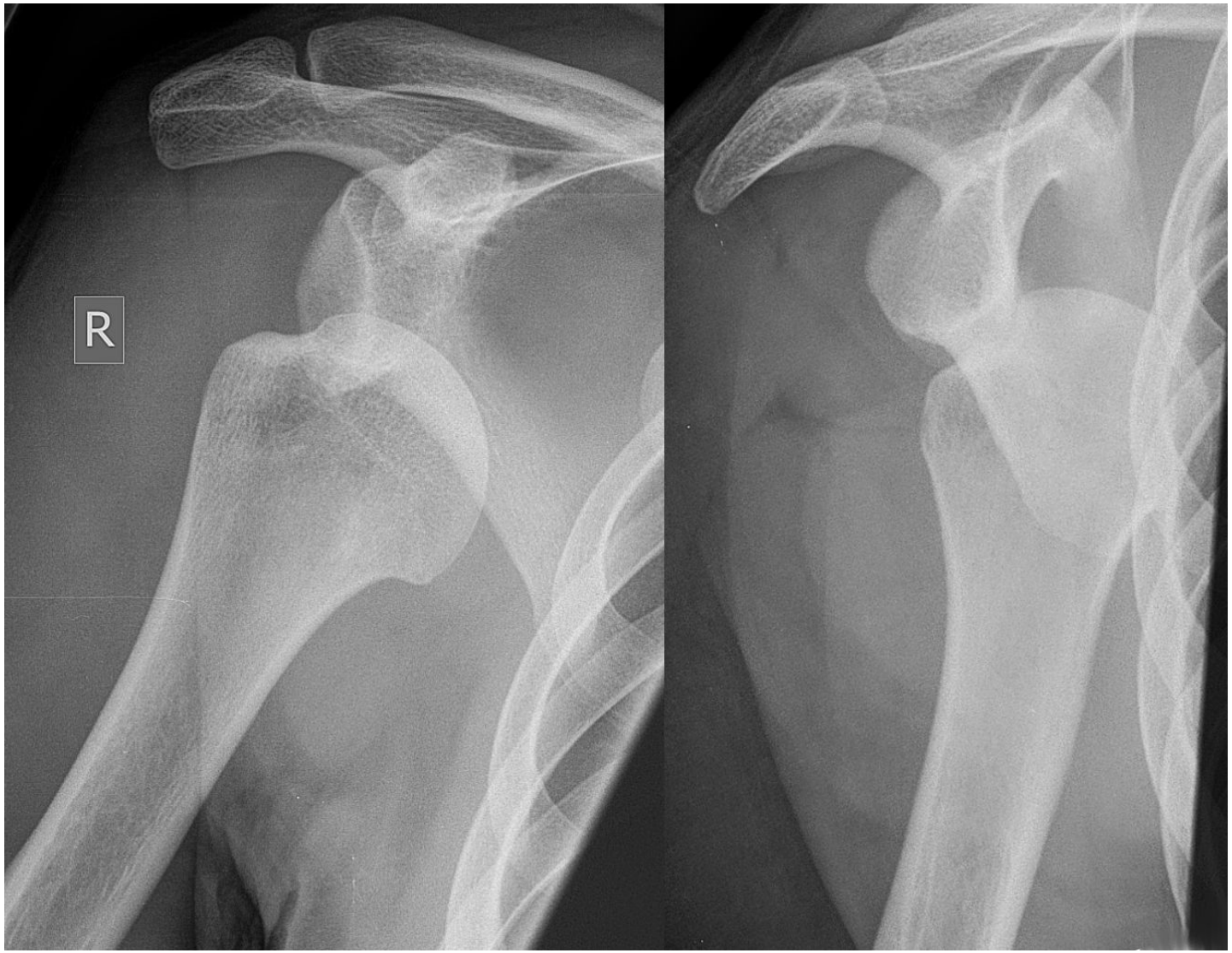
MUSCKELOSKELAT IMAGING III

Shoulder dislocation

- Most commonly anterior.
- The humeral head is dislocated from the glenoid of the scapula and is located inferior to the coracoid process of the scapula.
- Flattening or indentation of the posterior humeral head following shoulder dislocation is known as a 'Hill-Sachs' lesion.
- Usualy associate with injury to the anterior labrum and boney glenoid (Bankarat lesion).

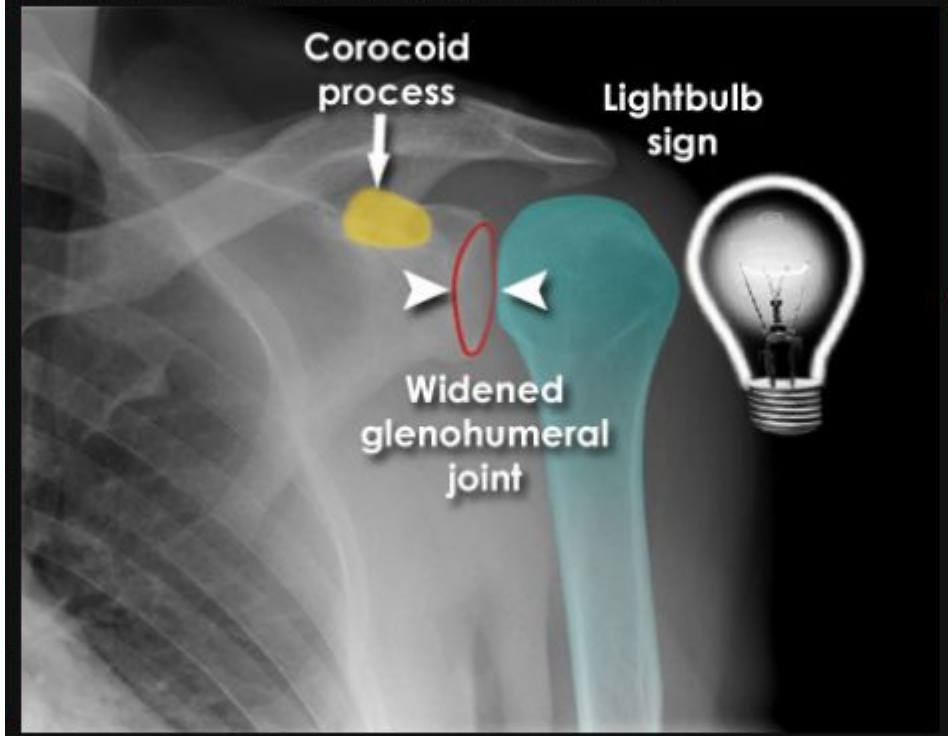
DISLOCATIONS





- Posterior dislocation.
  - The glenohumeral joint is widened (**arrowheads**) and the humeral head has taken on a more rounded 'light bulb' shape. These are typical appearances of a posterior glenohumeral dislocation.
  - High position of the humerus head in relation to glenoid.

