

Orthopedic Injuries Not to Miss

Primary Care Conference

11/5-11/9/25

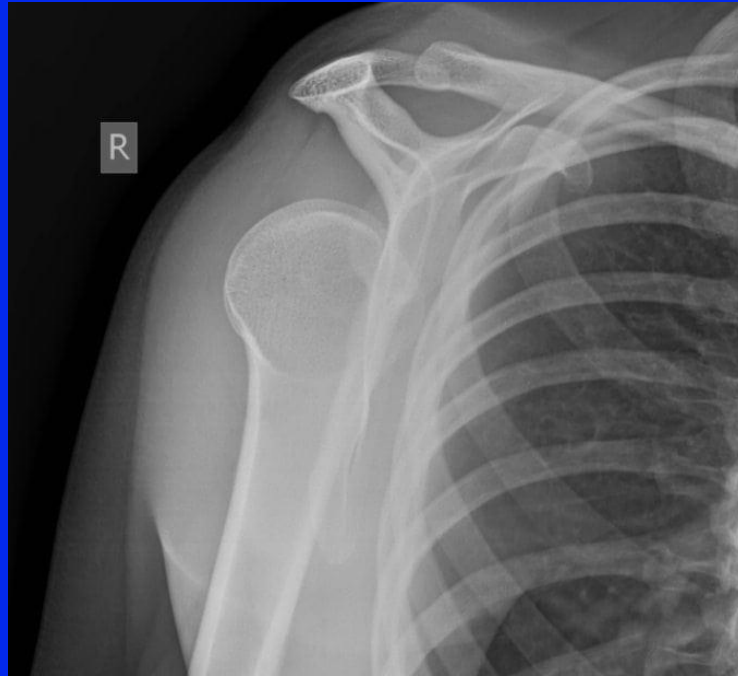
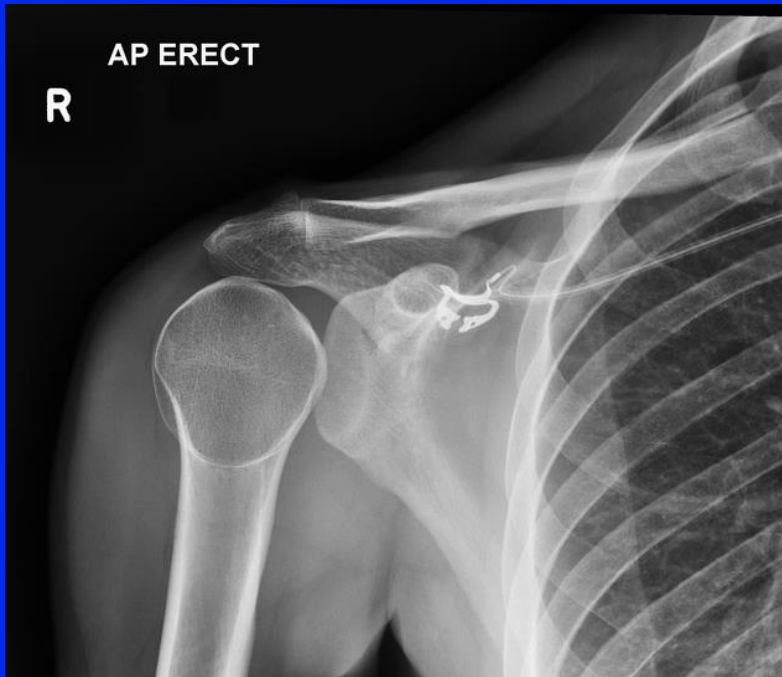
Napa, CA

