

# Acetabular fractures

## Principles and initial management



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# Learning outcomes

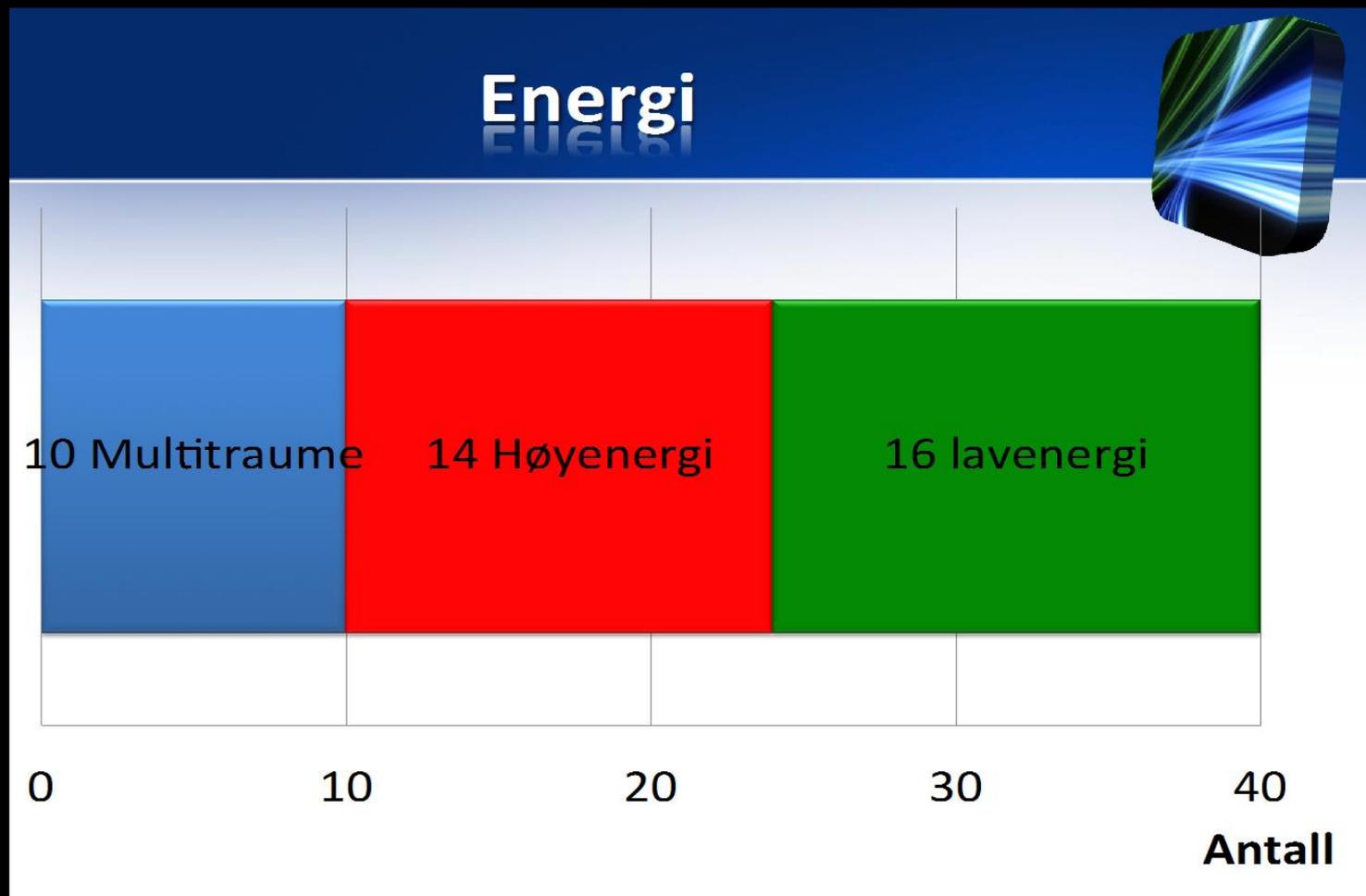
- Outline the anatomy of the acetabulum
- Interpret x-rays and CT scans of acetabular fractures
- Describe different fracture patterns
- Describe principles of management
- Cases

# Patient

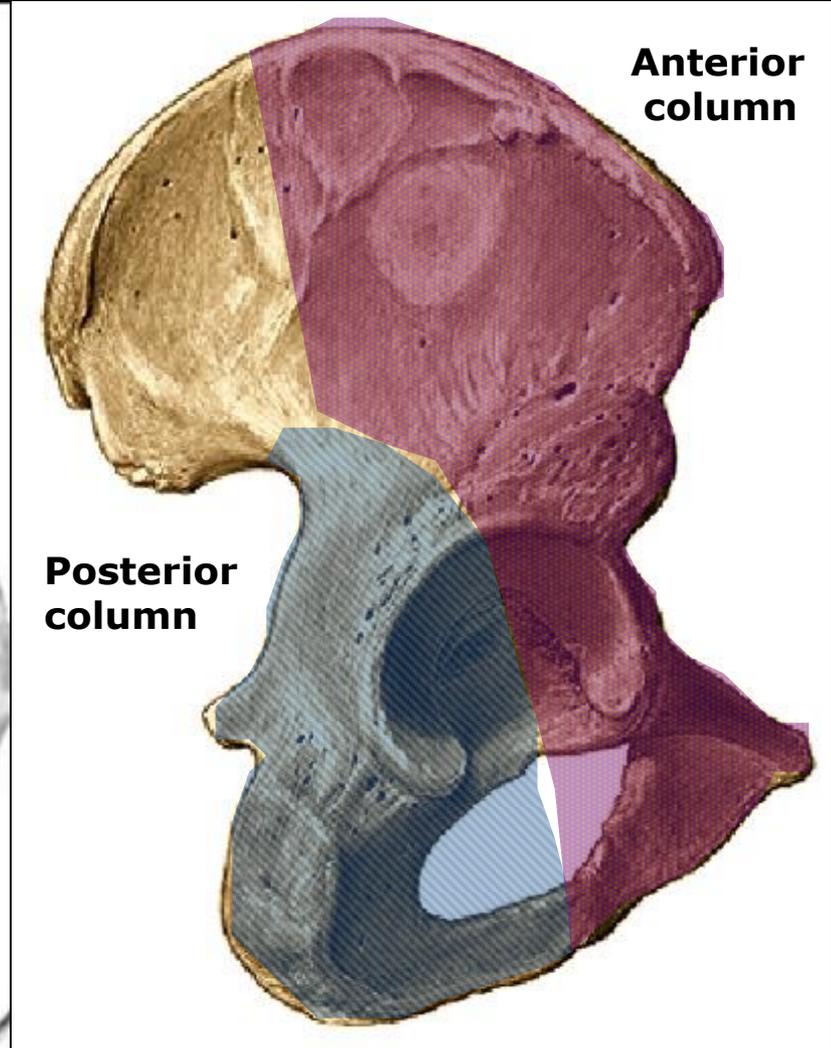
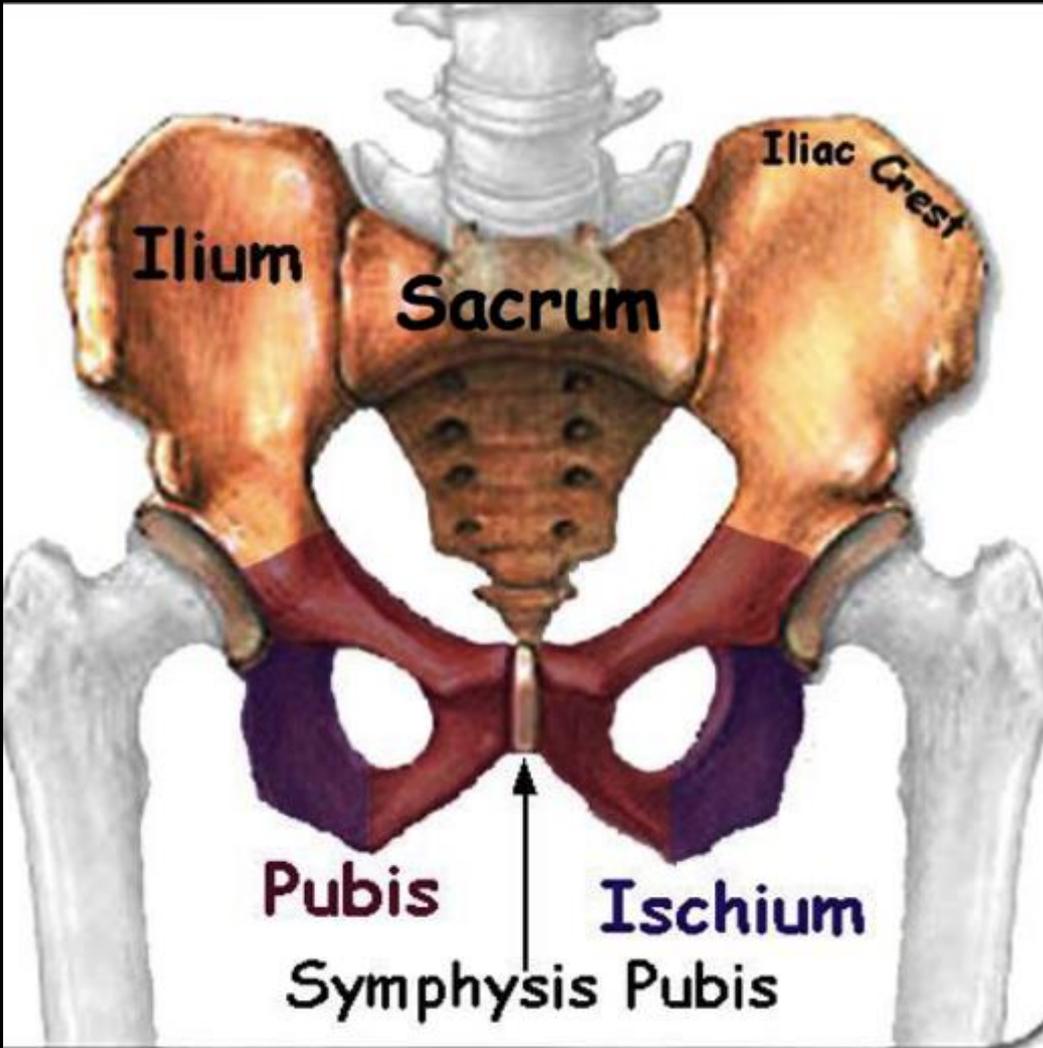
- Incidens: 10-15 pr. 100.000
- Young: Manly ♂, high energy fractures
- Older: Manly ♀, low energy fractures