Shoulder - Posterior dislocation - AP



Hover on/off image to show/hide findings

Shoulder - Posterior dislocation - AP

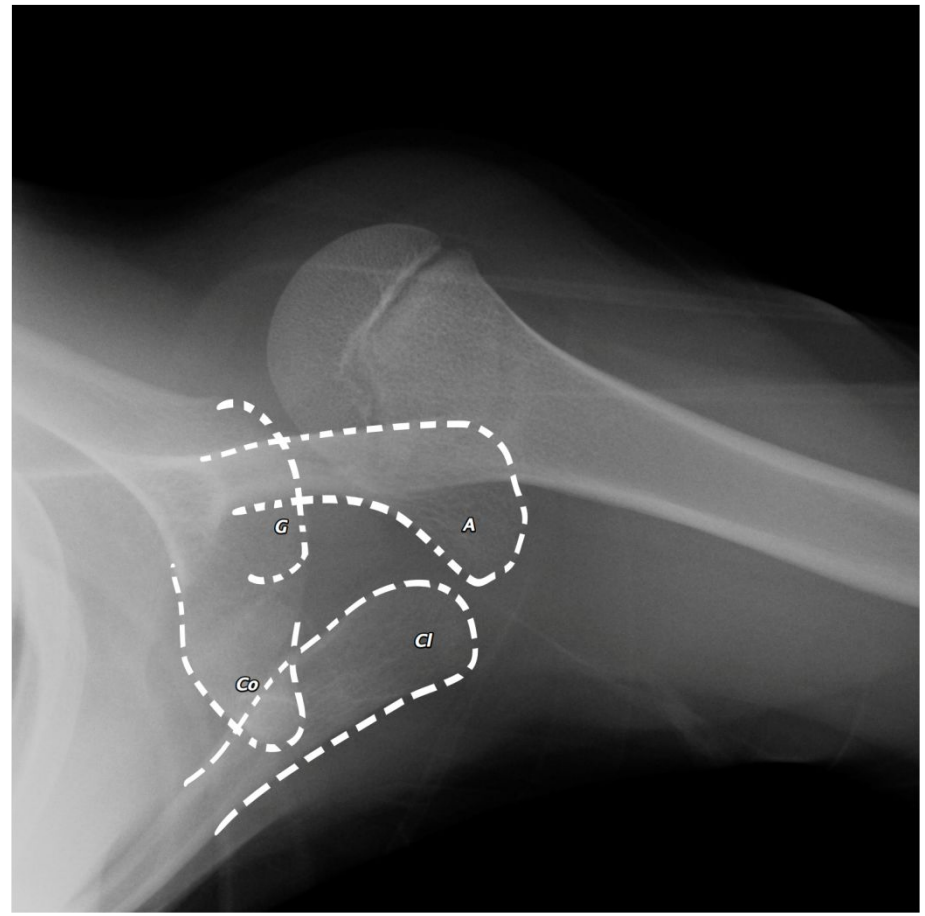
- The glenohumeral joint is widened (**arrowheads**) and the humeral head has taken on a more rounded 'light bulb' shape
- These are typical appearances of a posterior glenohumeral dislocation

Shoulder - Posterior dislocation - Y-view


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- Use AP, trans axillary and Y views for shoulder dislocation evluation.


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Hip dislocation

- Hip dislocation (dislocation of the femoral head from the acetabulum) is most frequent following total hip replacement (THR). Dislocation is usually in a posterior direction which clinically leads to leg shortening, with flexion and internal rotation at the hip (note - hip fractures usually cause external rotation).
- Hip dislocation may be accompanied by fracture of the acetabulum, or significant soft tissue injuries not visible with X-ray.
- **Standard views**
  - **Anterior-Posterior (AP) pelvis and Lateral hip**. Both views should be carefully viewed to look for an accompanying fracture of the acetabula

