



MR Clinical Cases: MSK

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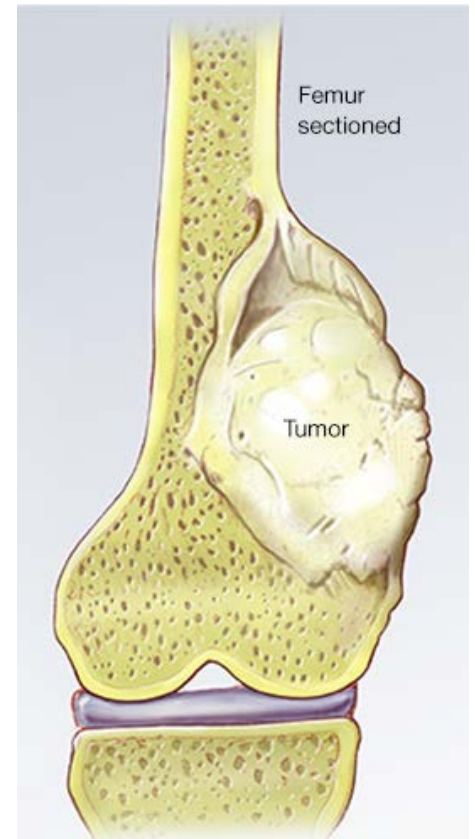
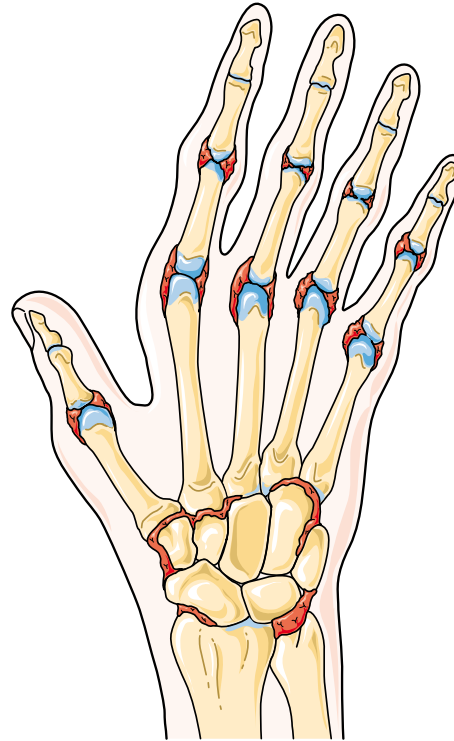
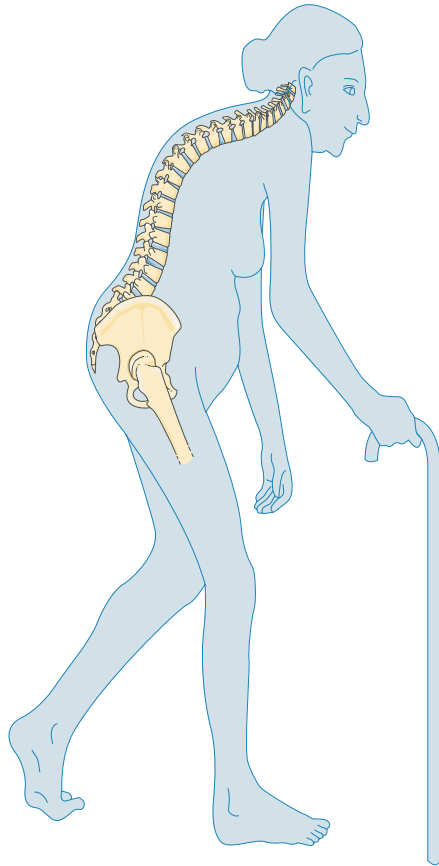
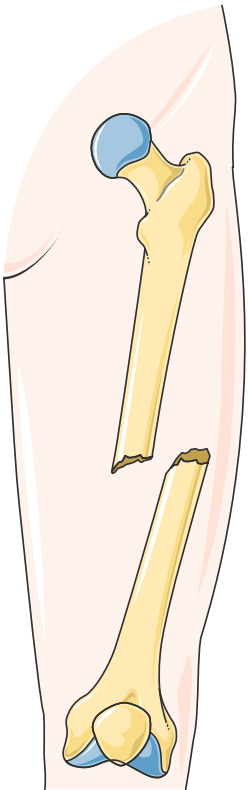
Abteilung für Diagnostische und Interventionelle Radiologie



Orientation

- systematic review for the diagnostic work
- Limitations of conventional imaging
- Importance of MRI scan

