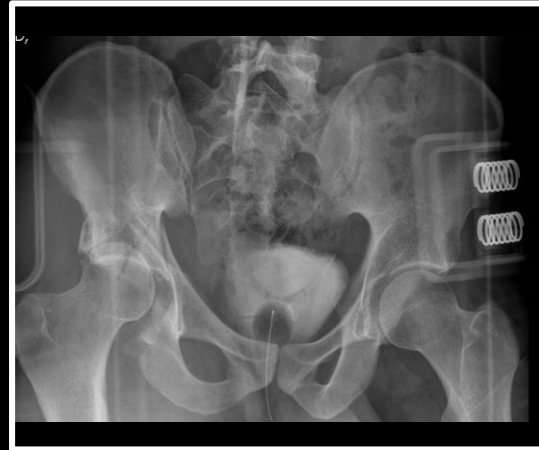


Acetabular fractures

Principles and initial management



AO trauma course –
Advanced principles of
fracture management
25-28/4-2022



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Aarhus Universitetshospital

Learning outcomes

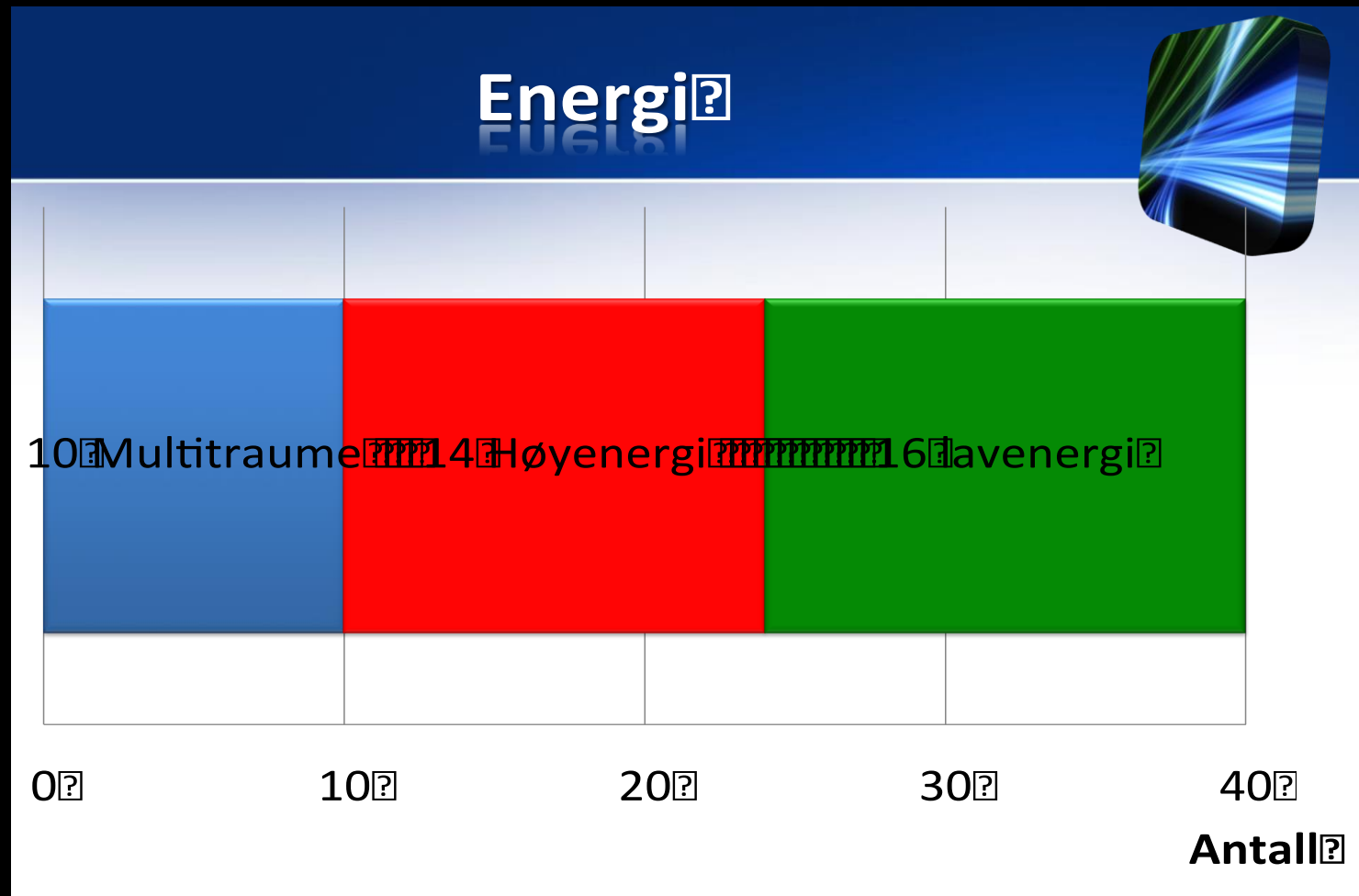
- Outline the anatomy of the acetabulum
- Interpret x-rays and CT scans of acetabular fractures
- Describe different fracture patterns
- Describe principles of management
- Cases

Patient

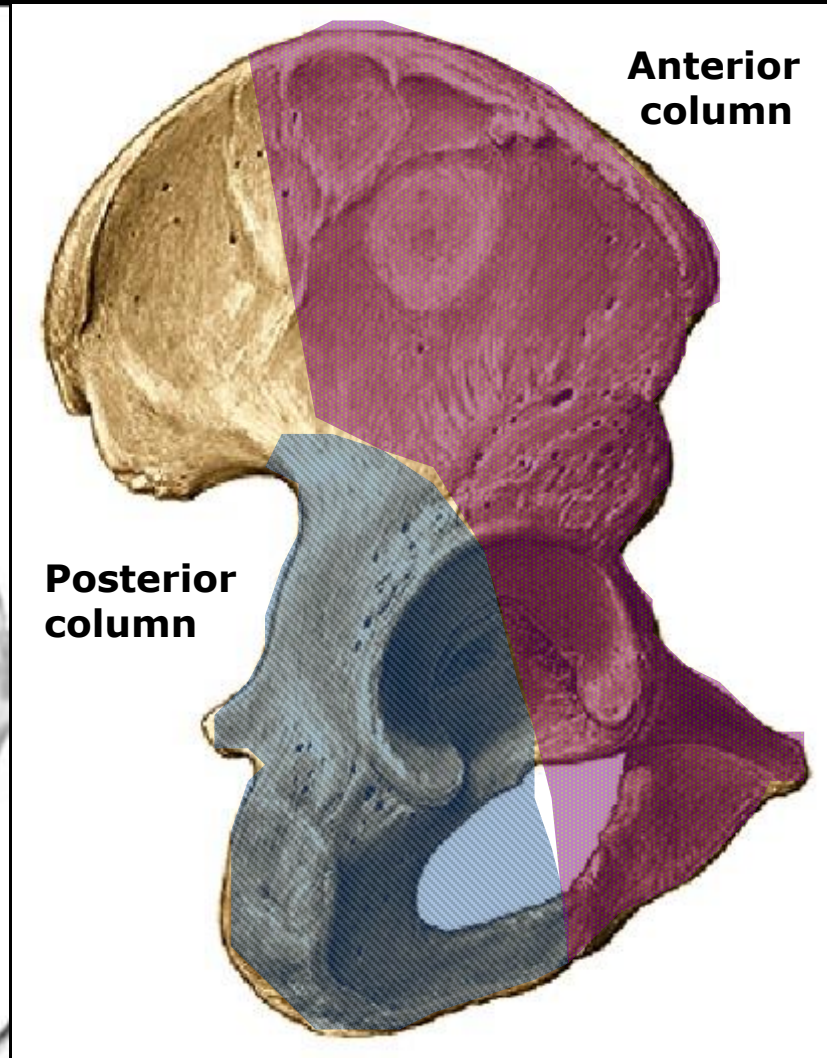
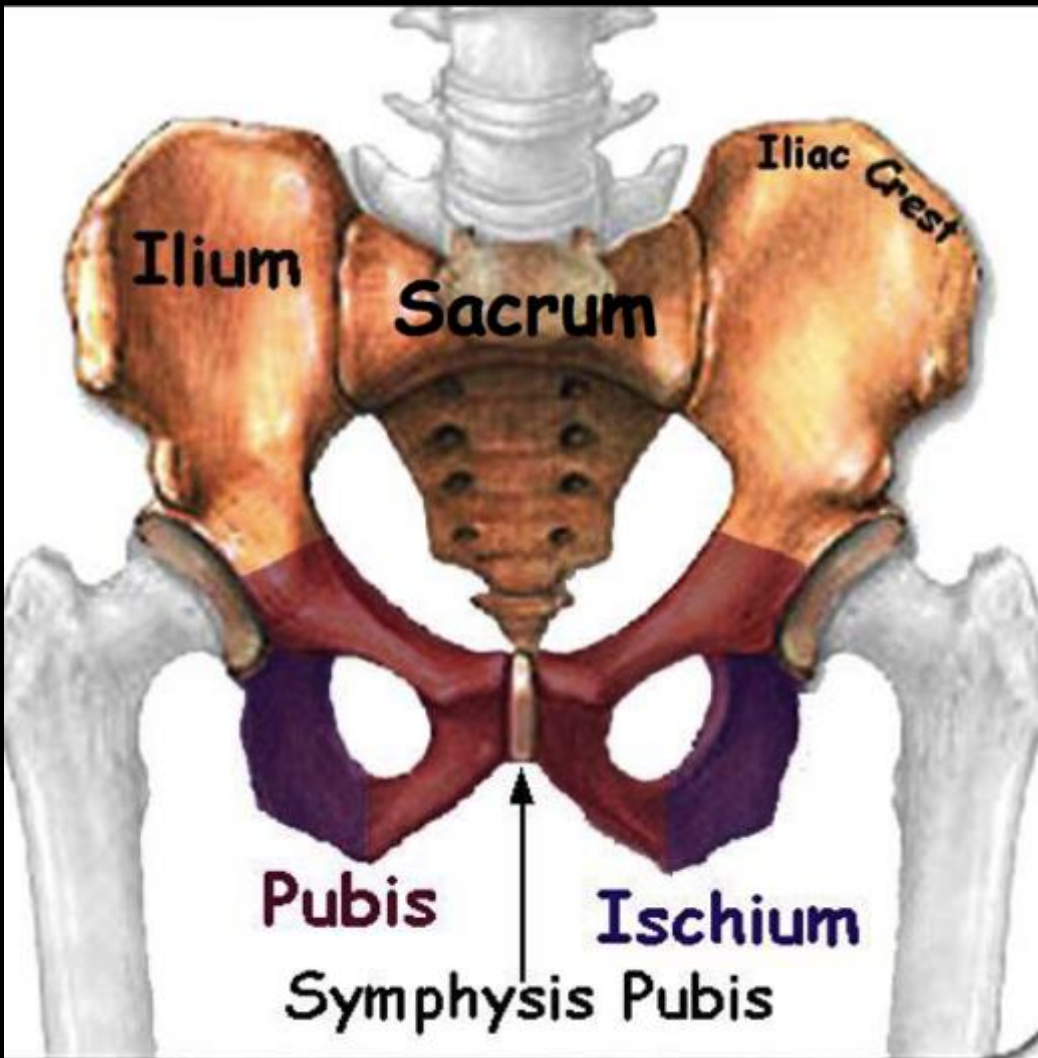
- Incidens: 10-15 pr. 100.000
≈ 20% are operated
- Young: Manly ♂, high energy fractures
- Older: Manly ♀, low energy fractures