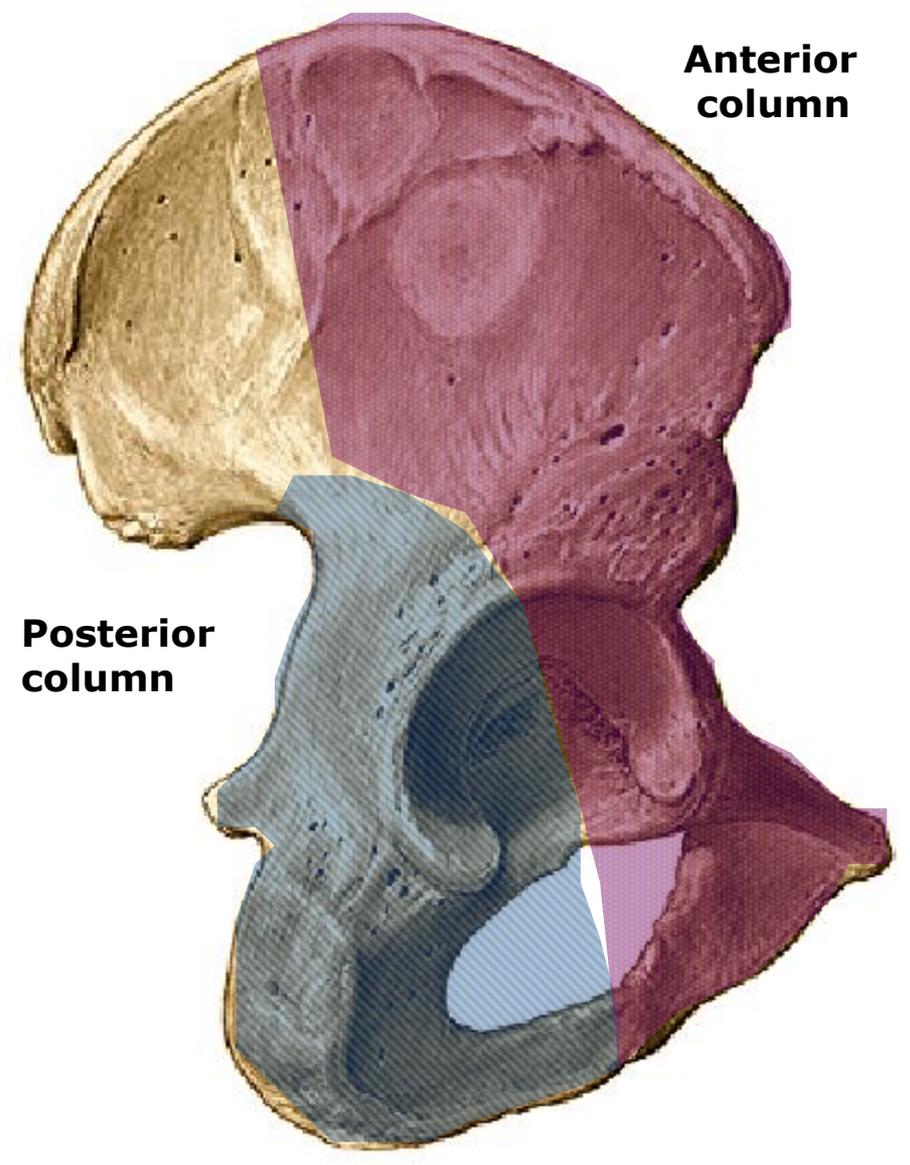
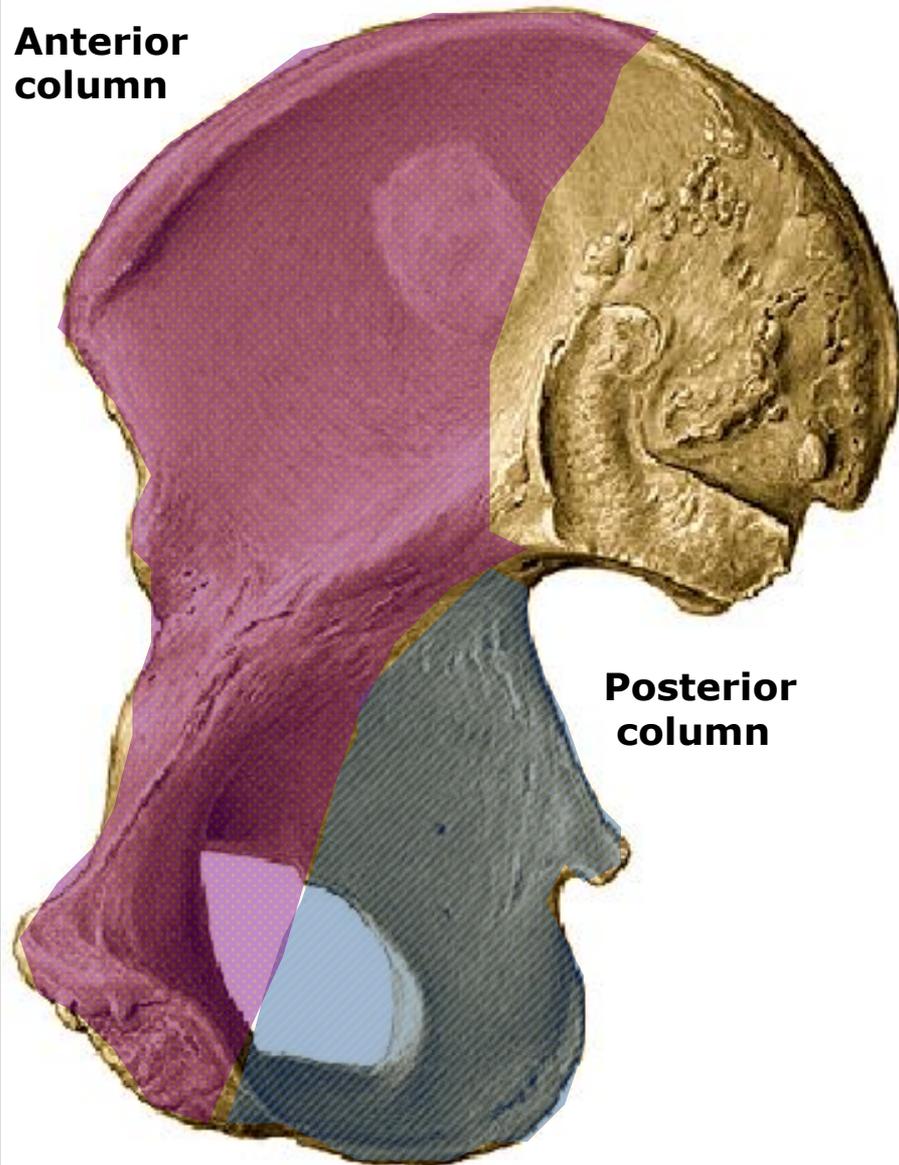
# Acetabular fracture Oslo 2012



