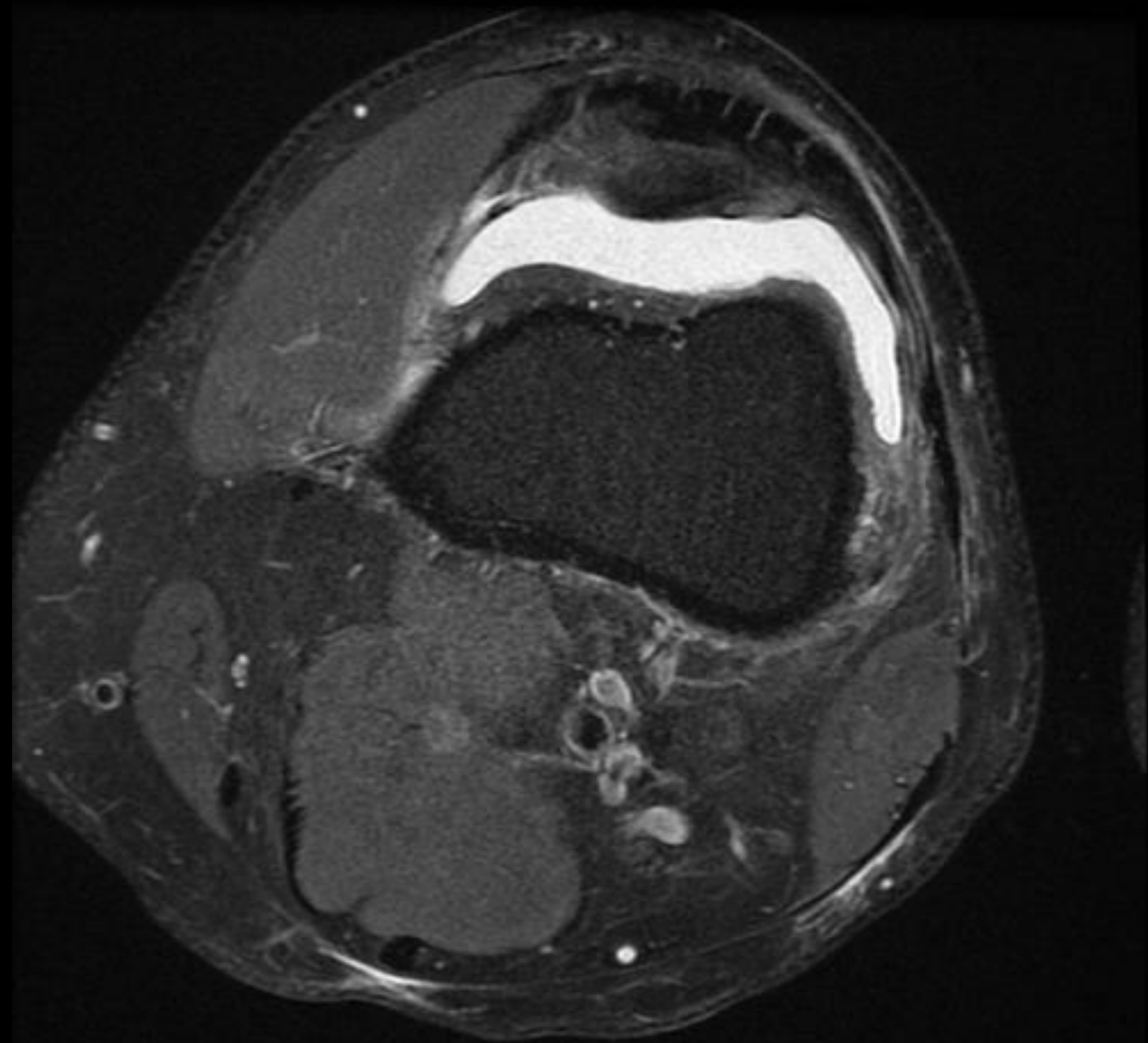