Greg Maletis

Kaiser Baldwin Park

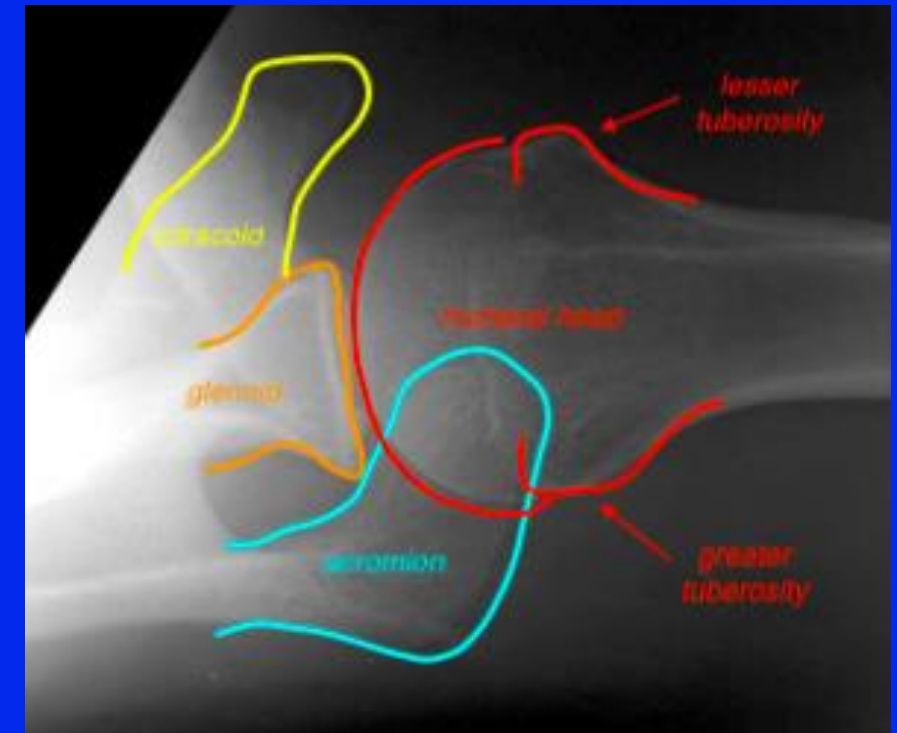
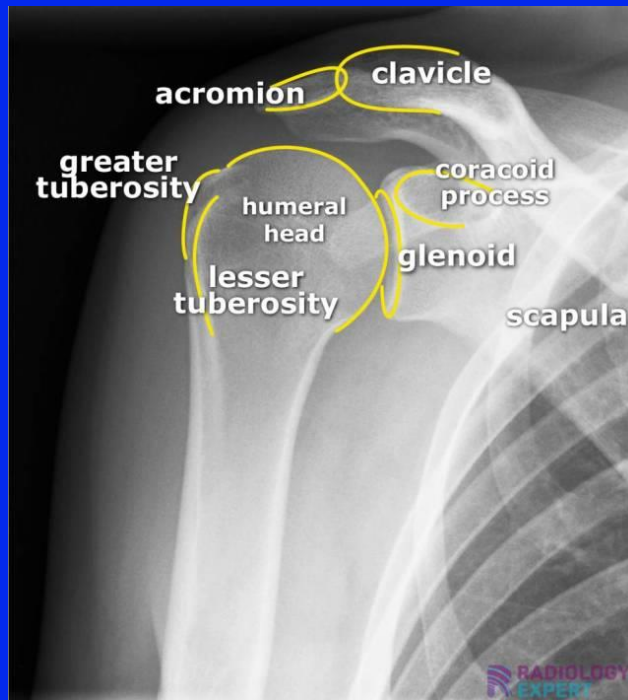
I have no disclosures

60 yo male with a 3 day history of shoulder pain and limited motion.



His wife says it seemed to start when she found him in a postictal state after a seizure