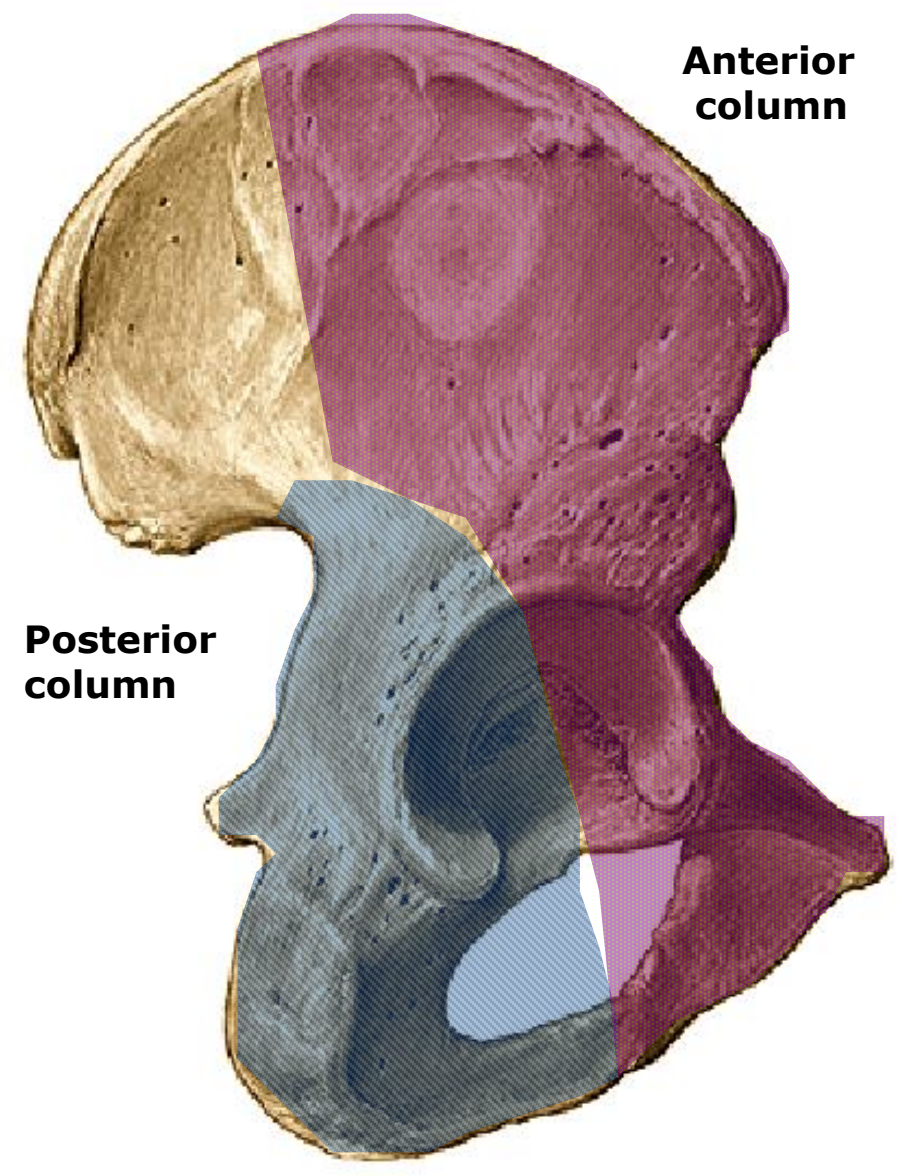
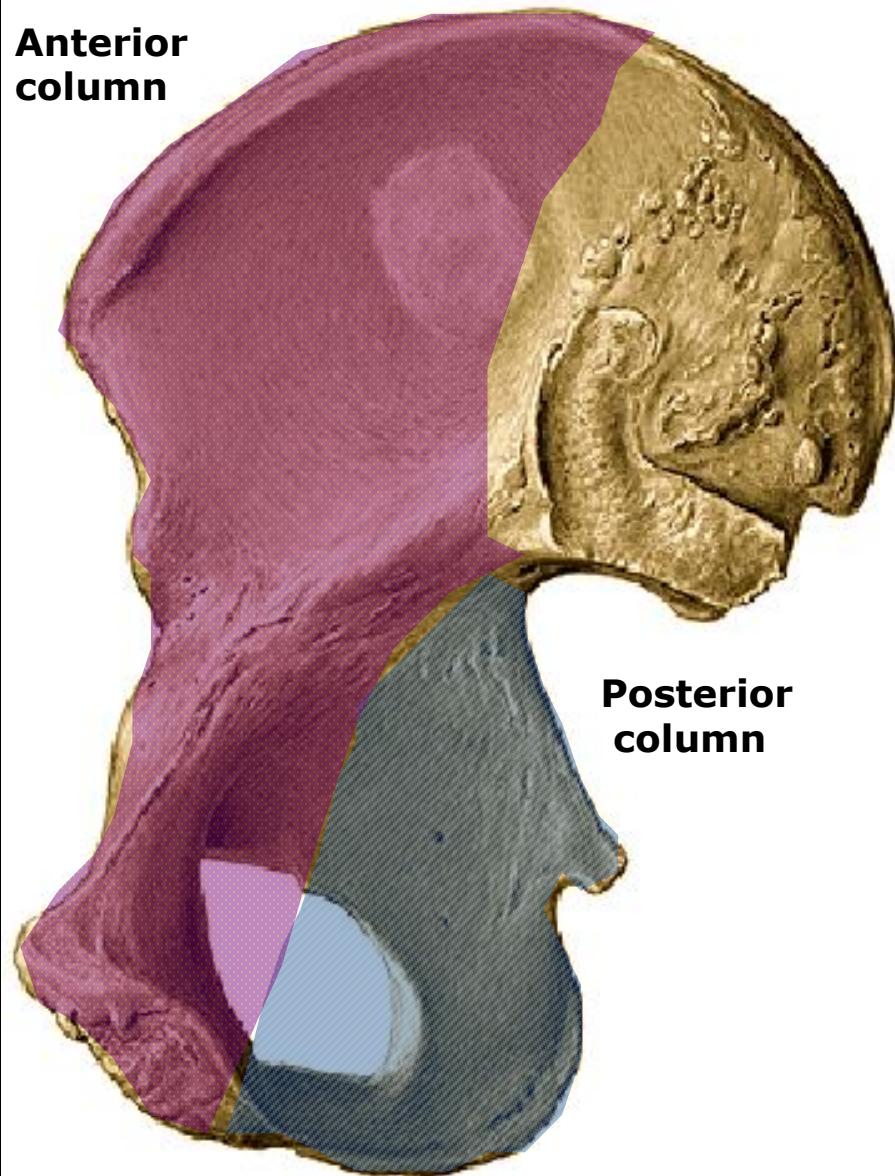
Acetabular fracture Oslo 2012