Imaging of the MSK – System





IMAGING OF TRAUMA

X-Ray

CT

MRI

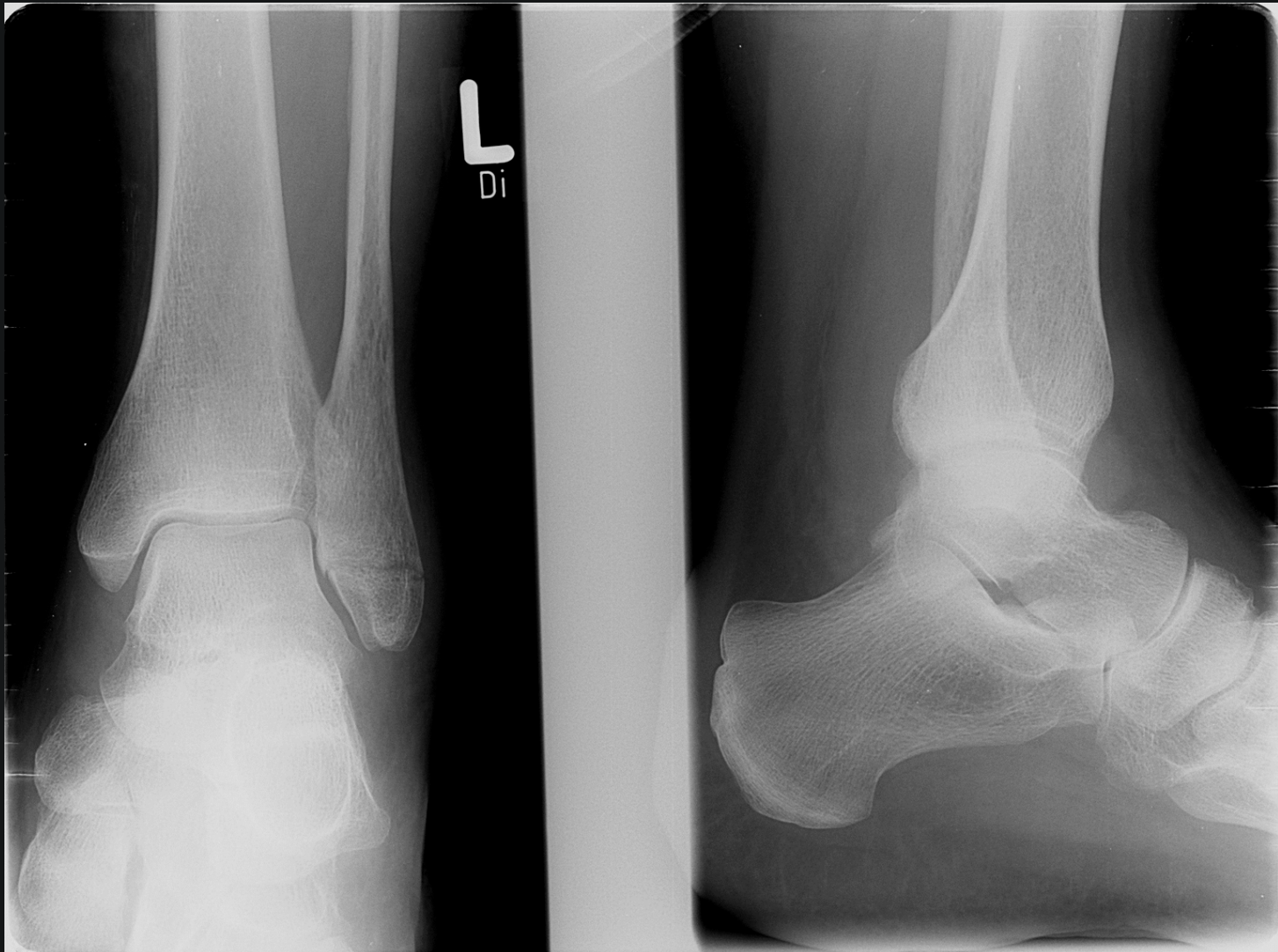




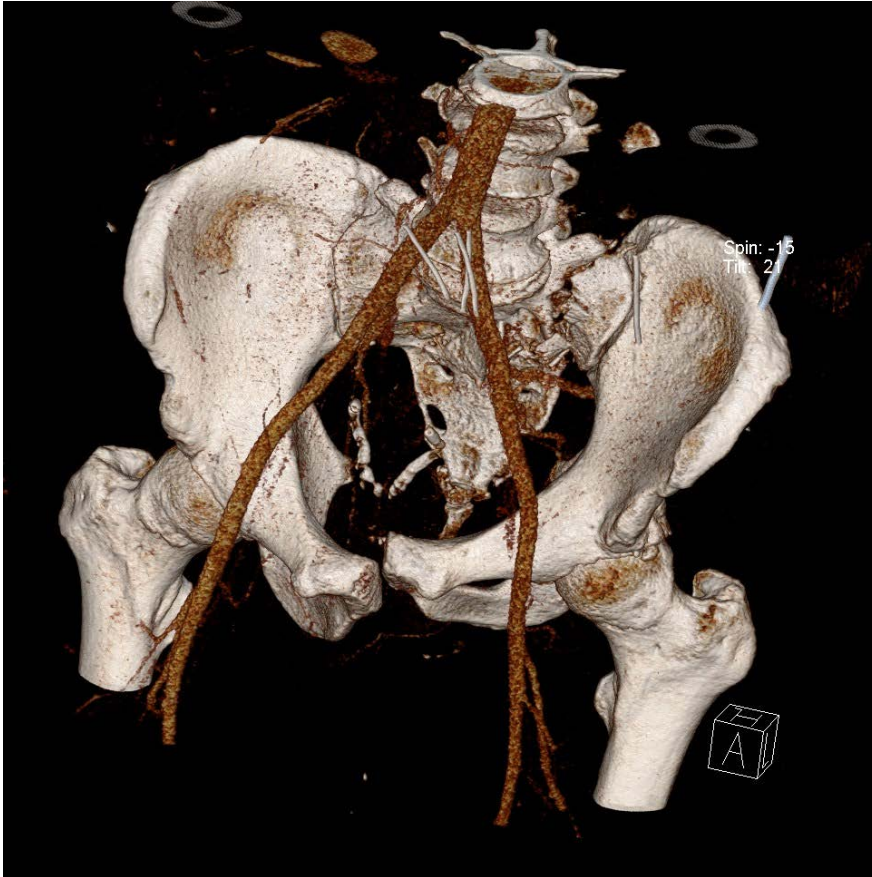
X-Ray in 2 planes



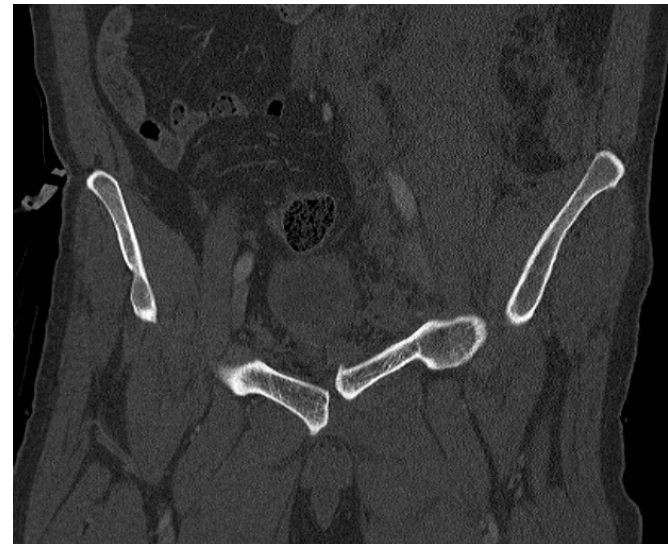
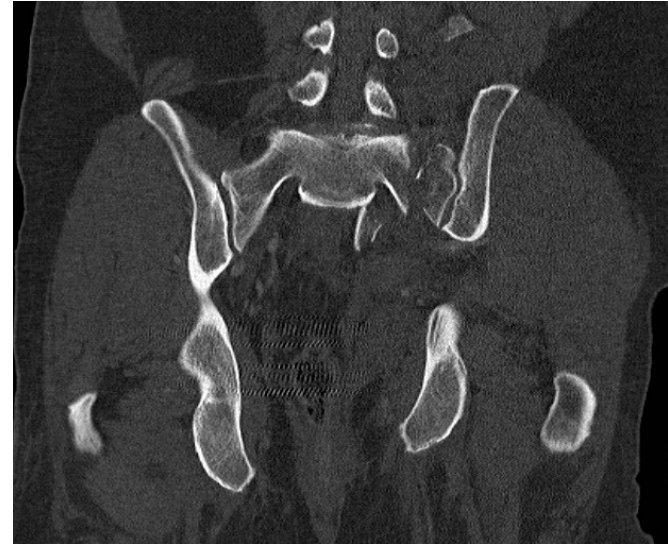
Fracture?