What does a normal shoulder xray look like

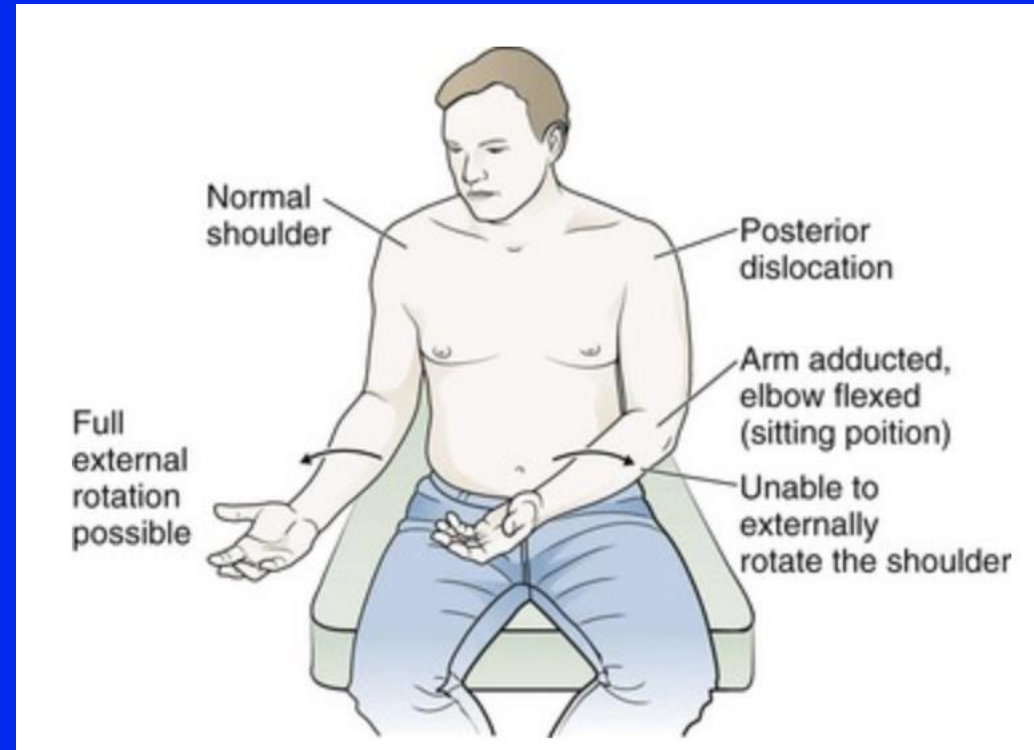


Make sure to get either a Y view or preferably an axillary view to verify the shoulder is reduced

Posterior Shoulder Dislocation

- Less common than anterior dislocation. 3-5%
- Anterior still more common with a seizure but seizures are often the cause of a posterior dislocation

50% missed in the ER



Unable to externally rotate

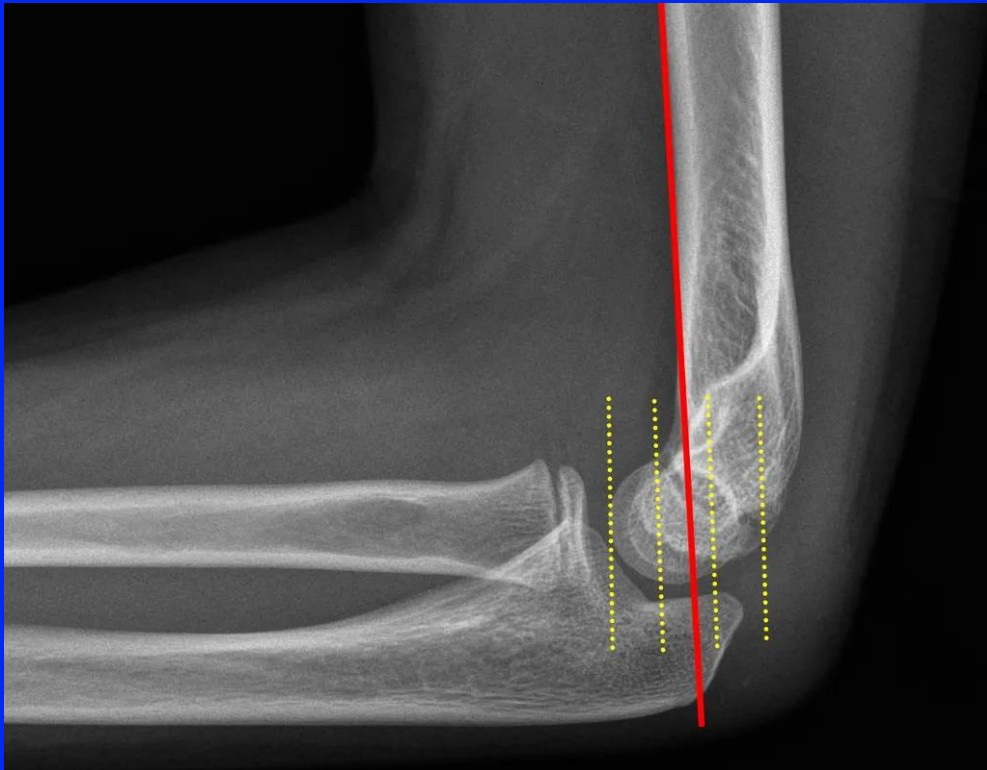
6 yo fell off the monkey bars and won't move arm



