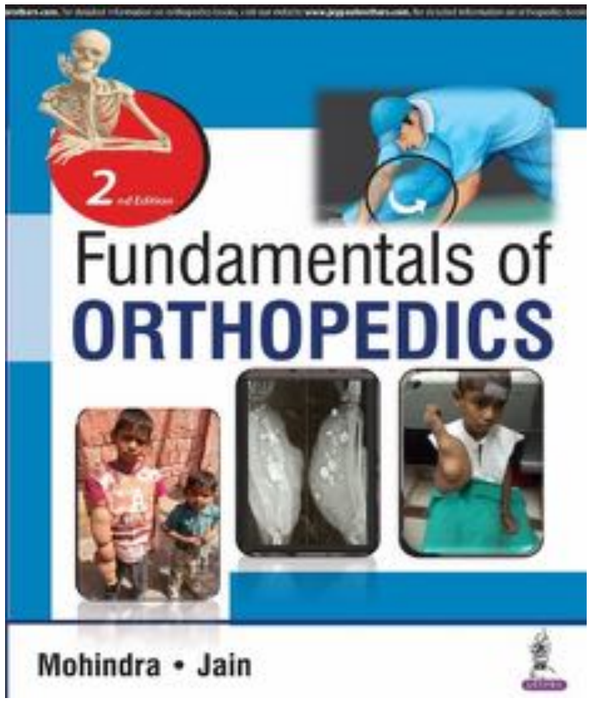

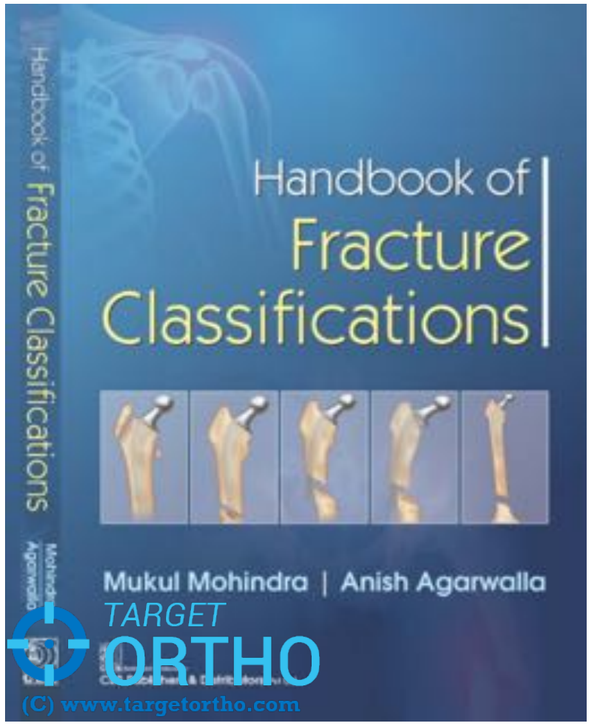

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Musculoskeletal Rheumatology

SPONDYLOARTHROPATHIES

AUTOIMMUNITY

HLA B-27 associated spondyloarthropathies

RHEUMATOID ARTHRITIS

Q. Which type of cells ARE predominantly seen in **RHEUMATOID ARTHRITIS** ?

A. T cells

B. B cells

C. Dendritic cells

D. Giant cells

Q. A middle age female with Rheumatoid Arthritis on treatment develops upper motor neuron signs in her limbs. The investigation required to evaluate her further would be:

A. Cervical spine lateral view *in flexion and extension*

B. Open mouth view

C. Swimmer's view

D. Broden's view

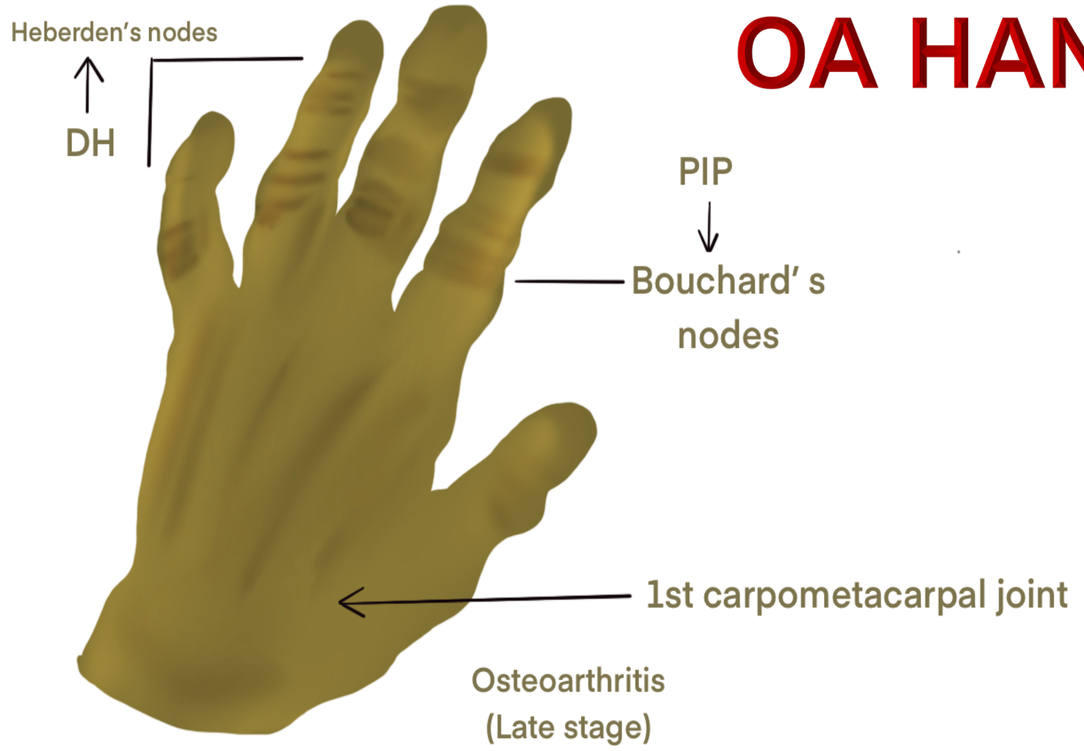
The 14 specified joints (both sides) that are commonly involved in RA are:

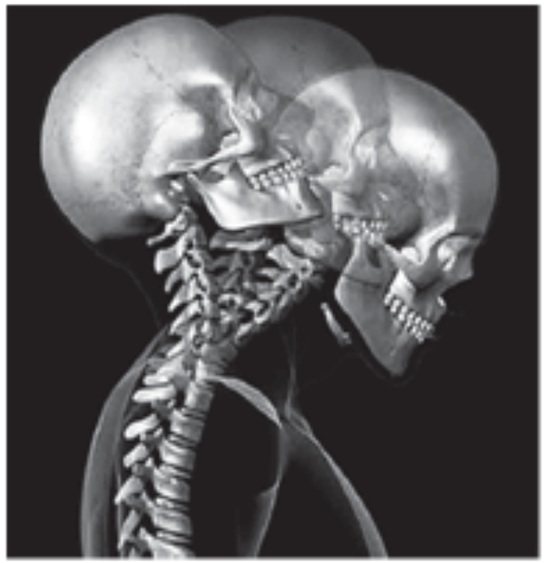
1. Proximal interphalangeal joint
2. *Metacarpophalangeal joint*
3. Wrist joint
4. Elbow
5. **Knee**
6. Ankle
7. Metatarsophalangeal joints.