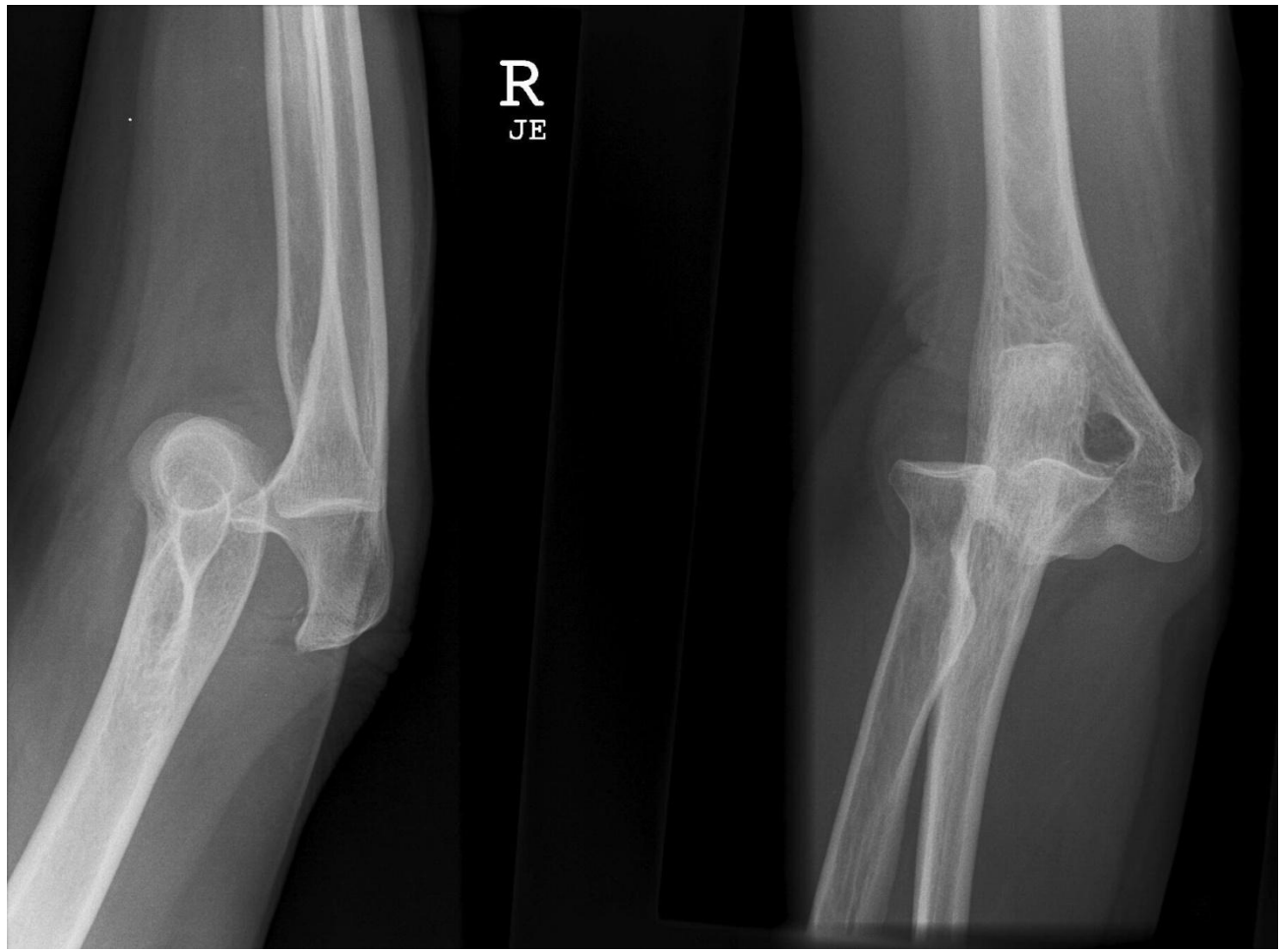

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Elbow dislocation

- Usually anterior
- If the anterior fat pad is raised away from the humerus, or if a posterior fat pad is visible between triceps and the posterior humerus, then this indicates a joint effusion. In the setting of trauma this is due to haemarthrosis (blood in the joint) secondary to a bone fracture. This is often the only X-ray sign of a bone injury.


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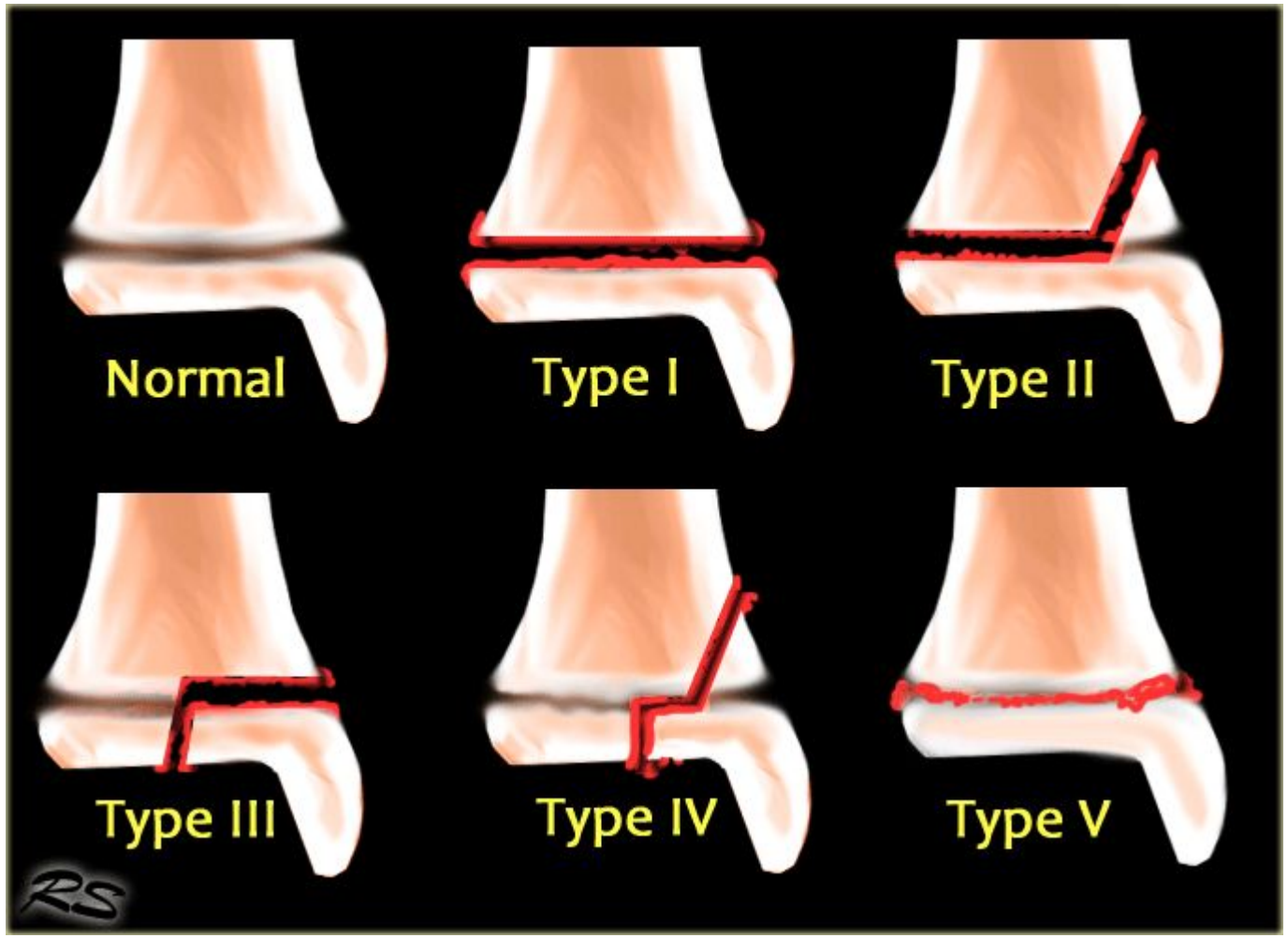
- PEDIATRICS FRACTURES