Supracondylar Humerus Fracture



What to look for on the xray



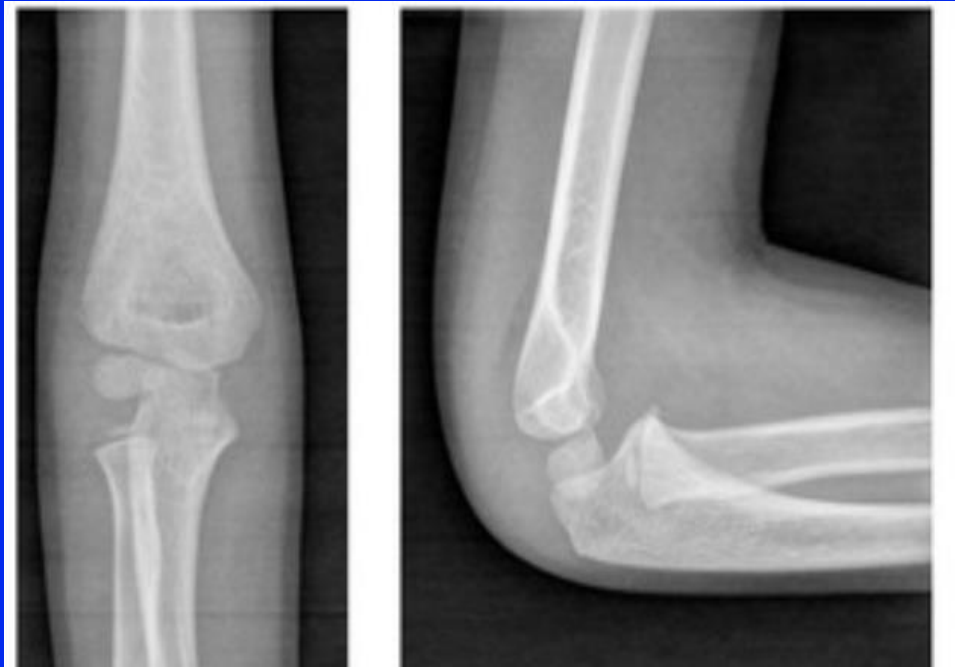
Anterior humeral line should intersect
Middle 1/3 of Capitellum