Less commonly involved joints:
Hip, temporomandibular, subtalar and *atlantoaxial joints*.

NOT INVOLVED:
Lumbar spine and
DIP joints in hand!

OA HAND





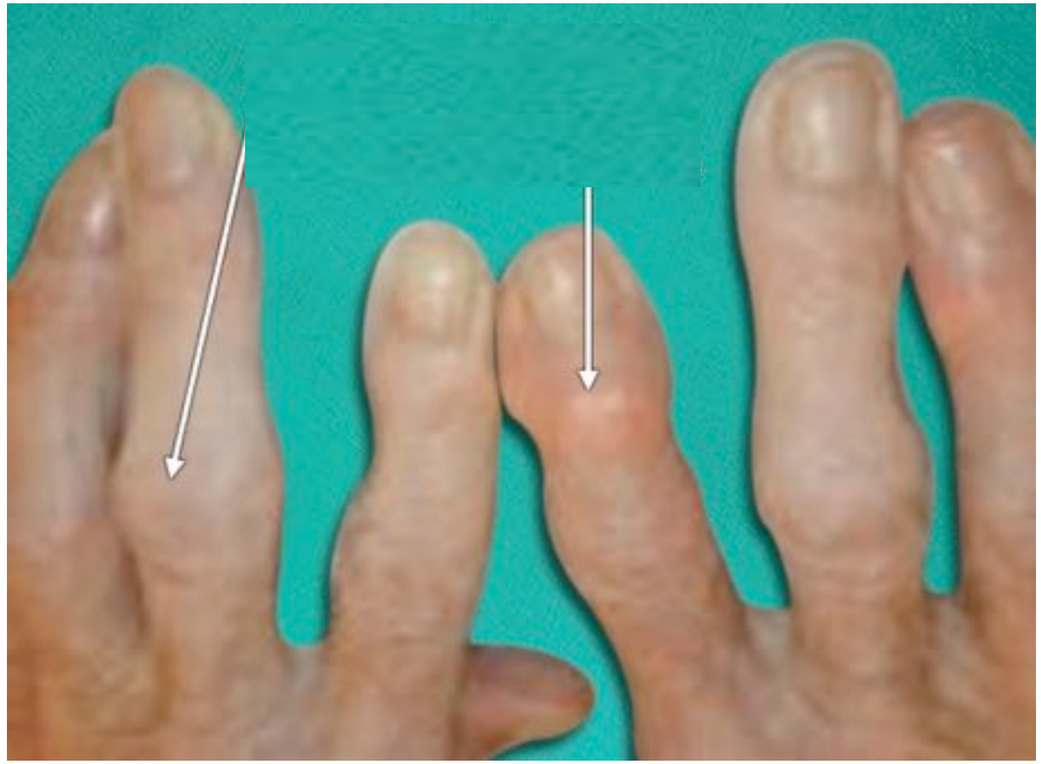
Q. A 65 years old lady presented to clinic with a 6 month history of stiffness in her hand, bilaterally. This stiffness gets worse in the morning and quickly subsides as the patient begins daily activities. She has no other significant medical problems. On examination the patient has bilateral bony swellings at the margins of the distal interphalangeal joints on the (2nd, 3rd and 5th) digits. No other abnormalities were found on the physical examination. These swellings represent:

A. RA Hand

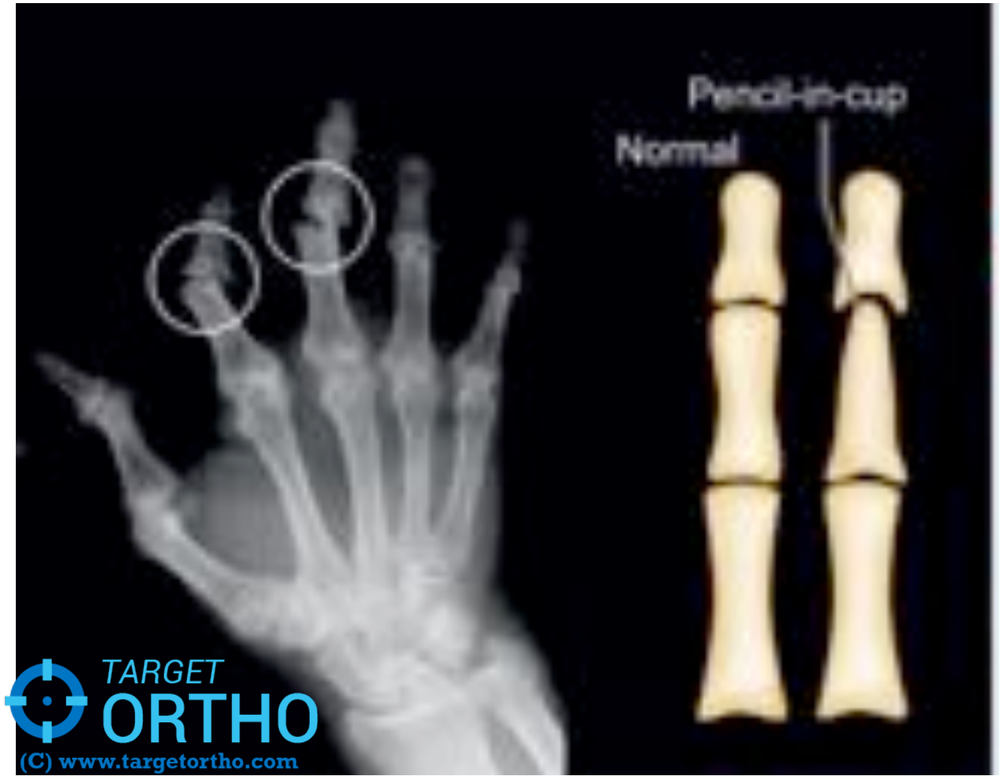
B. OA Hand

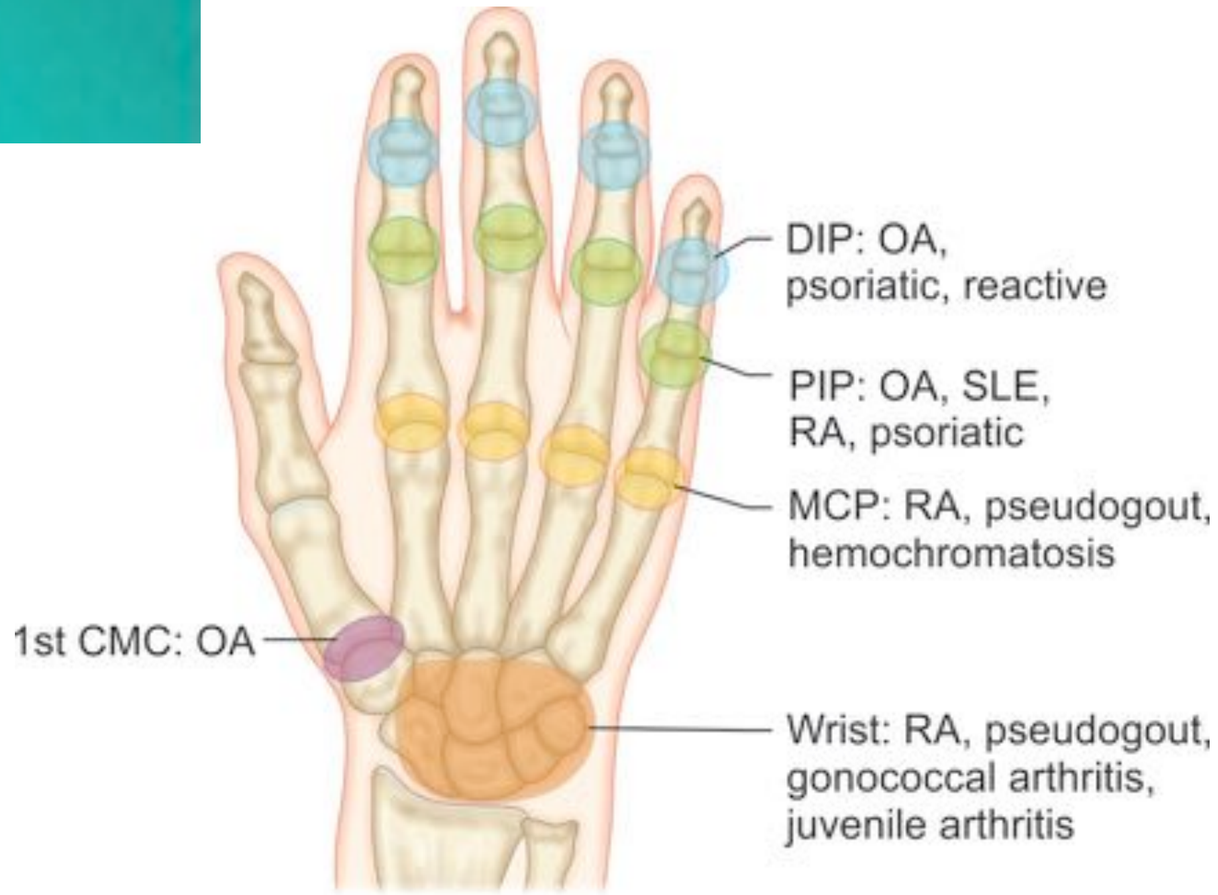
C. Psoriatic Arthritis

D. SLE

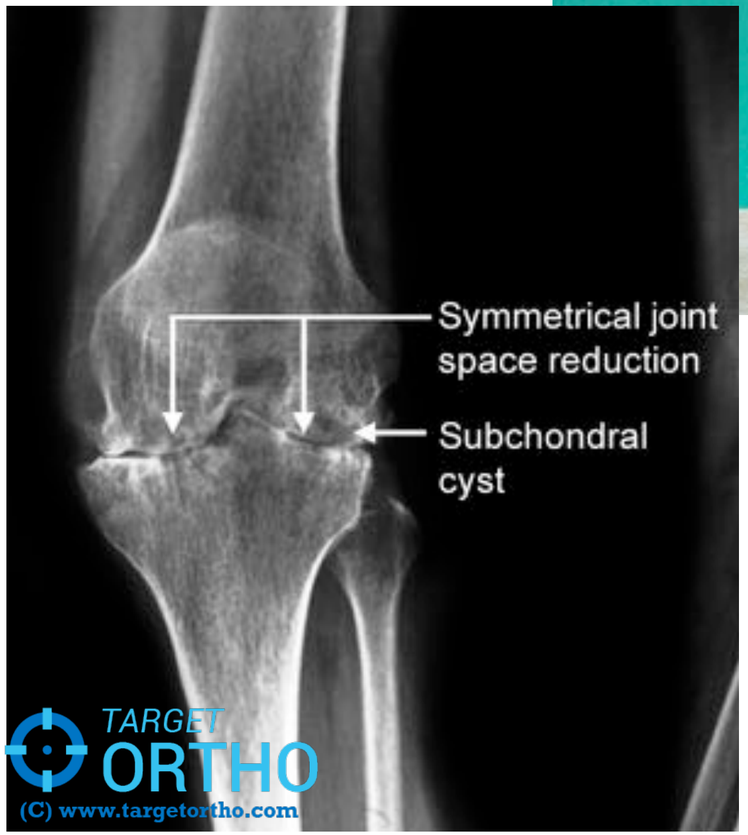


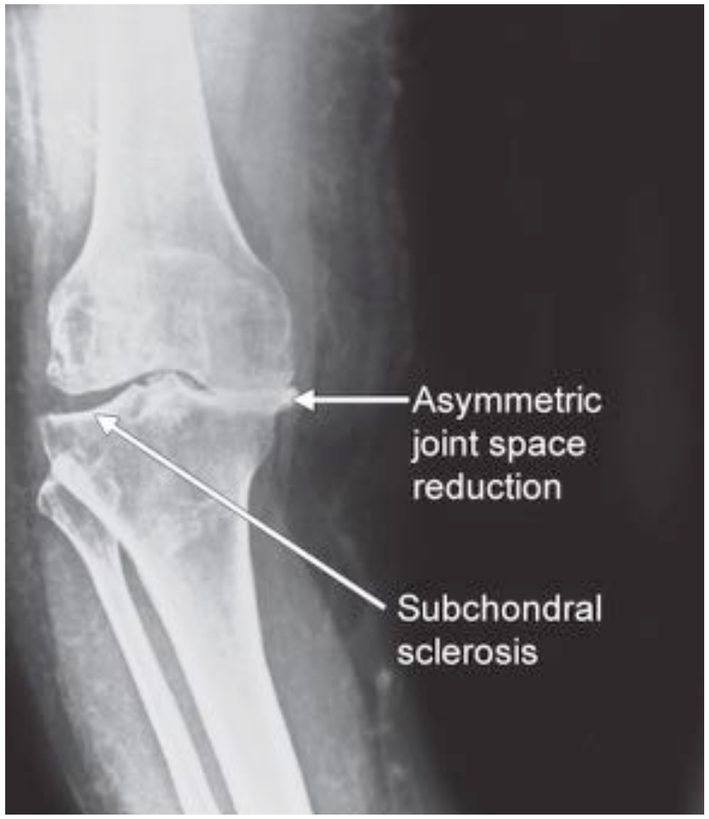
Psoriatic Arthritis





RA Knee *Vs* OA Knee





Q. Swan neck deformity is RA involves

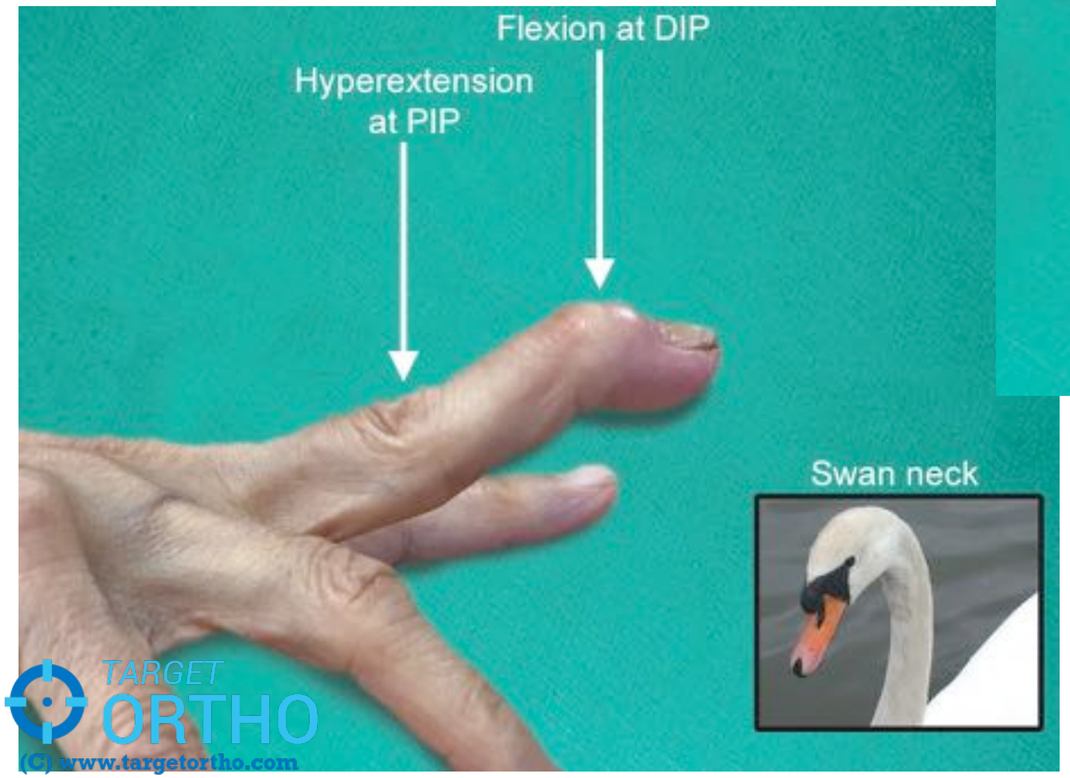
A. Flexion at PIP and DIP joint

B. Extension at PIP and DIP joint

C. Flexion at PIP and Extension at DIP joint

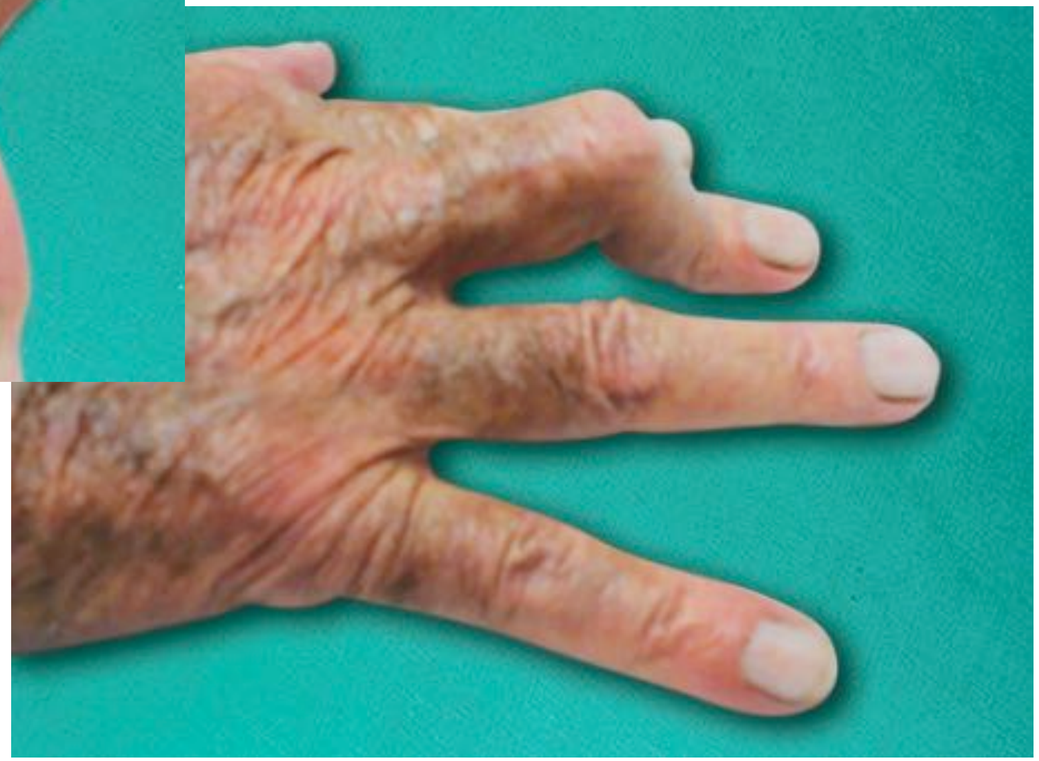
D. Extension at PIP and Flexion at DIP joint

Swan Neck deformity



“Z” deformity

Boutonniere deformity



