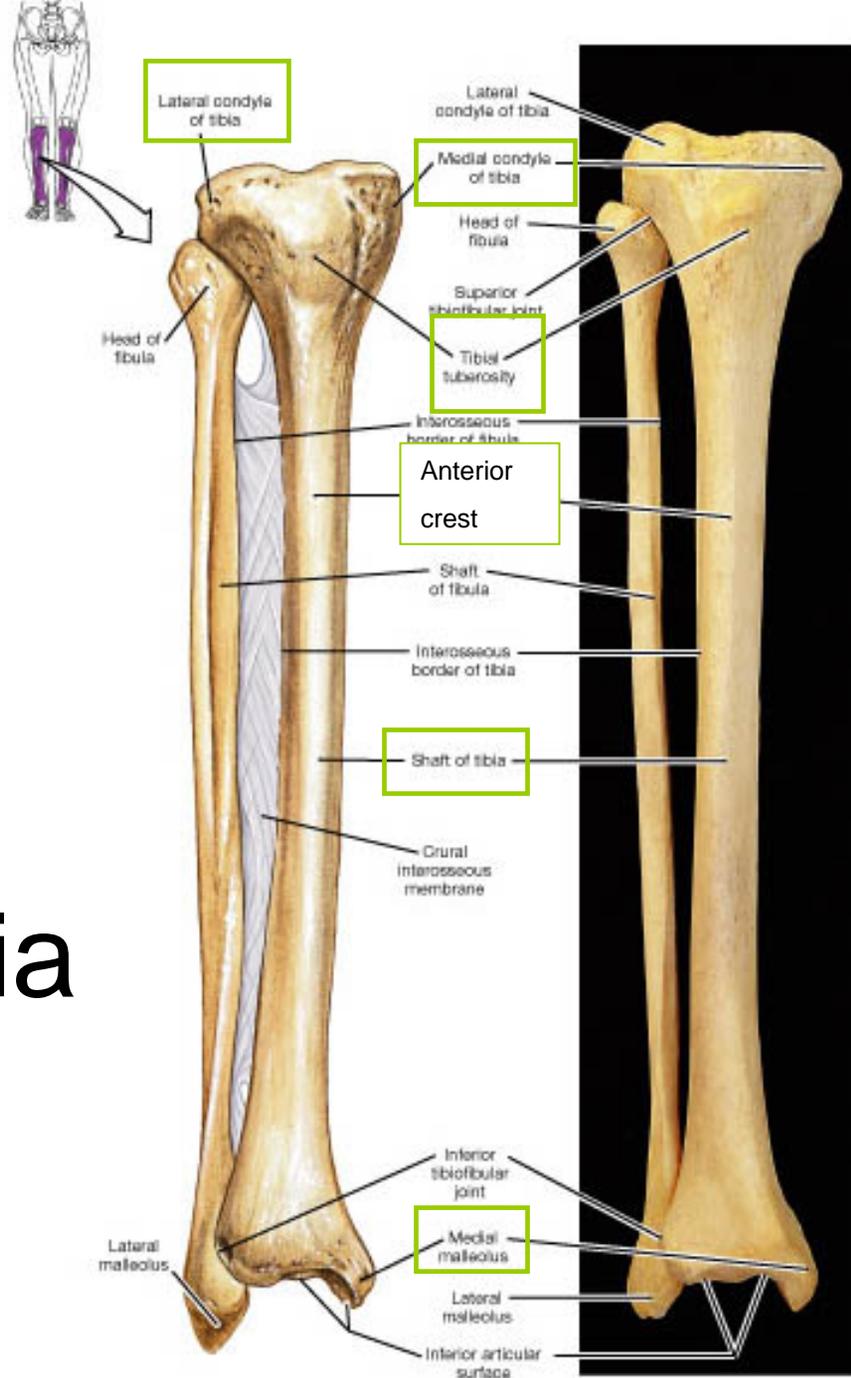
femur

(a) Anterior surface

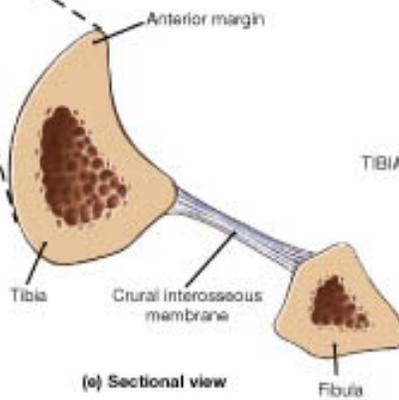
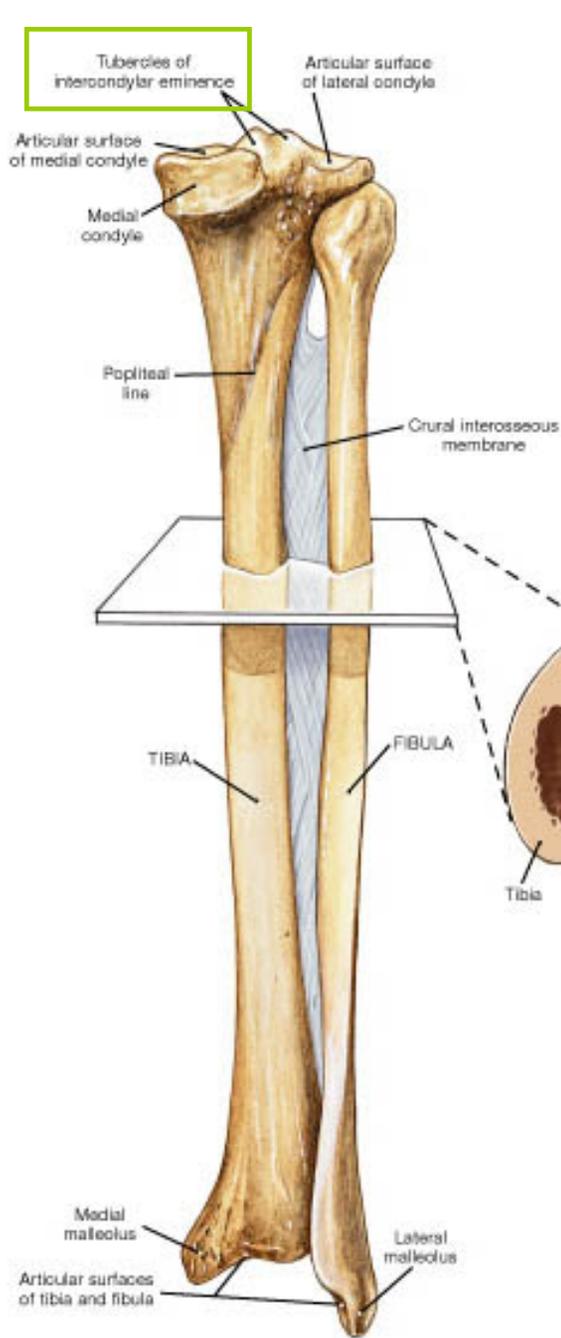