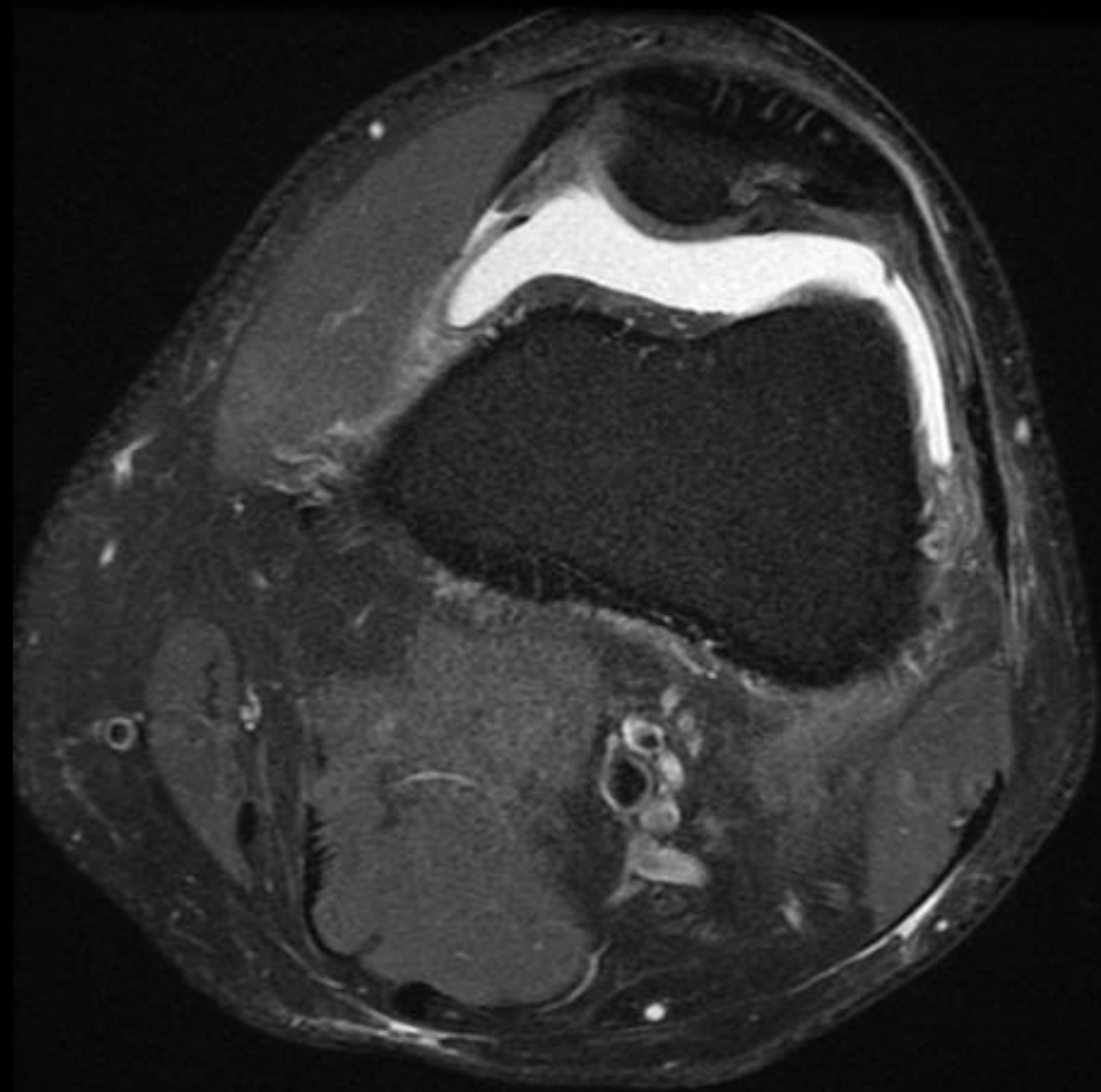
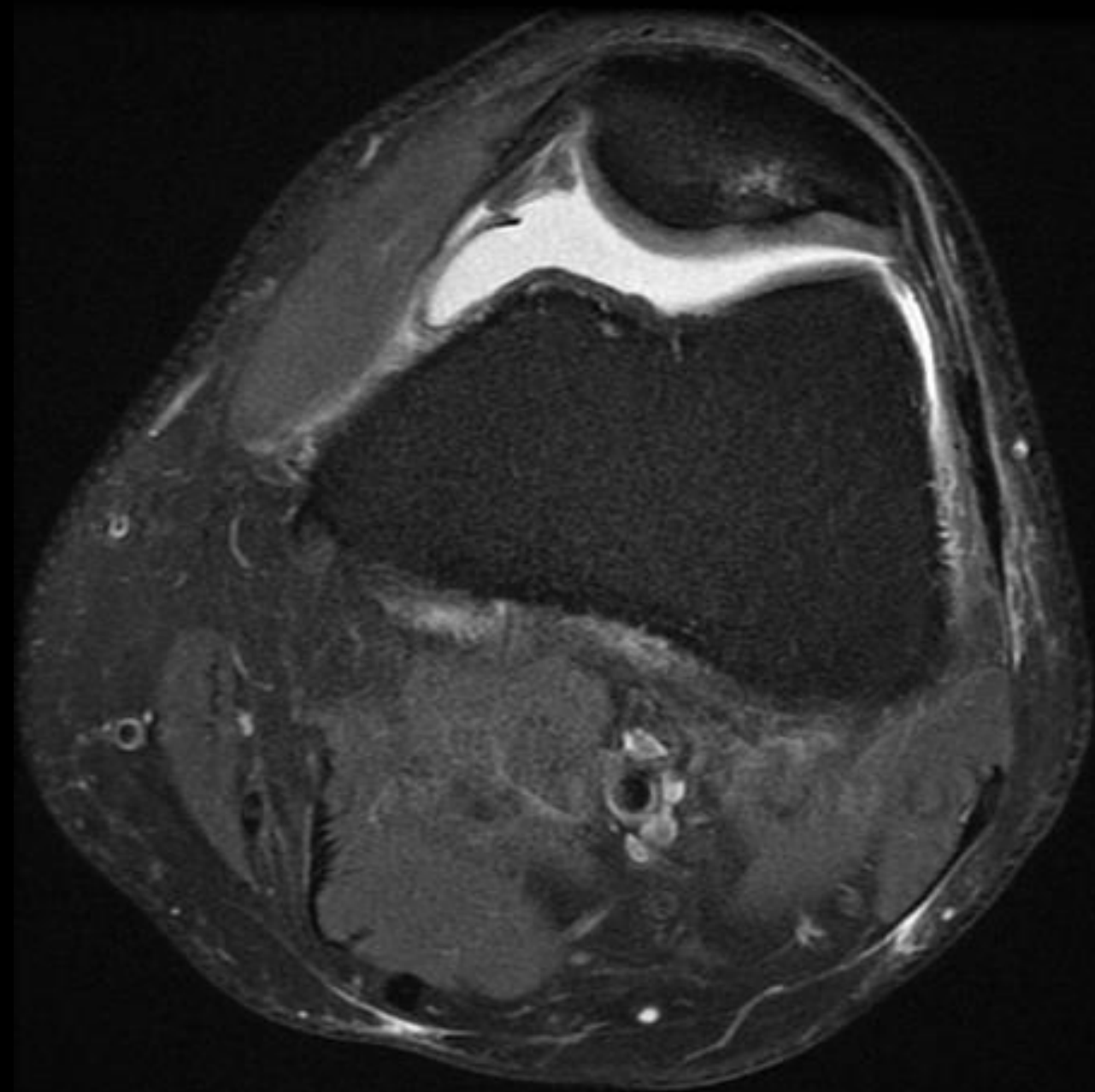