Sail sign and posterior fat pad sign
suggest fracture



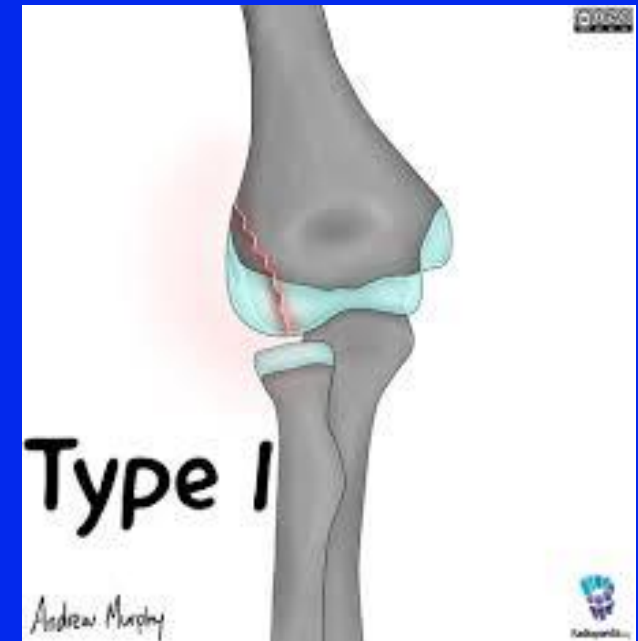
Lateral Epicondyle Fracture



AP and Lateral may look normal

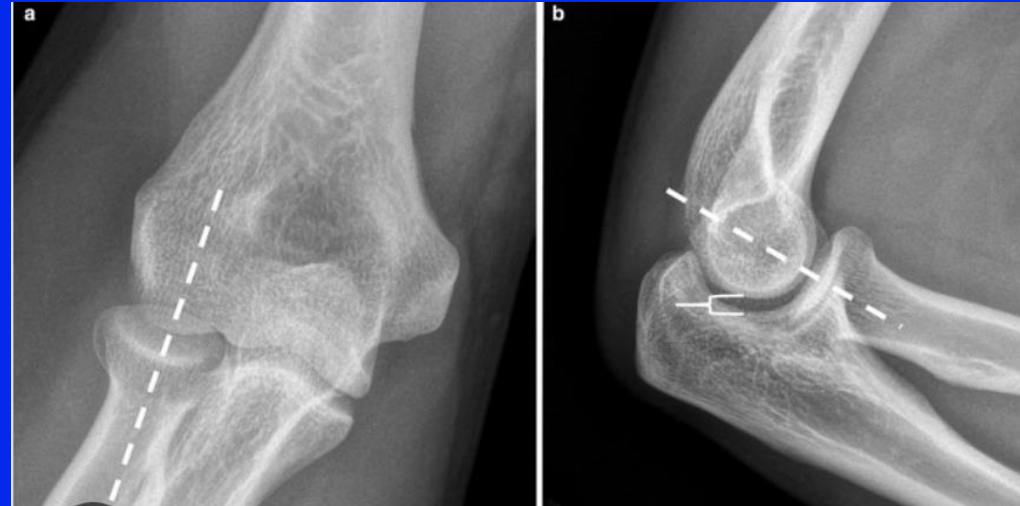
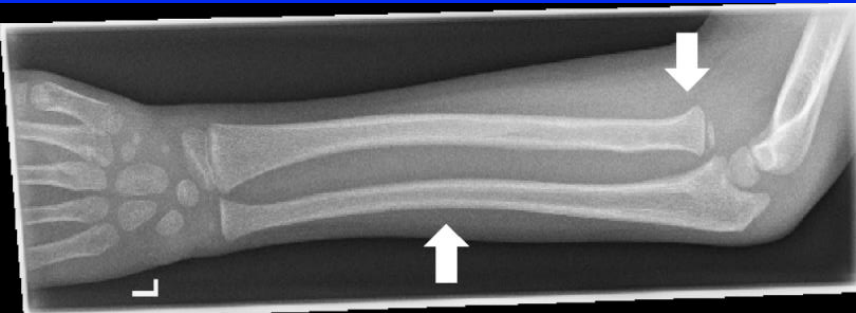


Internal oblique view tells the story



Other Fracture Variants

- Monteggia



Xray the joints above and below a fracture

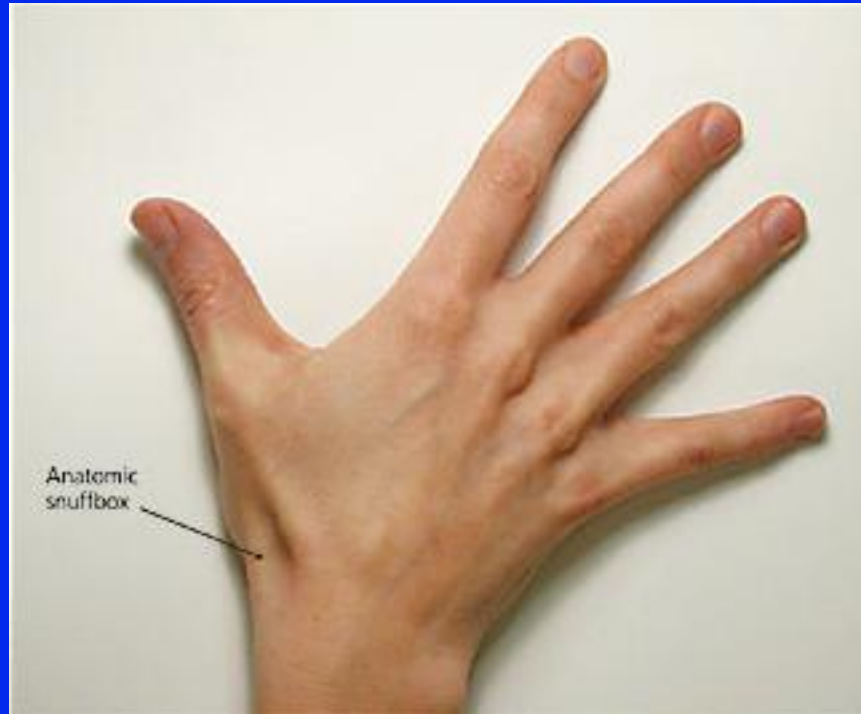
Radial Head should always point towards the Capitellum