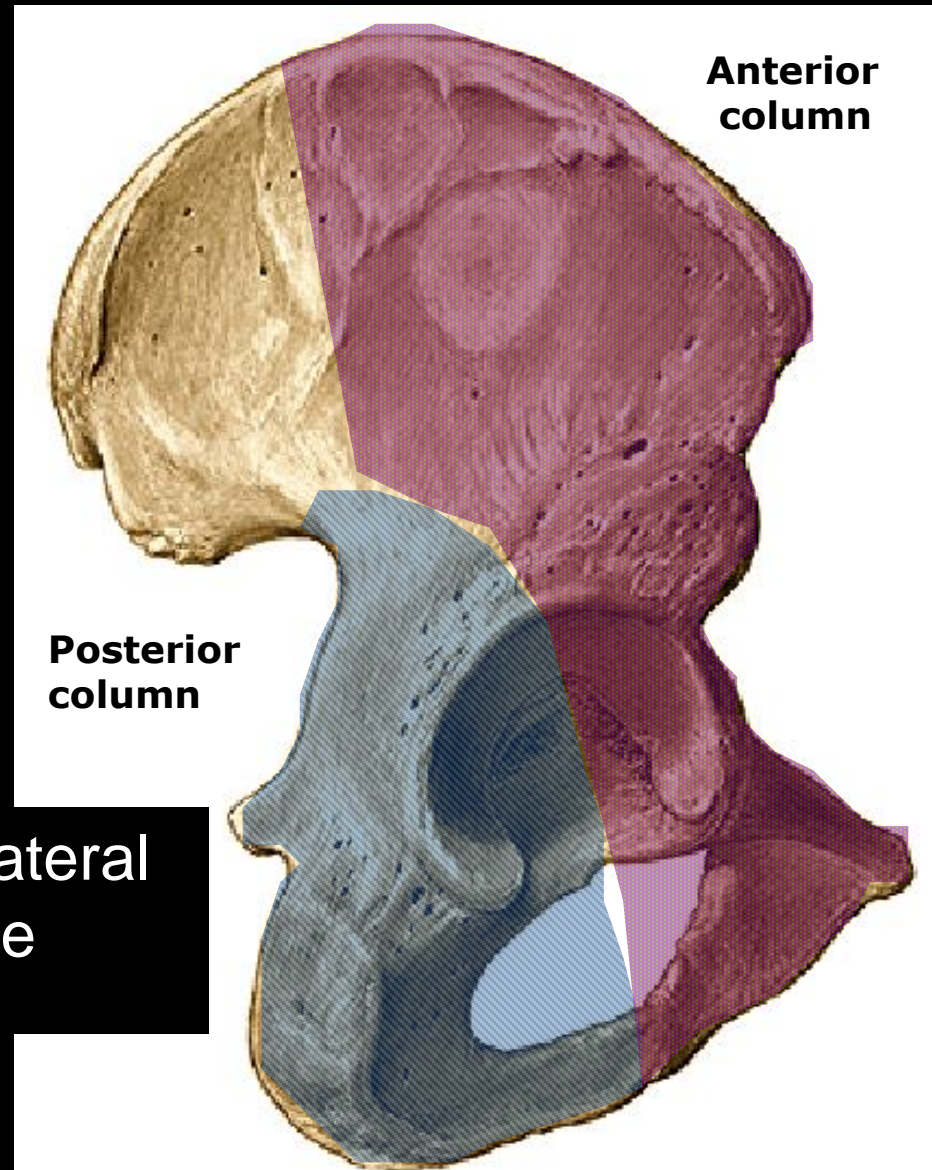
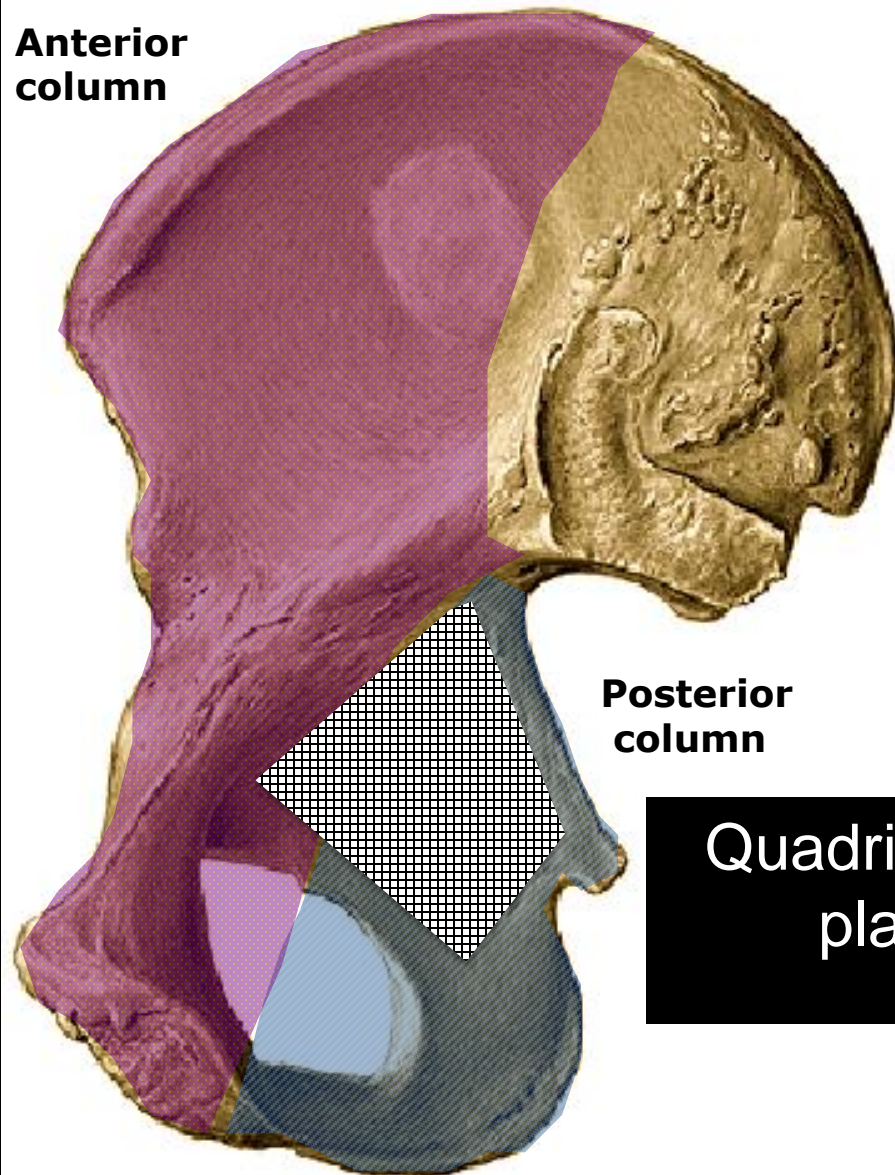
Anatomy - Acetabulum