idi Posterior surface

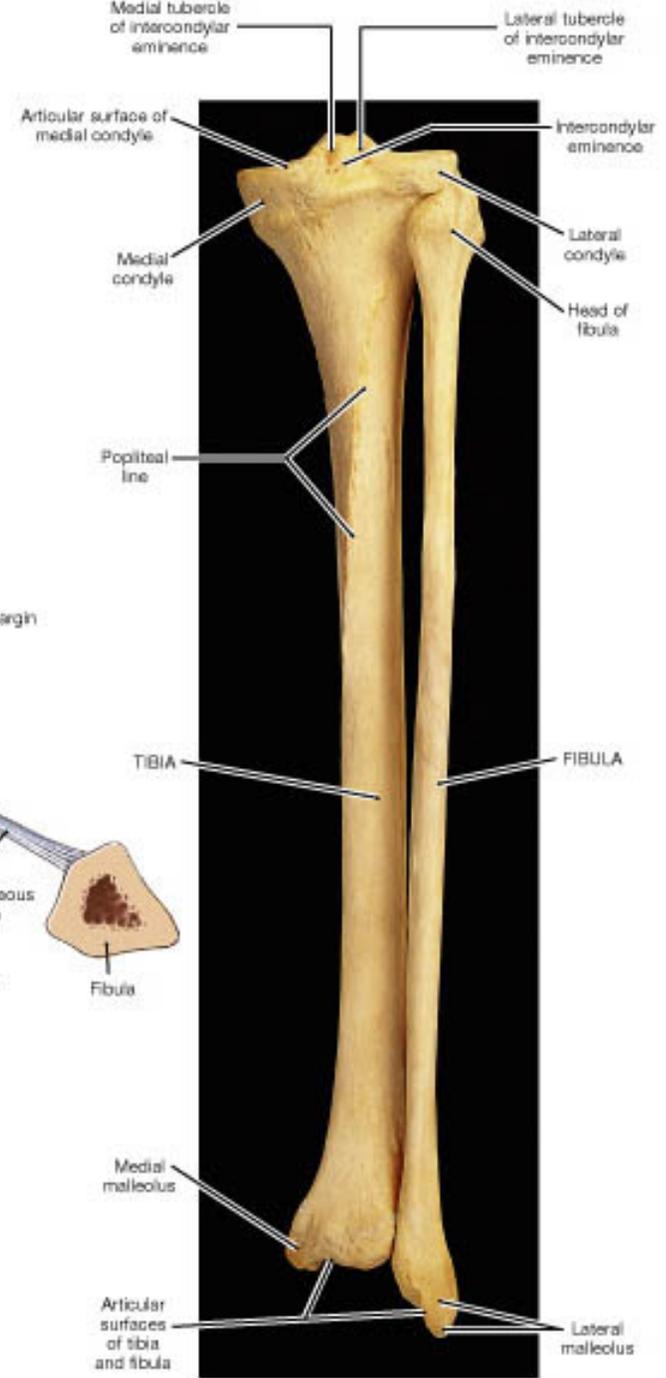
tibia



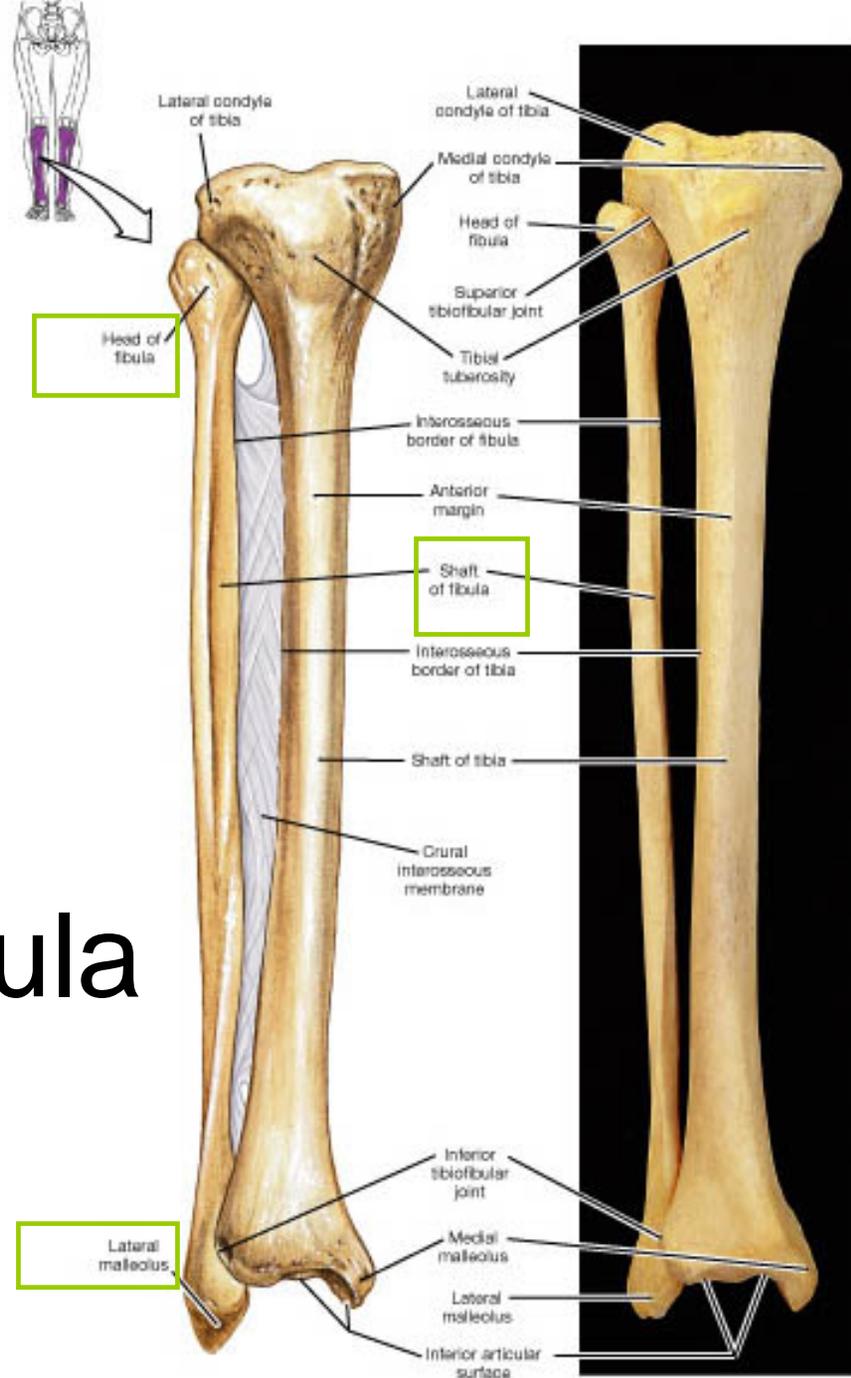
(a) Anterior views



(e) Sectional view

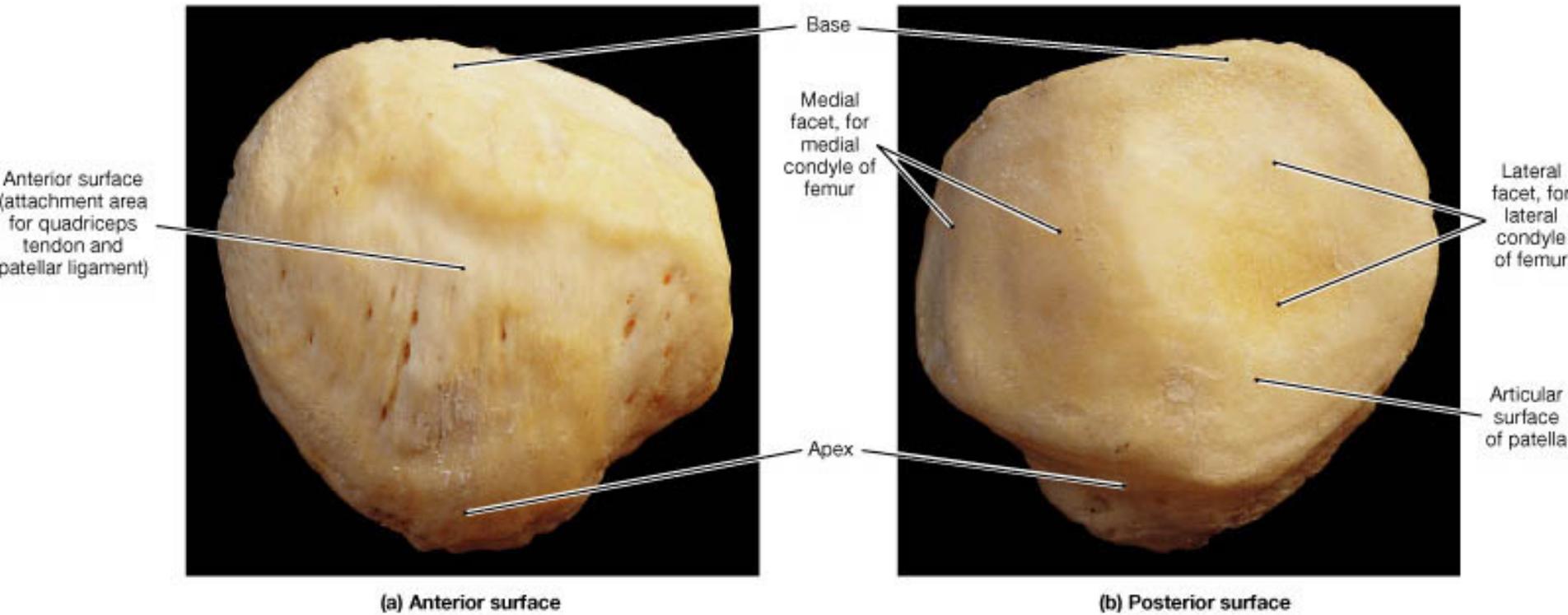


(f) Posterior views

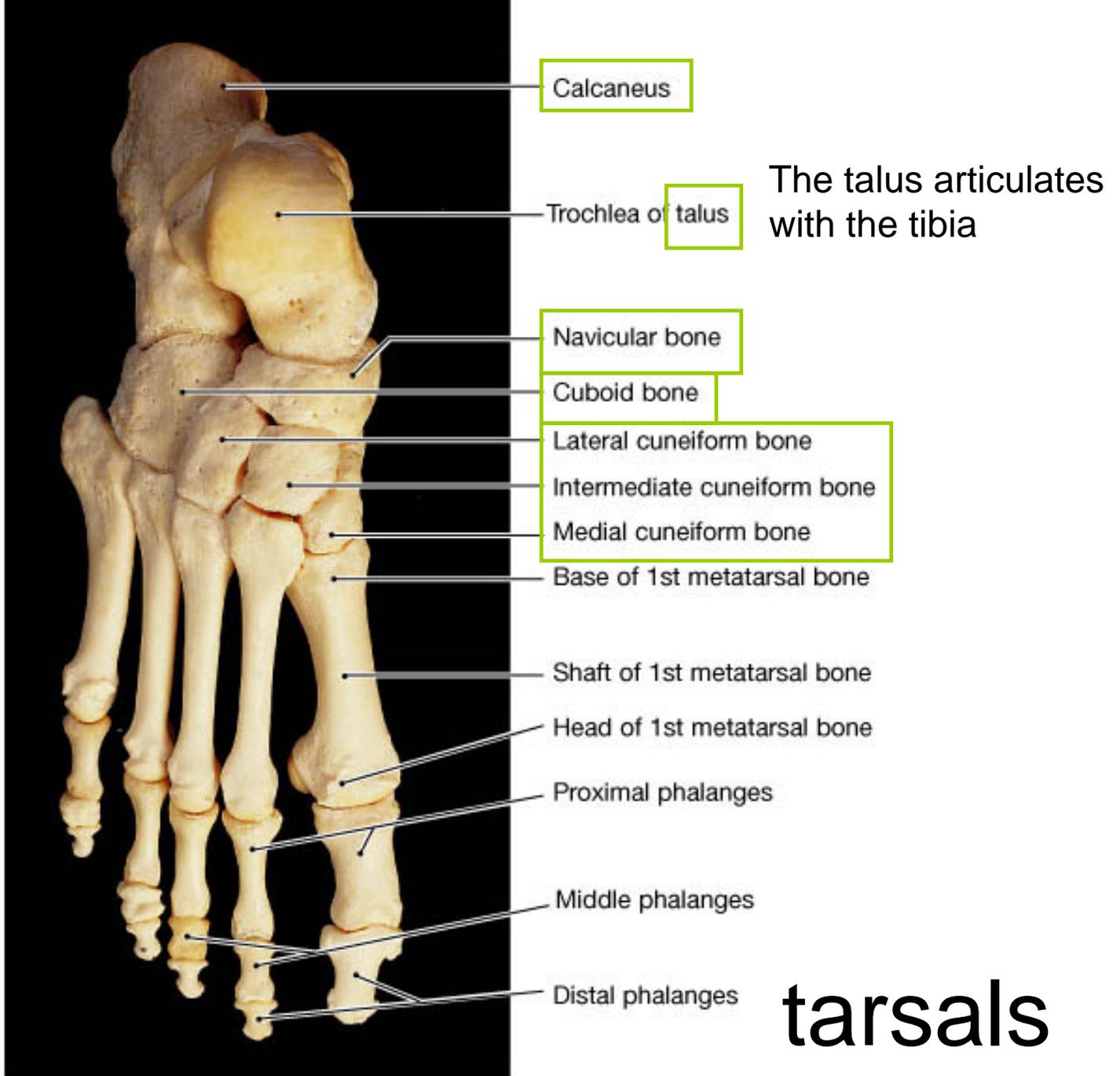


fibula

(a) Anterior views



patella



Distal phalanx
Middle phalanx
Proximal phalanx

Metatarsal
bones
(I-V)