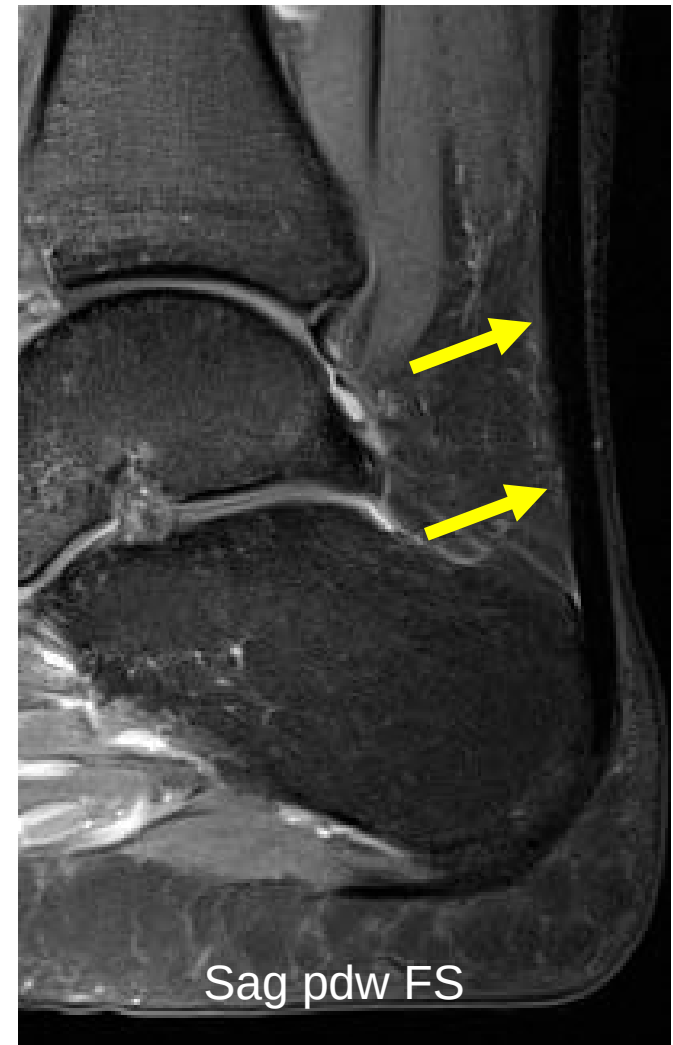
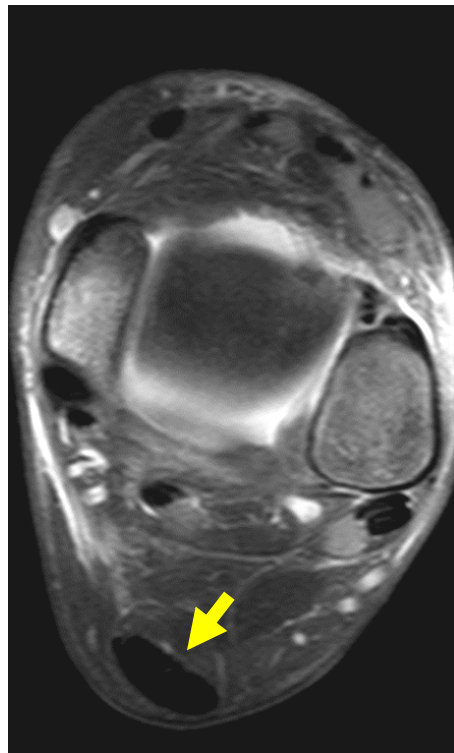