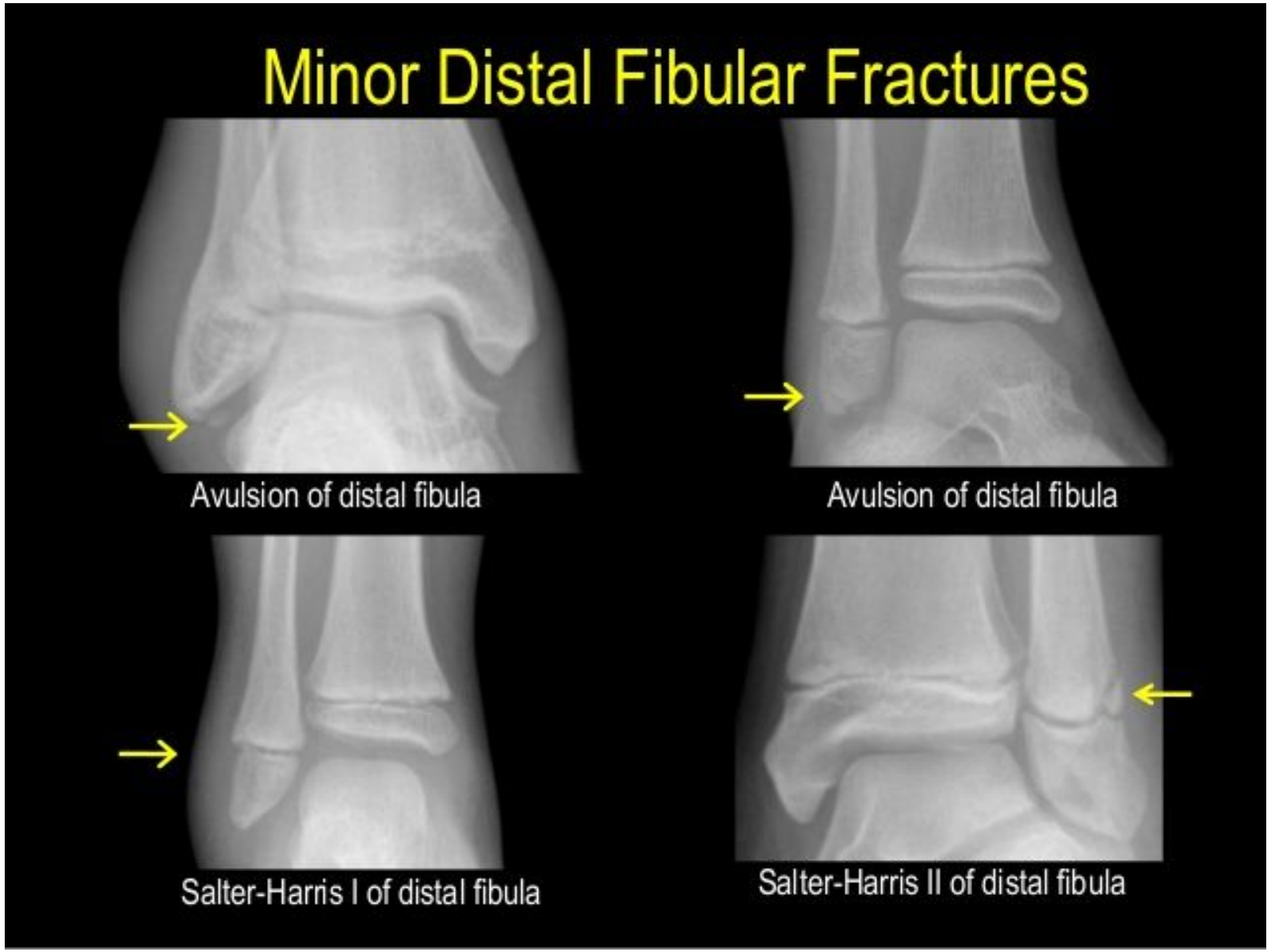

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GREEN STICK




Normal
Type I
Type II
Type III
Type IV
Type V

Minor Distal Fibular Fractures




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A



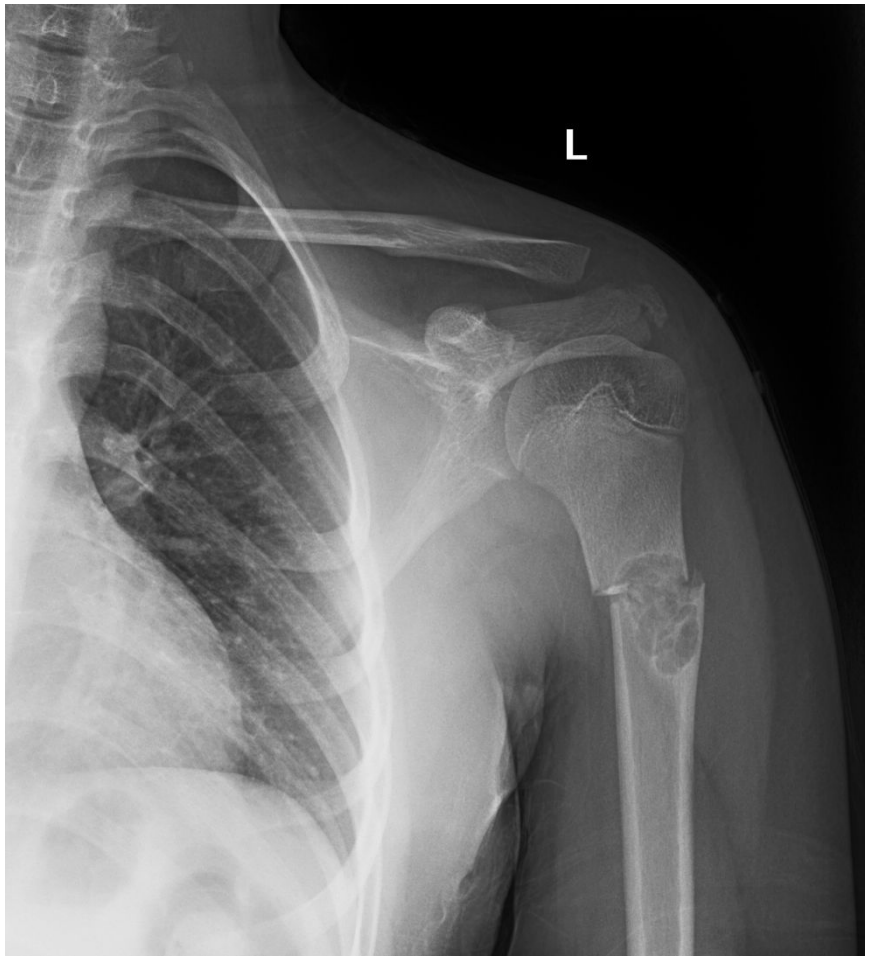
Source: Shah BR, Lucchesi M, Amodio J, Silverberg M: *Atlas of Pediatric Emergency Medicine:* www.accessemergencymedicine.com