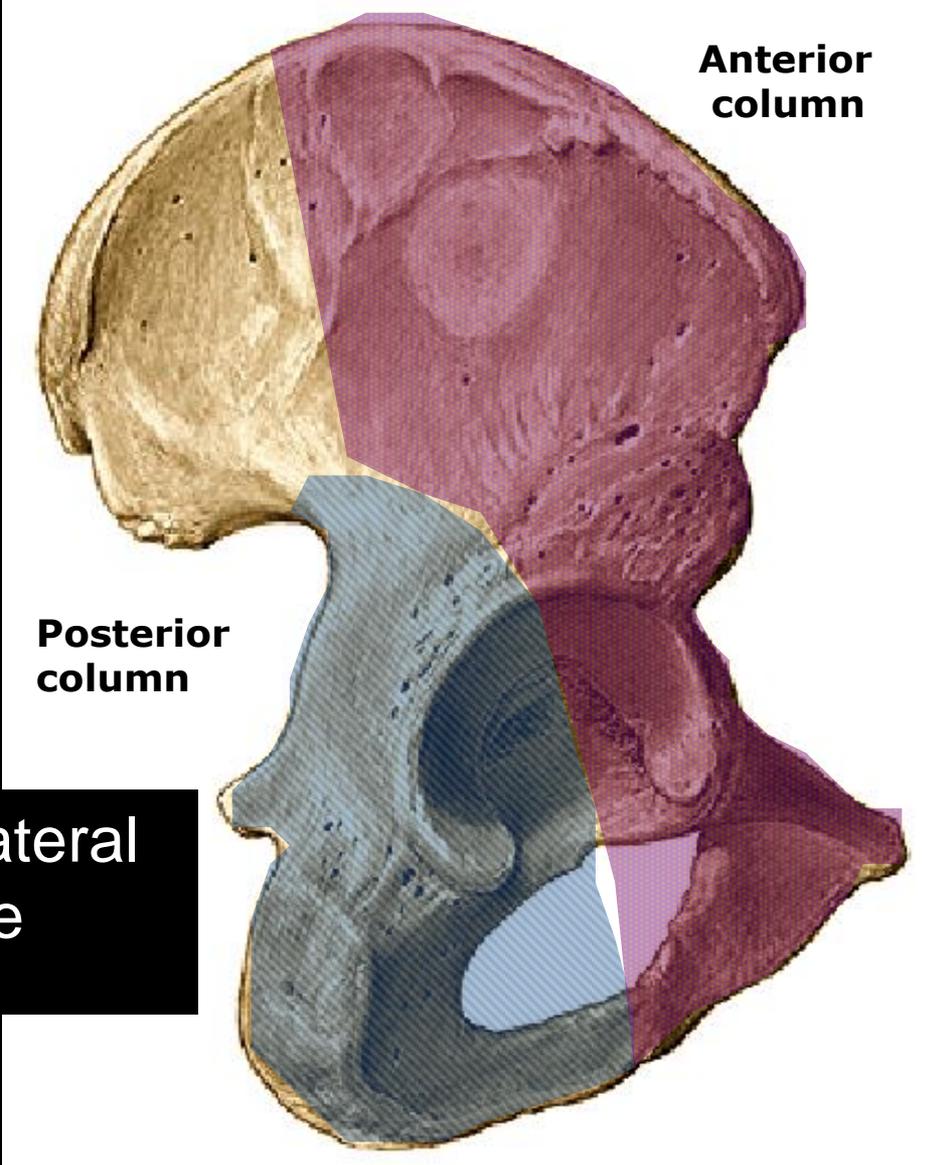
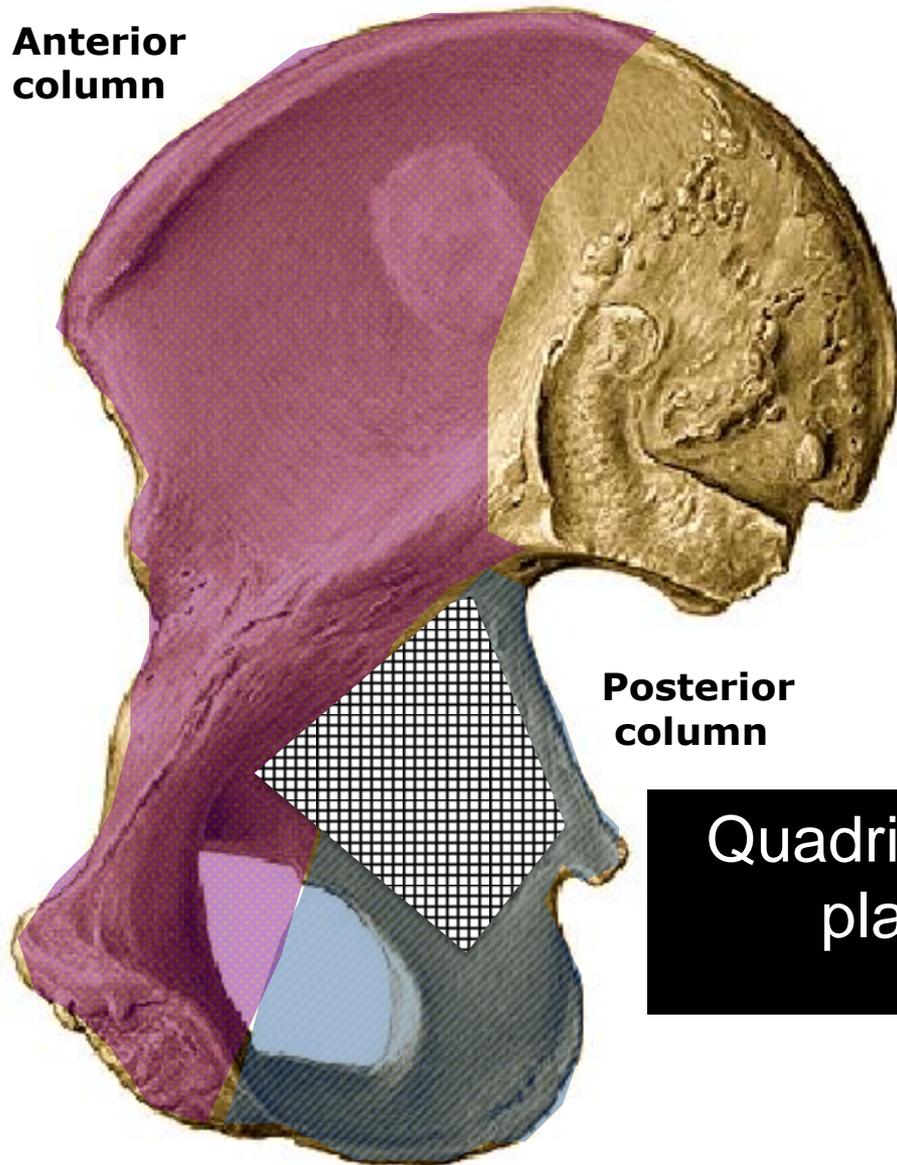
# Anatomy - Acetabulum