V
IV
III
II
I

Distal phalanx
Proximal phalanx

Metatarsals

numbered 1 – 5,
medial to lateral

Navicular bone

Talus

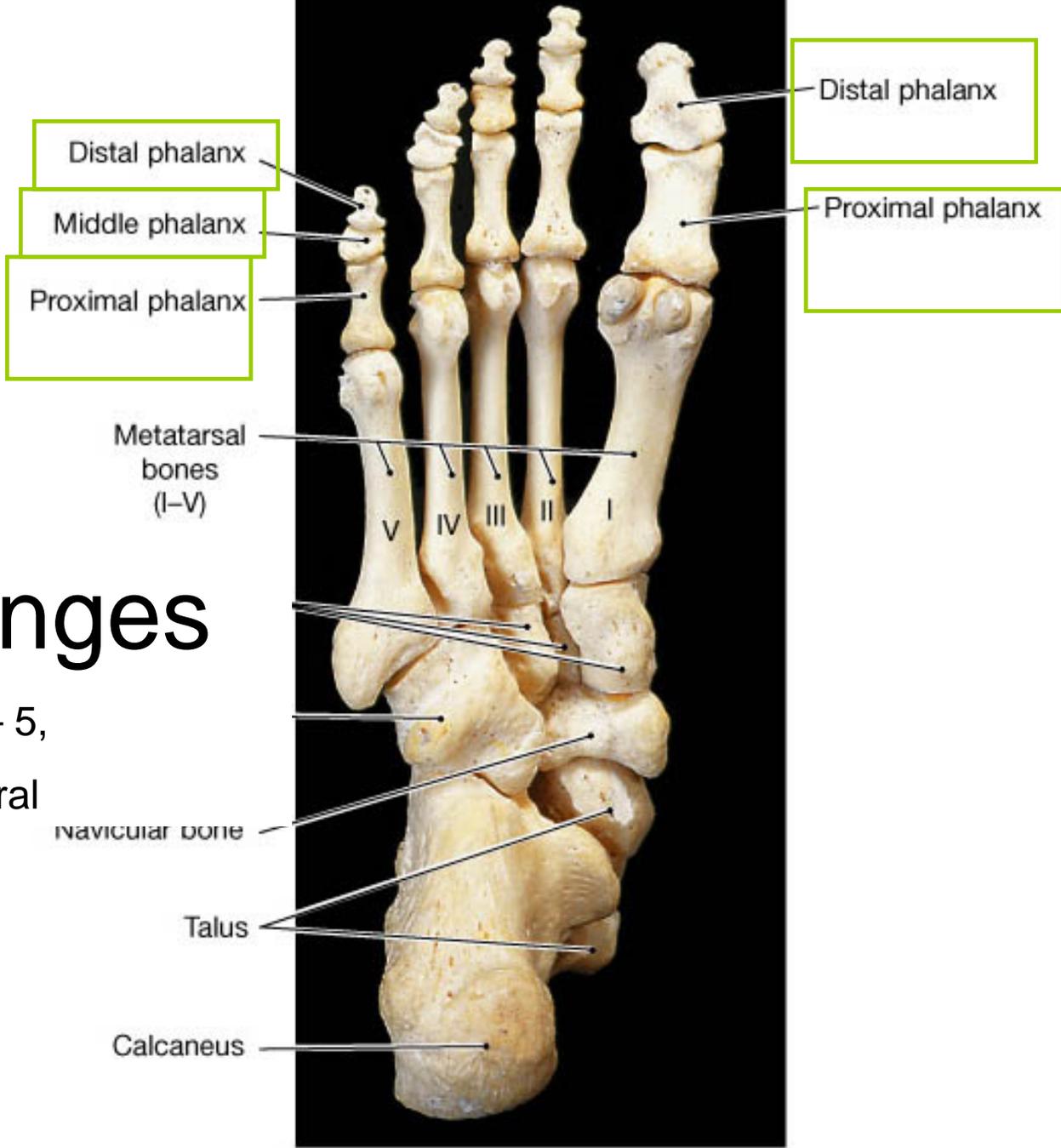
Calcaneus

(b) Inferior (plantar) view



phalanges

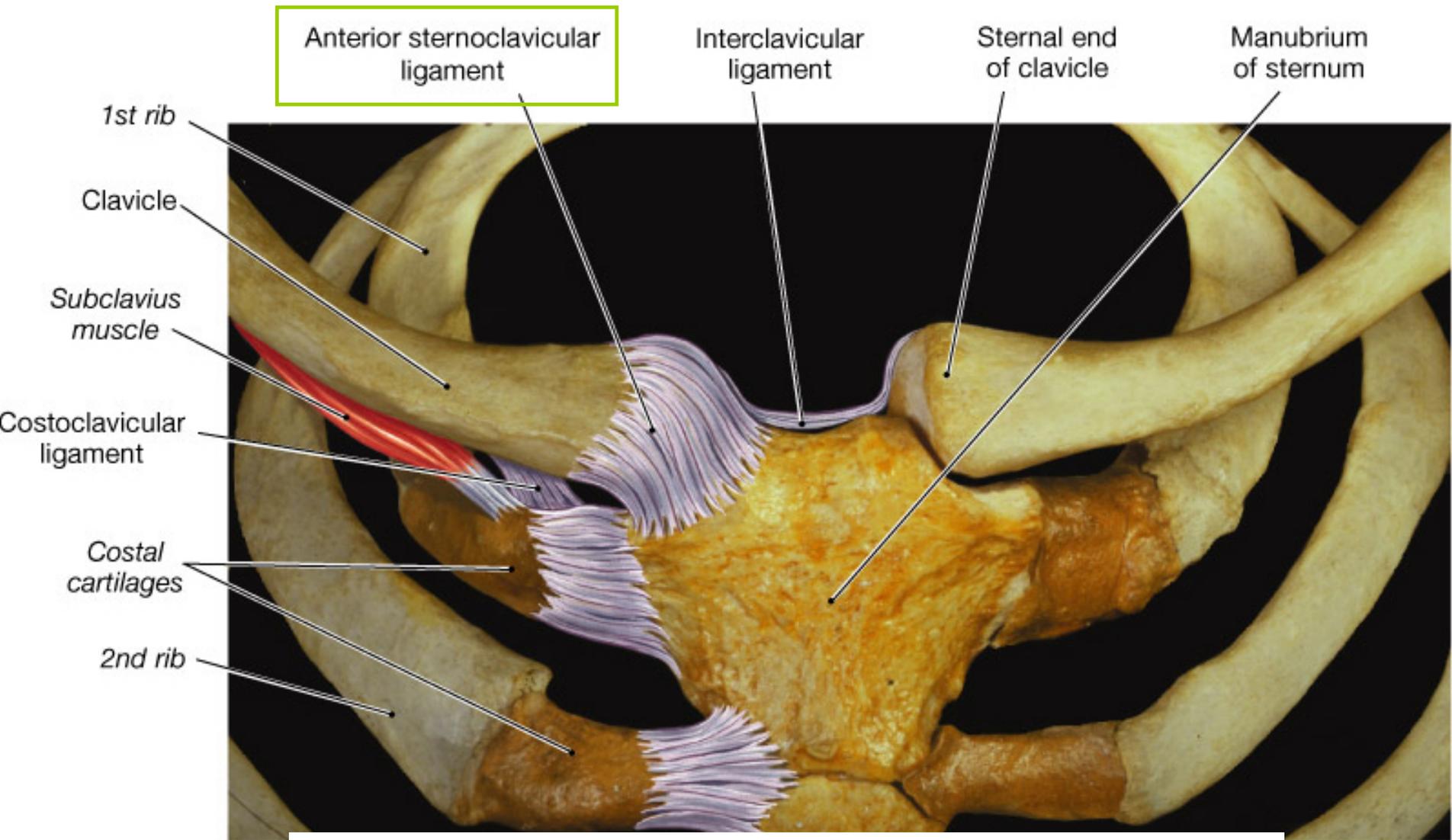
numbered 1 – 5,
medial to lateral



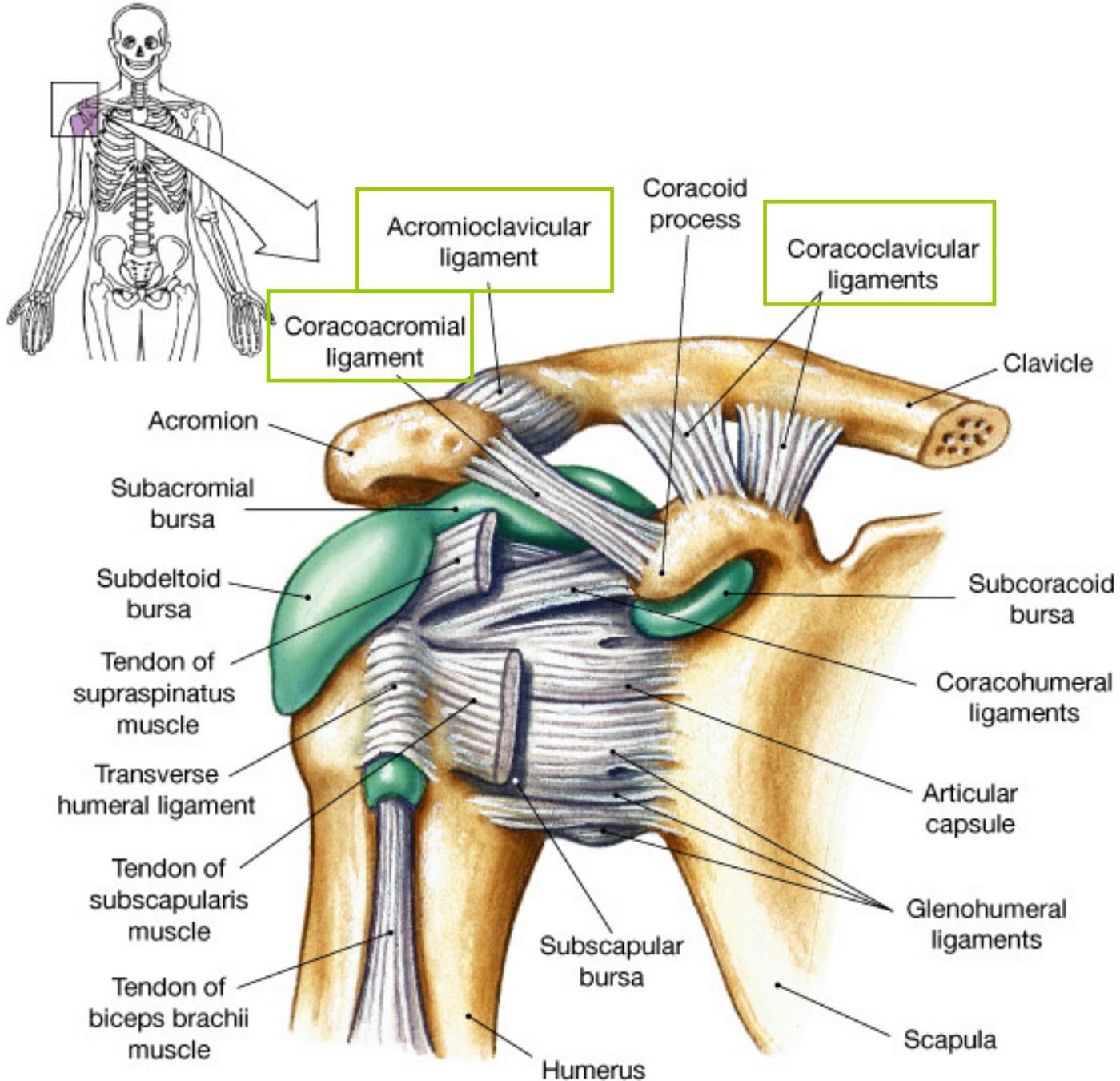
(b) Inferior (plantar) view

Ligaments of the appendicular skeleton

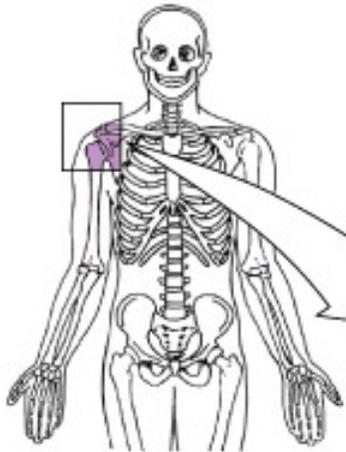
- Chapter 8