Typ C - Injury



Normal Tendon, z.B. Achilles Tendon

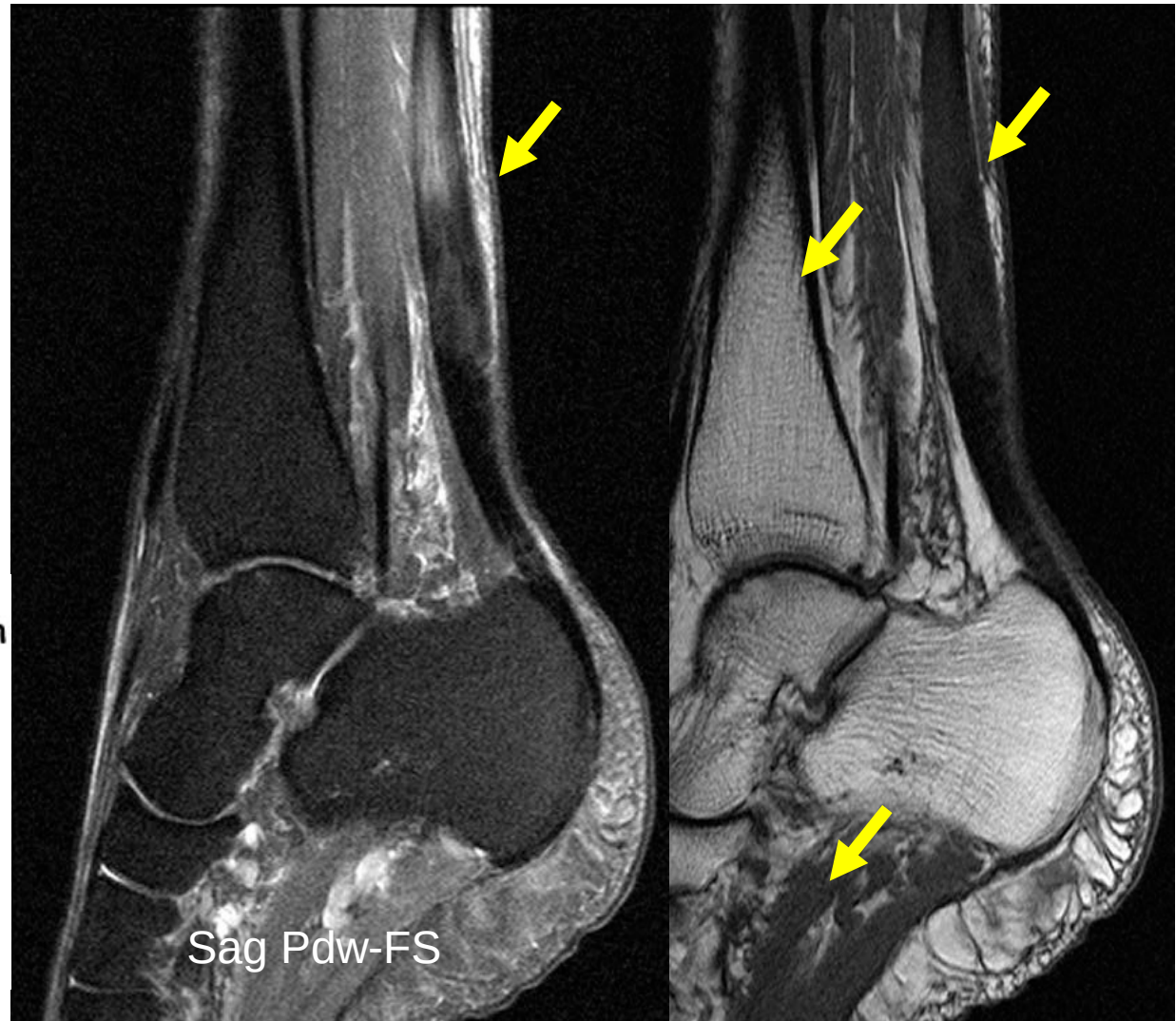
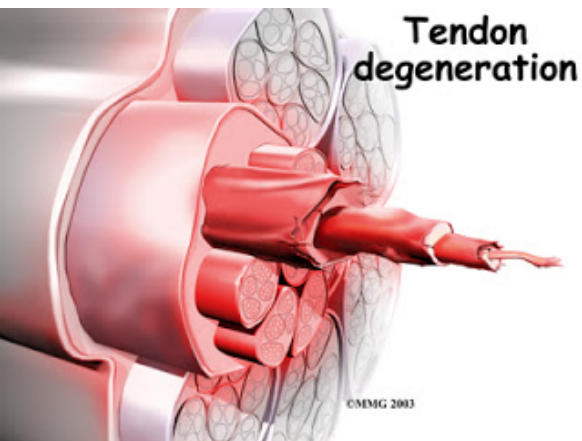
- MRI: Dark and smooth