# Acetabulum - column



# Acetabulum - column



# Acetabulum fracture - Letournel & Judet

- Simples Fractures



# Acetabulum fracture - Letournel & Judet

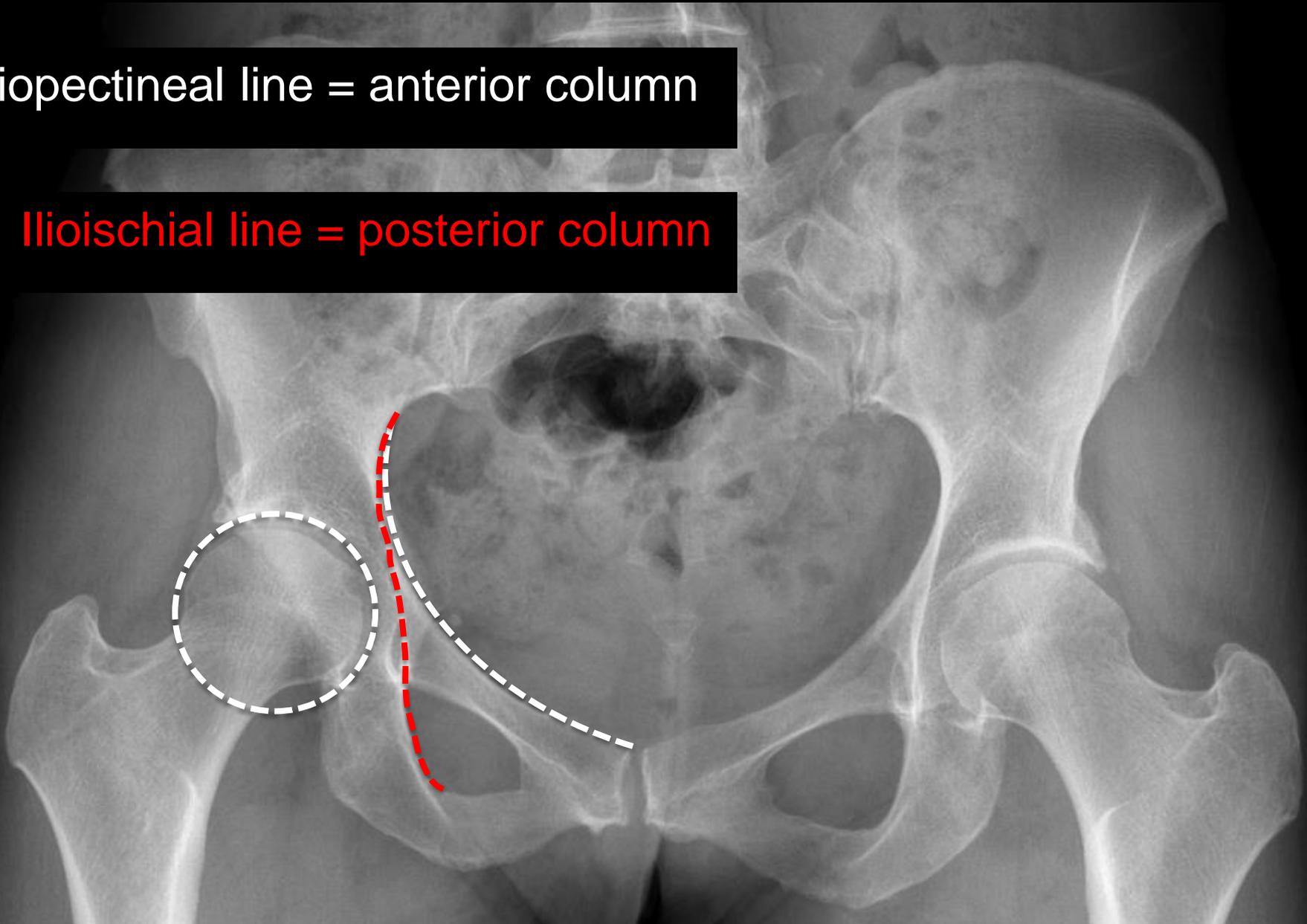
- Complex Fractures



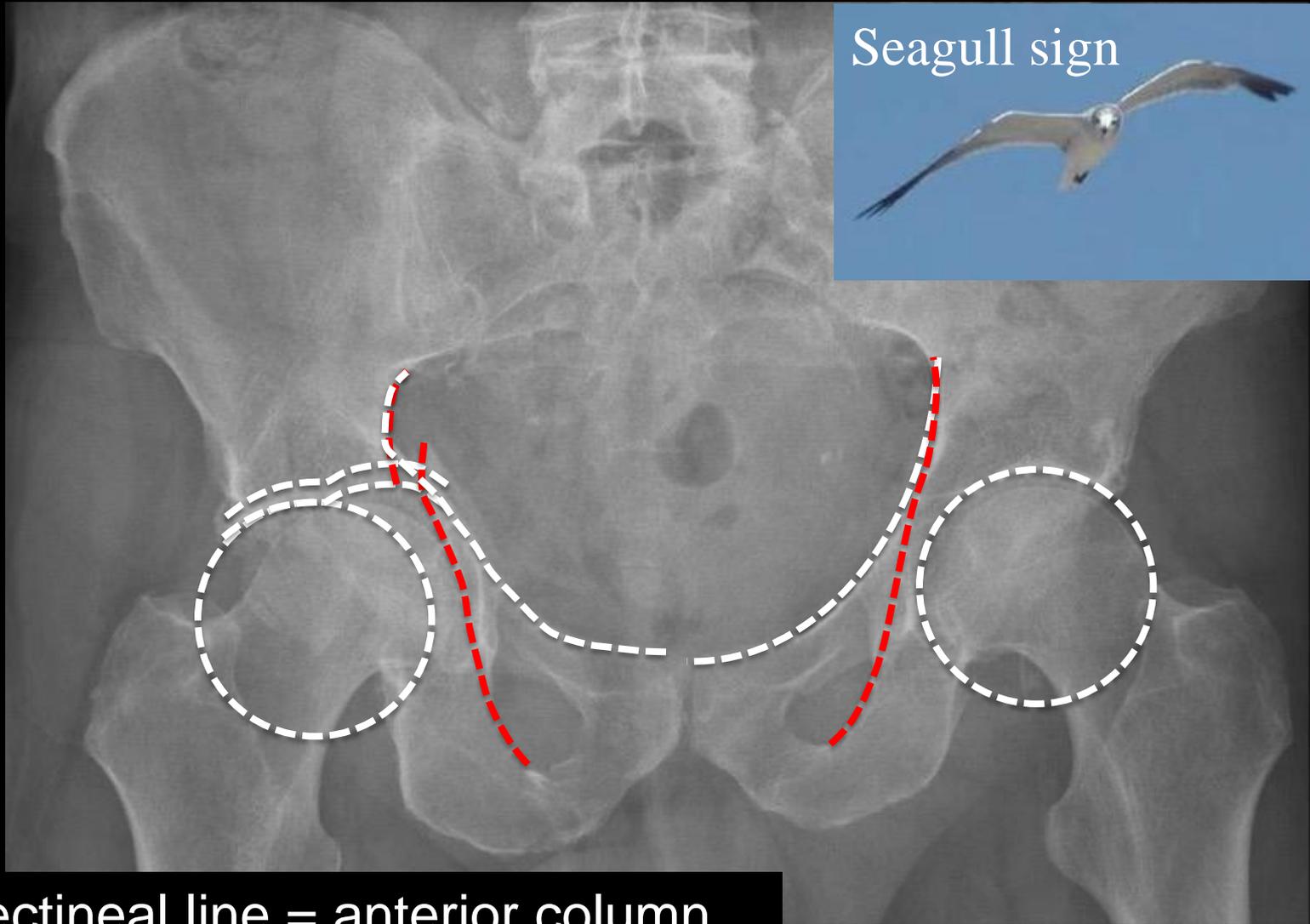
# X-ray acetabulum

Iliopectineal line = anterior column

Ilioischial line = posterior column



# X-ray acetabulum



Iliopectineal line = anterior column

Ilioischial line = posterior column

# 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

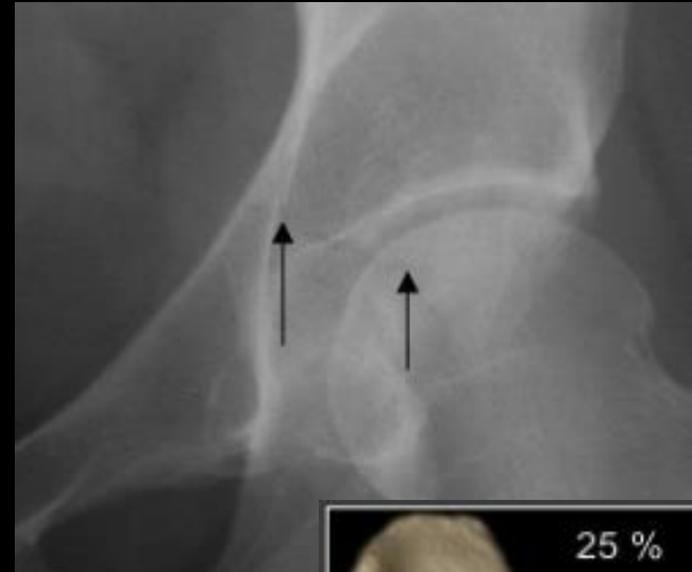
- Hip instability

- 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 (50km/h)



Male 22 year. Motocross accident (50km/h)

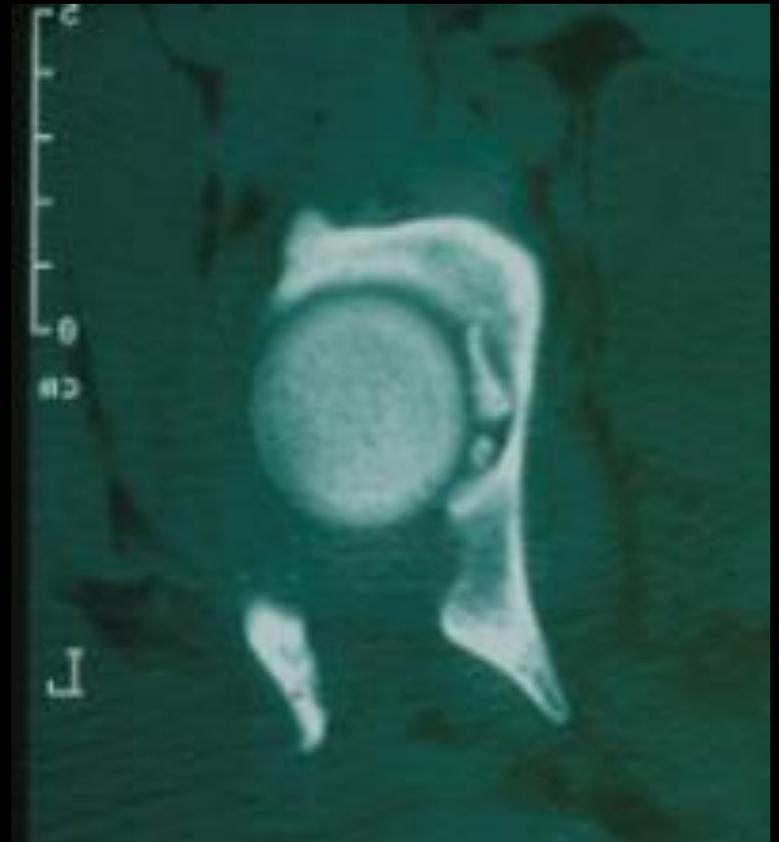
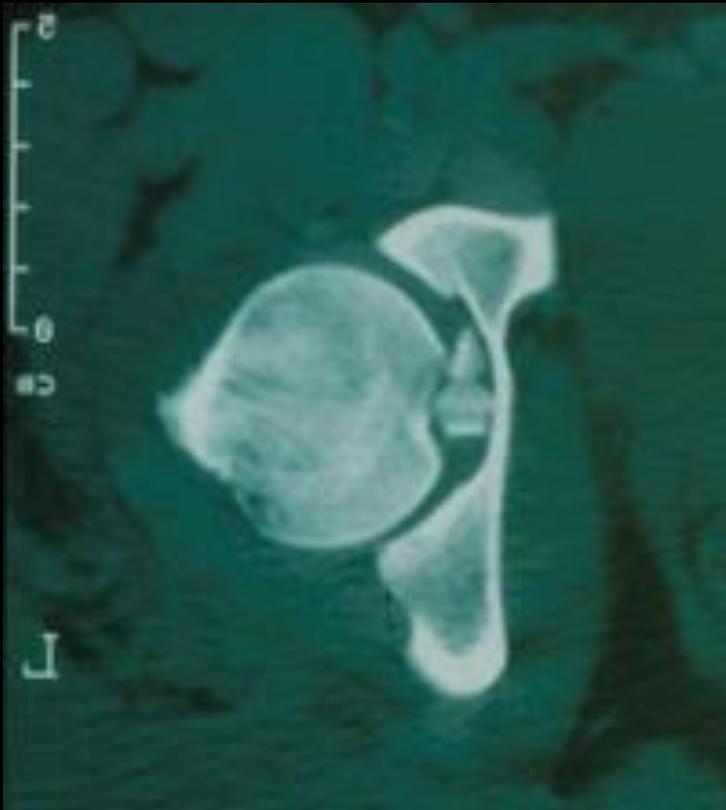


Male 22 year. Motocross accident (50km/h)



OBS

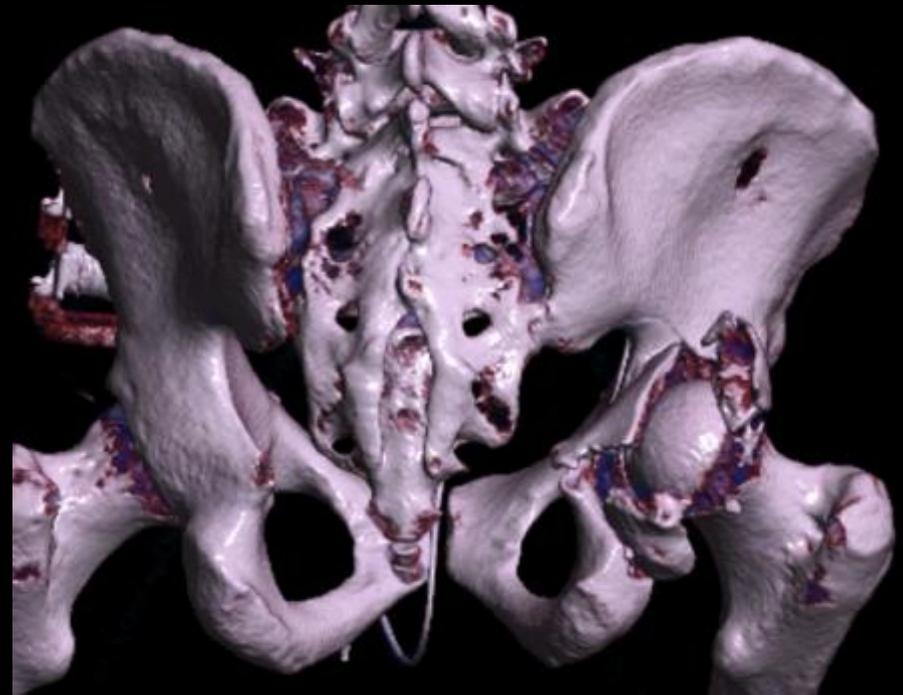
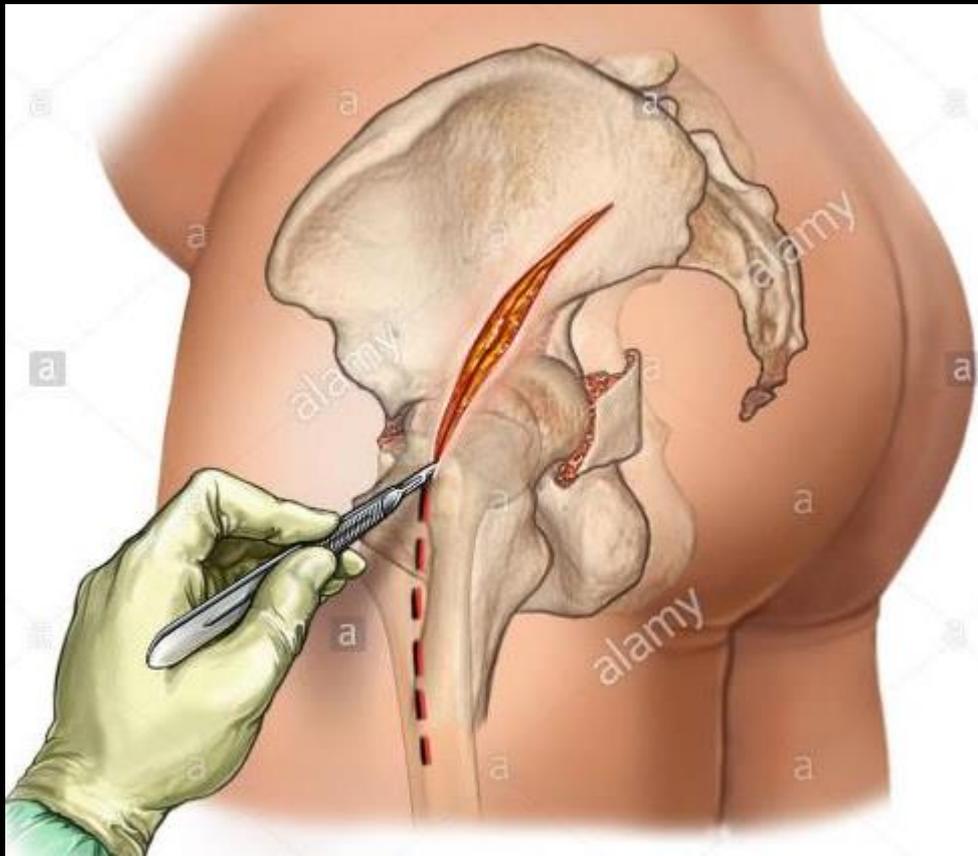
CT – Intraarticular fragments