Acetabulum - column



Acetabulum - column



Acetabulum fracture - Letournel & Judet

- Simples Fractures



Acetabulum fracture - Letournel & Judet

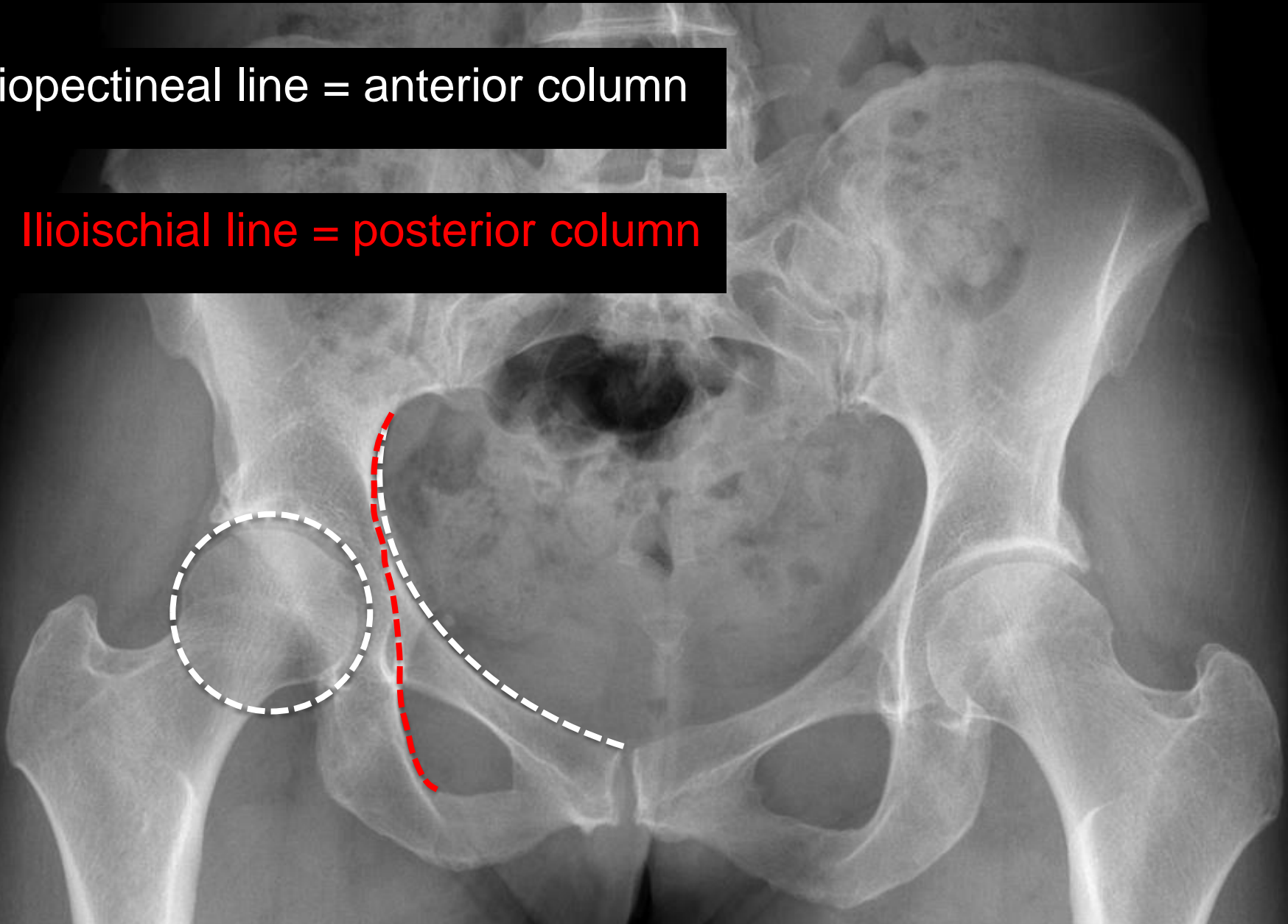
- Complex Fractures



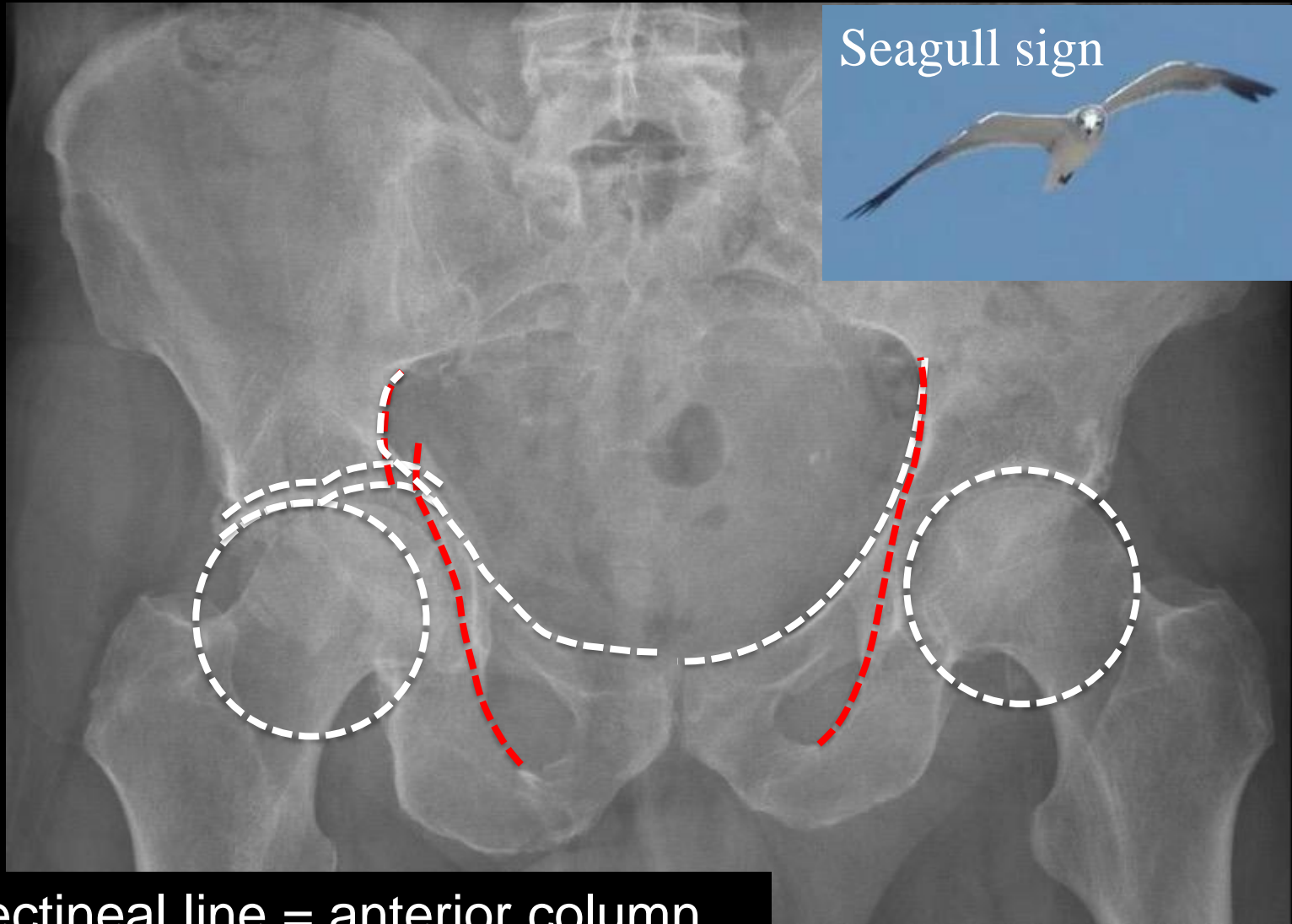
X-ray acetabulum

Iliopectineal line = anterior column

Ilioischial line = posterior column



X-ray acetabulum



Iliopectineal line = anterior column

Ilioischial line = posterior column

Initial treatment

Bleeding

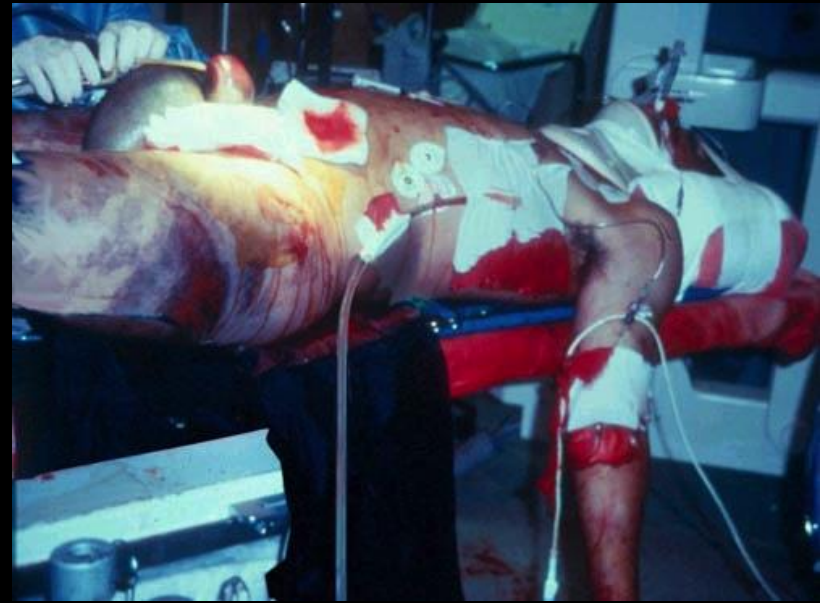


Mechanical stabilisation

- Reduce volume
- Decrease bleeding from fracture surfaces

Hemodynamic stabilisation

- Replace blood
- Control bleeding



Management

- Displaced acetabular fracture = intraarticular fracture
 - Anatomical reduction
 - Stable internal fixation
 - Early motion



Management

- Goal of surgical treatment
 - Maximize hip function
 - Decrease risk of arthrosis
 - Minimize risk of complications