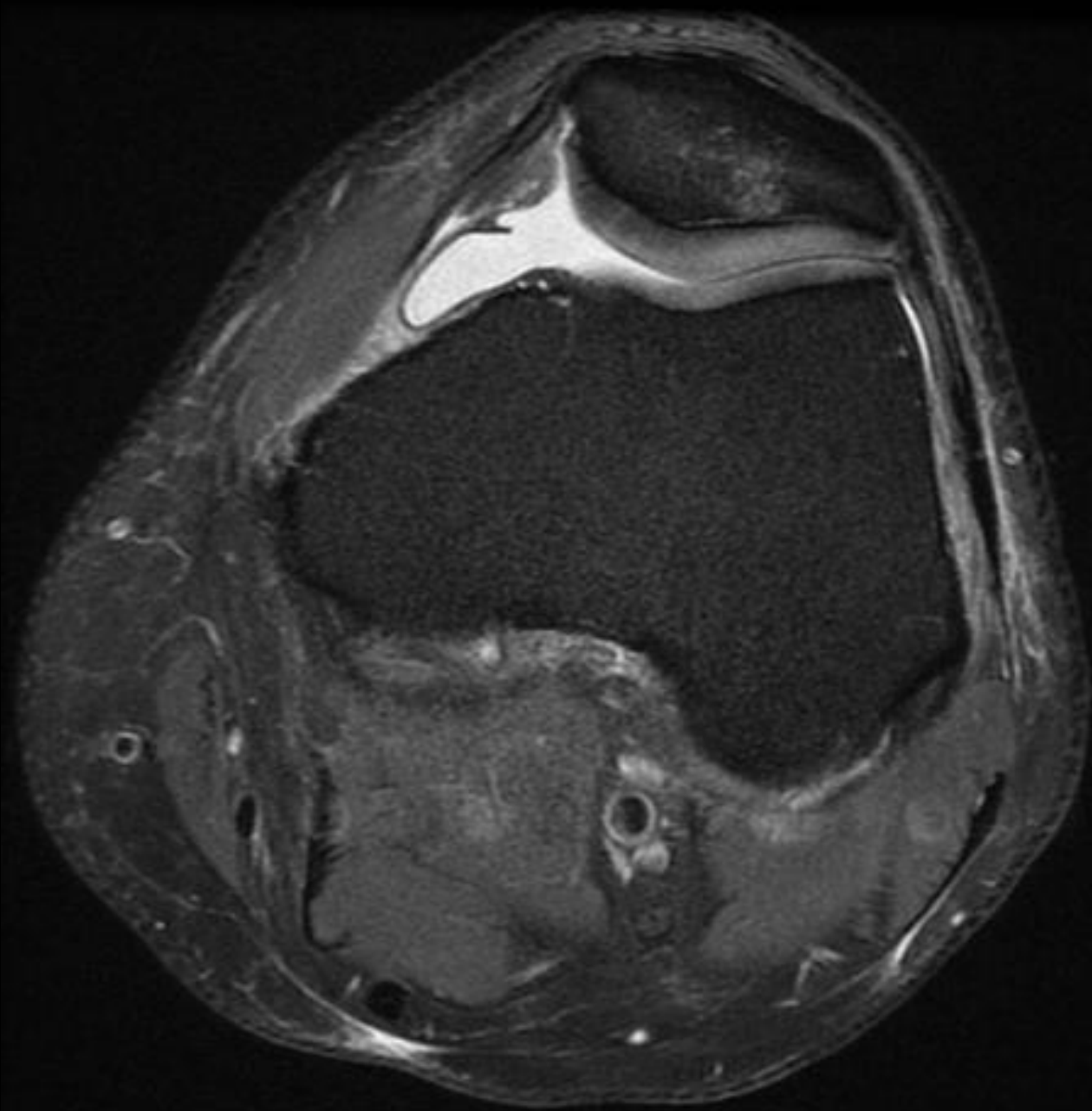