Q. For a middle-aged, right-handed man with rheumatoid arthritis, a disabling boutonniere deformity of the right index finger, and an extension contracture of the DIP joint, optimal treatment would be:

A. Release of the lateral bands distal to the DIP joint

B. Silicone arthroplasty of the PIP joint

C. Reconstruction of the central slip at the PIP joint

D. Arthrodesis of the PIP joint in 25 to 30° of flexion

Elson test

is the most reliable way to diagnose a central slip injury before the deformity is evident

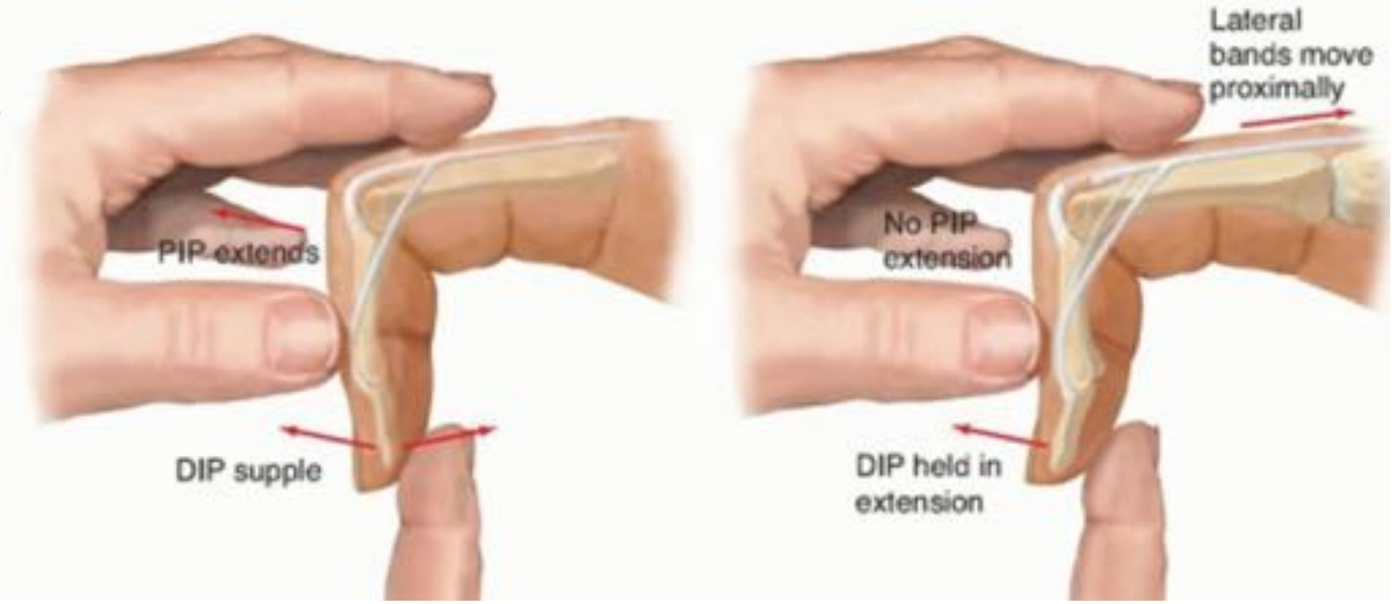
? Zone

• Test: Bend PIP 90° over edge of a table and extend middle phalanx against resistance.