Tendinosis Degeneration

Enlarged

Intratendinous SI $\uparrow$
in T1 and T2





IMAGING OF DEGENERATIVE DISEASE

X-Ray



MRI





Risk Factor Osteoarthritis

Age > 40

Female Sex

Genetic Factors

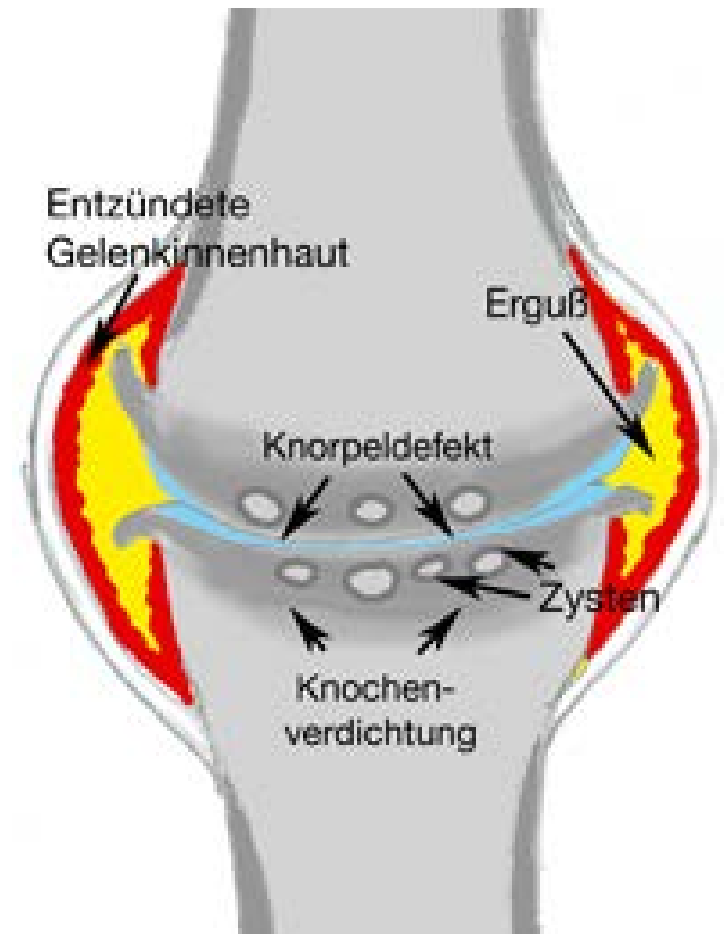
Overweight



Trauma