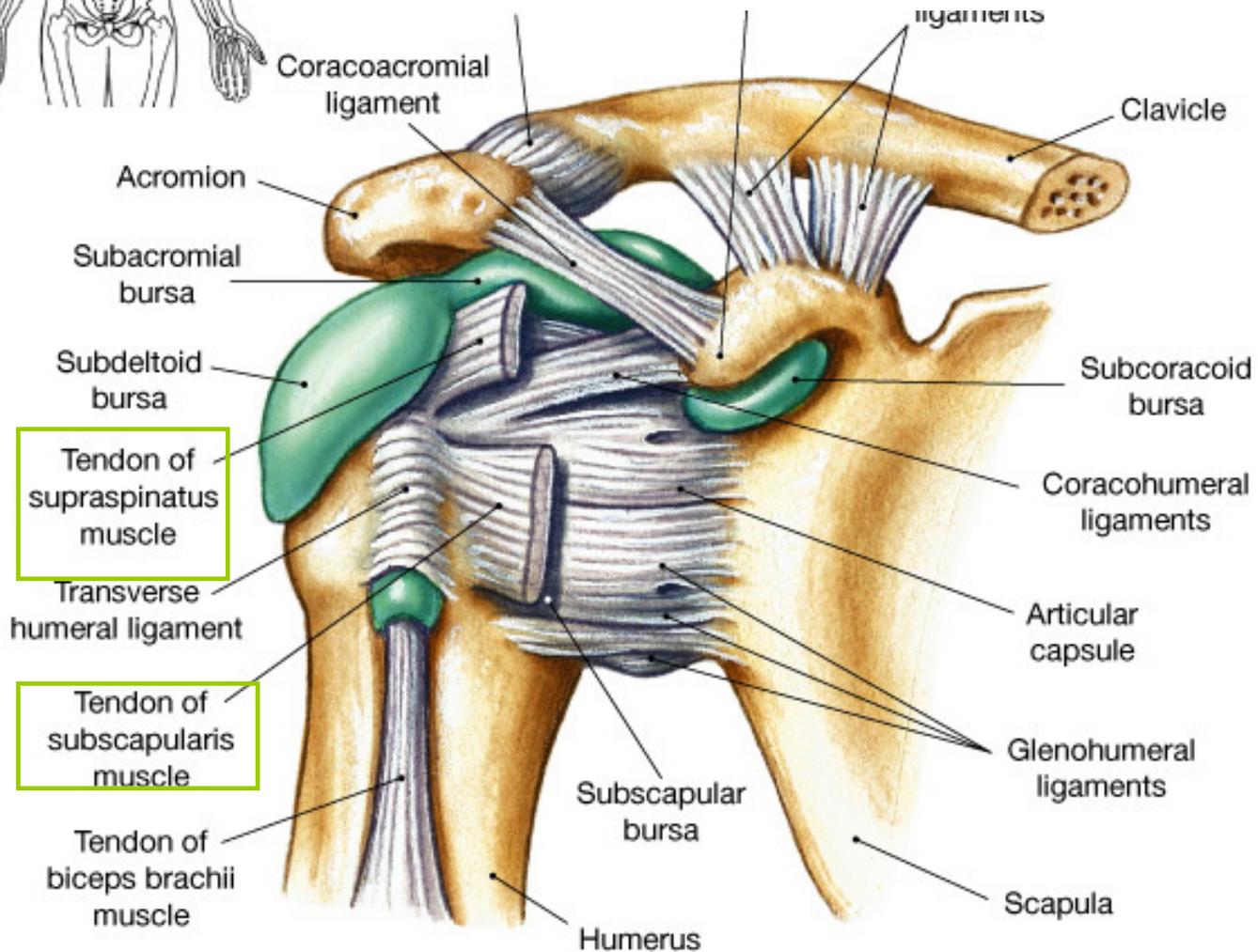
Pectoral girdle



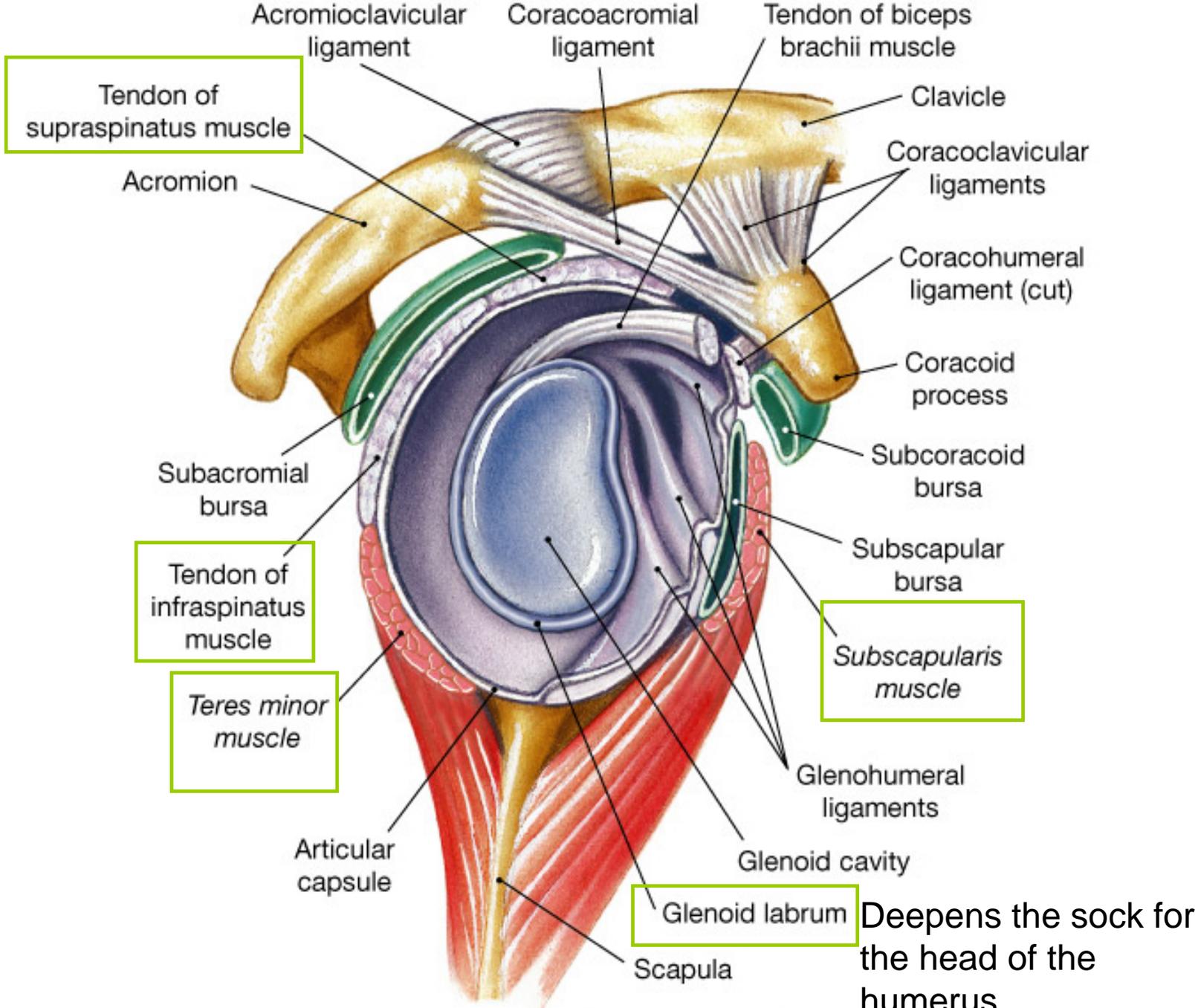
(a) Anterior view



Rotator cuff tendons



(a) Anterior view



Tendon of supraspinatus muscle

Acromion

Subacromial bursa

Tendon of infraspinatus muscle

Teres minor muscle

Articular capsule

Glenoid labrum

Scapula

Acromioclavicular ligament

Coracoacromial ligament

Tendon of biceps brachii muscle

Clavicle

Coracoclavicular ligaments

Coracohumeral ligament (cut)