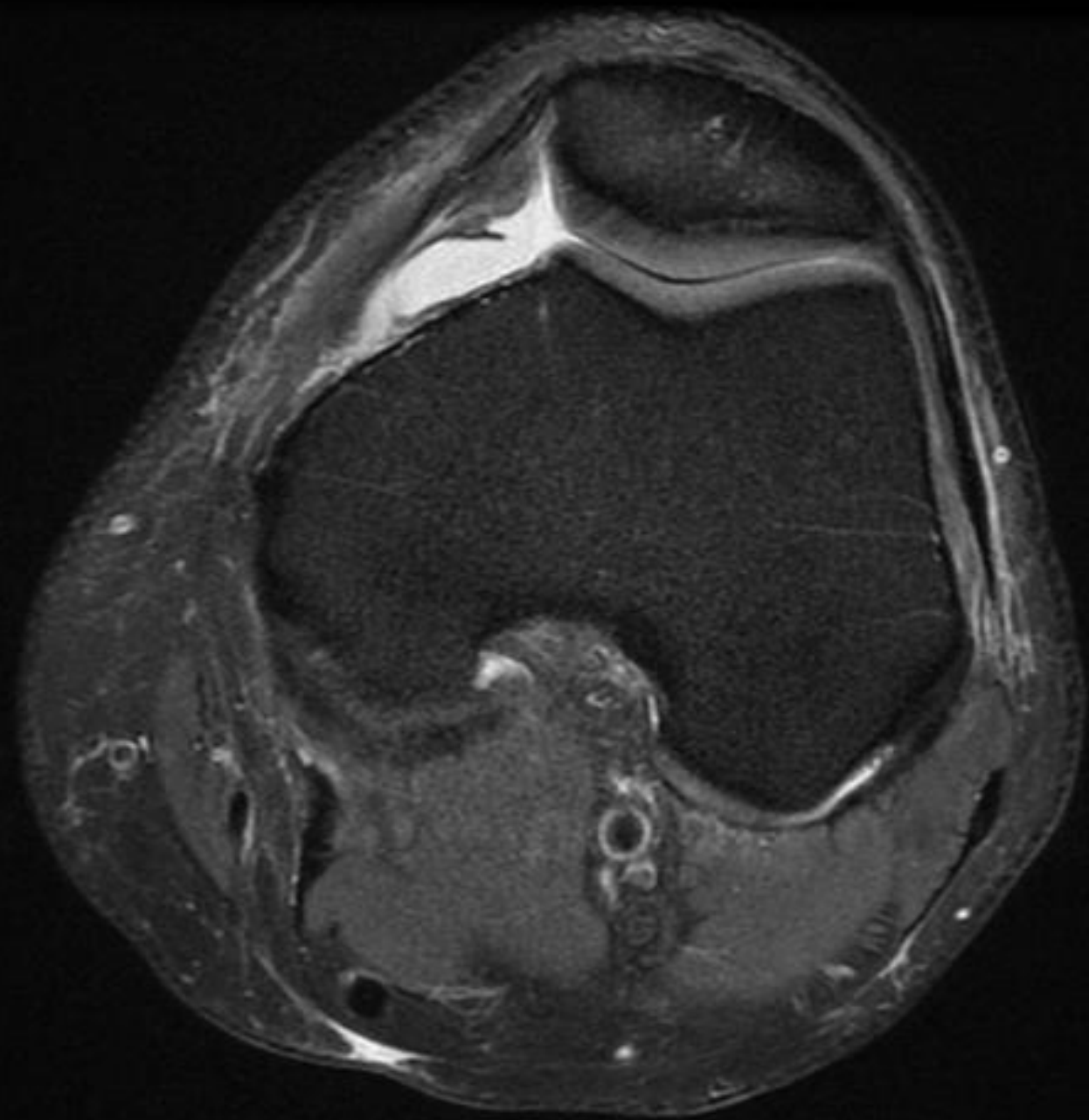
43M took a bad step 2 weeks ago.
Now swelling, pain, limited ROM.