INFERENCE

•in absence of central slip injury DIP remains floppy because the extension force is now placed entirely on maintaining extension of the PIP joint; the lateral bands are not activated

•in presence of central slip injury there will be weak PIP extensior the DIP will go rigid



Q. A 24 years female has come with complaint of pain and stiffness in multiple hand joints. X ray has revealed destruction and erosions in multiple locations as shown. There is no history of any doctor consultation taken prior or any treatment taken on record. The patient wishes to know the likely costs that will be incurred provided the treatment is started. What would be the appropriate treatment you would like to start for the case?

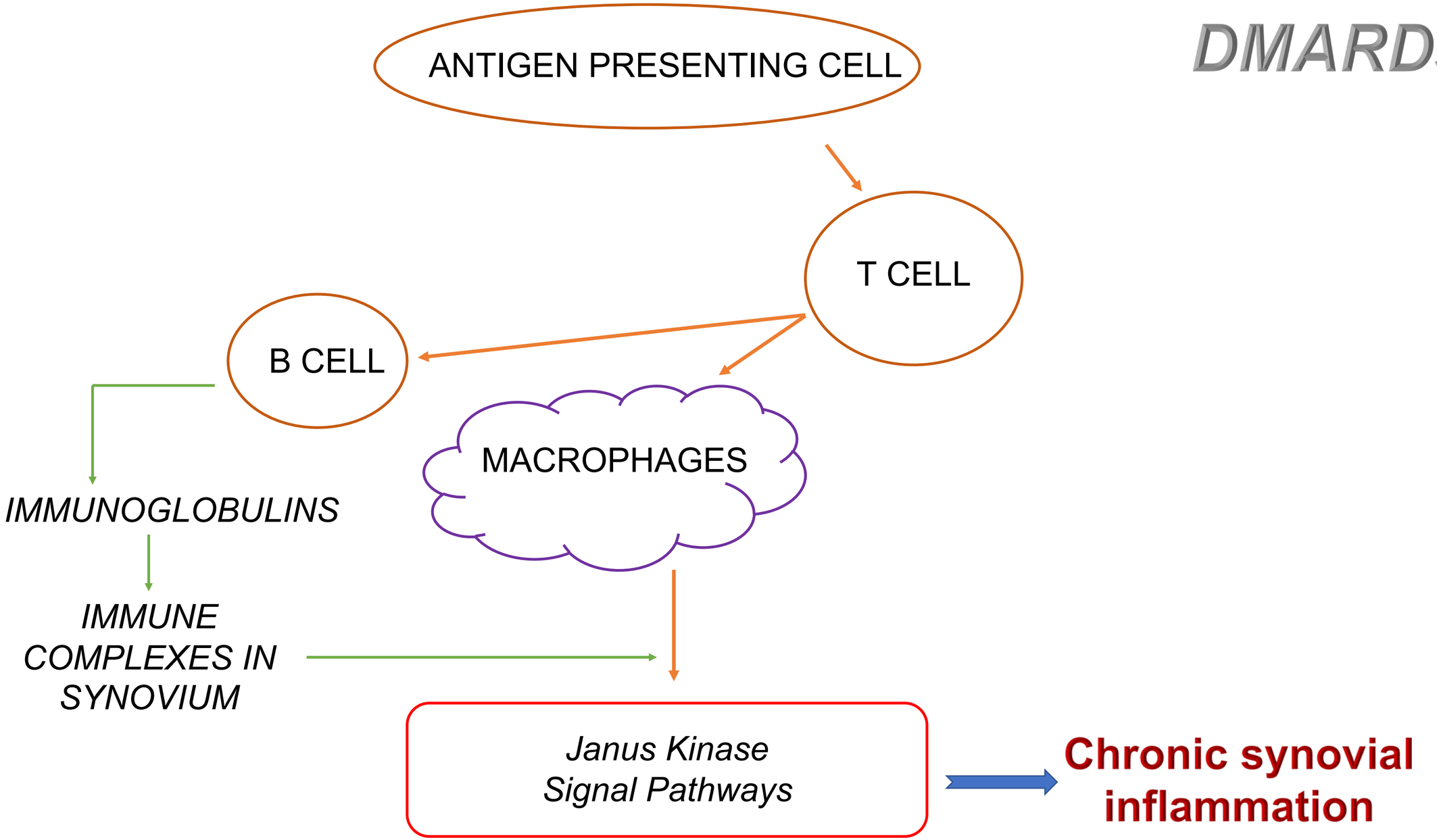
A. Only NSAIDs

B. First 3 months NSAIDs f/b DMARDs

C. DMARDs with a short course of Steroids

D. Monotherapy with TNF drugs

DMARDs



BIOLOGICALS

A large molecule derived from living cells by recombinant DNA technology

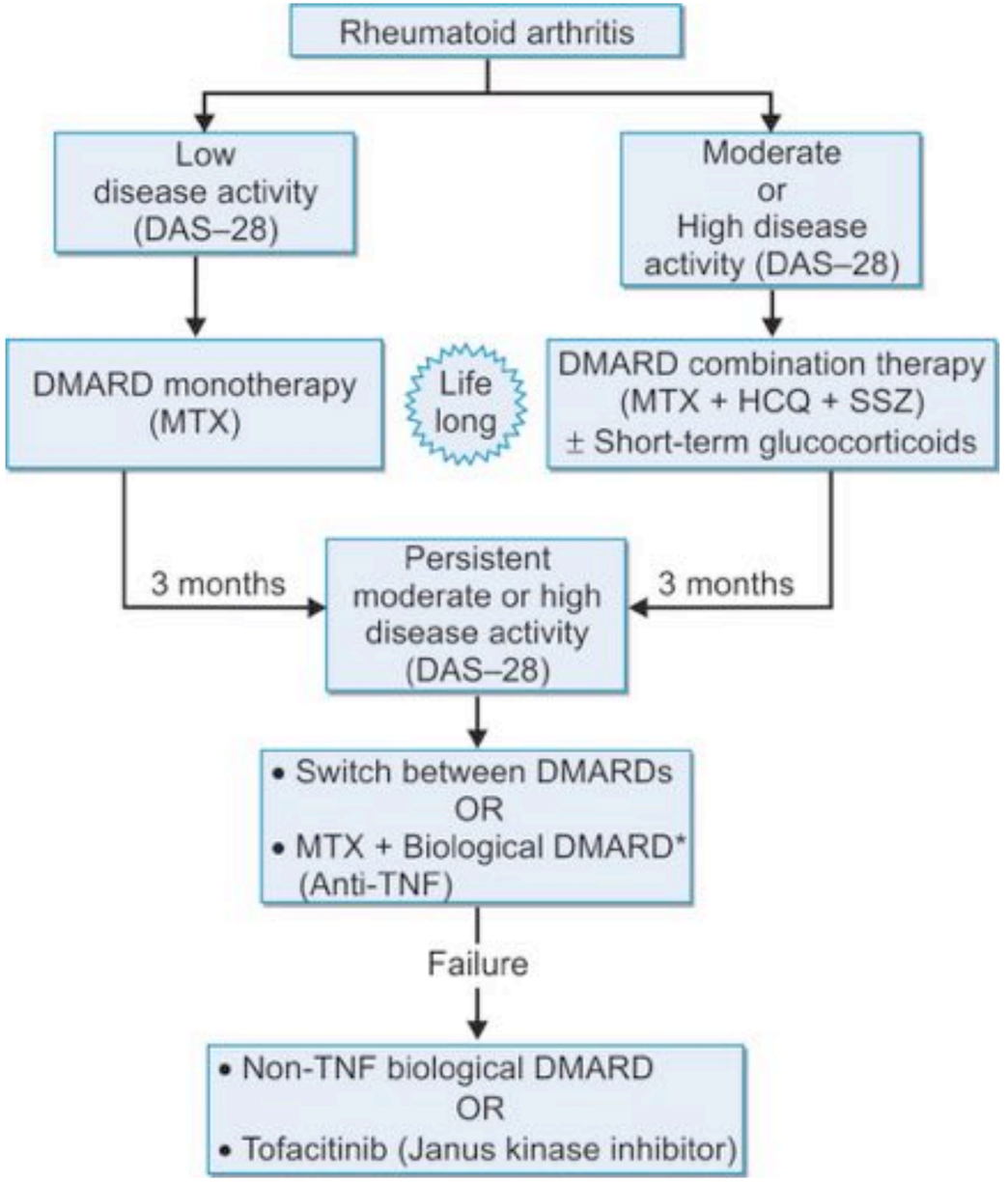
Discoverers: Kohler and Milstein (1975)