Coracoid process

Subcoracoid bursa

Subscapular bursa

Subscapularis muscle

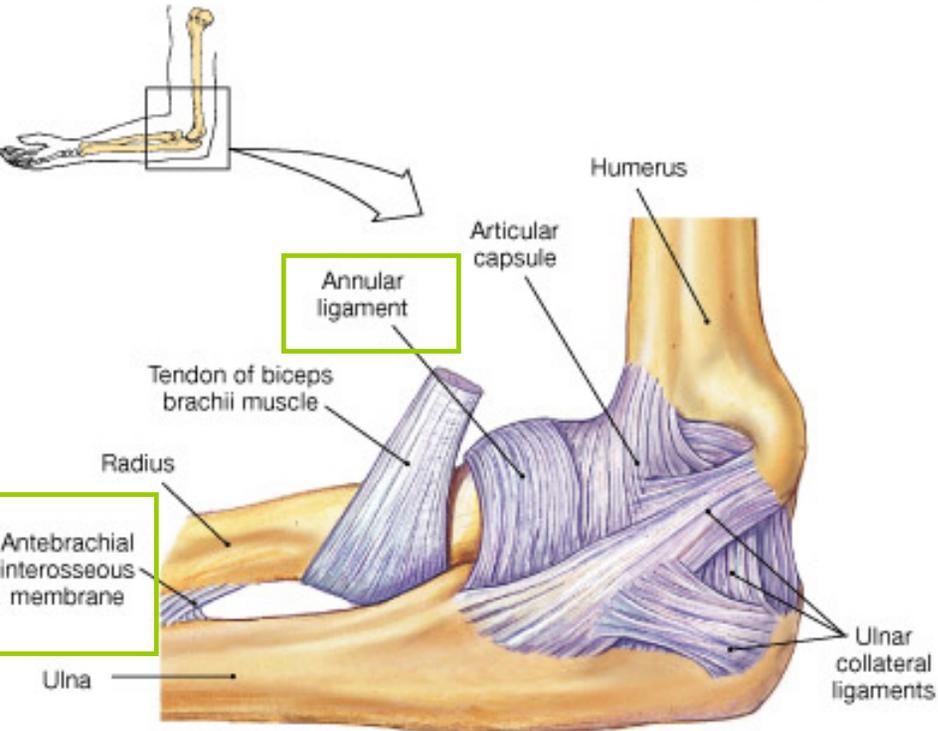
Glenohumeral ligaments

Glenoid cavity

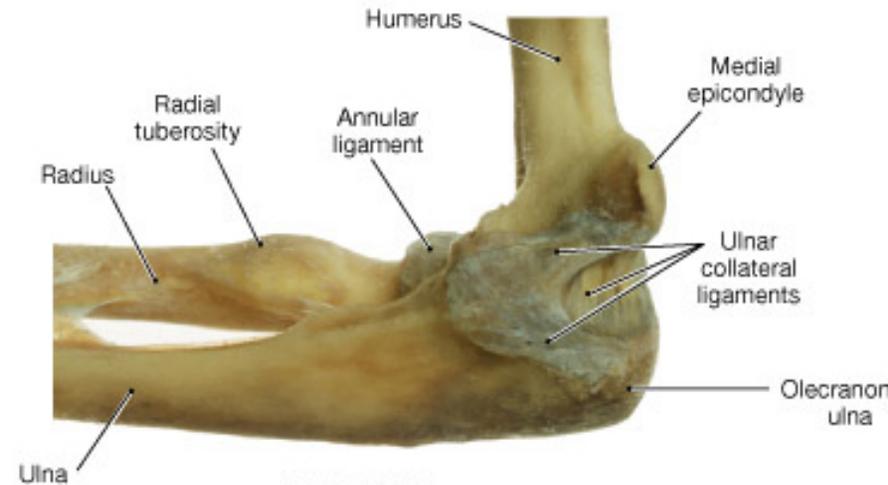
Deepens the sock for the head of the humerus