# Acetabulum fracture

## Posterior wall

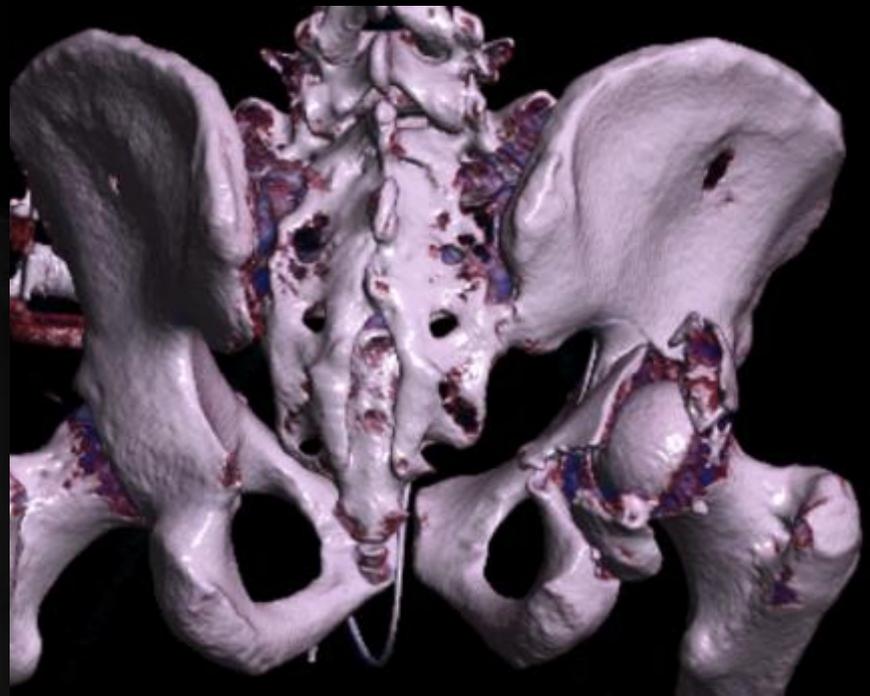
- Kocher-Langenbeck



# Acetabulum fracture

## Posterior wall

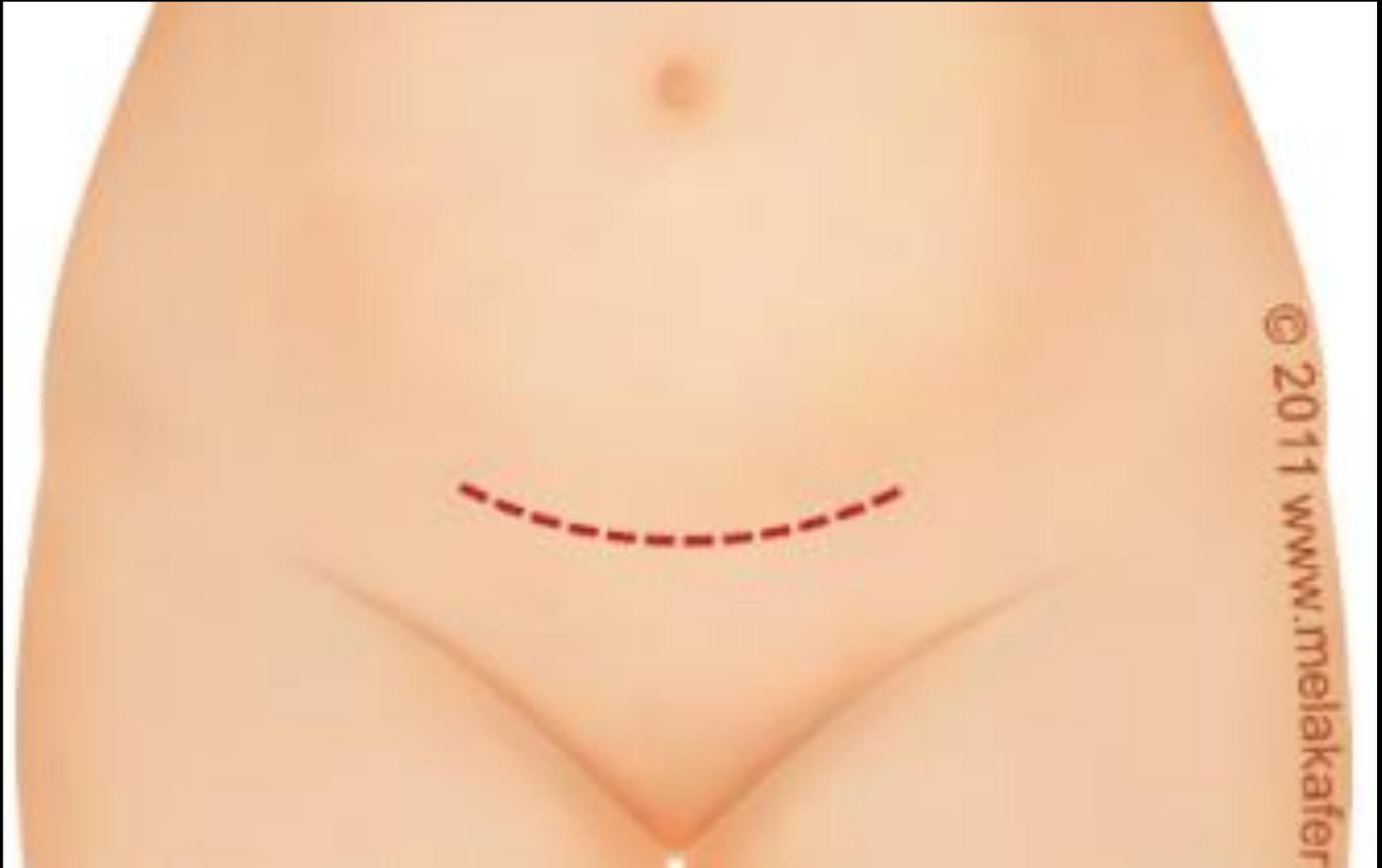
- Kocher-Langenbeck



82 year old woman. Low-energy



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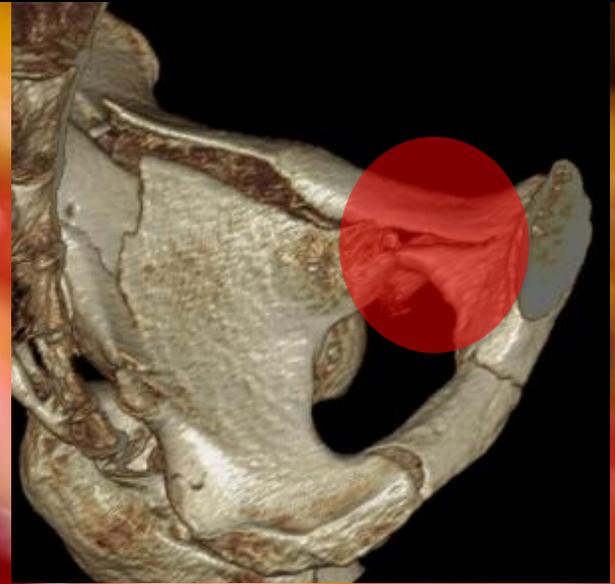
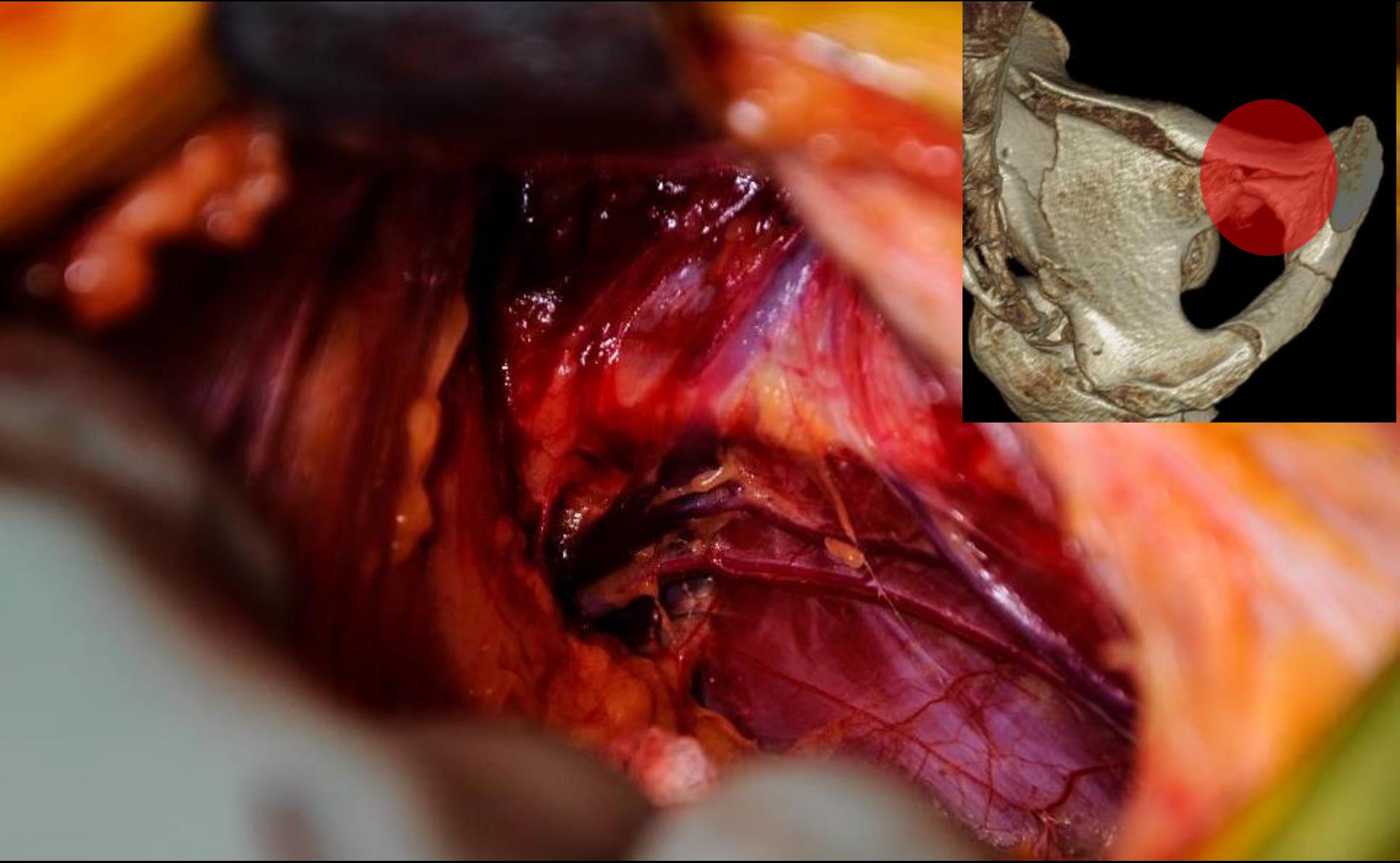