Management

- Main indication for surgery

- Hip instability

- Joint incongruity



Indications for nonsurgical management

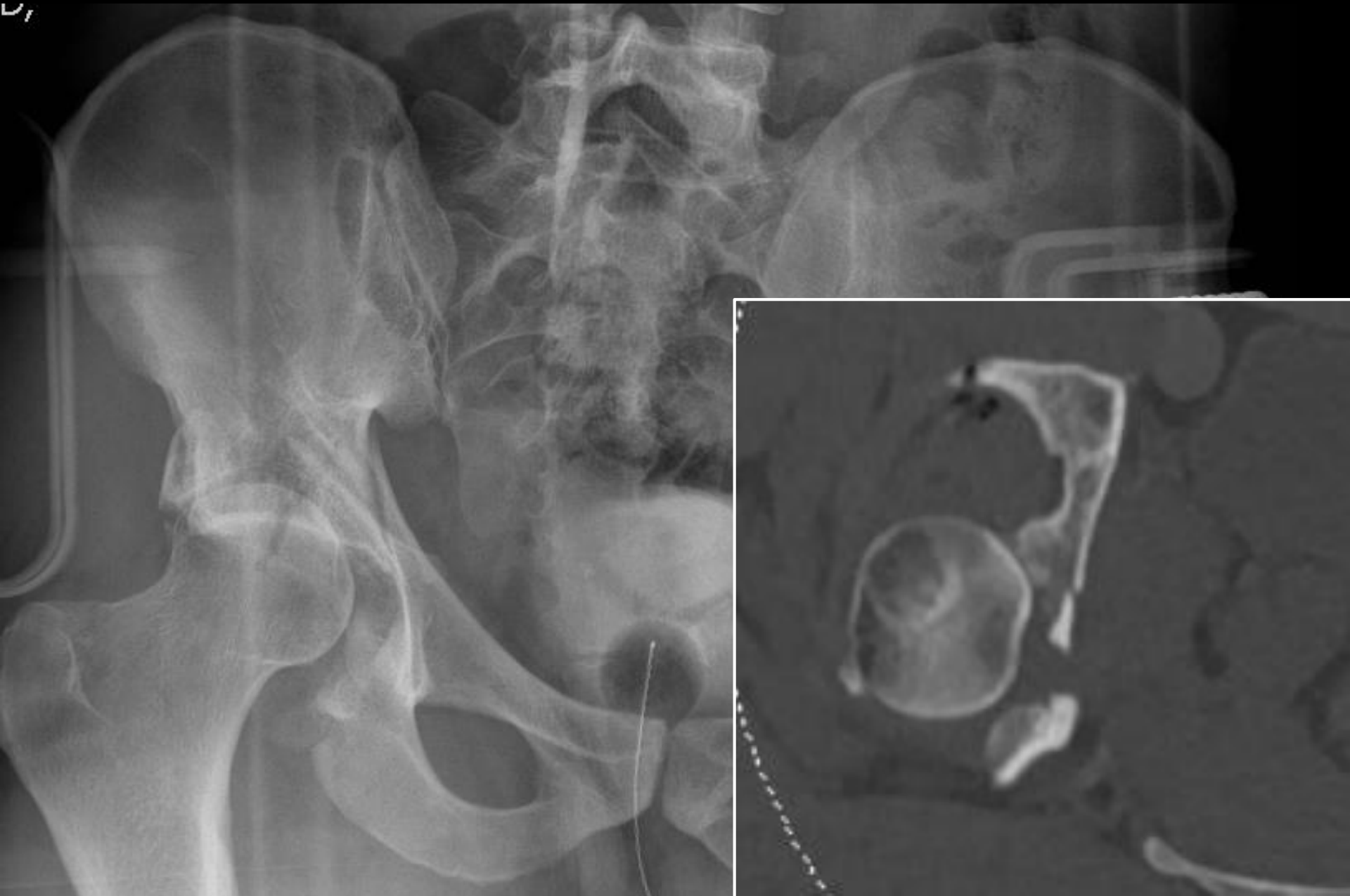
- Displacement < 2 mm
- Fracture below weight-bearing area
- Posterior wall fracture with stable hip
- Both-column fracture with secondary congruency
- Advanced medical problems



Male 22 year. Motocross accident



Male 22 year. Motocross accident

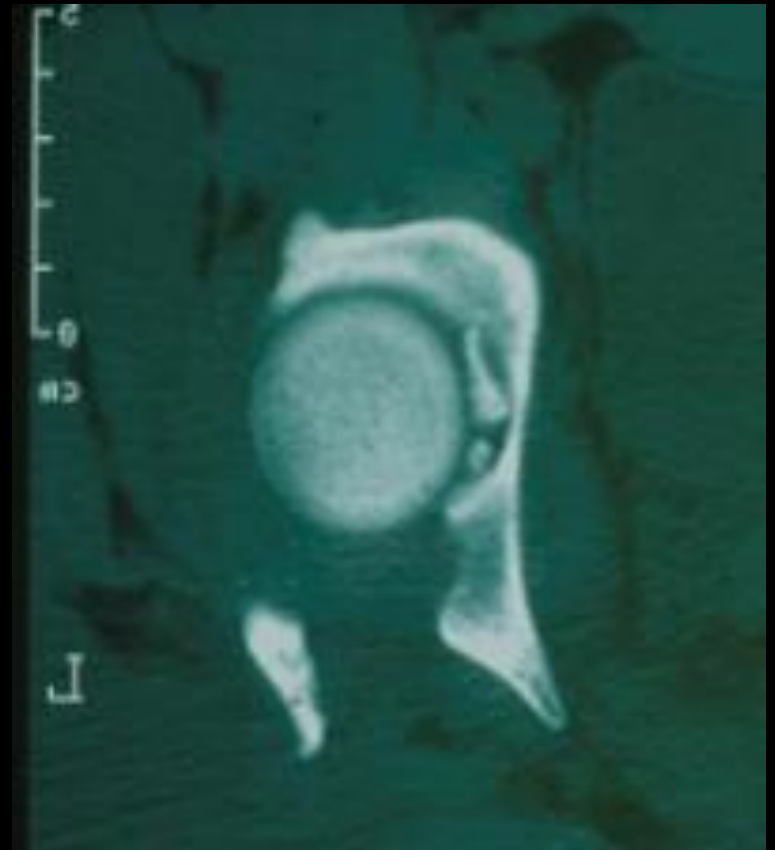
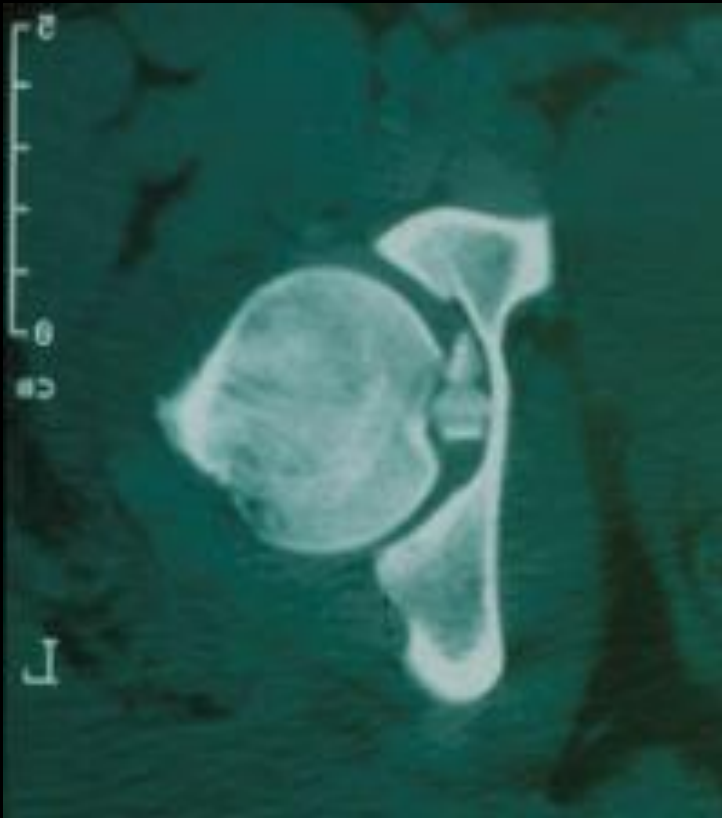


Male 22 year. Motocross accident



OBS

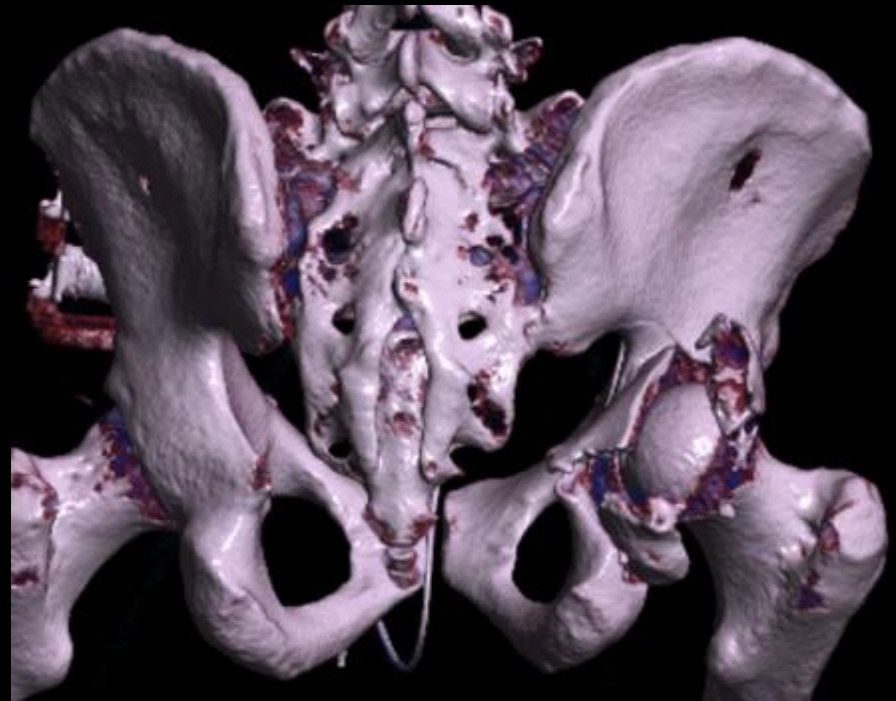
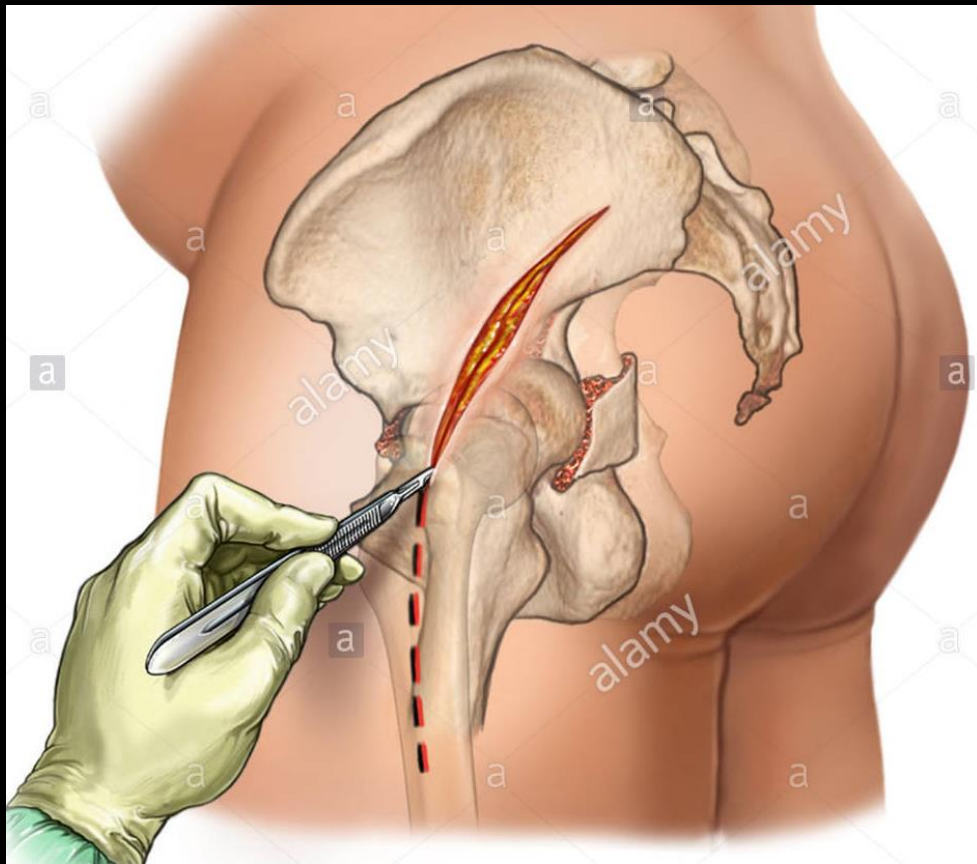
CT – Intraarticular fragments