- **Classification**
  - **By cause**
    - Traumatic fracture - This is a fracture due to sustained trauma. e.g.- Fractures caused by a fall, road traffic accident, fight etc.
    - Pathological fracture - A fracture through a bone which has been made weak by some underlying disease is called pathological fracture.
      - e.g.- a fracture through a bone weakened by metastasis. Osteoporosis is the most common cause of pathological fracture.

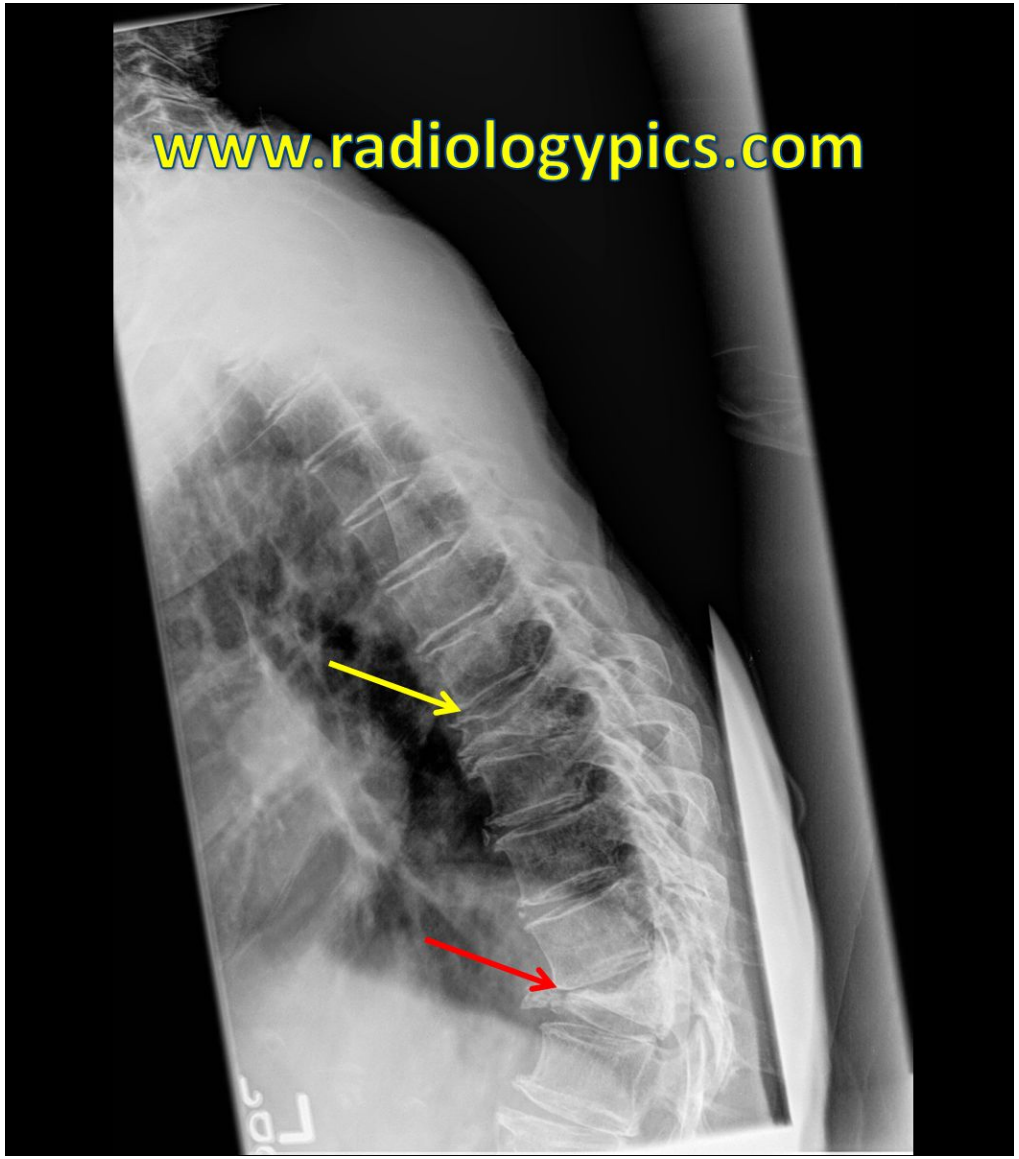



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Stress fractures

- A stress fracture is an overuse injury.
  Bone is constantly attempting to remodel and repair itself, especially when extraordinary stress is applied.
  When enough stress is placed on the bone, it causes an imbalance between osteoclastic and osteblastic activity and a stress fracture may appear.
- Stress fractures are most common in the weight-bearing bones of the lower extremity, especially the lower leg and the foot .
- Radiographs have a sensitivity of 15-35% for detecting stress fractures on initial examinations, increasing to 30-70% at follow up due to more overt bone reaction.