Classical X-Ray Changes Osteoarthritis

- Subchondral Sclerosis
- Joint Space Narrowing
- Osteophytes
- Geods



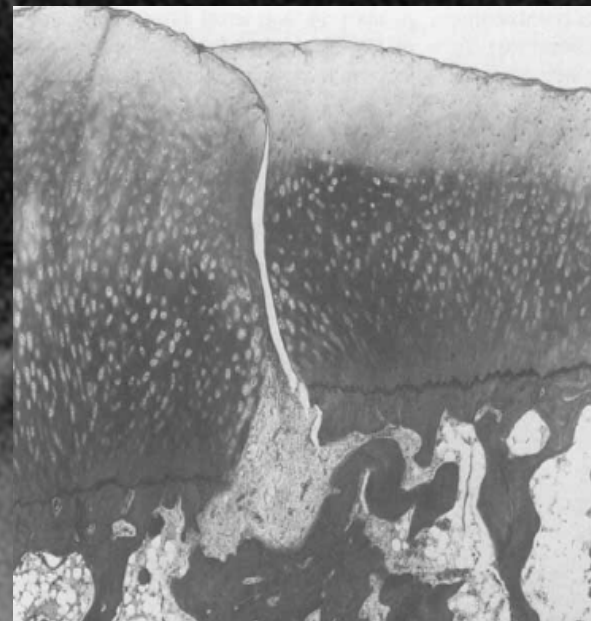
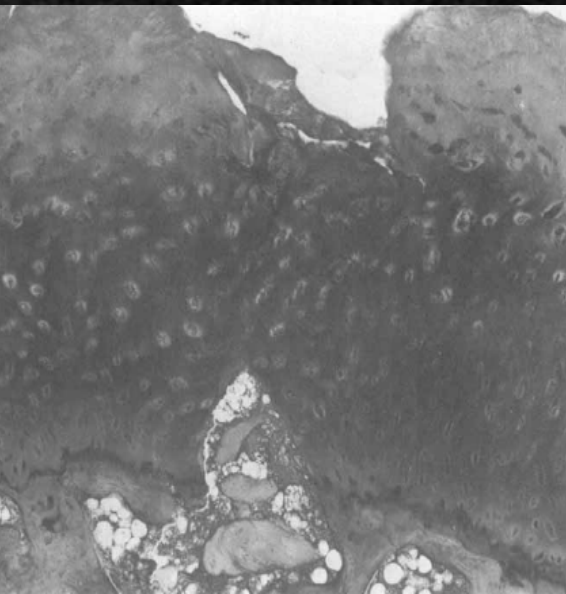
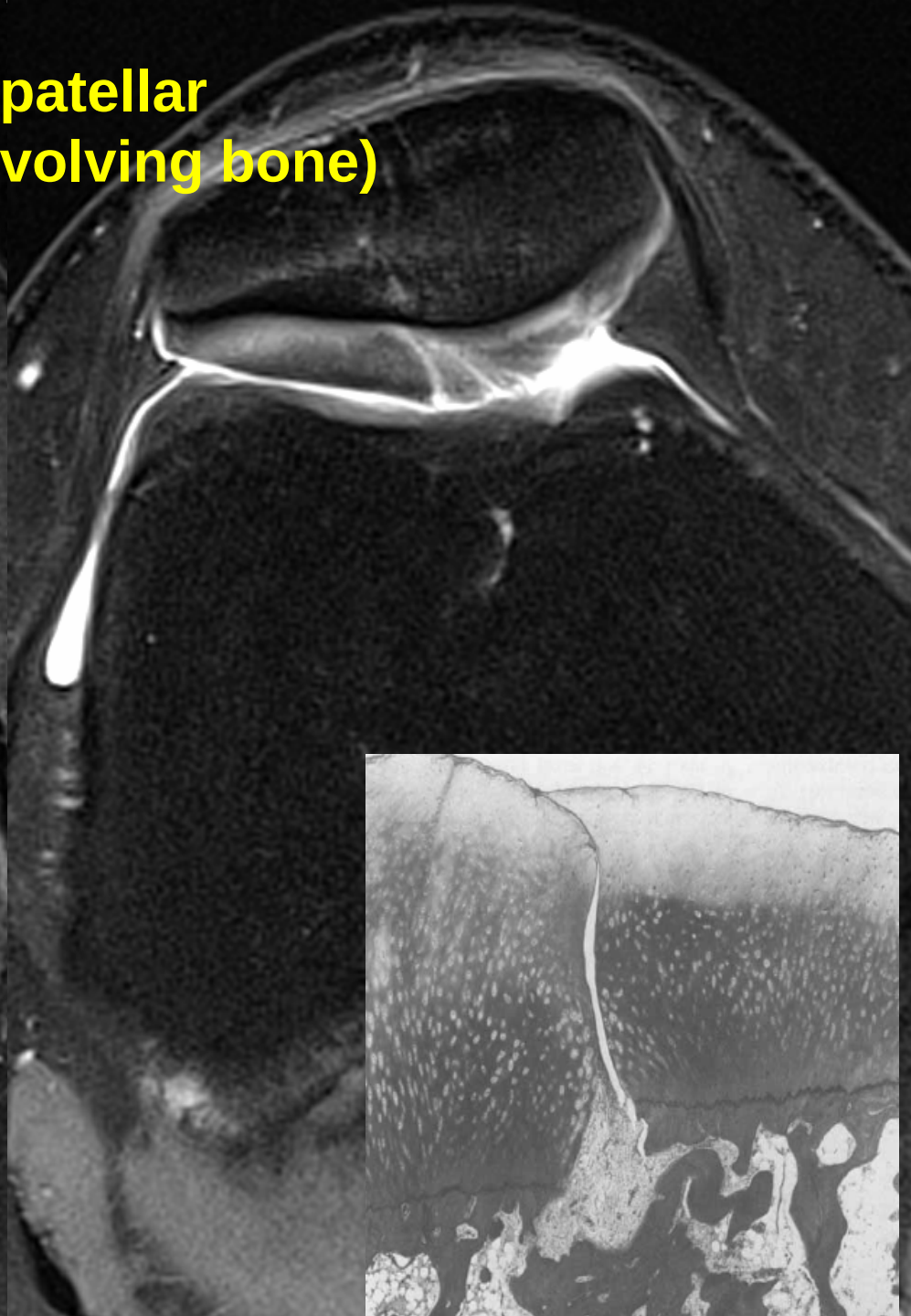
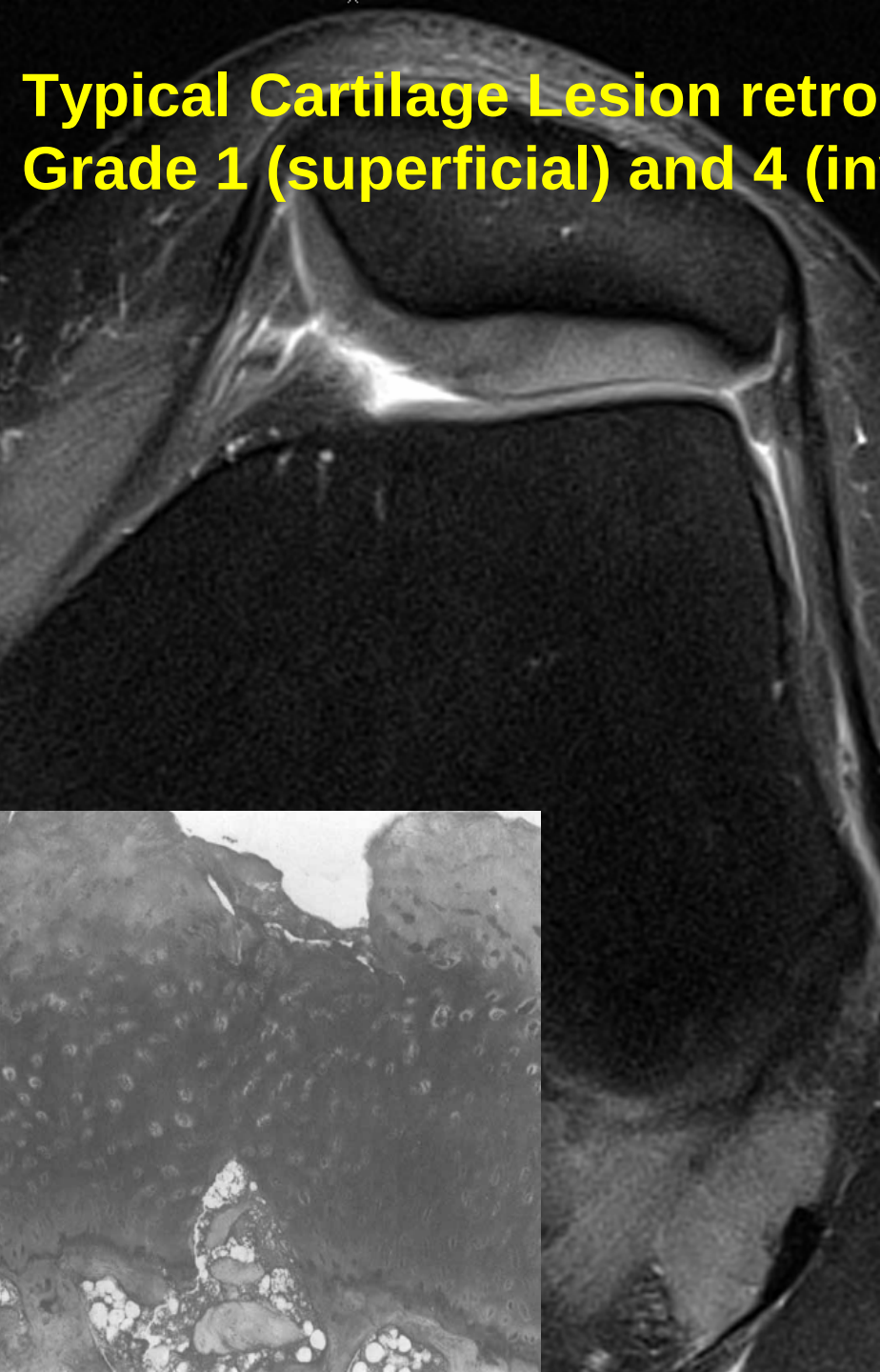
Varus - Osteoarthritis

