



Erosive OA

Soft tissue change:	Swelling at the third and fourth PIPs
Subluxations:	Laterally at third and fourth PIPs
Mineralization:	Normal
Calcification:	None
Joint spaces:	Nonuniform loss—best seen at third PIP and first IP
Erosions:	Central erosions—combined with osteophytes to produce “seagull” appearance
Bone production:	Osteophytes at PIPs, DIPs, first carpometacarpal joint and greater multangular-navicular joint; subchondral sclerosis at second to fourth DIPs, PIPs and IP joint of thumb; ankylosis fifth DIP
Distribution:	PIPs and DIP; first carpometacarpal and greater multangular-navicular joint





CPPD Crystal Deposition Disease

Soft tissue change:	None
Subluxations:	None
Mineralization:	Normal
Calcification:	Triangular cartilage (fibrous cartilage); between lunate and triquetrum (hyaline cartilage) (<i>arrows</i>)
Joint spaces:	Uniform loss of second through fourth MCPs, radiocarpal, and capitate-lunate
Erosions:	None
Bone production:	Osteophytes at MCP joints; subchondral sclerosis in navicular, capitate, lunate
Distribution:	MCPs, 1st metacarpal-carpal joint, radionavicular joint, and capitate-lunate joints





Gout

Soft tissue change:	Soft tissue mass around second and fifth DIP, ulnar styloid
Subluxations:	Laterally at thumb IP joint
Mineralization:	Normal
Calcification:	In soft tissue masses—best seen at ulnar styloid
Joint spaces:	Maintained; loss at second through fifth MCPs, PIPs; nonuniform loss at first IP; destruction of 2nd and 5th DIPs
Erosions:	Nonaggressive; second and fifth DIP, second PIP (<i>arrow</i>), third and fourth intercarpal joint, scapholunate joint, ulnar styloid
Bone production:	Overhanging edge of cortex—second and fifth DIP joint
Distribution:	Carpometacarpal and scapholunate joint; randomly throughout fingers—second and fifth DIPs

L

IR

RA





RA



Psoriasis



Gout



Psoriasis



RA with OA - look for the uniformity - Never in degenerative



CPPD



Carpal Compartment



All compartments – inflammatory arthritides

first carpometacarpal joint – OA and erosive OA

CPPD - radiocarpal compartment → extends in stairstep pattern → the capitate-lunate joint

Gout - predilection for carpometacarpal compartment

- (1) radiocarpal compartment
- (2) midcarpal compartment
- (3) common carpometacarpal compartment
- (4) first carpometacarpal compartment

References



- ✦ Jacobson JA, Girish G, Jiang Y, Resnick D. Radiographic evaluation of arthritis: inflammatory conditions. Radiology. 2008;248(2):378-89
- ✦ Jacobson JA, Girish G, Jiang Y, Sabb BJ. Radiographic evaluation of arthritis: degenerative joint disease and variations. Radiology. 2008;248(3):737-47
- ✦ Brower, Anne C., et al. Arthritis in Black and White. Elsevier Saunders, 2012
- ✦ Greenspan, Adam. Orthopedic Imaging: a Practical Approach. Wolters Kluwer/Lippincott, Williams & Wilkins, 2011