Table 16.4: Biological disease-modifying antirheumatic drugs (DMARDs) in rheumatoid arthritis (RA)

Agents	*Comments*
Infliximab	It is a chimeric mouse-human IgG1 monoclonal antibody which targets TNF-α
Etanercept	It is a dimeric fusion protein of human p75 TNF receptor and human IgG1-Fc targeted against TNF-α and lymphotoxin-α
Adalimumab (Exemptia)	It is a recombinant human IgG1 monoclonal antibody directed to human TNF-α
Abatacept	It is a fusion protein of human CTLA4 and Fc domain of human IgG1
Golimumab	It is a recombinant human IgG1 monoclonal antibody directed to human TNF-α
Rituximab	Rituximab is a chimeric mouse-human IgG1 monoclonal antibody that targets CD20
Certolizumab pegol	Humanized antigen-binding fragment (Fab) of a monoclonal antibody conjugated to polyethylene glycol. It targets TNF-α
Tocilizumab	Chimeric mouse-human IgG1 monoclonal antibody against IL-6
[illegible]	Anakinra is a recombinant protein and IL-1 inhibitor

[illegible] immunoglobulin G; TNF, tumor necrosis factor; IL, interleukin.

? Pregnancy



*Low-dose glucocorticoids <10 mg/day prednisolone; high-dose glucocorticoids 10–60 mg/day prednisolone; short-term glucocorticoids <3 months duration.
Tender/swollen joint count, CRP and patient global assessment score each ≤1 or simply DAS-28 ≤ 2.6.
Symptom duration <6 months; *established RA*: Symptom duration >6 months.

Biosimilar (year)	Therapeutic area	Company
Infliximab (2014)	RA, AS, PsA, JIA	Sun/Ranbaxy(Epirus)
Etanercept (2013)	RA, AS, PsA, JIA	Cipla
Adalimumab (2014)	RA, AS, PsA, JIA	Zydus
Rituximab (2007)	RA	Dr. Reddy's

RA=Rheumatoid arthritis, AS= Ankylosing Spondylitis; PsA: Psoriatic Arthritis; JIA: Juvenile Inflammatory Arthritis; UC= Ulcerative Colitis; CD= Crohn's Disease

Box 16.1: American College of Rheumatology recommendations (2008) for laboratory monitoring intervals for rheumatoid arthritis (RA) patients receiving non-biologic disease-modifying antirheumatic drugs (DMARDs)

1. Baseline monitoring is required for all DMARDs before initiation of therapy and includes complete blood count, serum creatinine and liver transaminase levels
2. No laboratory monitoring is required after baseline for hydroxychloroquine and minocycline
3. For methotrexate, leflunomide and sulfasalazine, all baseline tests should be repeated every 2–4 weeks for first 3 months and then every 3 months till the drugs are continued

Box 16.2: Contraindications and concerns to the use of biological disease-modifying antirheumatic drugs (DMARDs)

1. Contraindicated in New York Heart Association (NYHA) class III or IV heart failure or in those with an ejection fraction of 50% or less
2. Increased risk of opportunistic bacterial and fungal infections, e.g. fatal *Legionella and Listeria infections*
3. *Increased risk of viral and bacterial infection*: It is recommended that before the start of the biological therapy, the inactivated influenza vaccine, recombinant human papillomavirus vaccine, live attenuated herpes zoster vaccine and recombinant pneumococcal vaccine should be administered to patients. Live vaccines are contraindicated during biological therapy
4. Patients should be screened for latent tuberculosis (TB) infection with either the tuberculin skin test or interferon-gamma-release assay (IGRA) and chest X-ray. History of TB infection and active TB are contraindications to use of biological DMARDs
5. Lymphoproliferative disease, hepatitis B or C infection, pregnancy and lactation are contraindications to use of biologic DMARDs

Q. A 35 years old female has been referred to you by an ophthalmologist, who was managing her for dry eye, as she complained of pain and swelling in right knee since last 2 days. X ray done was normal; however, MRI has reported synovitis with effusion. ESR, CRP levels are raised although CBC is normal with mild anemia. There is no history of trauma per se though there is a history of some water sports activities taken up in a vacation she went to few days ago. ANA levels are positive but there is no history of Photosensitivity. Which of the given options is likely to be related to the *diagnosis* ?

A. RA factor if done might turn out to be positive

B. There is possibility of HLA B27 positivity in the patient

C. A synovial biopsy would be required to ascertain the diagnosis

D. ANA titres can be monitored to guide the prognosis

? Nerve involvement

Q. A 65-year-old man has history of back pain since 3 months. His ESR and CRP levels are raised. He has sacroiliac joint tenderness on examination and mild restriction of chest movements. The most unlikely situation from amongst the following would be:

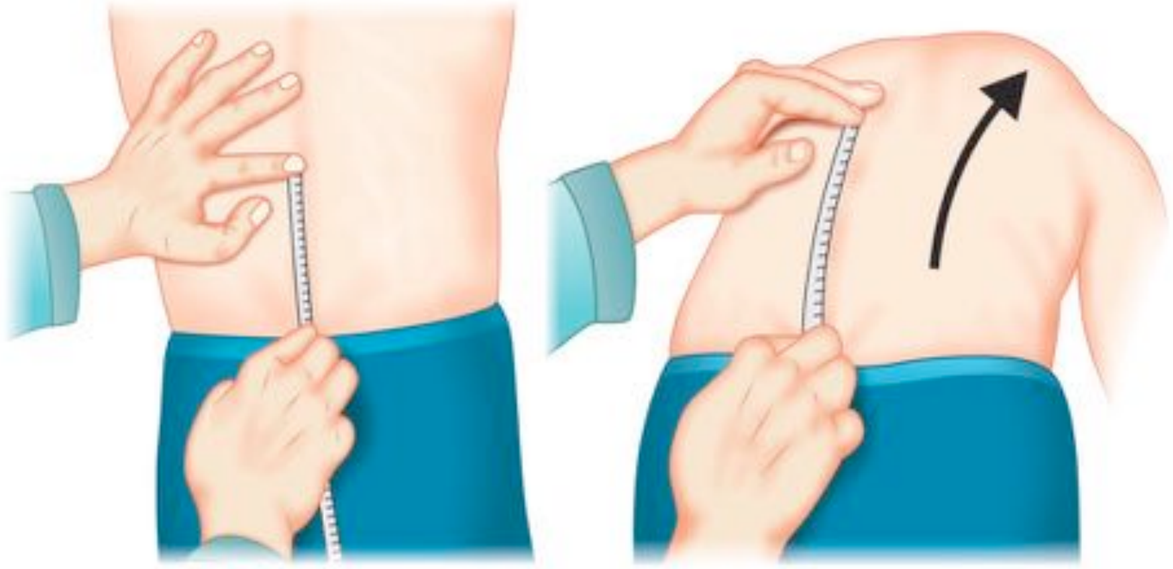
A. Modified Schoeber's test will reveal excursion > 10 cms