Acetabulum fracture

Posterior wall

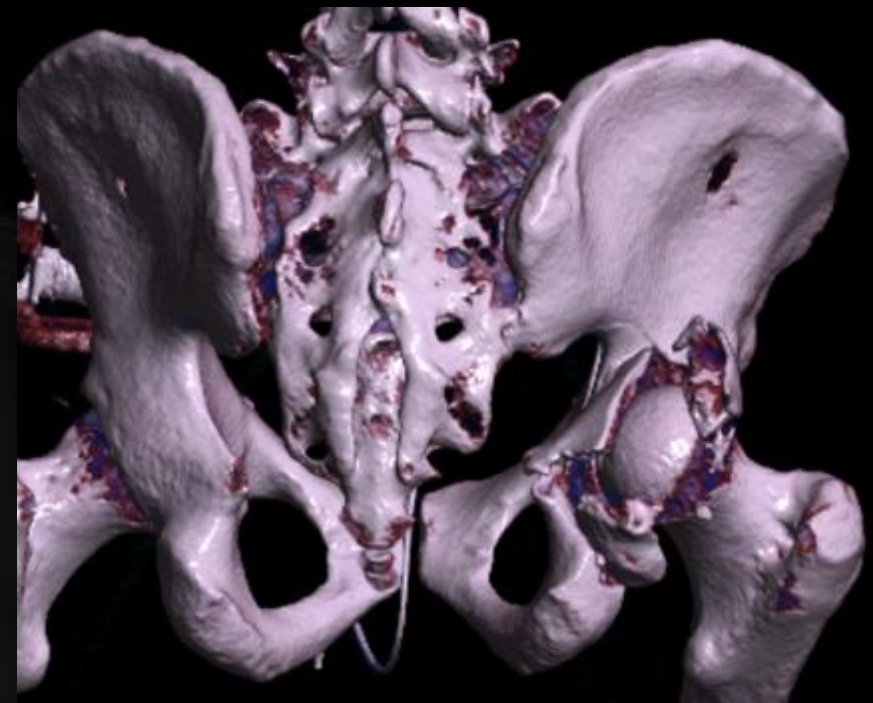
- Kocher-Langenbeck



Acetabulum fracture

Posterior wall

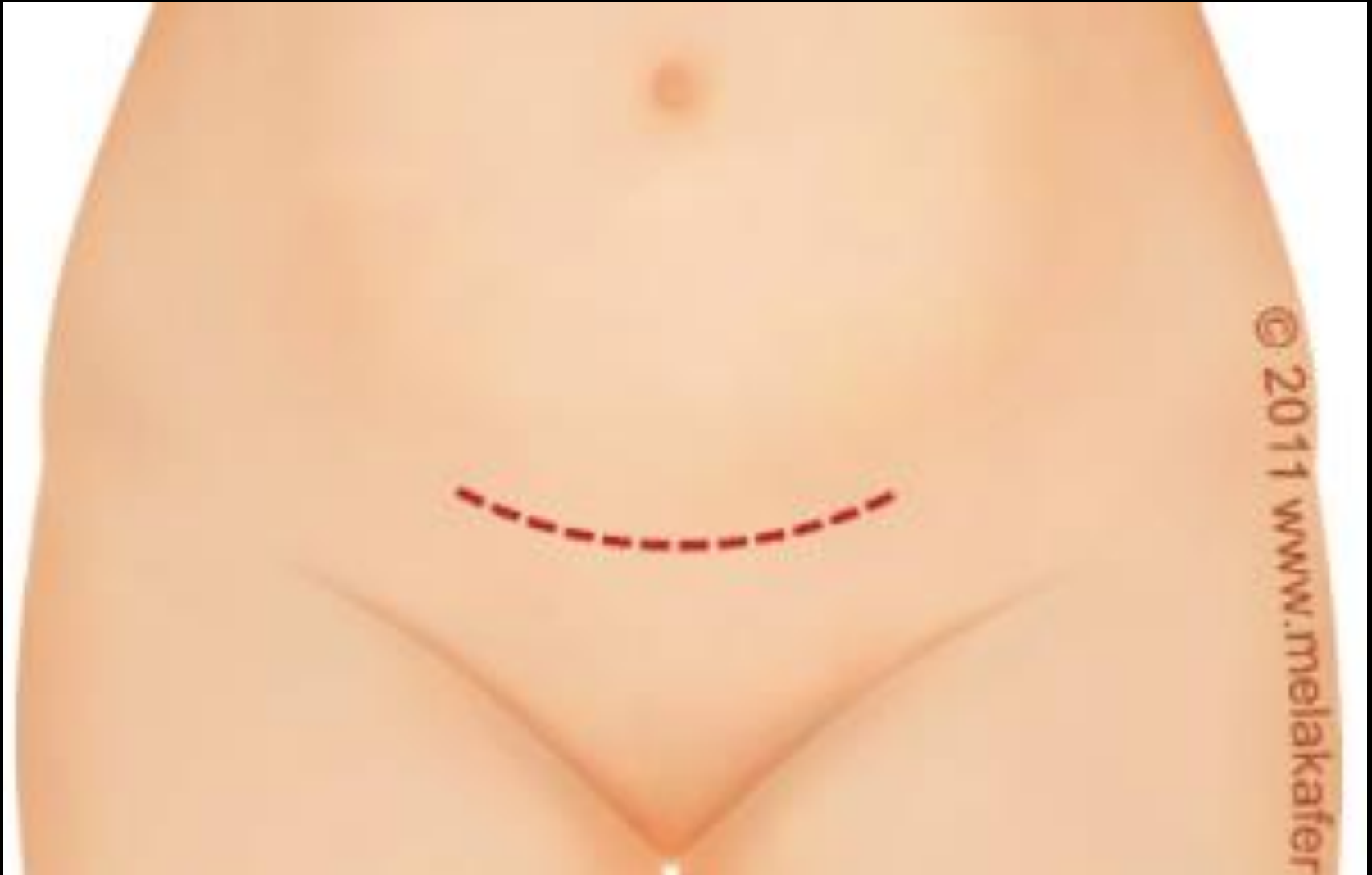
- Kocher-Langenbeck



82 year old woman. Low-energy



82 year old woman. Low-energy

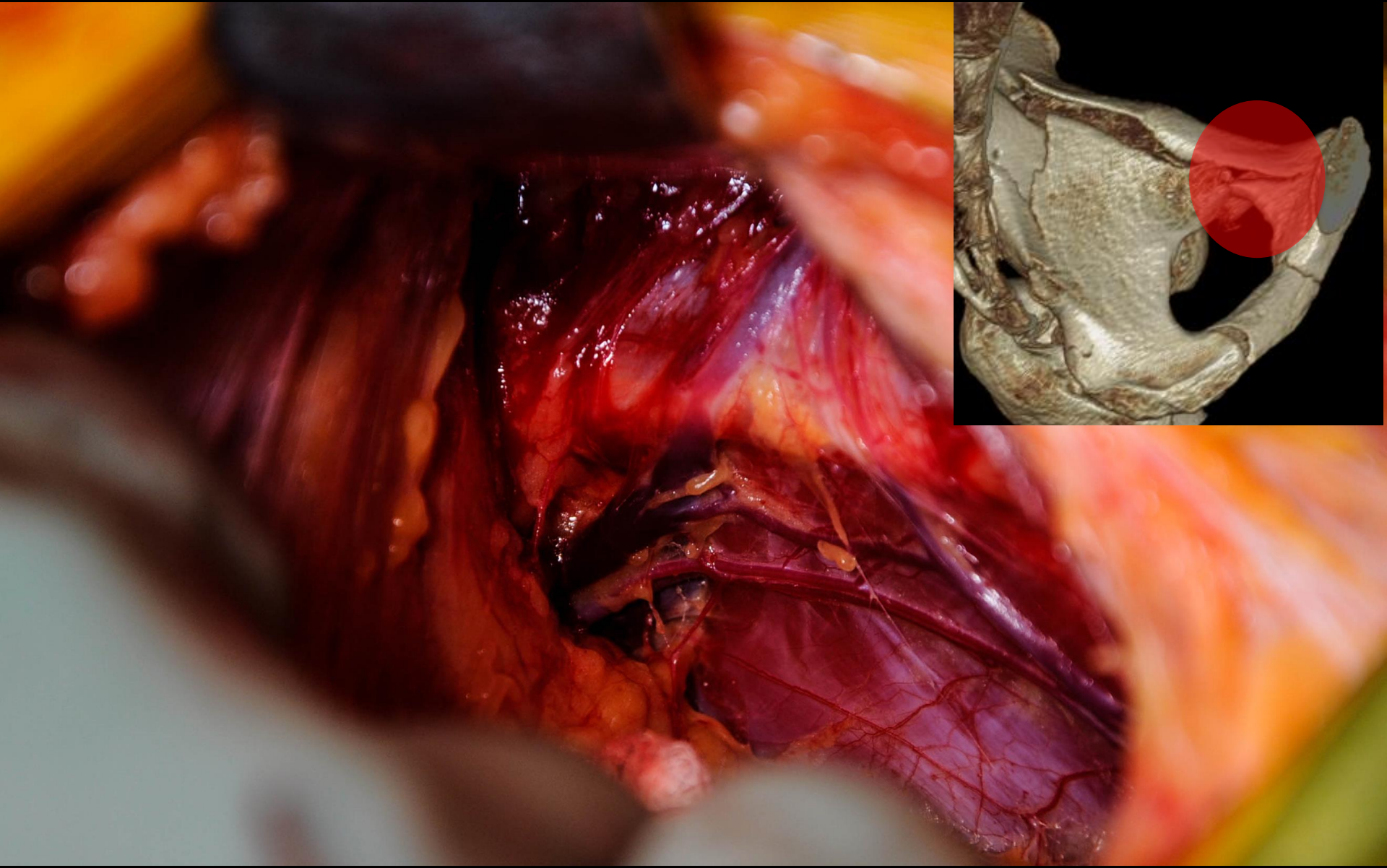


82 year old woman. Low-energy

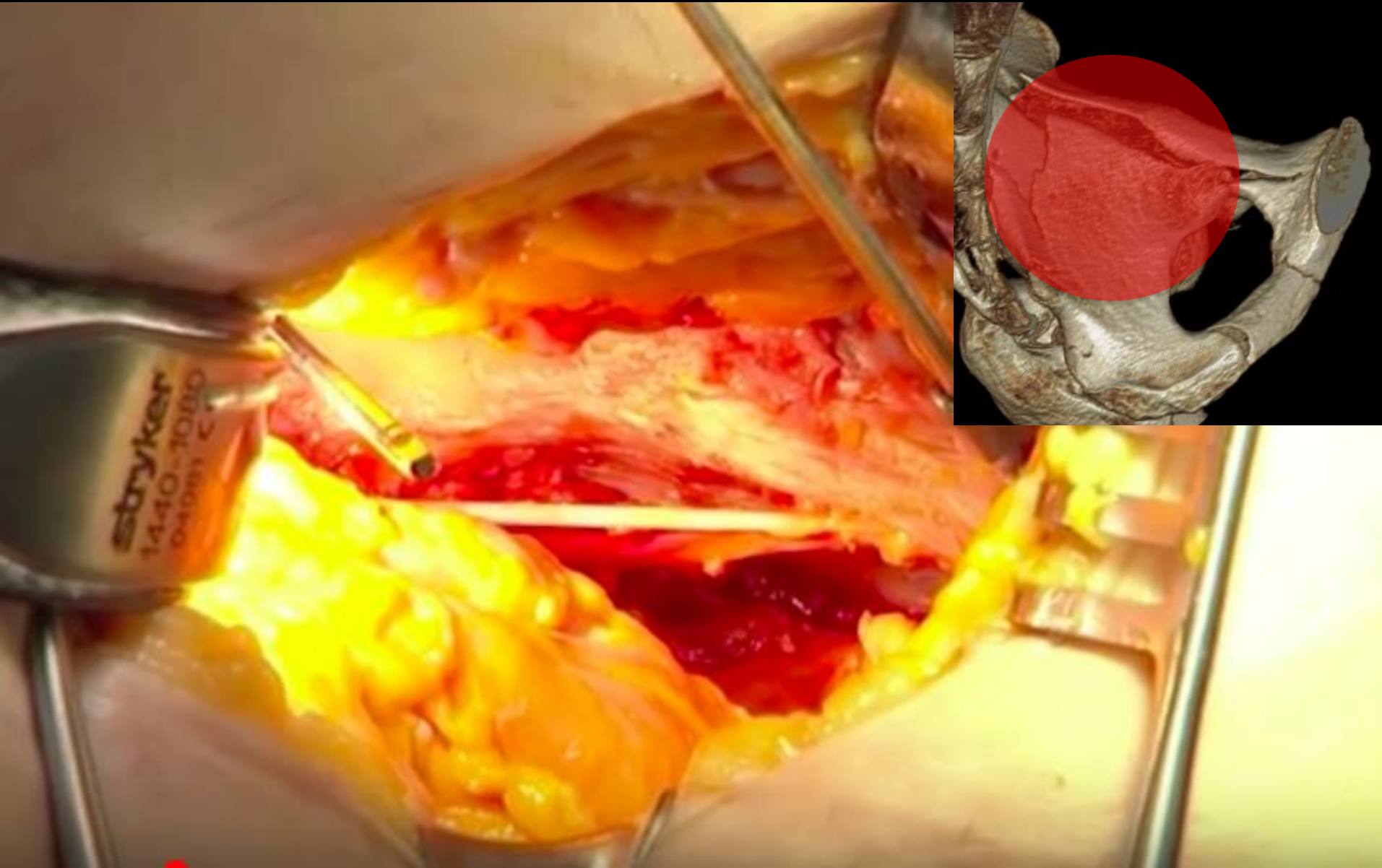


Symphysis