08



Joint Space Narrowing and sclerosis

Typical Cartilage Lesion retropatellar
Grade 1 (superficial) and 4 (involving bone)





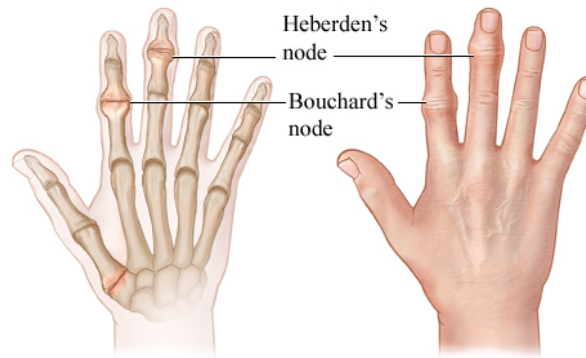
Lateral Knee Osteoarthritis



Hip Osteoarthritis



Finger Osteoarthritis





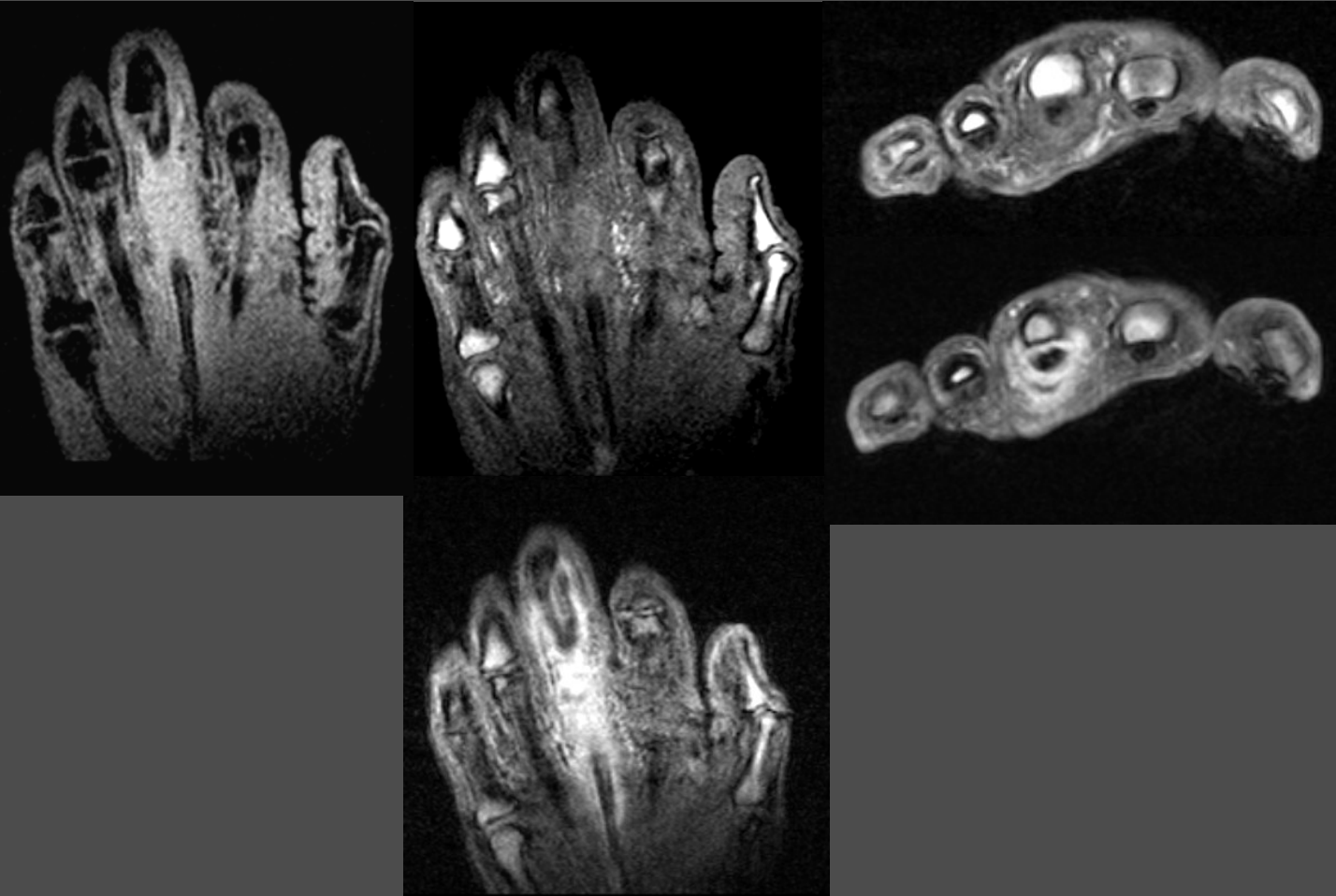
IMAGING OF INFLAMMATION

X-Ray



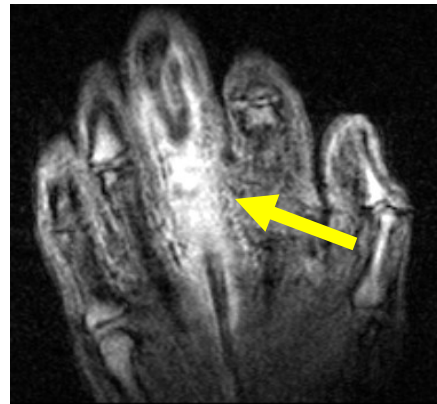
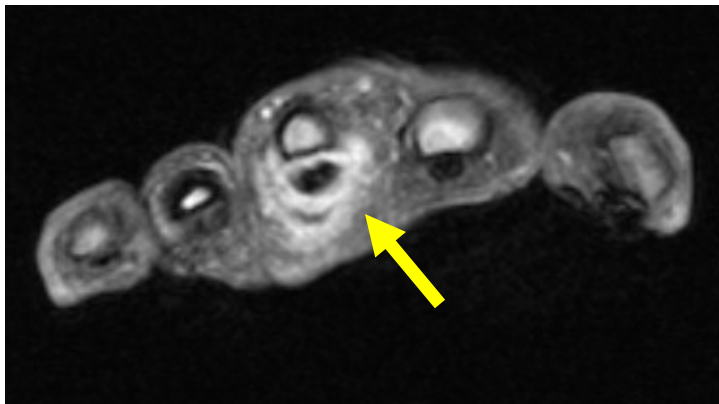
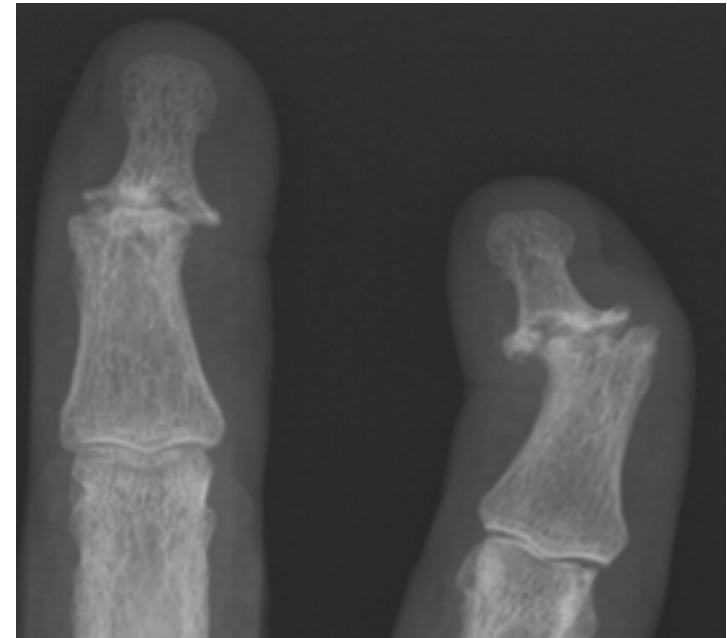
MRI



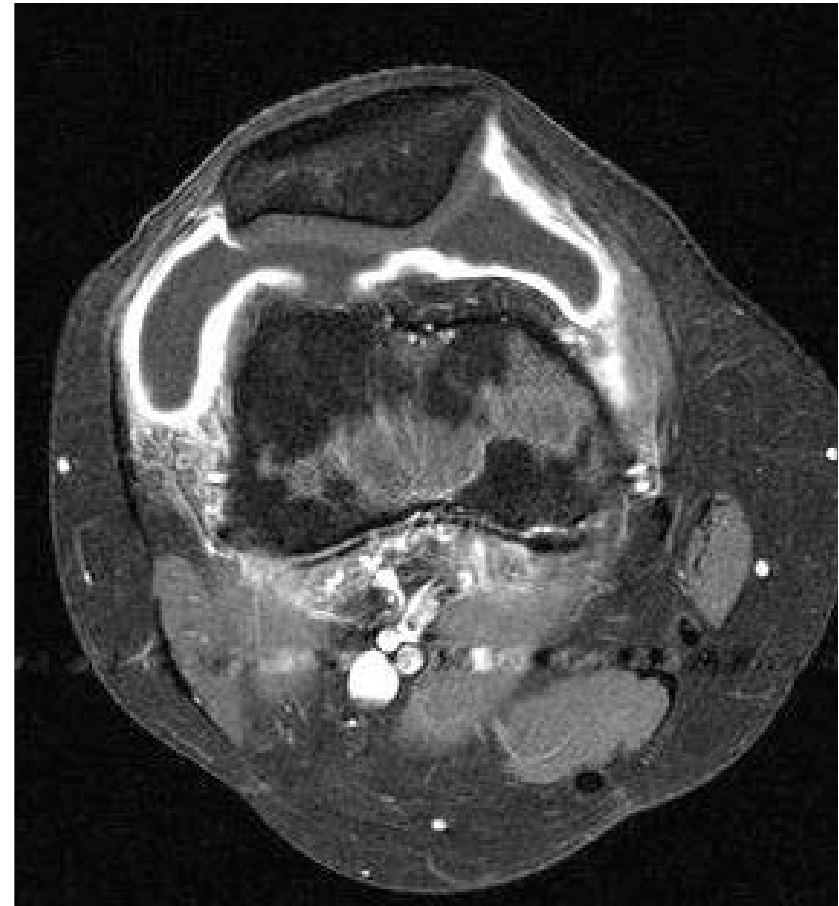
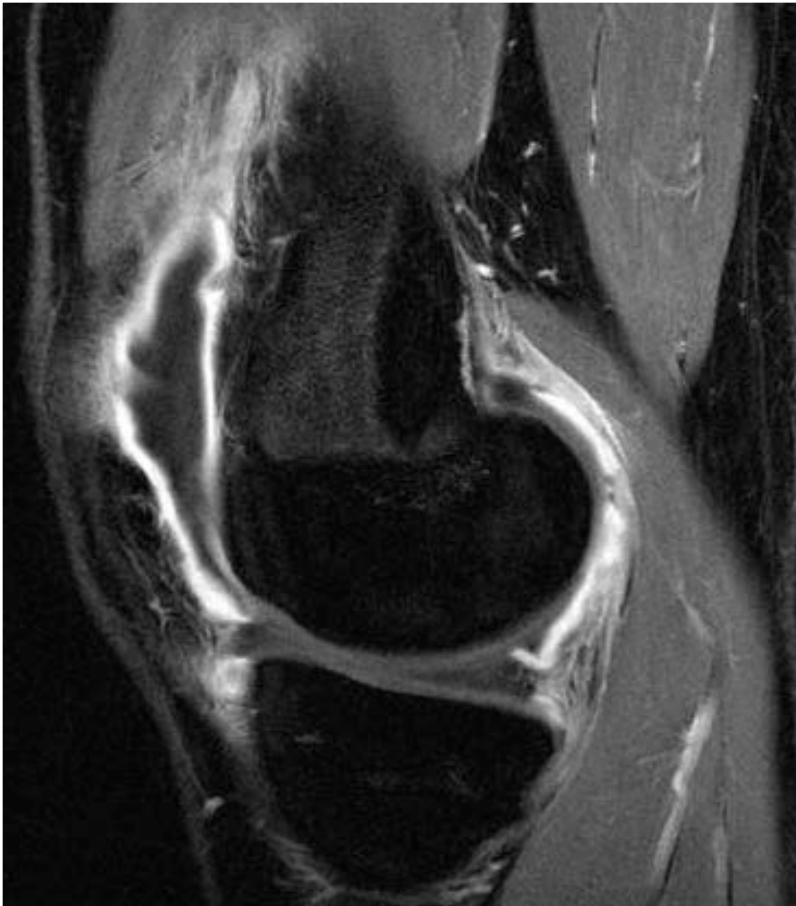