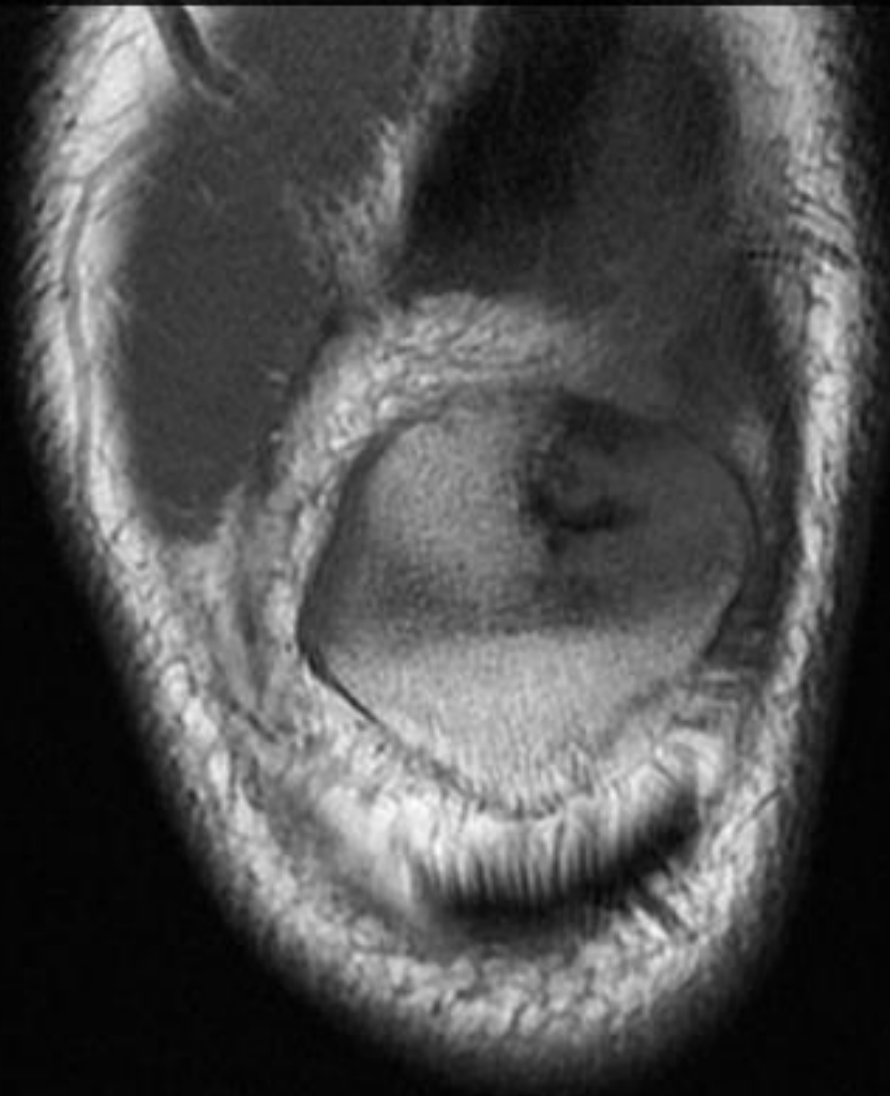














Dorsal Defect of the Patella

(Atypical or traumatized?)

Dorsal Defect of the Patella:

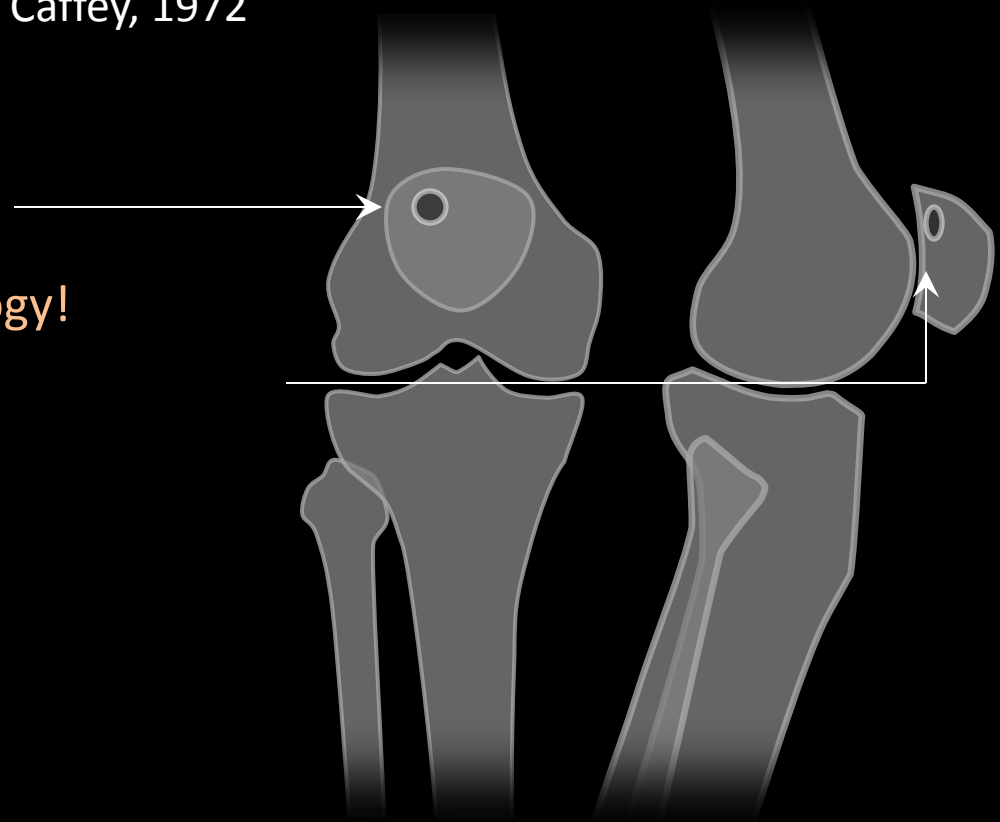
Well Known, But Not Well Understood

Dorsal Defect of the Patella (DDP): A Characteristic Radiographic Lesion

Dorsal Defect of the Patella

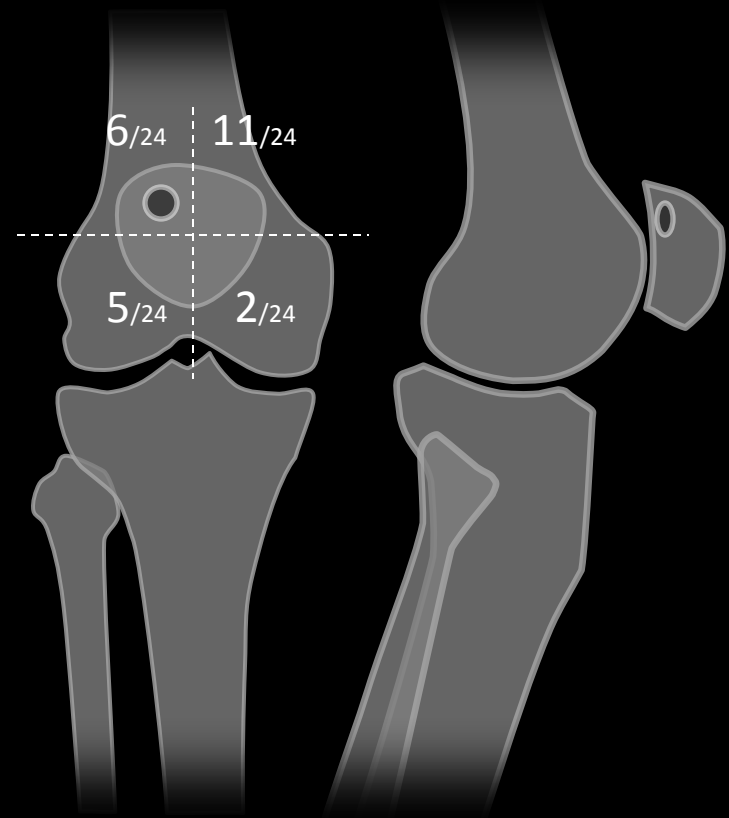
John Caffey, 1972

- Round, well-defined lysis
- Superolateral patella
 - Important for ddx and etiology!
- Extends to subchondral bone
 - Involves cartilage?
- May be symptomatic!
 - Pain, pop, giving way
 - Bone scan can be positive
- May spontaneously heal with sclerosis
 - Symptomatic cases respond to surgery



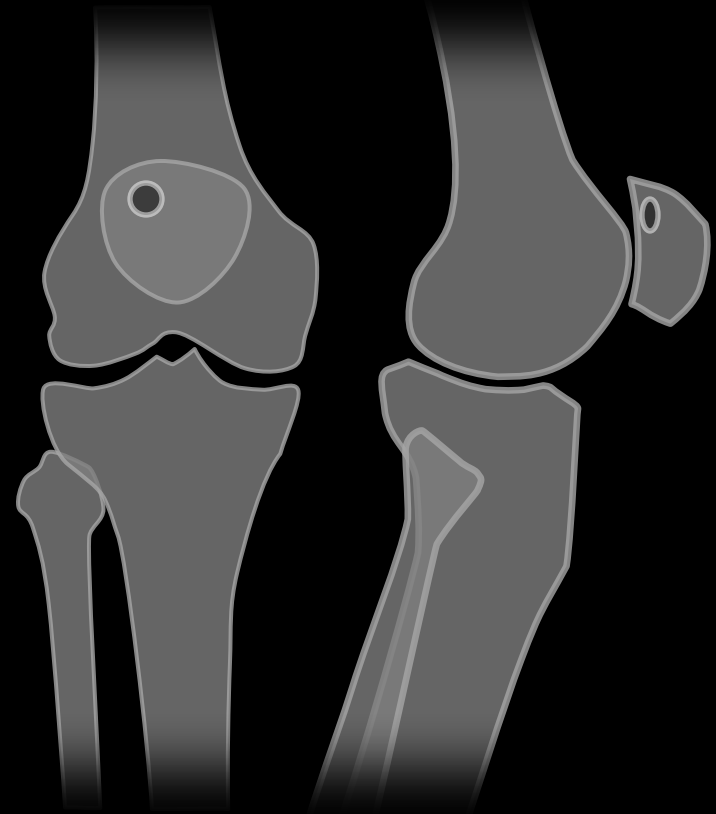
Differential

- Osteochondral lesion
 - Variable shape
 - Medial/central > lateral
 - Possible free fragments
 - Edema
 - Cartilage (?)
- Osteomyelitis / Brodie's
 - Starts ventral
- Mass (epiphyseal, esp CBw, GCT)