82 year old woman. Low-energy

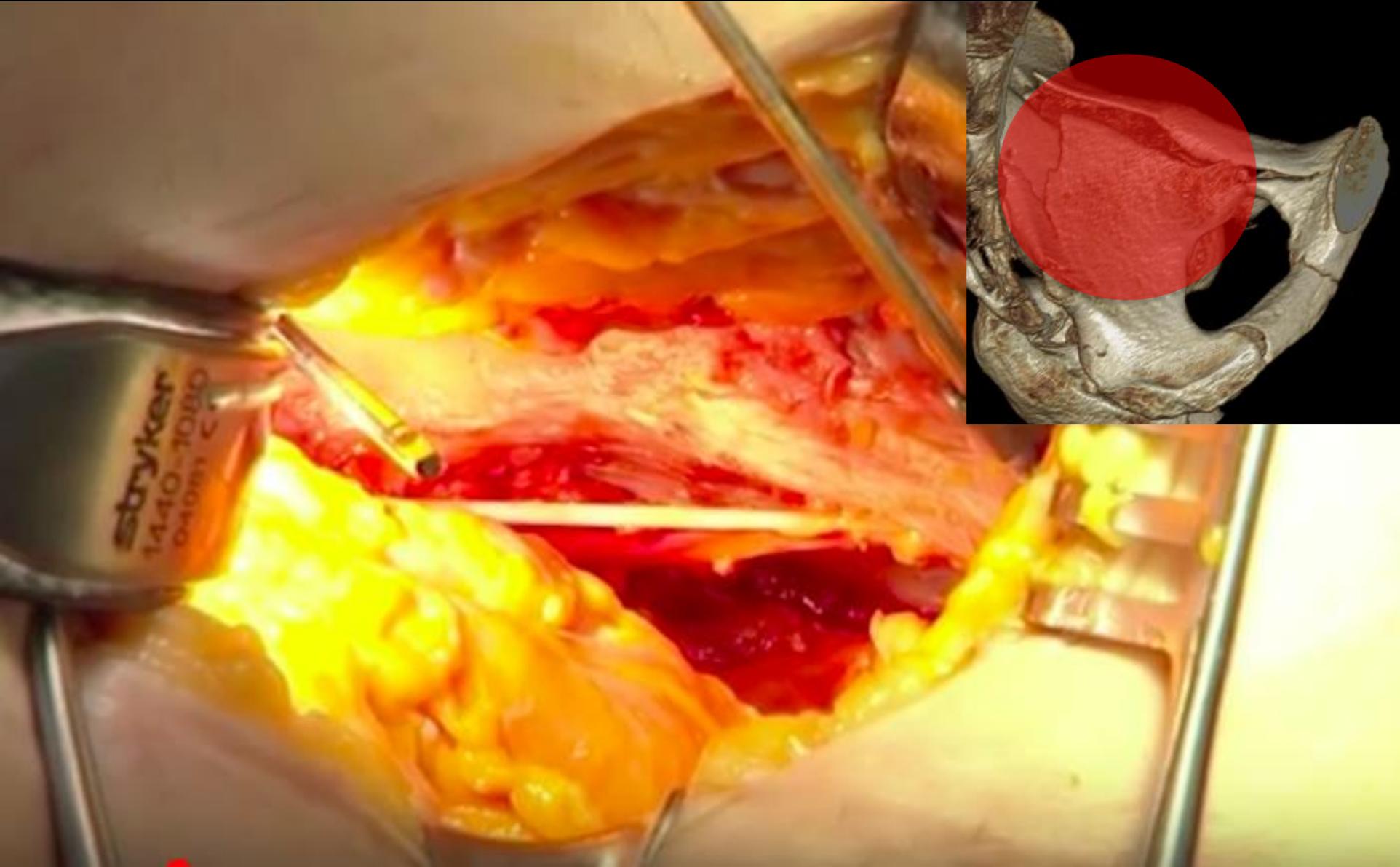


Symphysis

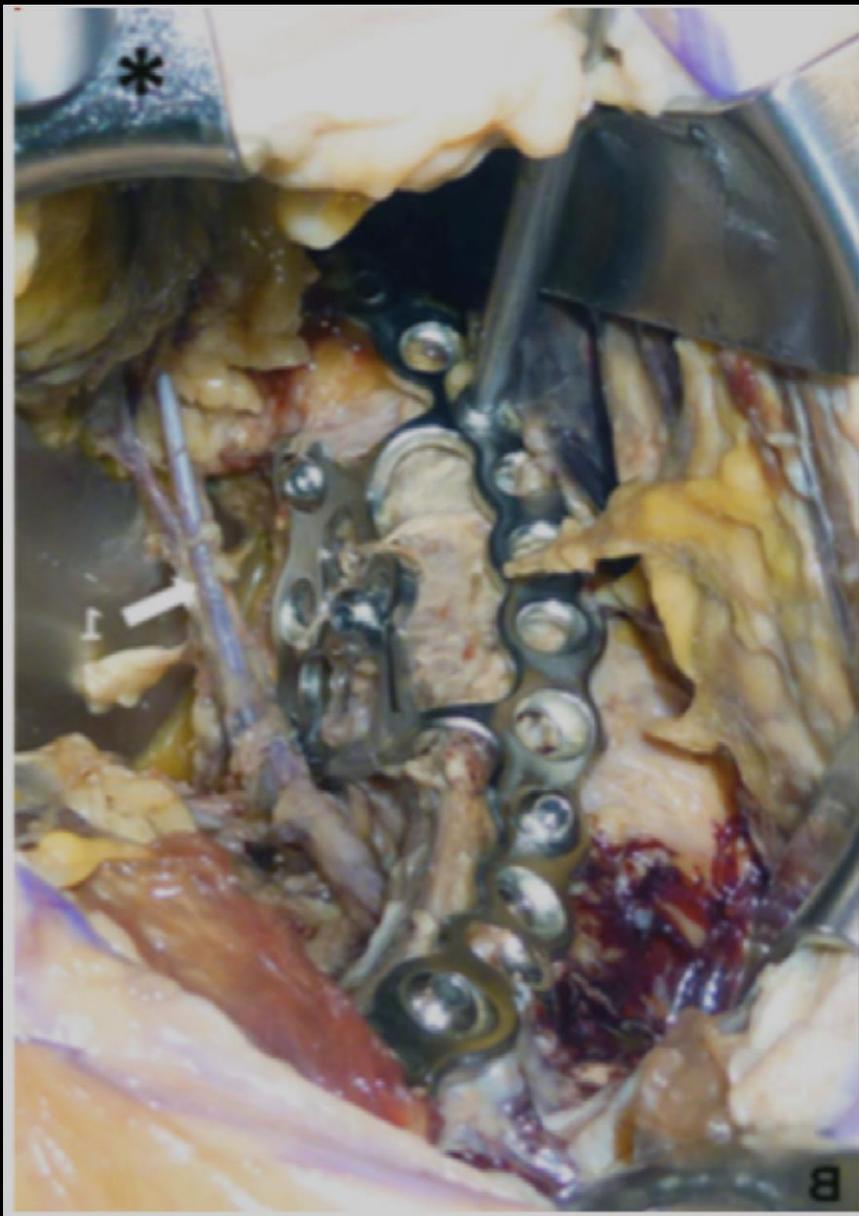
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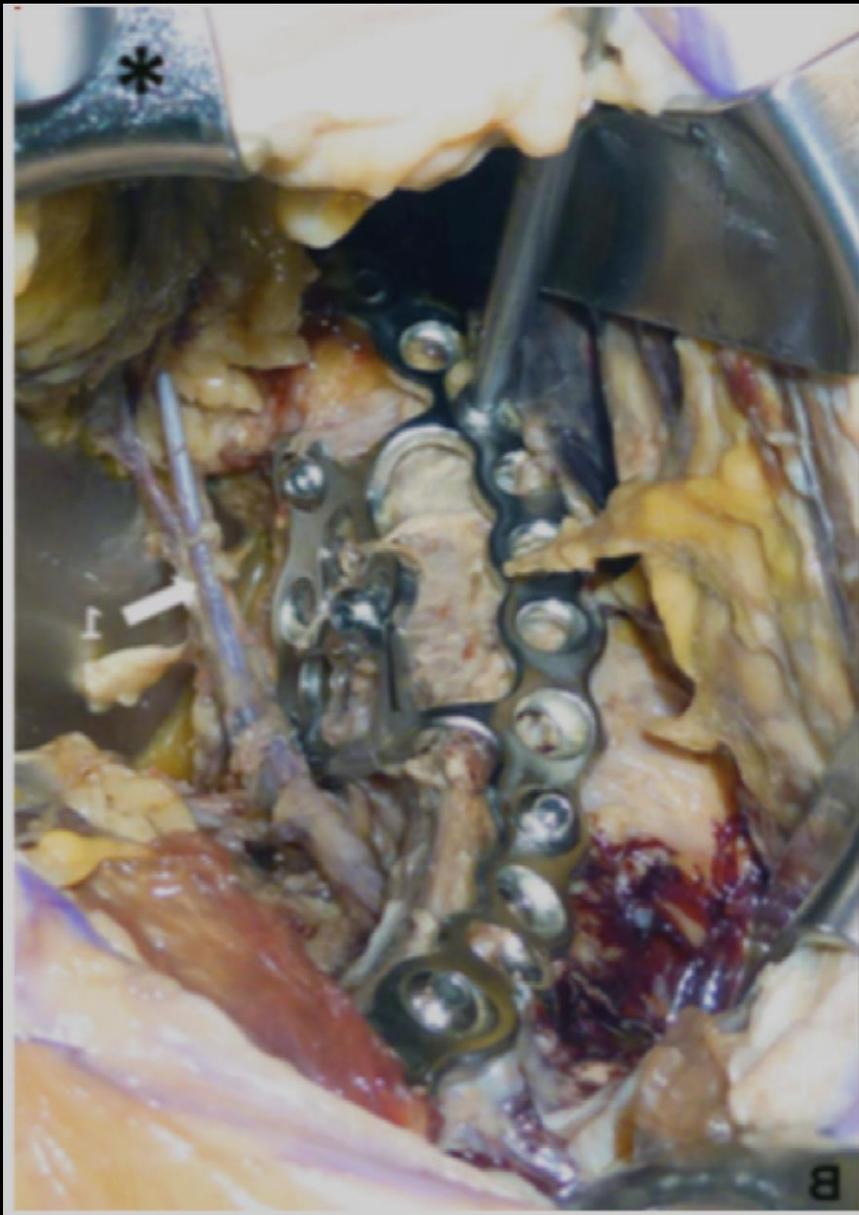
82 year old woman. Low-energy