In children plastic deformation is like a fracture

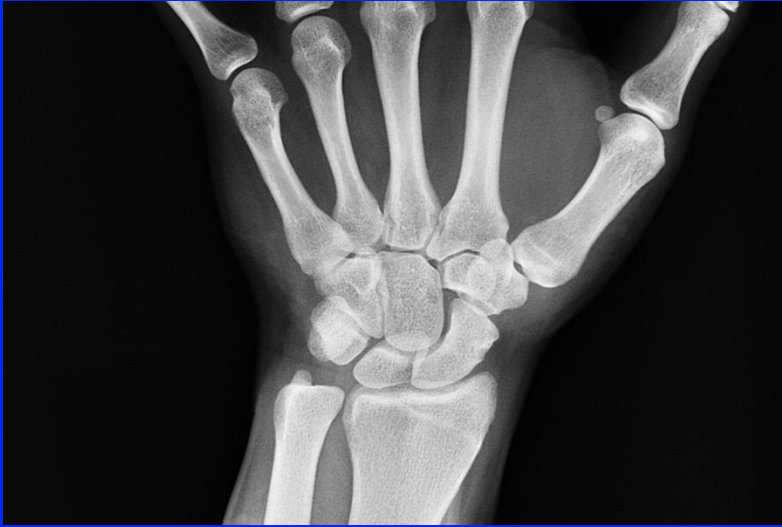
18 yo falls of a skateboard and lands on outstretched hand



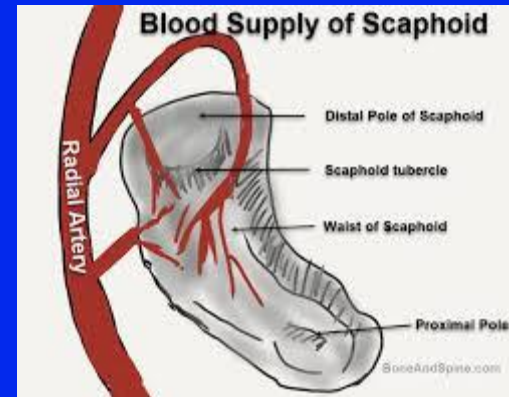
What else to consider



Scaphoid Fracture



Missed scaphoid fractures can go on to develop arthritis



CT scan can help in cases where a fracture is not obvious



Scaphoid nonunion advanced collapse
SNAC Wrist

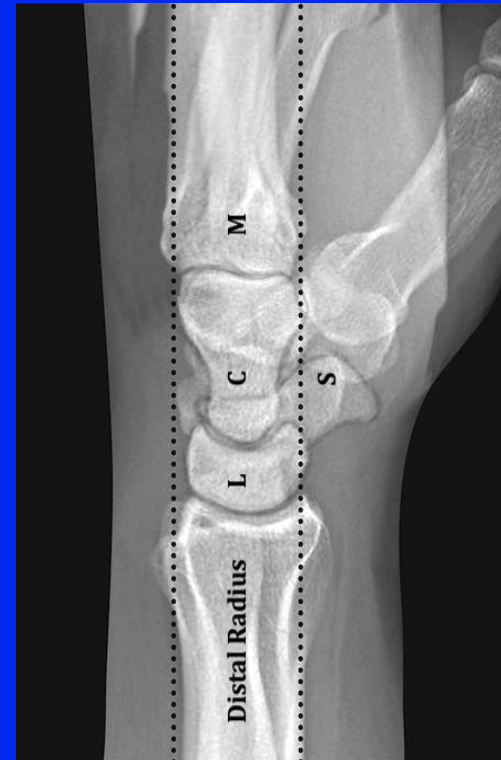
What else to consider



Perilunate Dislocation

- Significant hand swelling
- Look for alignment of Radius, Lunate, Capitate and Metacarpal

25% missed in ER



13 yo female soccer player falls while while trying to dribble around an opponent.