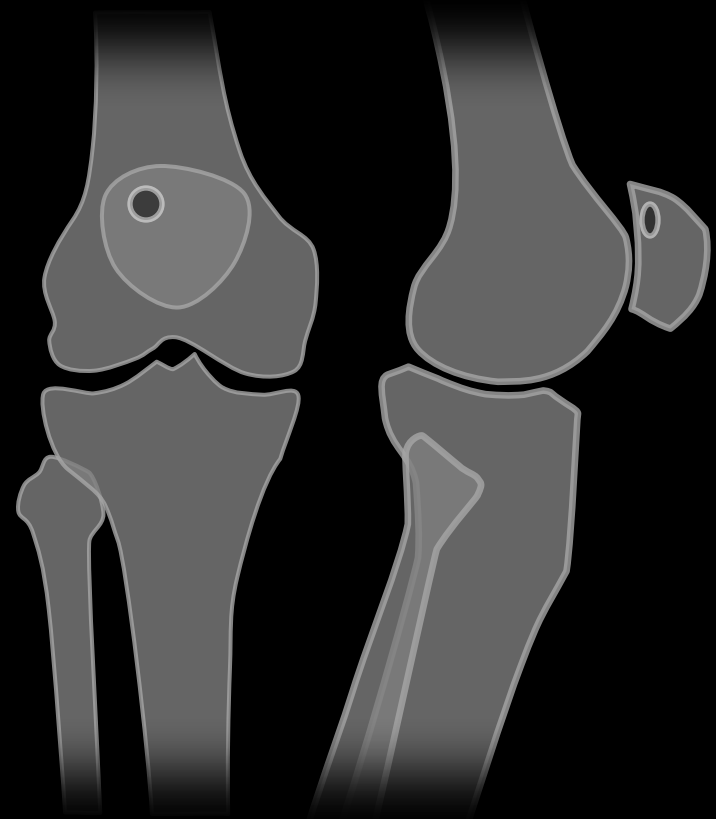
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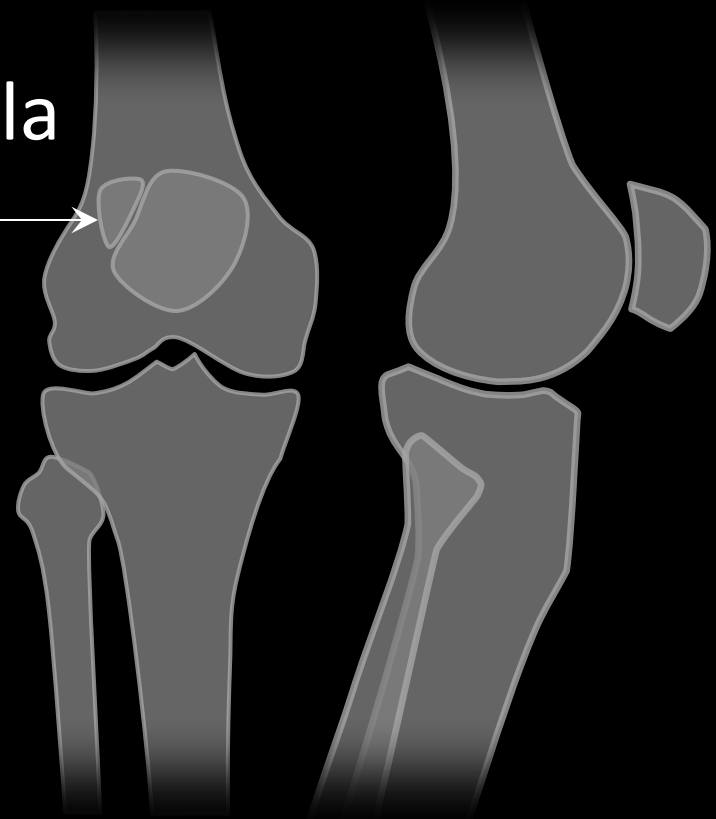


Epidemiology

- Ass'd with multipartite patella

Dorsal defect of the patella:

- Up to 1% of population
- Equal in males and females
- Bilateral in up to 1/3
- Usually young, but also cases in 50s



“There is an argument regarding the aetiology and pathology of the so called ‘dorsal defect of the patella’.”

Uncertain Histology and Origin

Goergen 1979: fibrosis

Non-ossifying
fibroma

Van Holsbeeck 1987

Vastus lateralis

Caffey 1972
Haswell 1976

Developmental

Van Holsbeeck 1987

Poor vasculature

Bilaterality
Ass'd bipartite

Trauma

Sugita 1998

Subchondral
collapse

Sugita 1998
Van Holsbeeck 1987

Cartilage defect

Ischemia
(Osteonecrosis)

Subchondral bone collapse
Necrotic trabeculae
Empty osteocyte lacunae
Necrotic debris
Active remodeling

Monu 1993

Pain

Denham 1984
Van Holsbeeck 1987

“There is a paucity of literature describing the advanced imaging features of DDP.”