(b) Lateral view of pectoral girdle

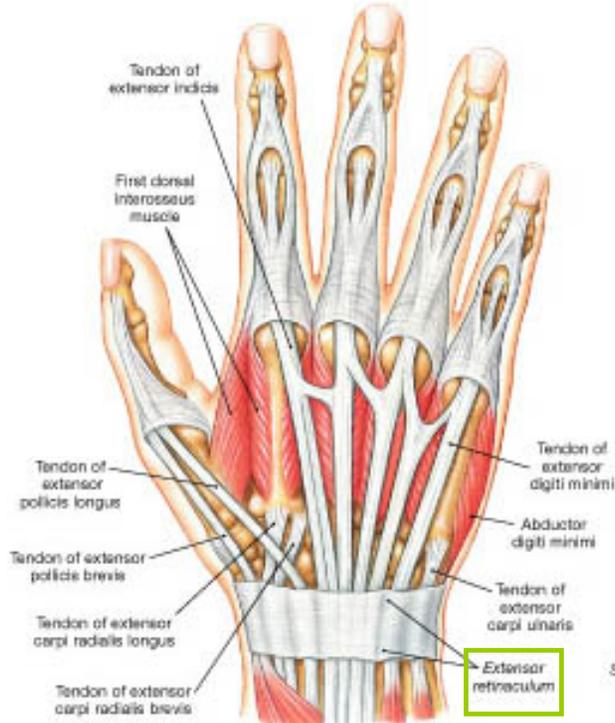
Elbow joint



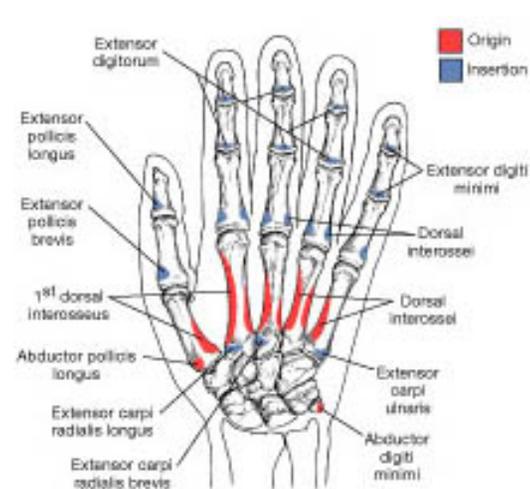
(a) Diagrammatic medial view



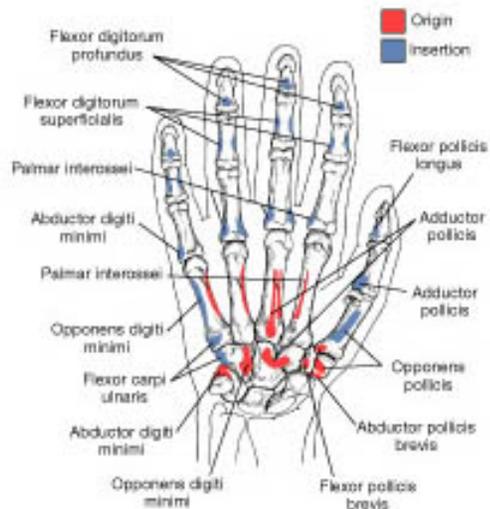
(b) Medial view



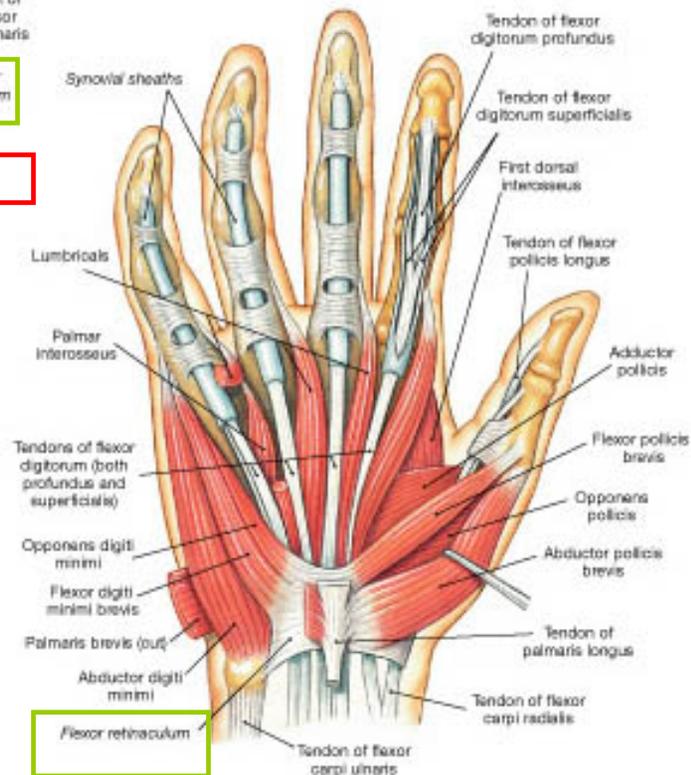
(a) Right hand, posterior (dorsal) view



(b) Origins and insertions, posterior view

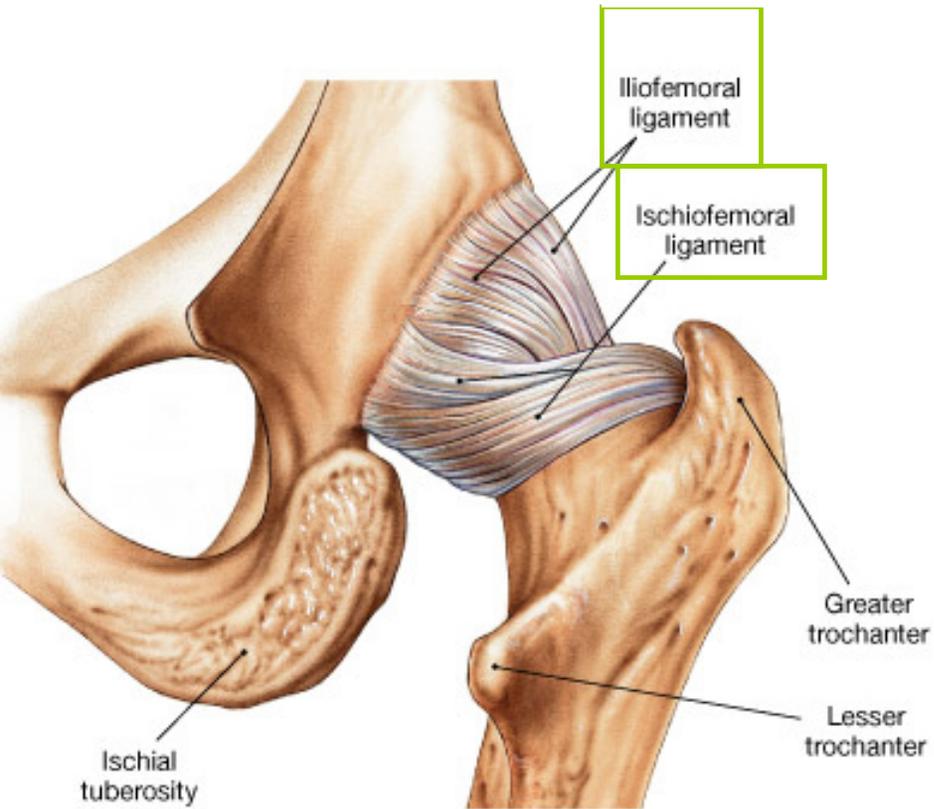


(c) Origins and insertions, anterior (palmar) view

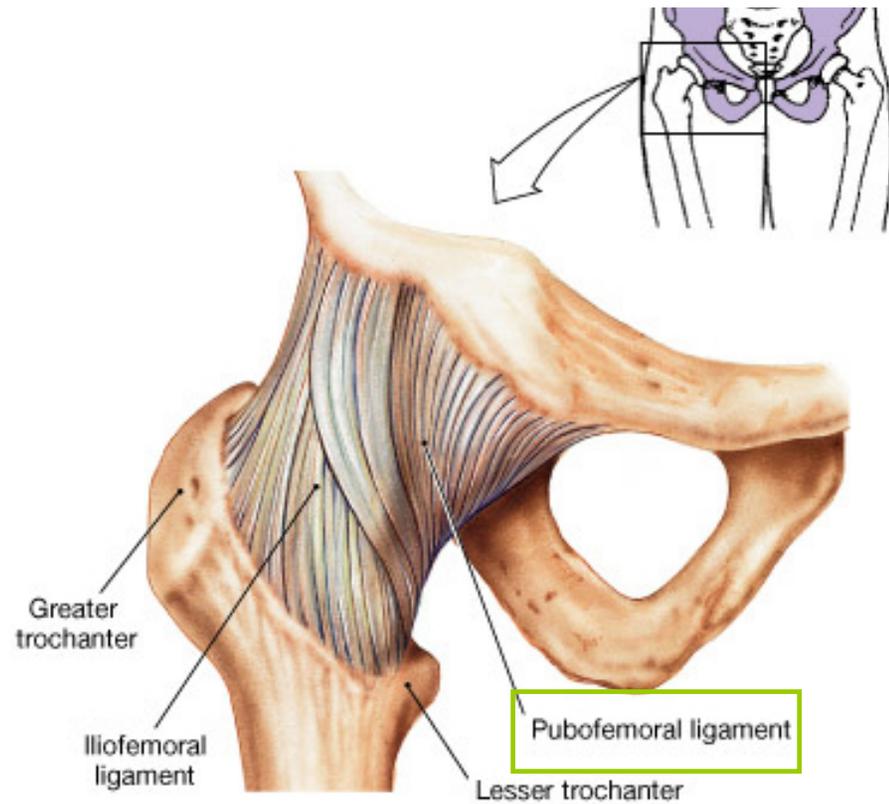


(d) Right hand, anterior (palmar) view

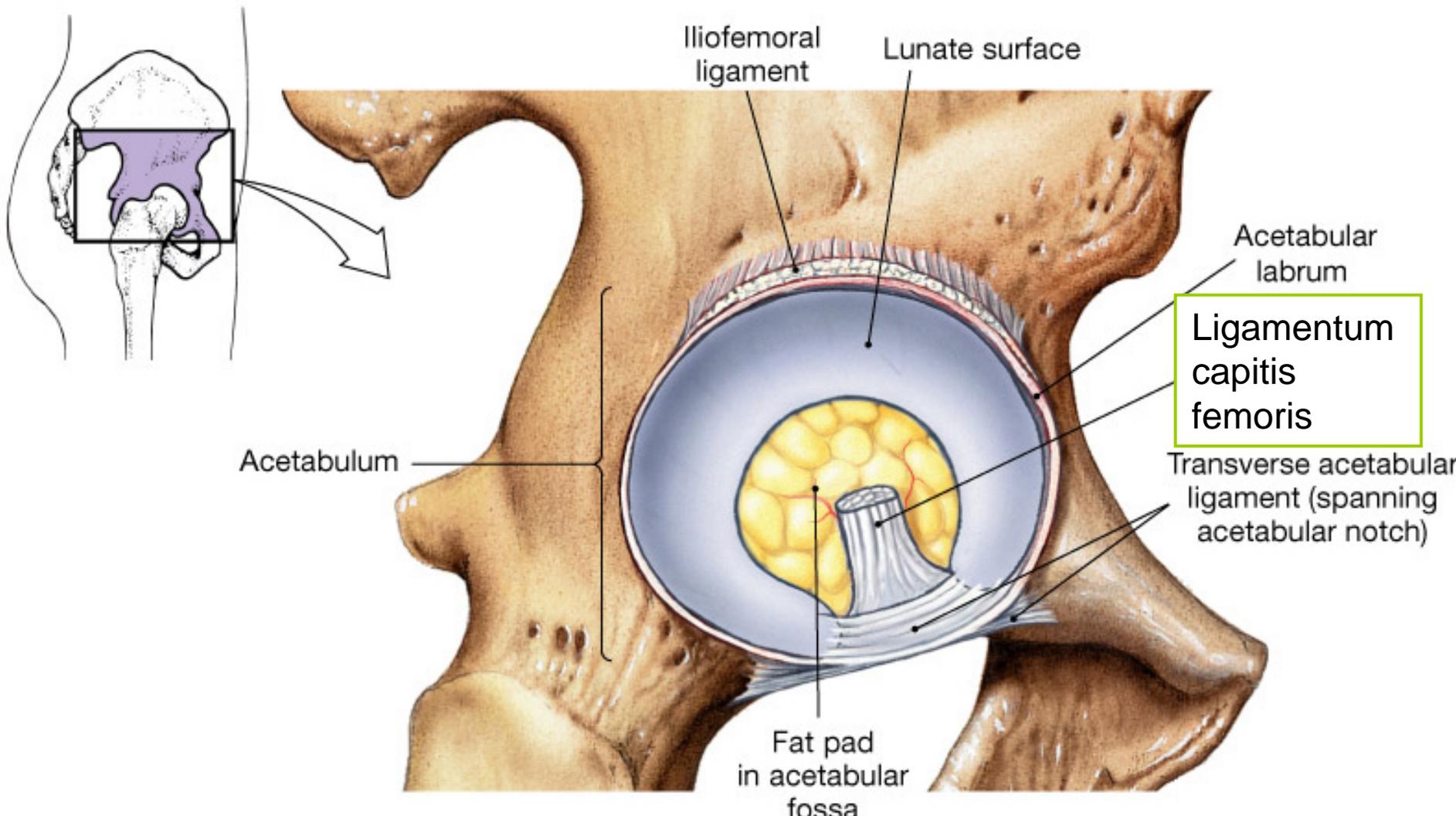
Hip joint



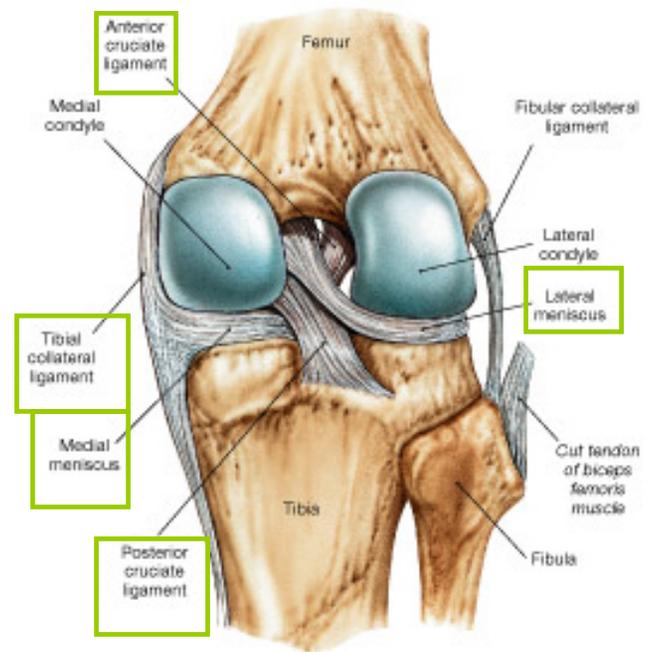
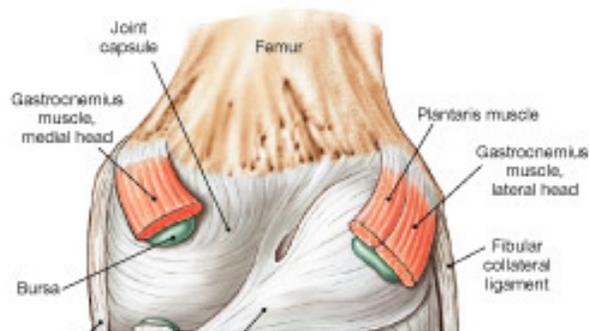
(c) Posterior view