- 35a Pt, Schmerzen D3 rechts

- X-Ray-Findings: Erosion, Pencil-in-Cup
- Soft Tissue swelling- Daktylitis
- Parasyndesmophytes, asymmetric or unilateral Sacroiliitis



MRI: Synovitis





IMAGING OF TUMORS

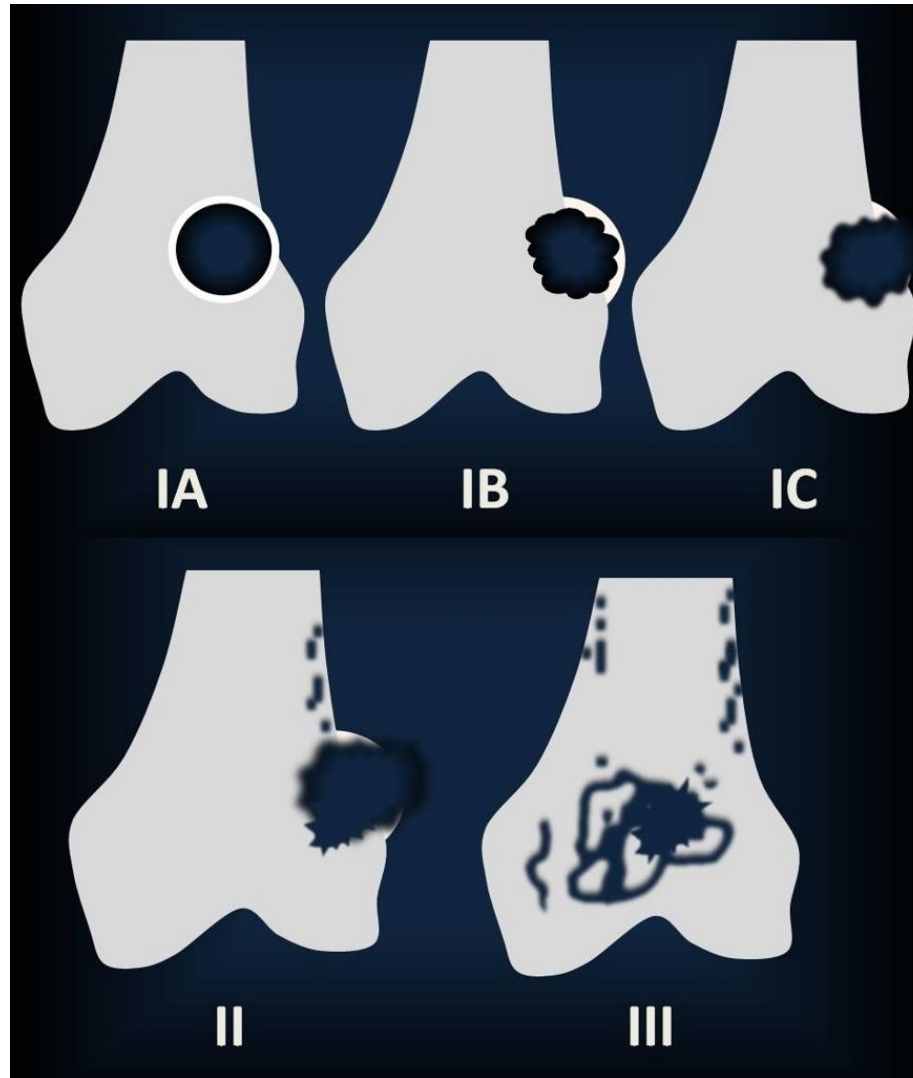
X-Ray



MRI



Lodwick-Classification correlates with the degree of the lesion aggressiveness





Appearance in MRI scan

MR Signal Intensities

	T2WI	PD/FLAIR	T1WI
Solid mass	Bright	Bright	Dark
Cyst	Bright	Dark	Dark
Subacute blood	Bright	Bright	Bright
Acute & chronic blood	Dark	Dark	Gray
Fat	Dark	Bright	Bright



Take home messages

- MRI scan in MSK imaging is a second line investigation after X-ray.
- MRI scan is the method of choice in evaluation of the soft tissue and the bone marrow changes.
- MRI scan is the method of choice in evaluation of the type of the tumoral tissue myxoid, fatt, soft tissue, vascular...etc.
- when radiograph is normal unexplained periosteal reaction or significant symptoms investigate with MRI +/- CT