Exam (may be difficult early on)

Limping

Limited ROM

Able to Straight leg raise

Ligament exam can be difficult (guarding)

EFFUSION



Four things that cause early (< 3 hours) Knee Swelling

ACL Tear



Patella Dislocation

Fracture

Tendon rupture

13 yo female soccer player falls while while trying to
dribble around an opponent.

ACL Tear until proven
otherwise

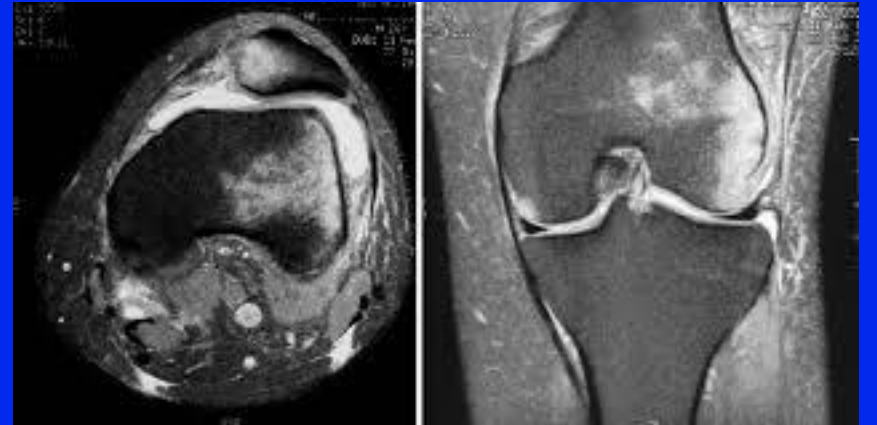


If missed further injury is likely



Bucket handle meniscal tear

Patella Dislocation



MRI shows “kissing lesion”