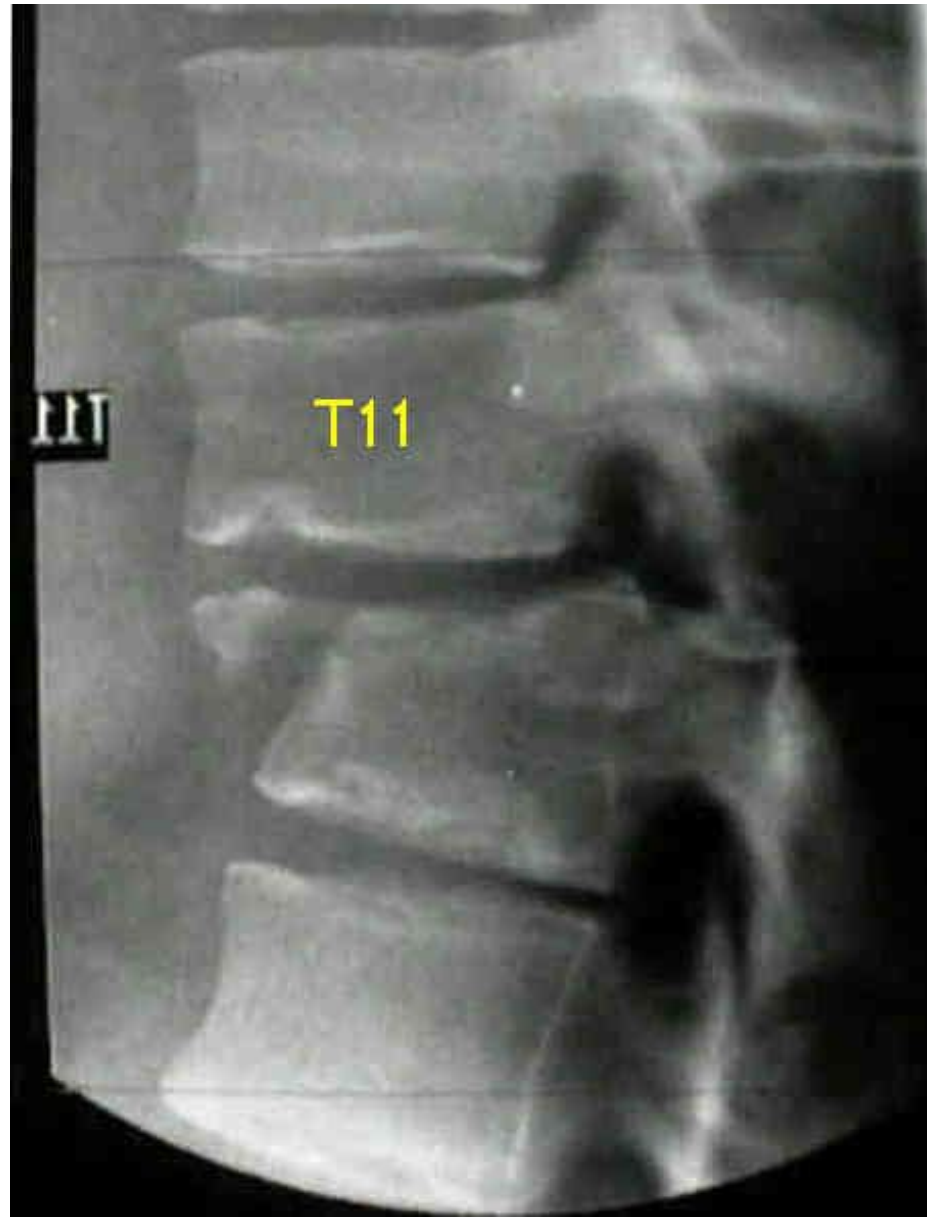


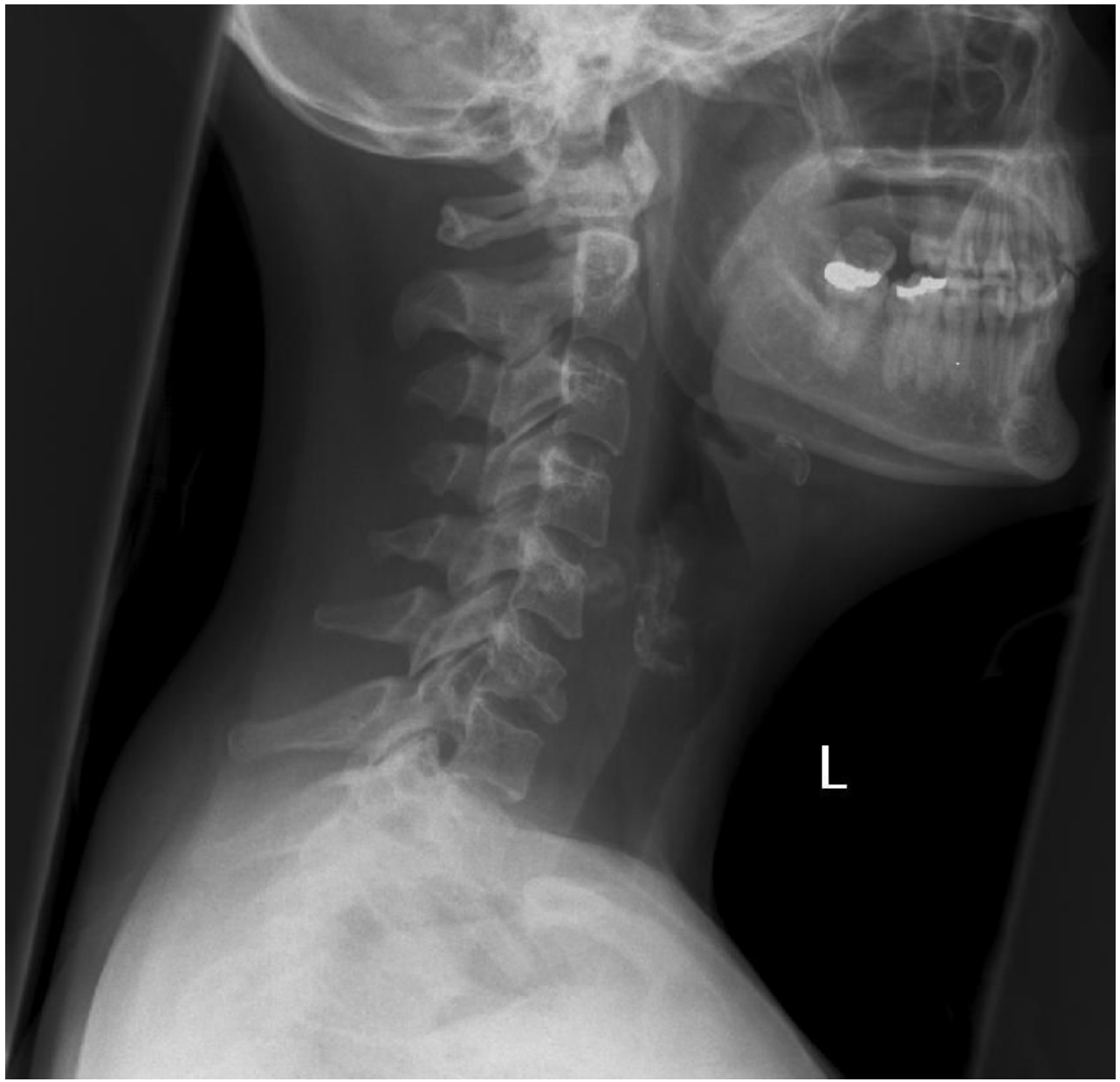




SPINE TRAUMA

- Alignment of the spin,, displacement, dislocation.
- Height of the vertebra.
- Fragments, esp. posteriorly compressing cord, posterior protrusion of bone.
- Anterior,, posterior arch invovlement.
- Soft tissue componant.
- Traumatic/pathologic fracture.

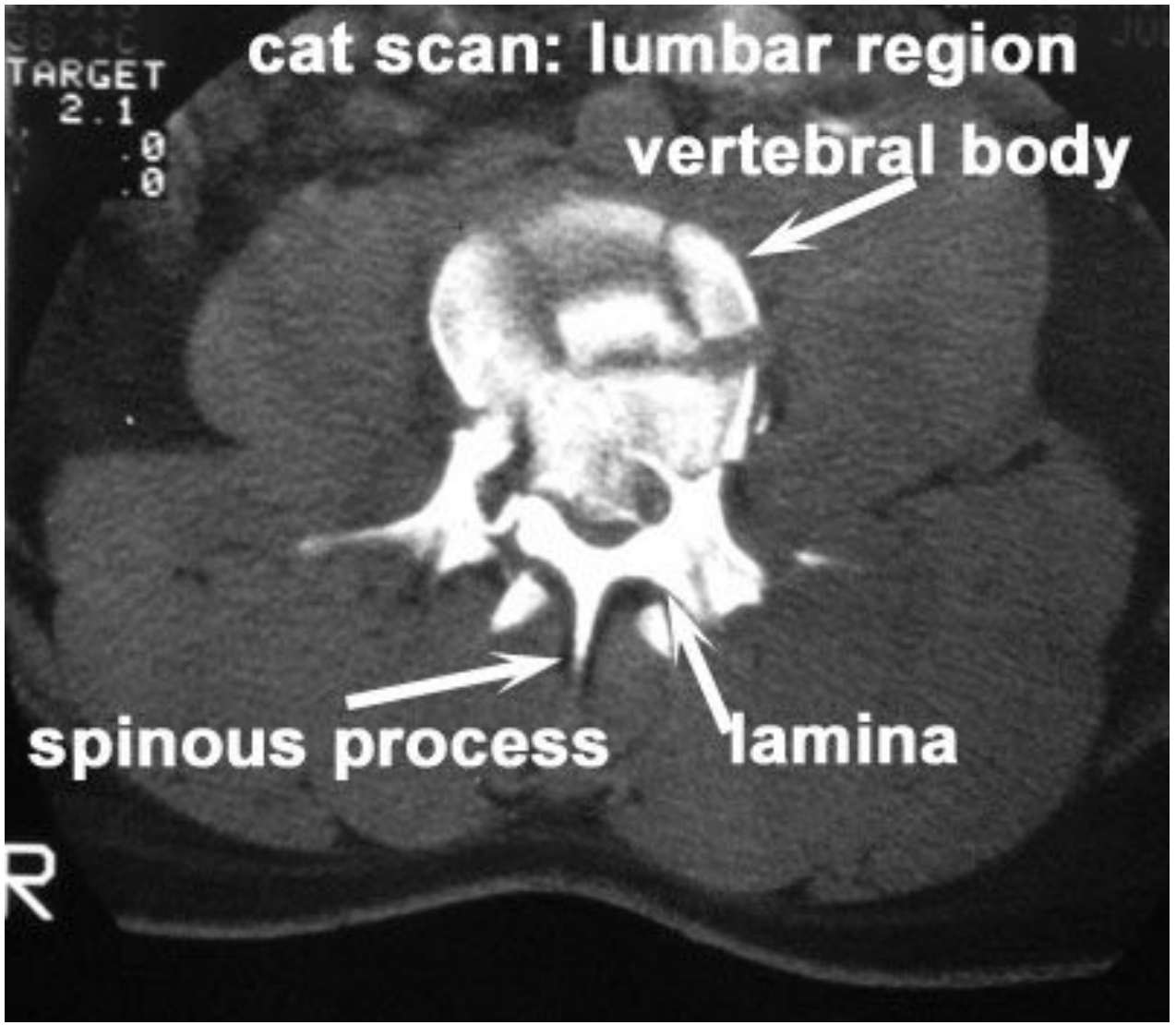

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widening of facet joint
fanning of spinous process
teardrop fracture
posterior displacement of vertebral body


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A
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Source: Neurosurg Focus © 2004 American Association of Neurological Surgeons


Front
[H]
Back
Fracture-dislocation
[F]