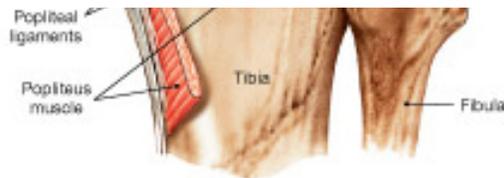
(b) Anterior view



(a) Lateral view

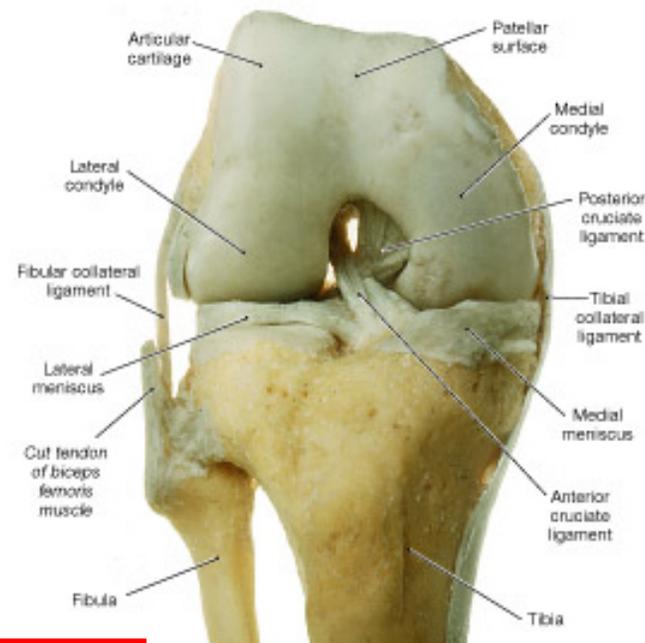
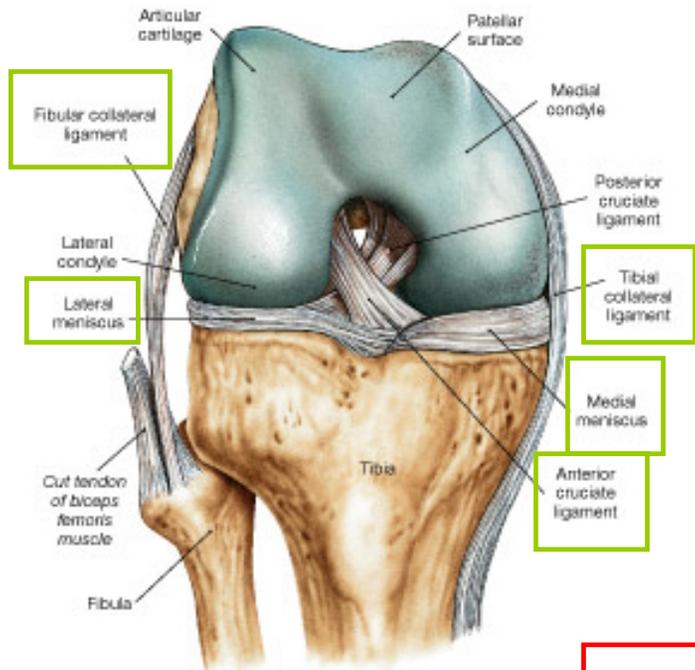


Knee joint

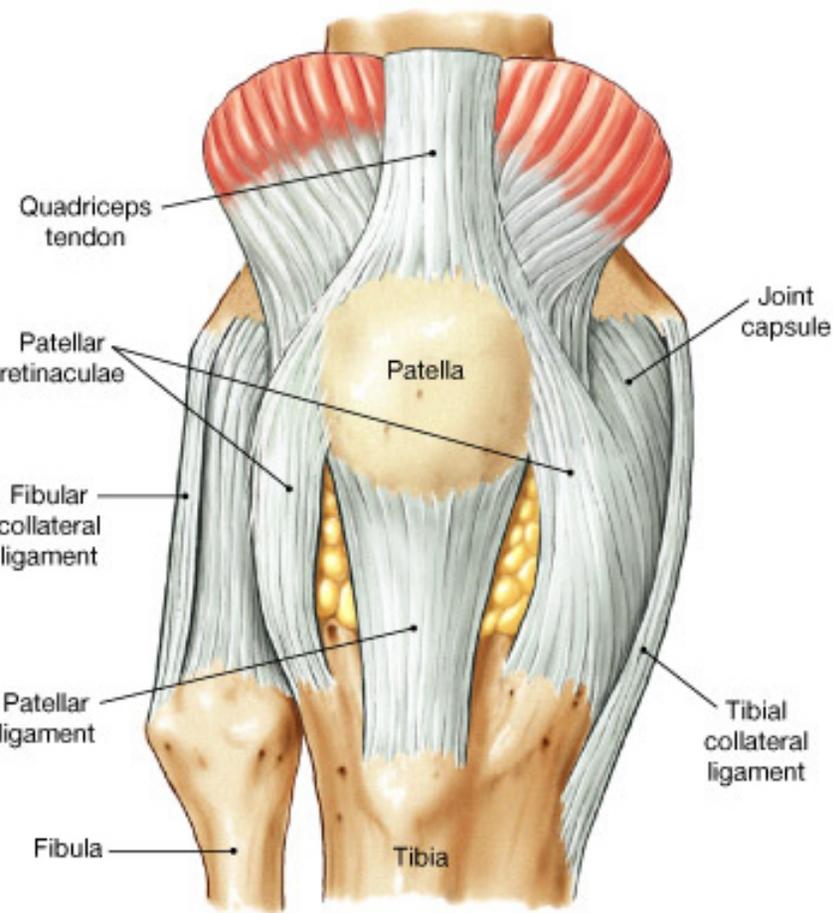


(a) Posterior view, superficial layer

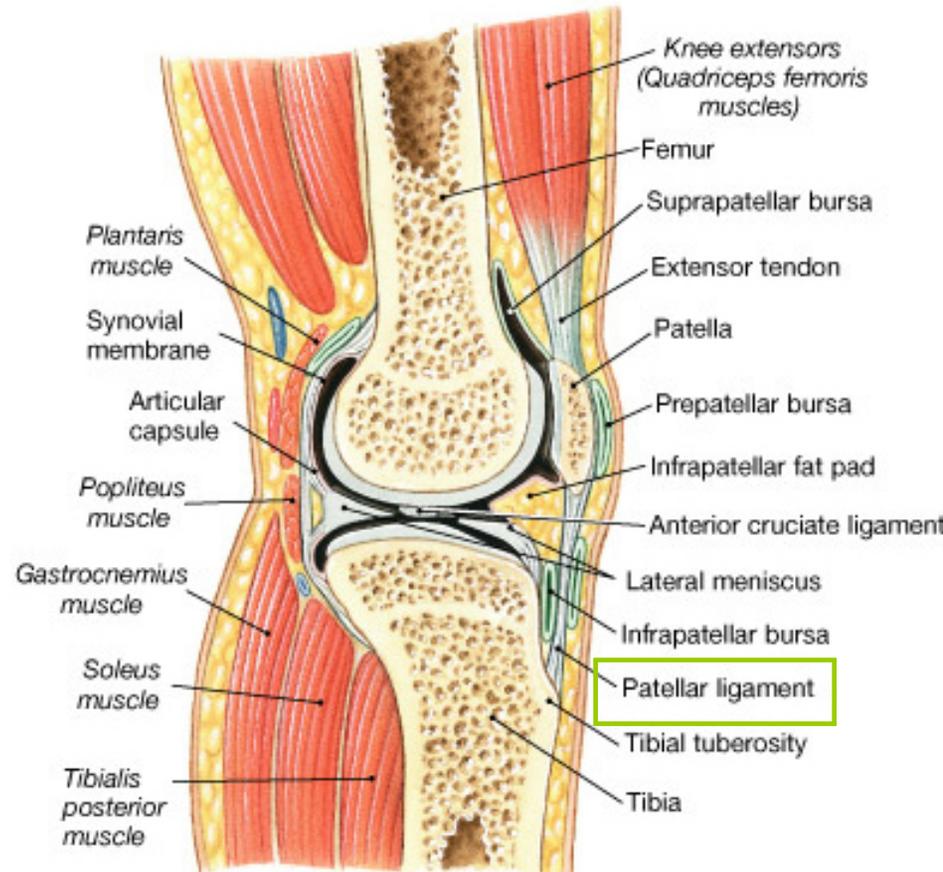
(b) Posterior view, deep layer



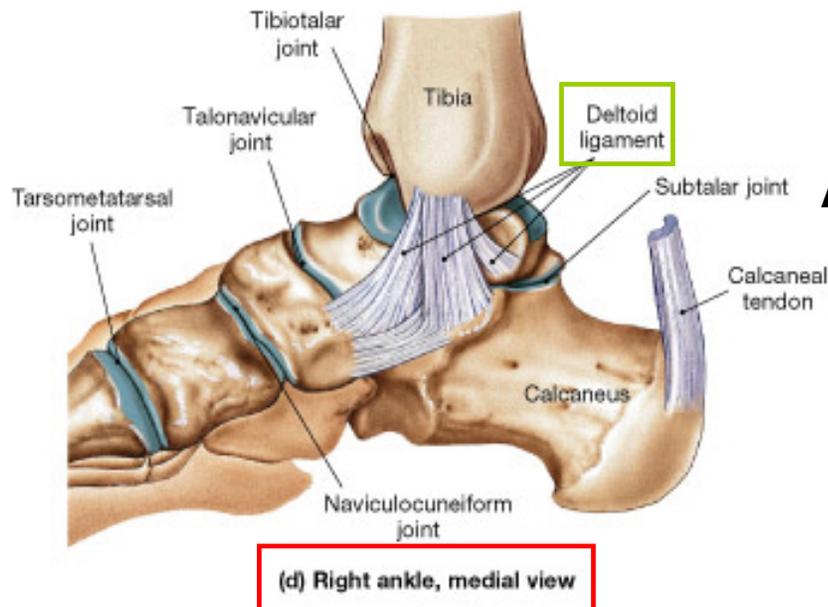
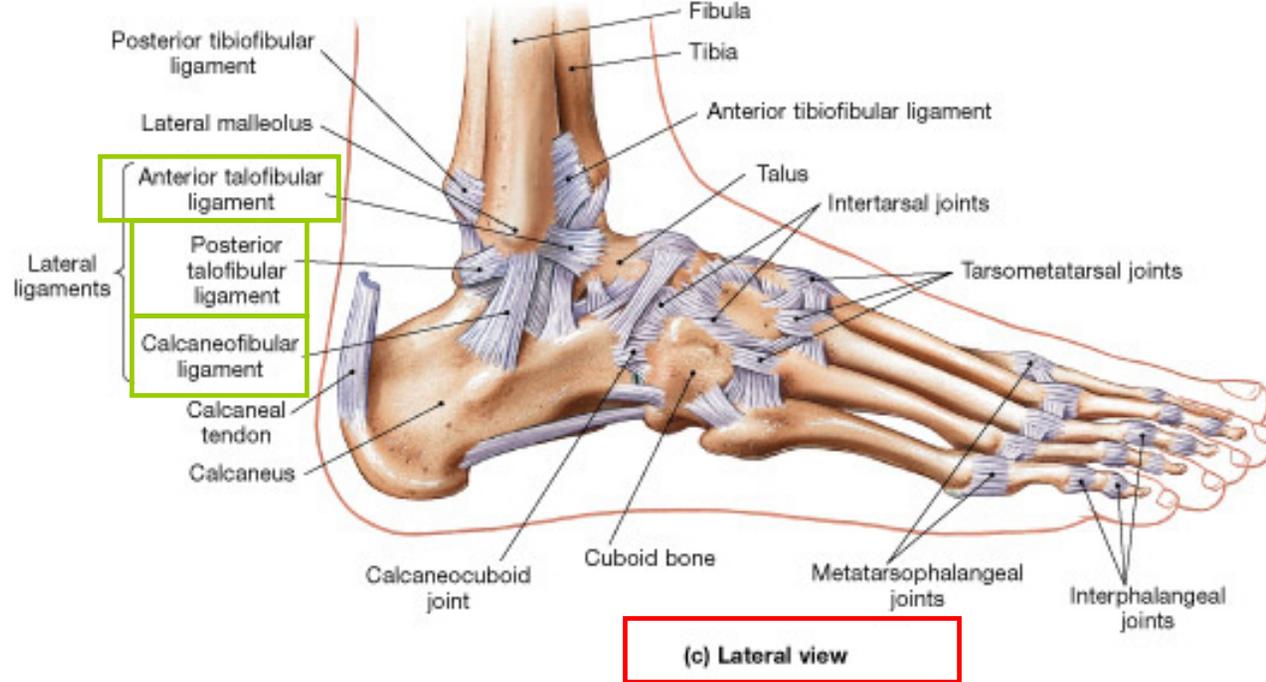
(c) Anterior view, flexed knee