# 82 year old woman. Low-energy



82 årig rask kvinde. Fald fra egen højde



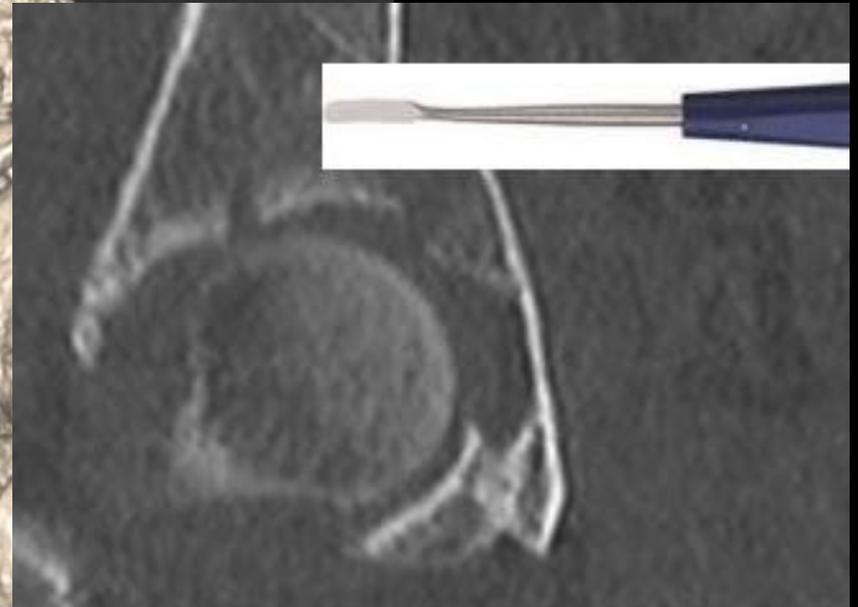
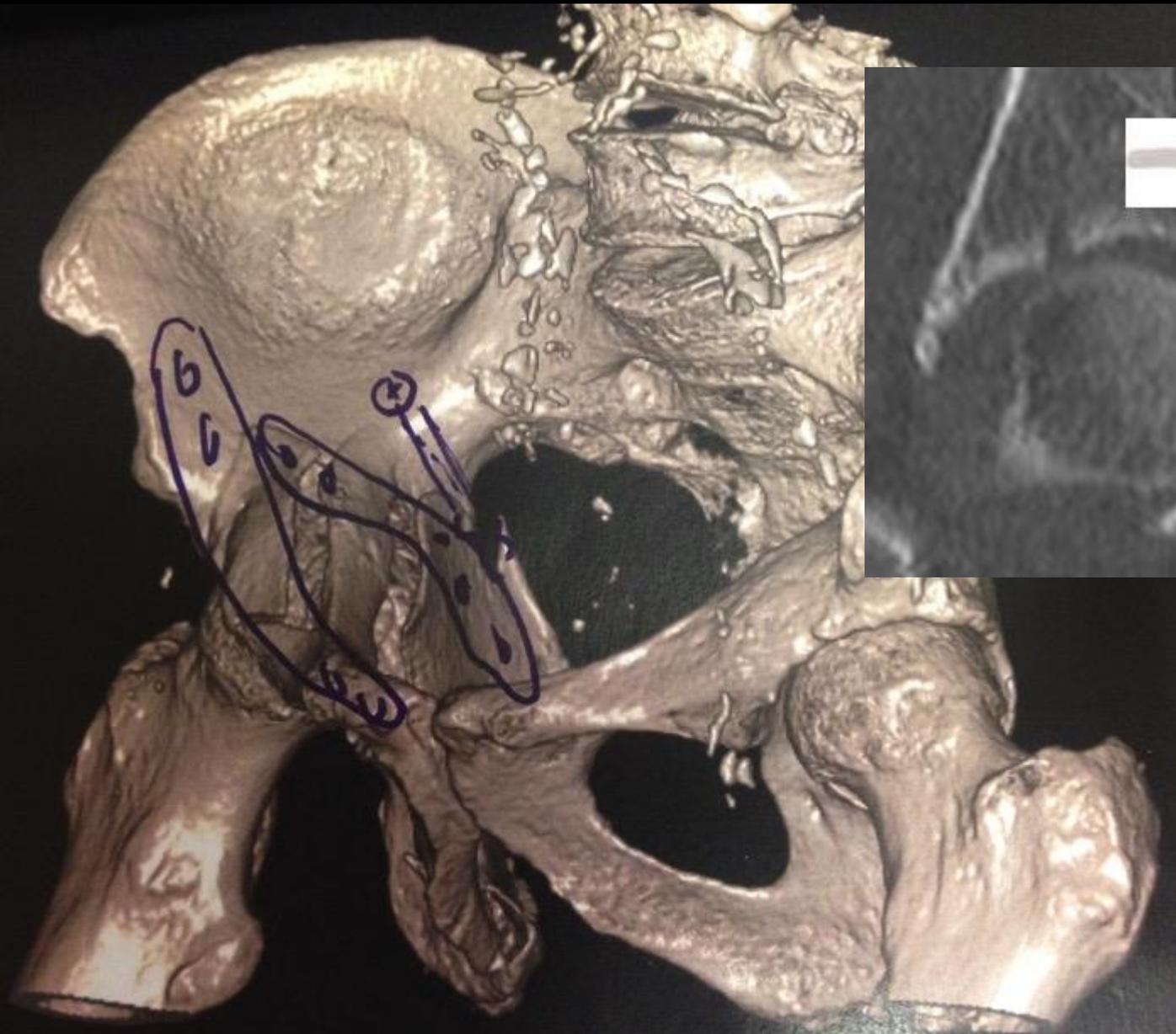
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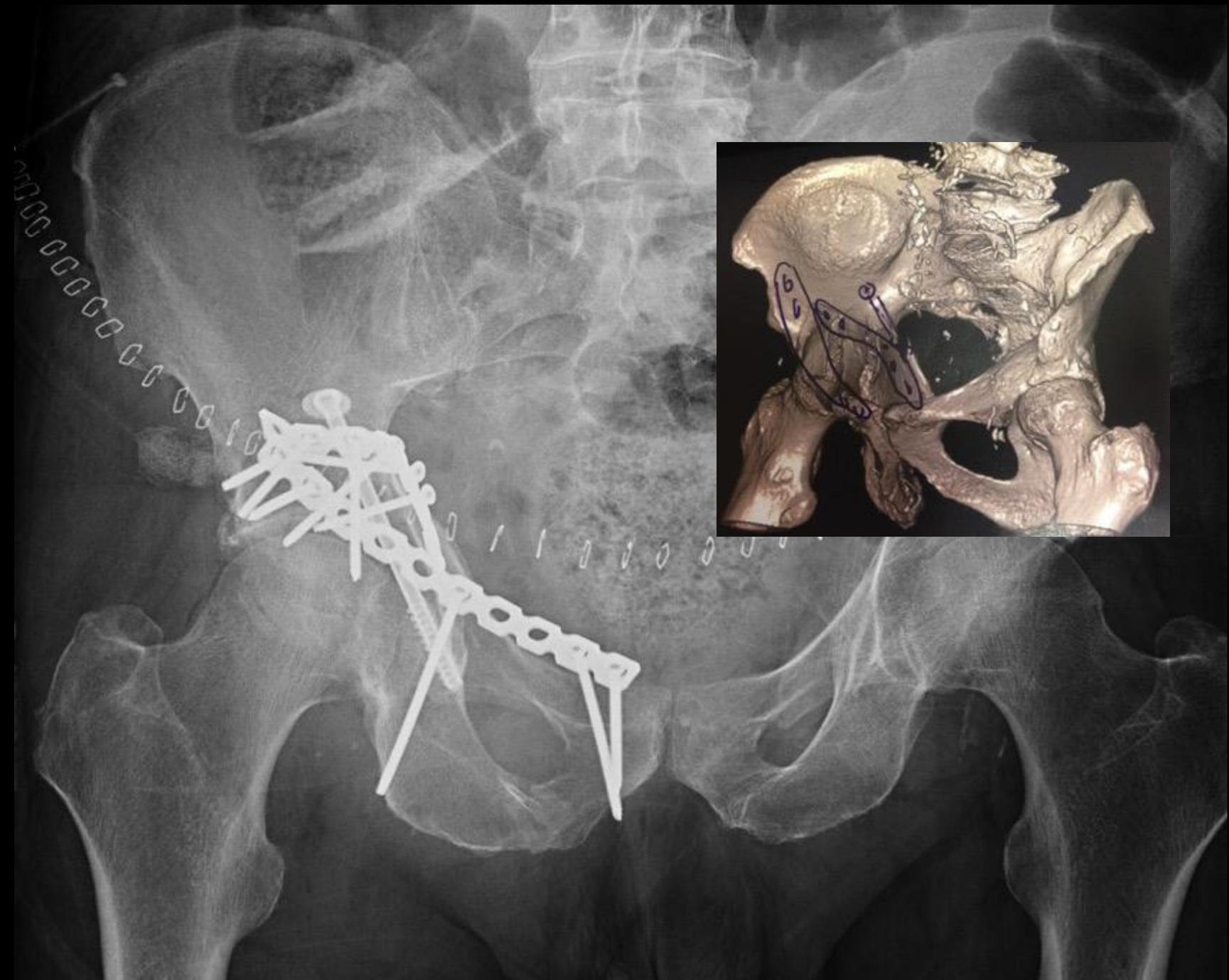