cat scan: lumbar region
TARGET
2.1
.0
.0
vertebral body
spinous process
lamina
R

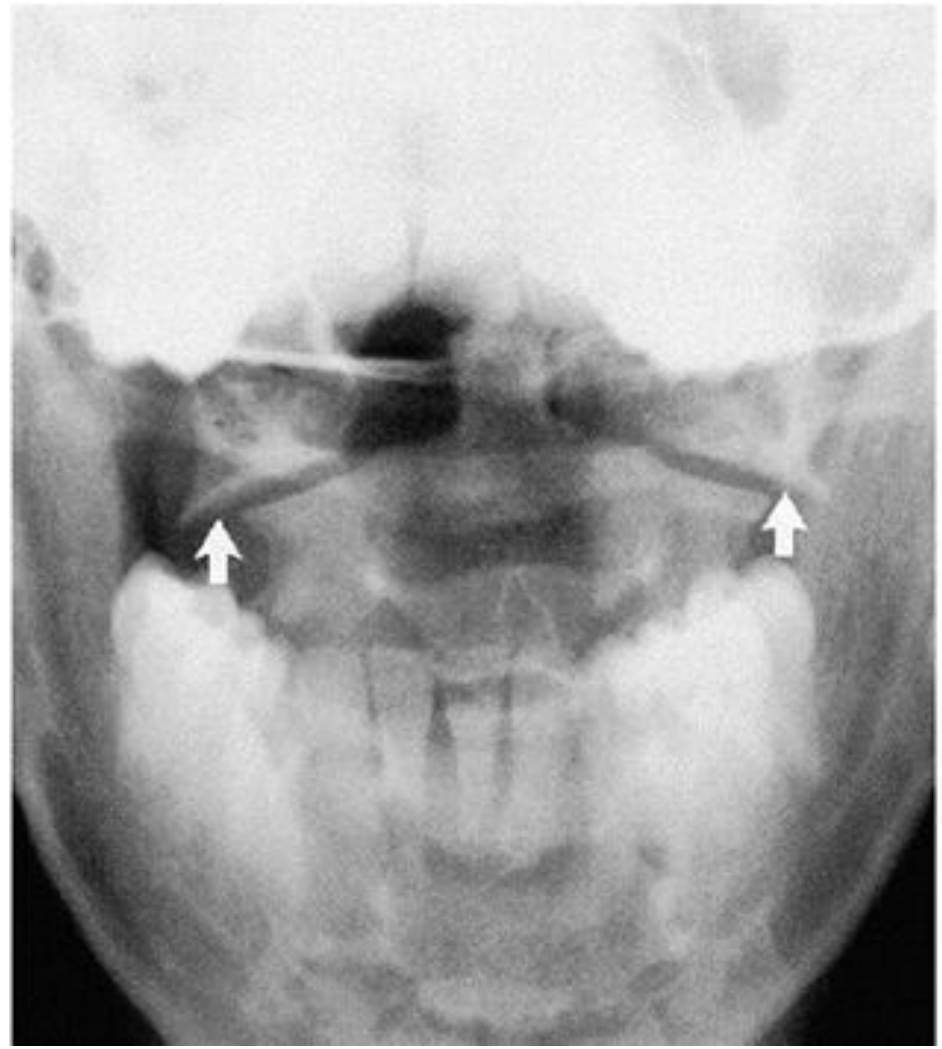
.Soft tissue injury



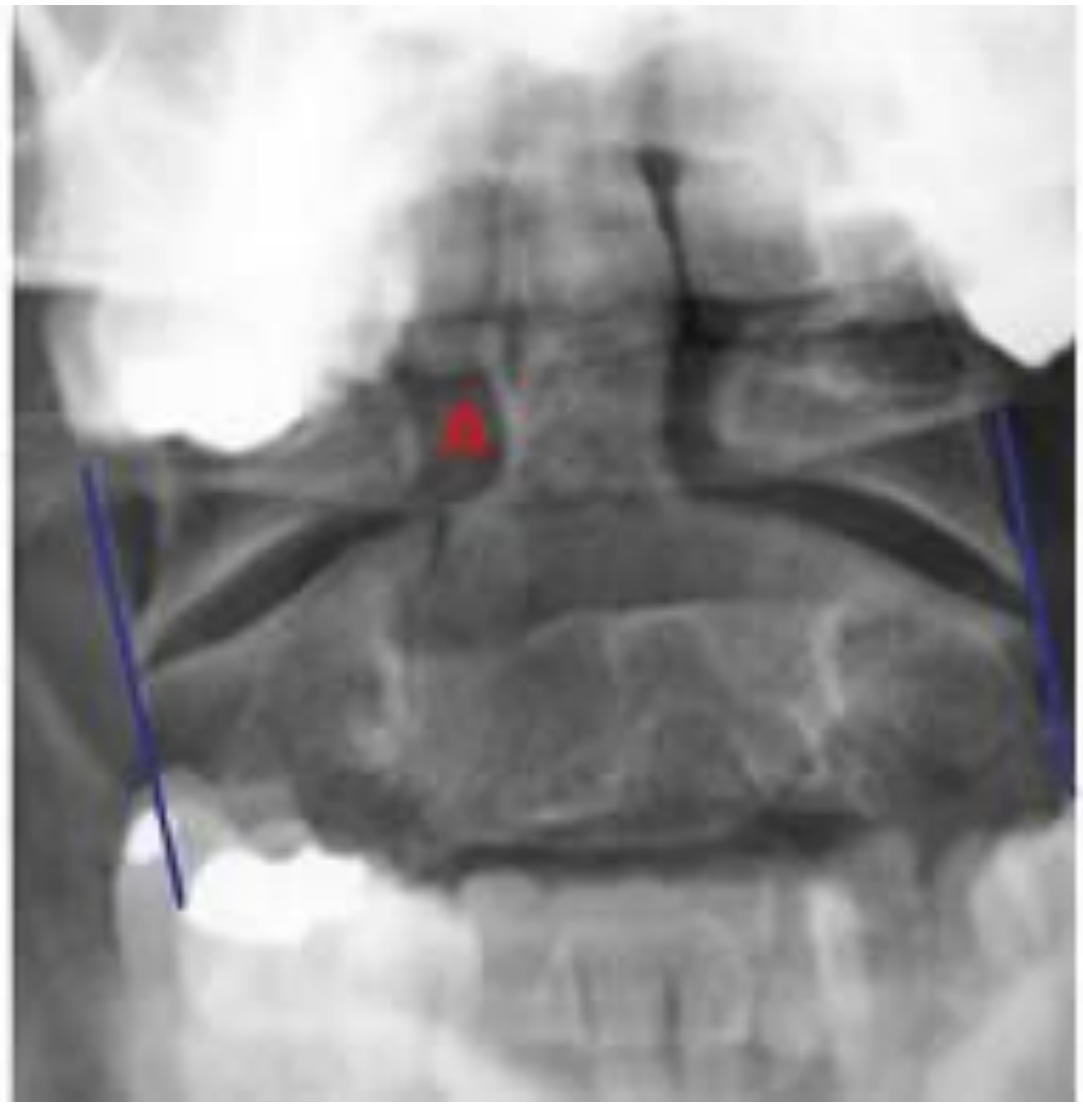









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THANK YOU FOR LISTENING