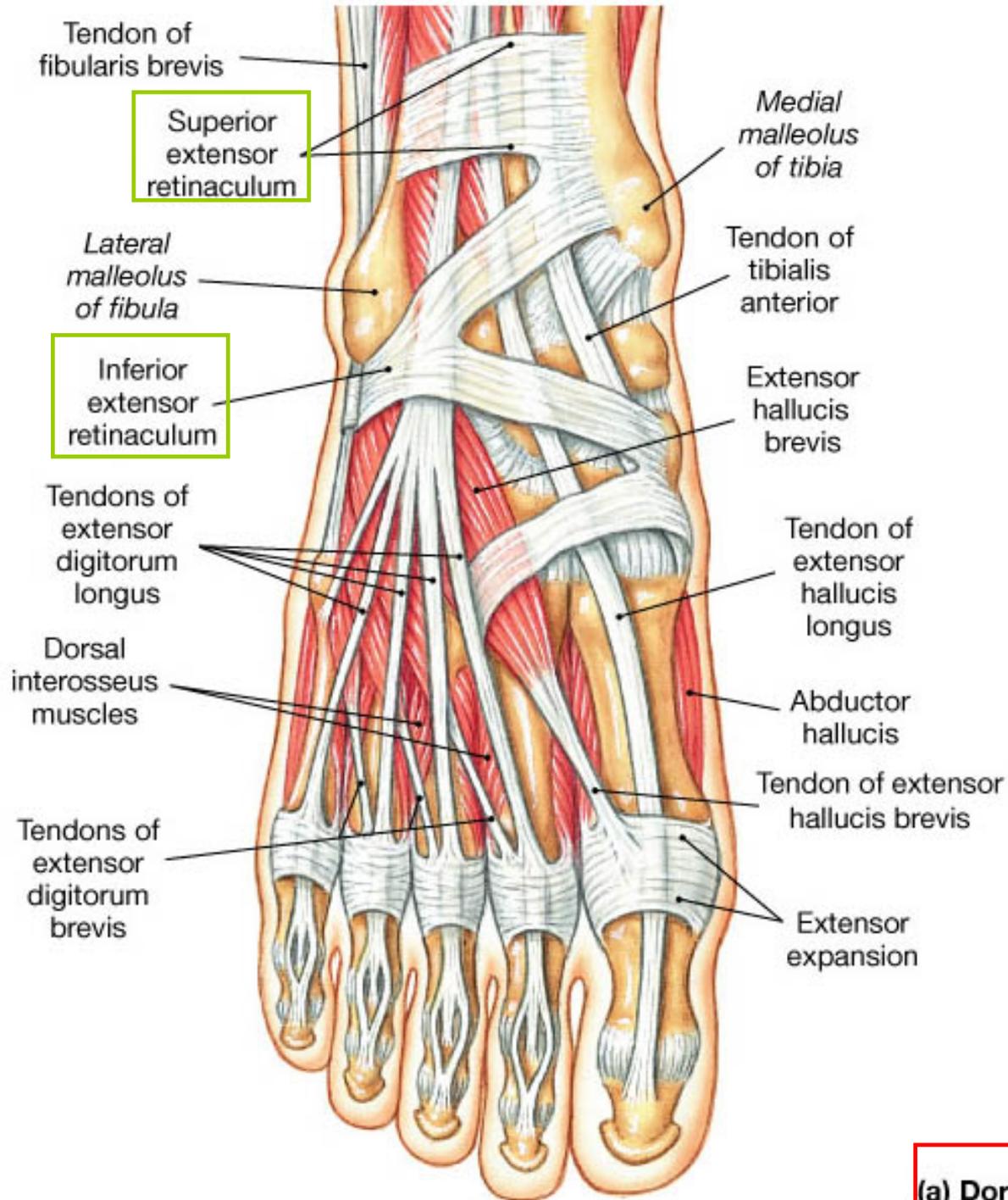
(a) Anterior view, superficial layer



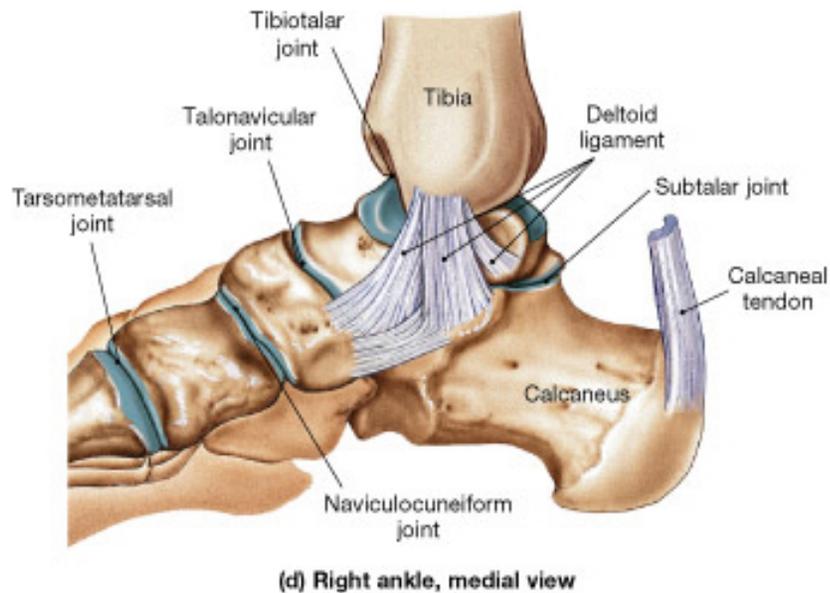
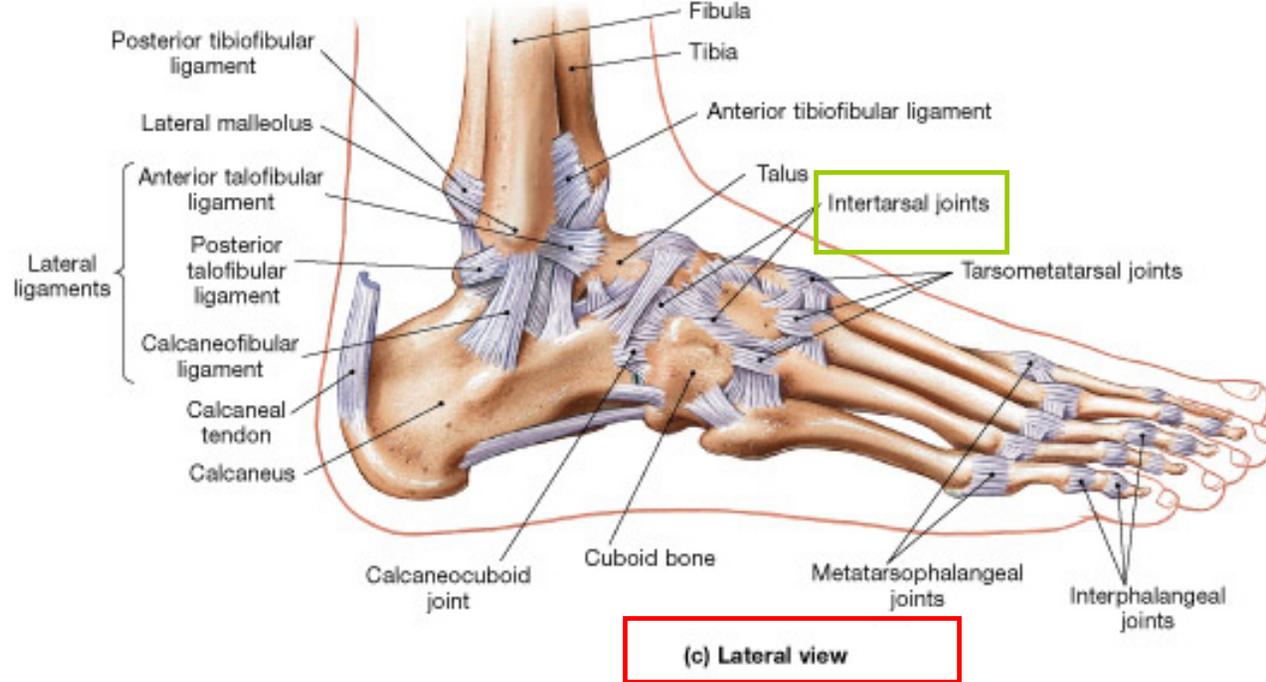
(b) Parasagittal section



Ankle joint



(a) Dorsal view



Foot