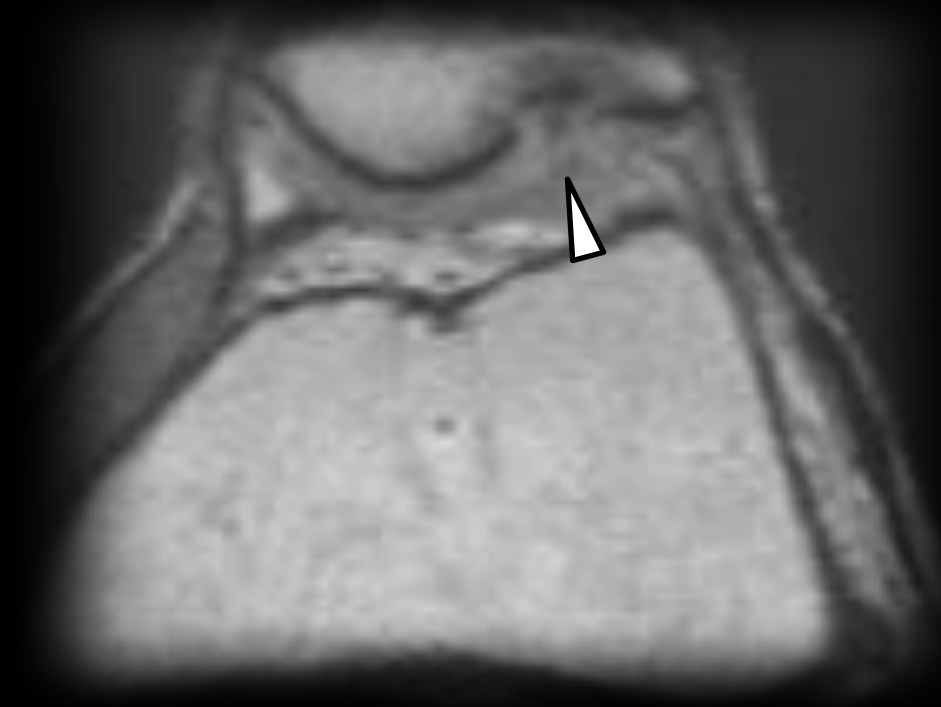
MRI Appearance

- Iso to slight hyper on T1WI/T2WI (Ho 1991)
 - With healing, sclerosis (dk/dk)
- “Soft tissue of similar signal intensity”;
“cartilage-like soft tissue” (Huang 2004)
- “Ingrowth of articular cartilage” with lines of PD/T2 iso to slight hyper (Monu 1993)

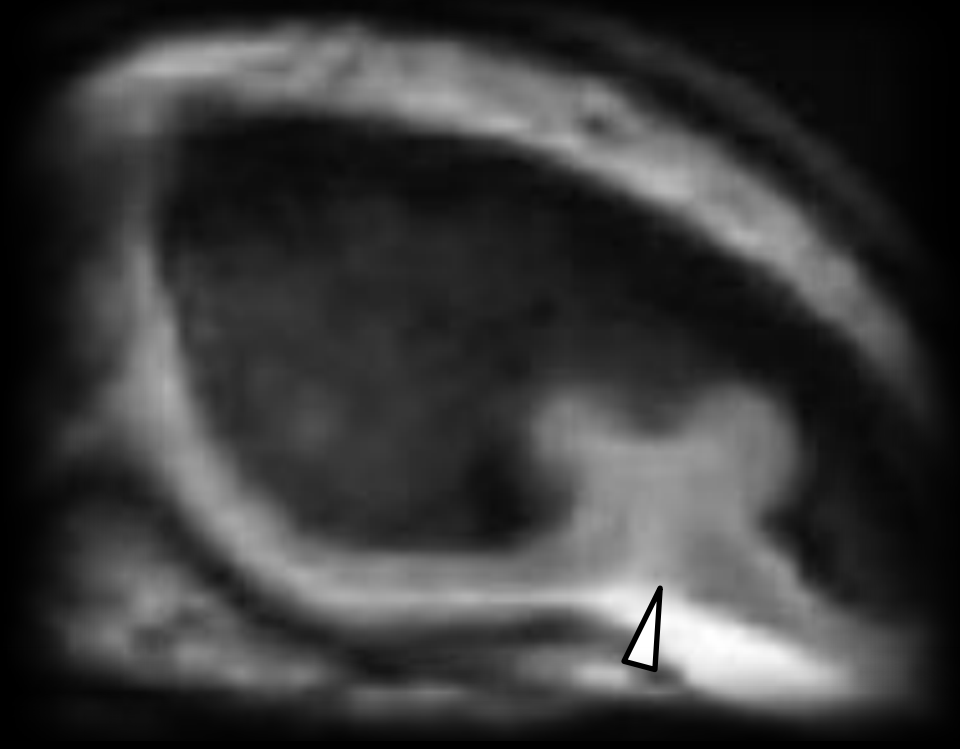
“Initial descriptions of DDP reported normal overlying articular cartilage. Later authors have since reported **associated cartilage abnormalities** in some patients.”

Monu JU, De Smet AA. Case report 789: Dorsal defect of the left patella. Skeletal Radiol. 1993 Oct;22(7):528-31.

Cartilage Involvement



Cartilage Involvement



Cartilage Involvement

