Synovial Chondromatosis

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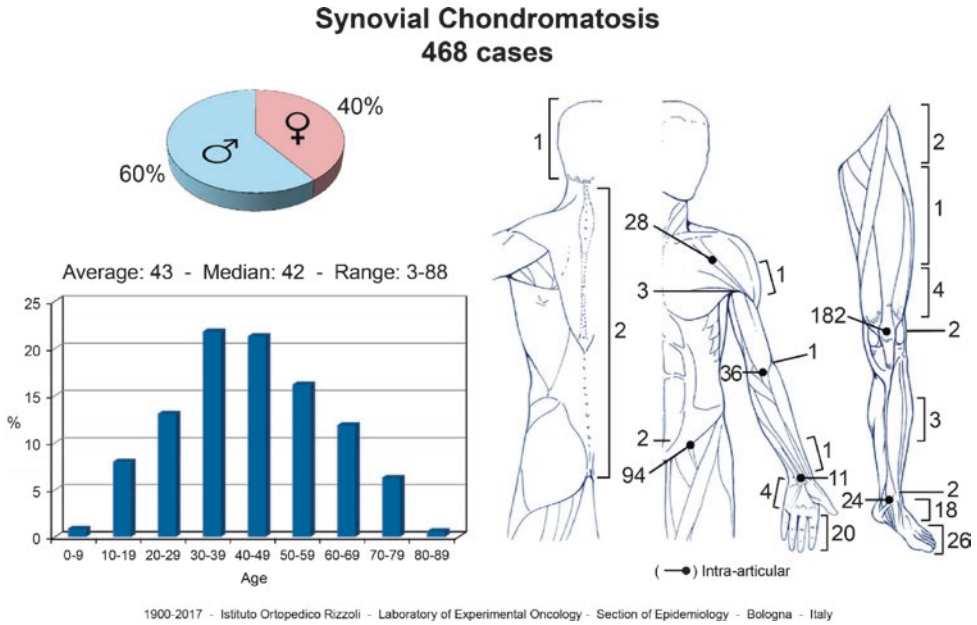
Definition: A benign neoplasm of well-differentiated hyaline cartilage originating from the synovial membrane of the joint, the tendinous sheath or the bursae mucosae.

Epidemiology: Rare. Males. 30–50 years old.



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Location: >50% knee, then elbow, shoulder, wrist, hip, and ankle. Extra-articular form in the fingers.

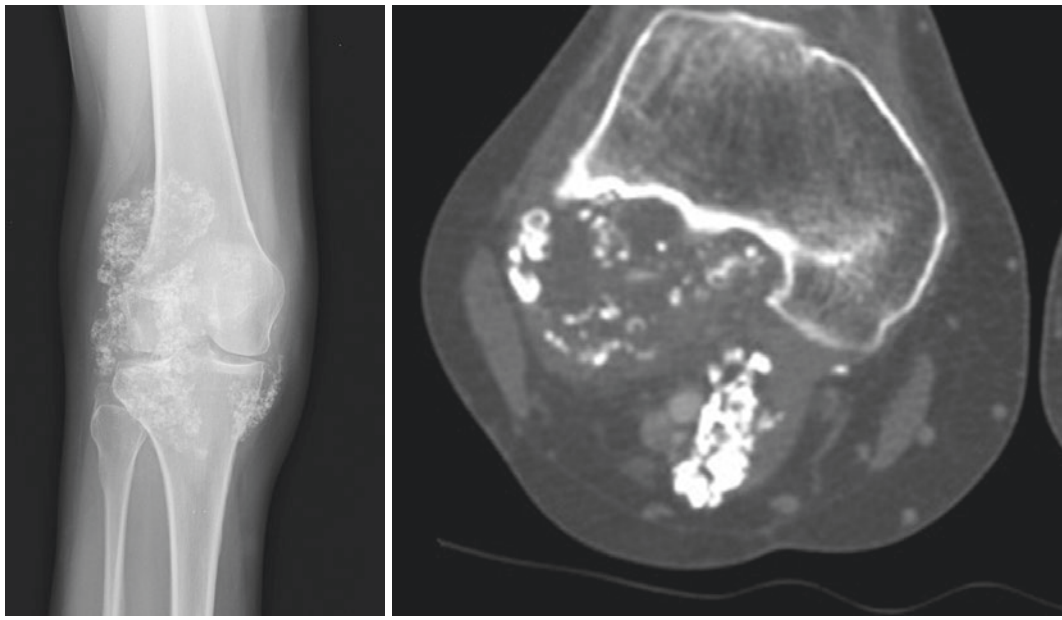
Clinical: Pain, limited joint motion, sensation of joint crackling. Rarely blocking of the joint and effusion. Solid nodules, sometimes loose bodies, may be palpable. Recurring and slowly progressive symptoms. Plurilobulated hard-elastic mass expanding around a joint in aggressive type.

Imaging: X-ray might show intrarticular calcified nodules. Osteoarthitis is frequently seen in longstanding lesions and bone erosion or cortical scalloping in the aggressive ones. On CT intrarticular nodules, calcifications, bone lesions, and invasion of the surrounding tissues is better appreciated. On MRI—increased joint fluid, lobular intra-articular mass, intermediate intensity if uncalcified or with white punctuated appearance if ossified on T1, round, ring-like, dark signal voids in strong enhancement of the synovial tissue on contrast T1 and in bright signal of the joint fluid on T2.

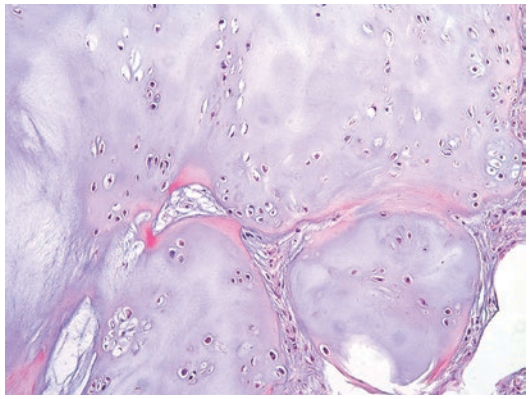
Histopathology: White, smooth, lucent, translucid soft or firm, loose bodies of different size. Thickened and seeded with cartilaginous nodules synovial membrane; hard, granular, yellowish ossified areas in the nodules. Lobules of well-differentiated rather cellular hyaline cartilage. Clustering of the chondrocytes is characteristic. Cartilaginous lobules are surrounded by fibrous bands.

Course and Staging: Slow growth, surgery is often curative, although late recurrences may be seen. Usually, stage 2 or 3. Rarely spontaneous regression. Very rare cases can transform into chondrosarcoma.

Treatment: Intralesional excision with (complete) synovectomy.



Radiograph and CT. Mass in the joint, eroding bone in a well limited way, and containing cartilaginous calcifications



Lobular pattern, clustering of chondrocytes, hyaline matrix

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