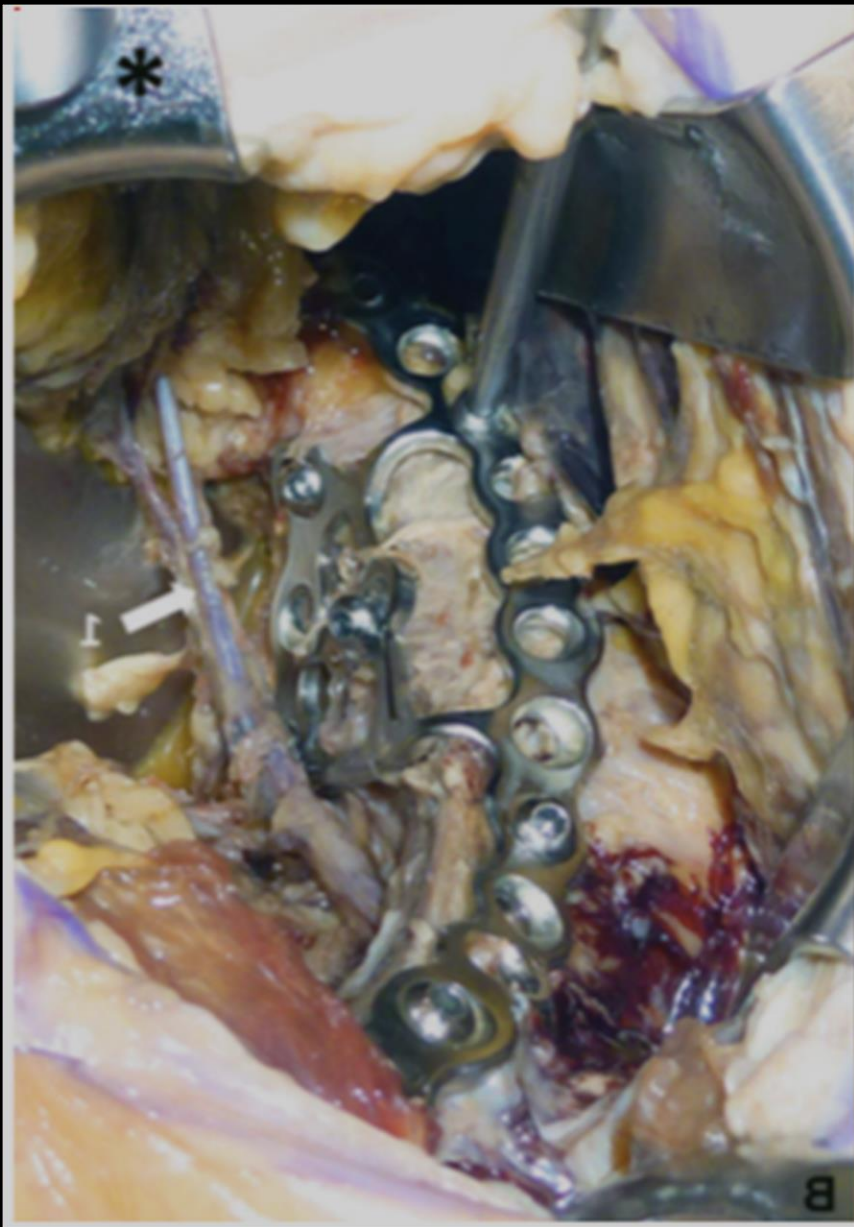
82 year old woman. Low-energy



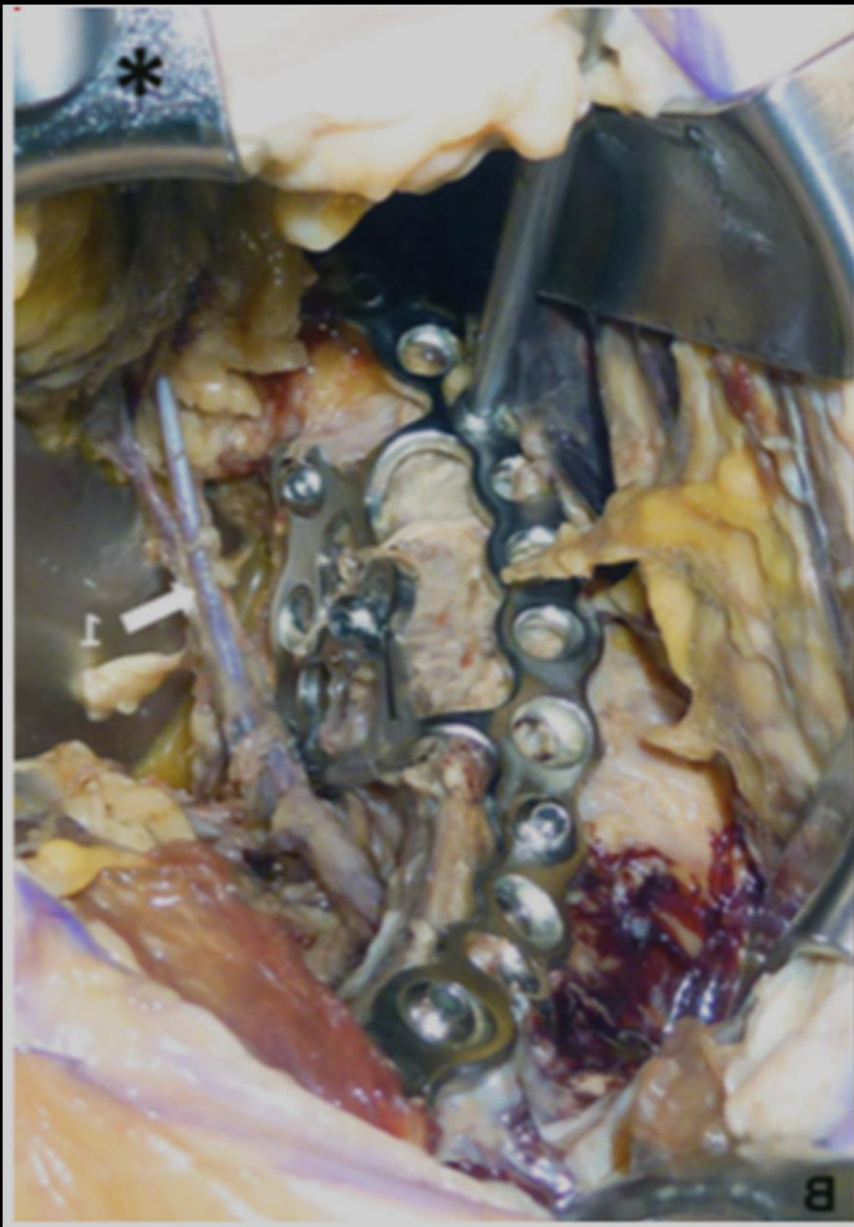
82 year old woman. Low-energy



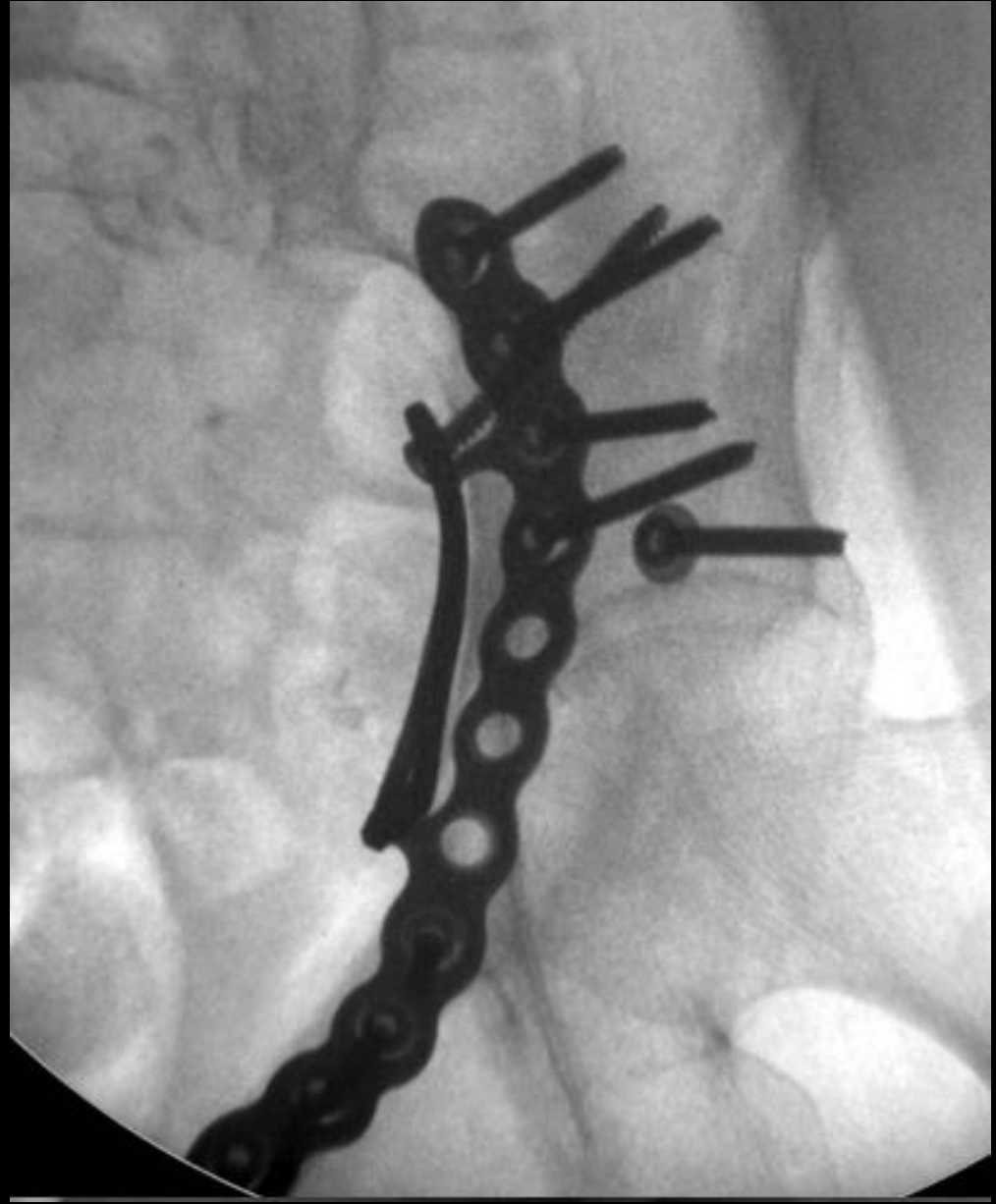
82 year old woman. Low-energy



82 year old woman. Low-energy



82 year old woman. Low-energy



76 year old man. Bicycle accident



76 year old man. Bicycle accident

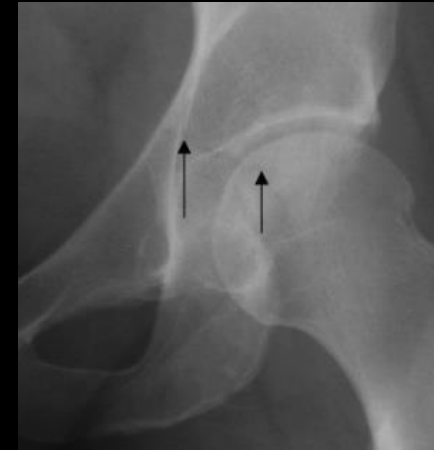


76 year old man. Bicycle accident



Post-OP treatment

- Decreased weight bearing for 6 weeks
 - older allowed weight bearing as tolerated.
- Allowed active unloaded exercise
- Prognosis depends on cartilage injury and joint congruency



Take home

- Dislocated hip
 - acute reduction
 - As sooner the better prognosis
 - Always CT after reduction
- Indication for surgery
 - Hip instability
 - Joint incongruity