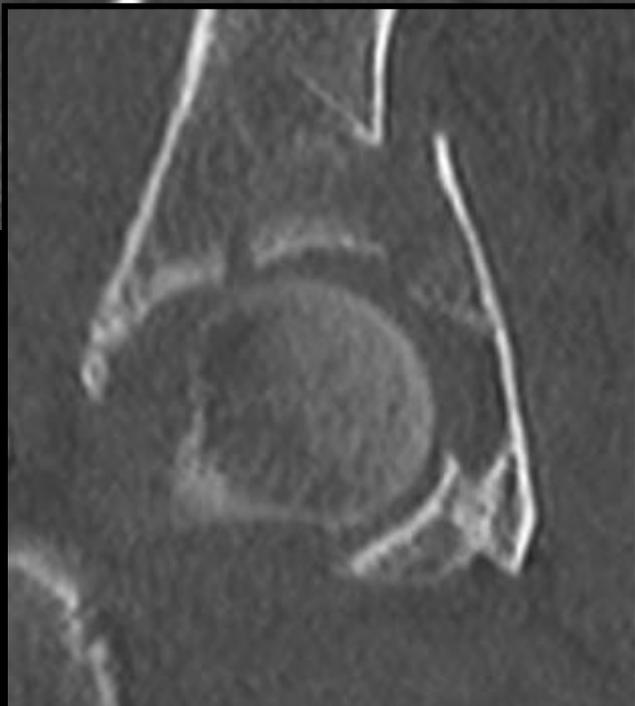
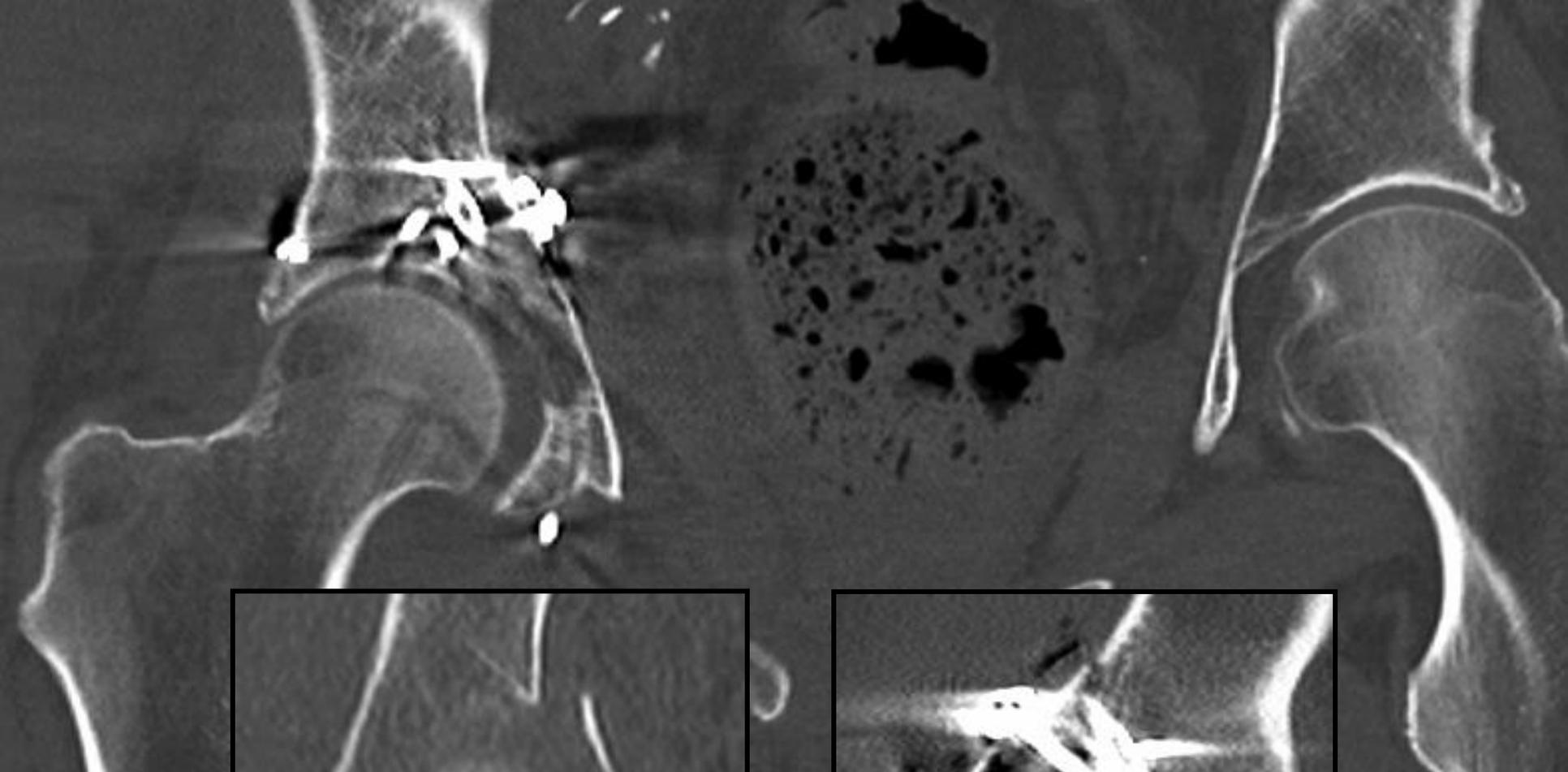
72 årig rask mand. Faldt fra egen højde



# Pre-op plan

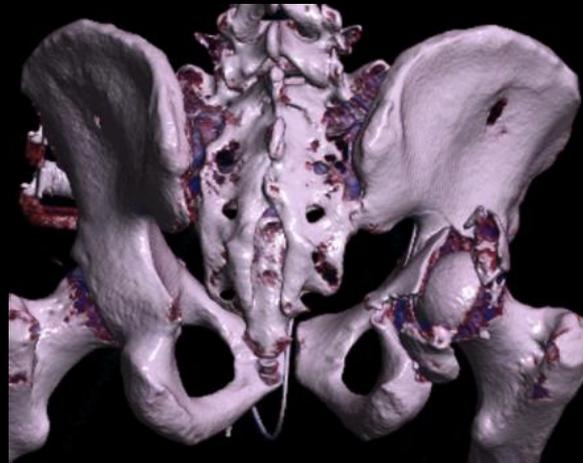
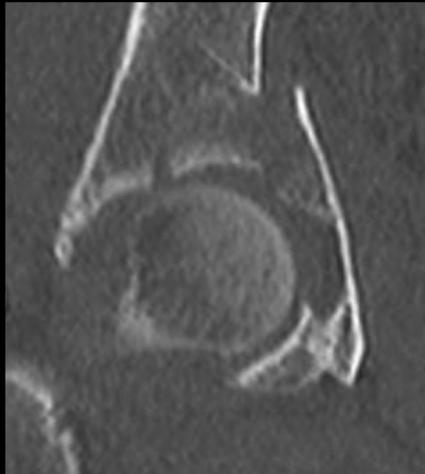






# Post-OP treatment

- 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

