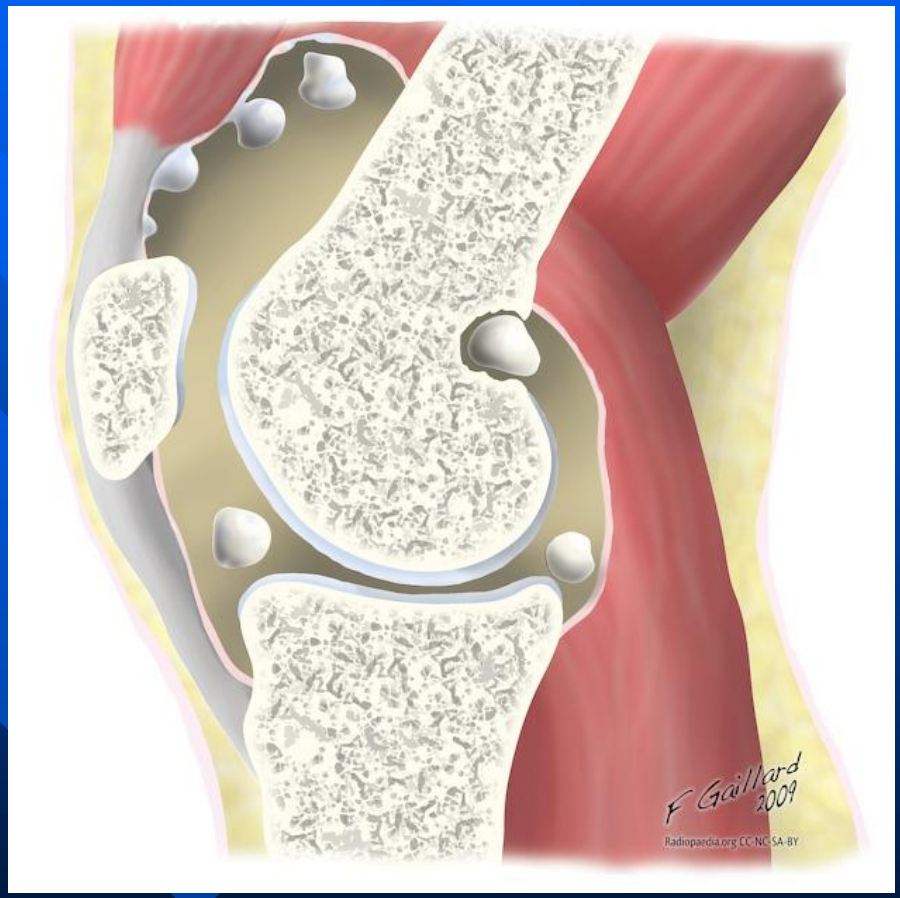
Synovial chondromatosis

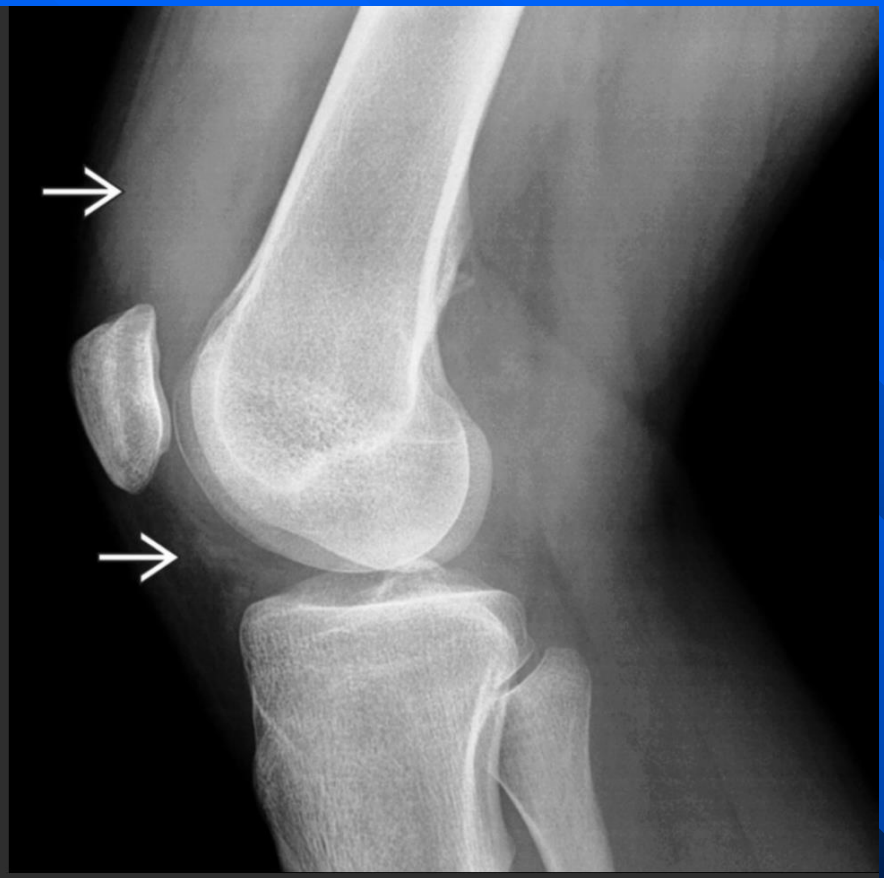
- Osteochondromatosis or synovial chondrometaplasia also known as Reichel syndrome
- Disorder characterized by loose cartilaginous bodies which may, or may not be calcified or ossified.
- It is classified under two main types:
  - Primary synovial chondromatosis: predominantly monoarticular disorder of unknown etiology
  - Secondary synovial chondromatosis: resulting in intra-articular loose bodies from causes such as trauma, osteoarthrosis and neuropathic arthropathy
- In the secondary type, articular nodules are often large, vary widely in size, and frequently ossify ,in contrast to the smaller and uniformly sized in the primary type.

Imaging

- Best diagnostic clues
  - Multiple cartilaginous bodies in synovial space, similar in size
    - » 85% of cases are calcified sufficiently for detection by radiography
  - MR: identifies extent and morphology of noncalcified bodies
- Location
  - Intraarticular: knee (50-65%) > hip > shoulder > elbow
  - Extraarticular: bursae (subdeltoid and popliteal are most common) or tendon sheaths (especially hands and feet)
- Variable degree of calcification &/or ossification
- Mechanical pressure bone erosion in some cases but uncommon
- Malignant transformation is rare (look for marrow invasion to distinguish from synovial chondromatosis)

Synovial Osteochondromatosis





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Lateral radiograph shows a large joint effusion → and no calcifications. A chronic monoarticular effusion could represent SC, tenosynovial giant cell tumor, or an atypical infection.

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Axial PD FS MR in the same patient shows numerous speckled intermediate SI filling defects, characteristic of SC →. At arthroscopy, a multitude of tiny chondroid bodies were present. It must be remembered that, in a minority of cases, the bodies in SC are not calcified enough to be visible on radiographs.

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Extending into the biceps tendon sheath

When primary will be same size

When 2nd, likely from trauma loose bodies will be different size

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