Small bone
avulsion



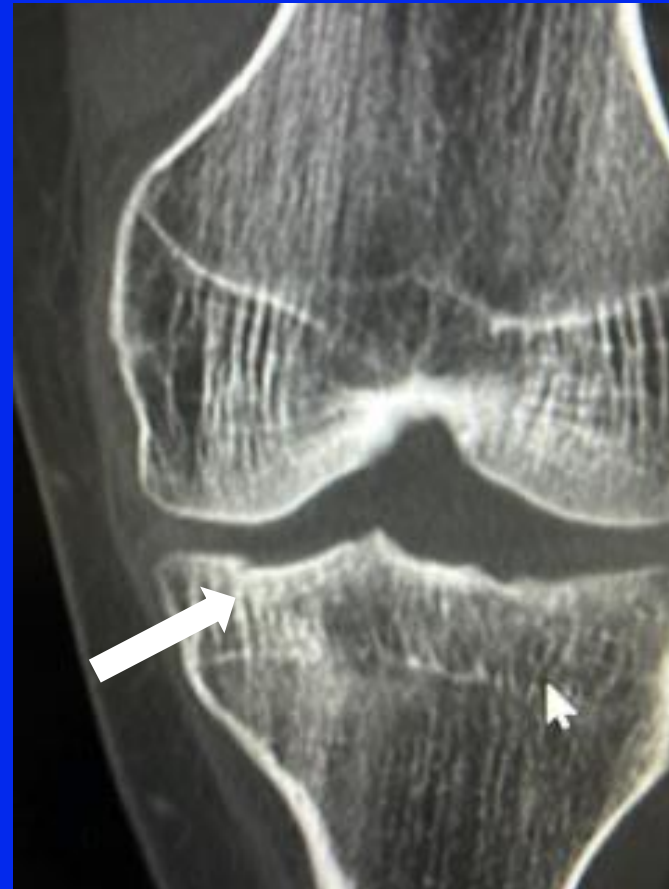
Tibial Plateau Fracture

24 yo male assaulted at a bar. Unable to weight bear
Large effusion



Tibial Plateau Fracture

If the story and exam don't fit, then keep looking



Quad or Patella Tendon Rupture

Inability to straight leg raise
Bilateral xrays at the 30 degrees flexion

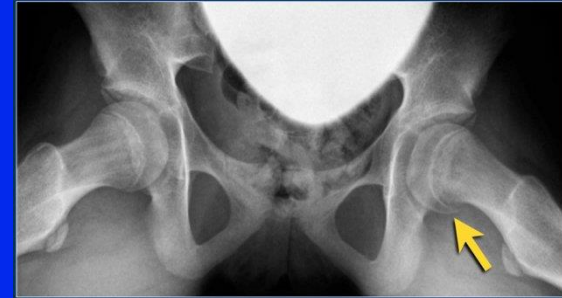
Patellar Tendon Rupture



Quad Tendon Rupture



14 yo male brought in by mother who states he has knee pain and is limping.



Slipped Capital Femoral Epiphysis (SCFE)

- SCFE Demographics
 - Males > Females
 - African American, Pacific Islanders, and Latinos
 - Ave age – Females 11-12, Males 12-13
 - Obesity is the greatest risk factor



Limited internal rotation



30 yo basketball player lands on another player's foot while coming down from a rebound



What else should you consider



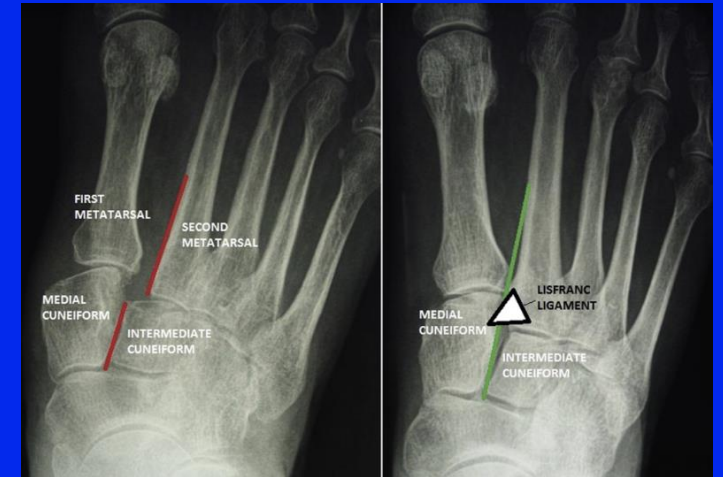
Maisonneuve Fracture

30 yo is thrown from a horse and is unable to walk



Don't forget the foot

Lisfranc fracture



Disruption of medial cuneiform
and 2nd metatarsal joint

40 y.o. tennis player feels a pop in the posterior leg

Location of pain

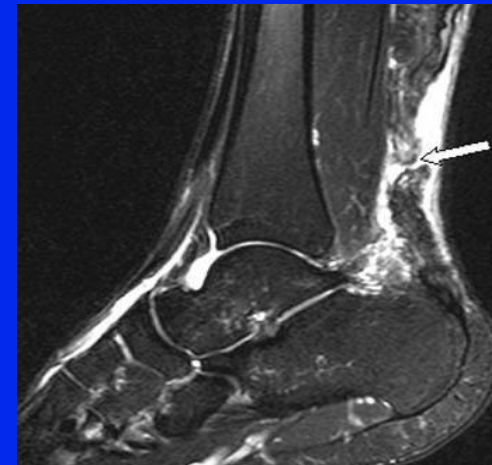


Achilles Tendon Rupture

- Most common in men 30-40
- Risk factors Fluoroquinolones and steroids

25% missed in ER

Thompson test



Take Home Message

- **Shoulder:** Get at least 2 orthogonal xray views for shoulders
- **Elbow:** Make sure the anterior humeral line intersects the capitellum and the radial head points to the capitellum. Use the other elbow for a comparison xray.
- **Wrist:** Look at the carpal bones not just the radius and ulna
- **Knee:** If there was a sports injury or trauma with an effusion it is something serious. Don't forget the hip in adolescents.
- **Ankle:** If there is displacement of the ankle without a fracture look above. If there is swelling or tenderness at the foot get xrays or a CT scan.
- **Calf:** Thompson test rules out an Achilles tear.
- **If there is significant swelling or effusion but normal xrays keep looking**

Thank You