B. MRI might show spondylodiscitis

C. If asked to stand against a wall, patient will find difficult to touch head and buttocks simultaneously

D. Treatment should be with Anti-TNF drugs

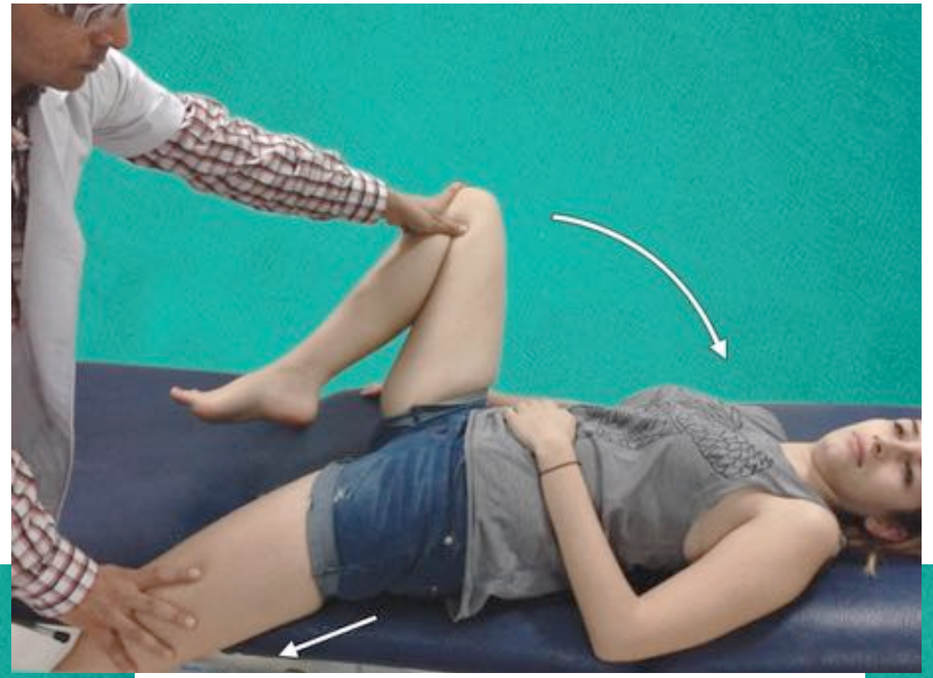
For Thoracic Spine



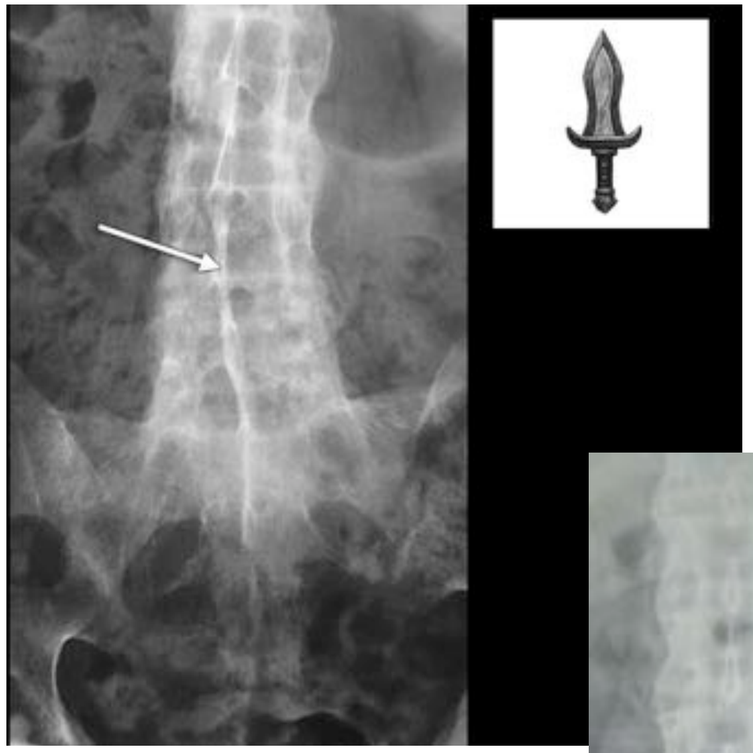
For Lumbar Spine

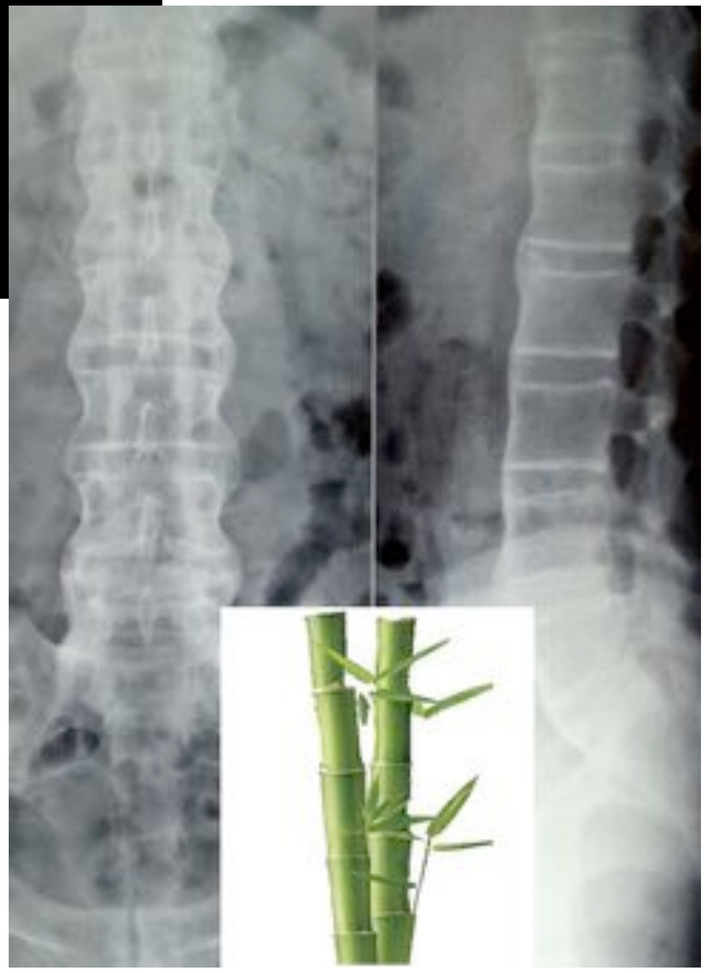
For Cervical Spine

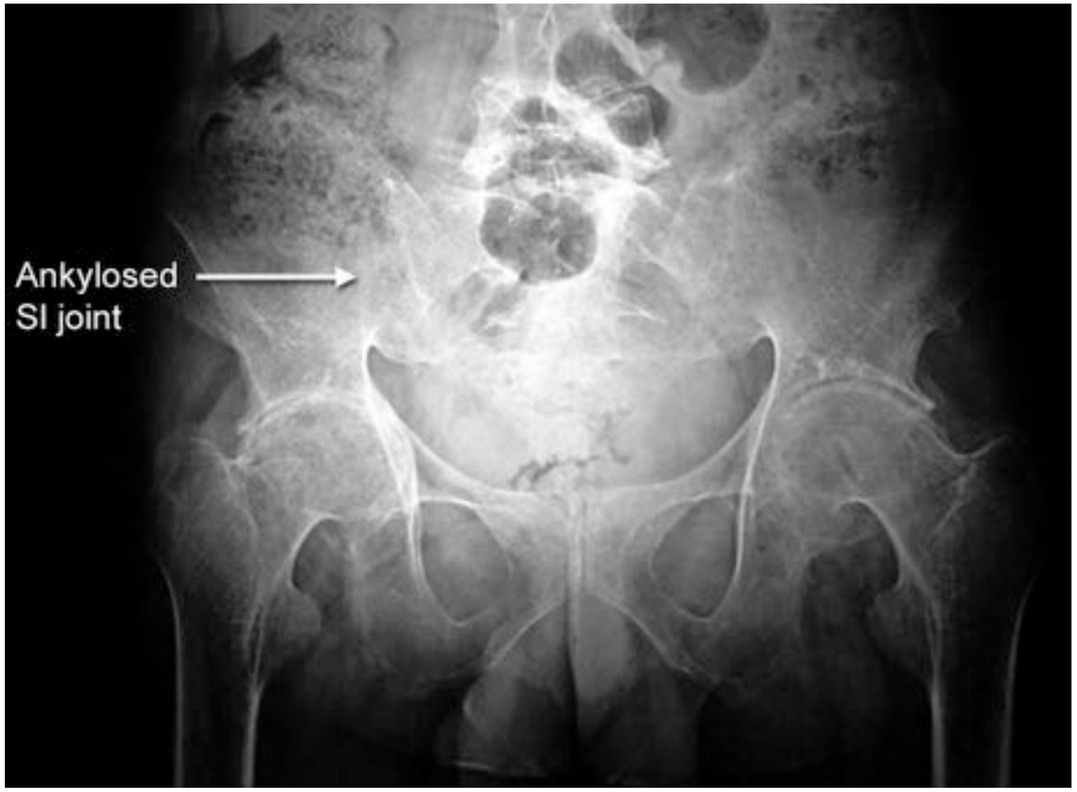
For SI joint



X-Ray

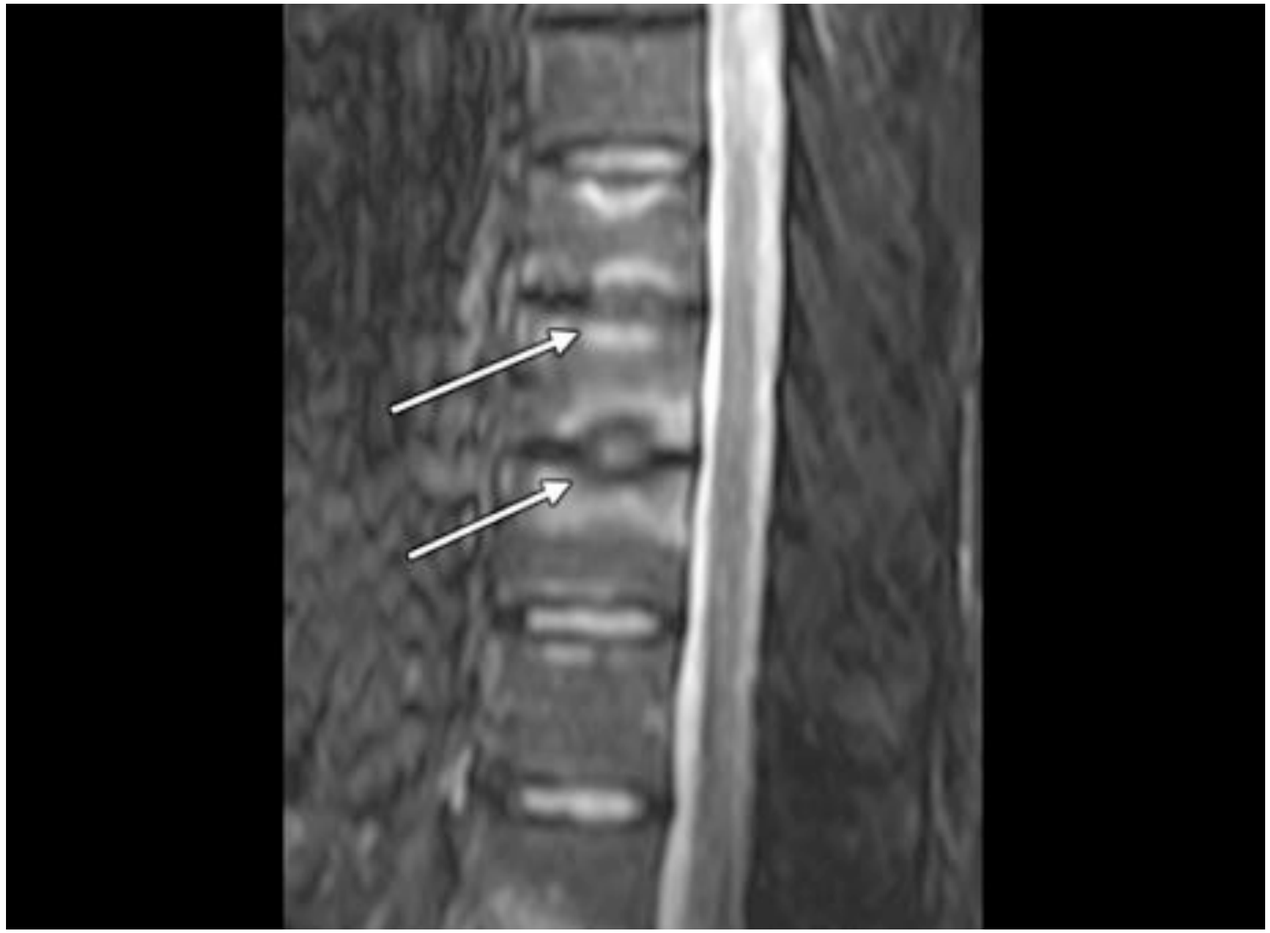


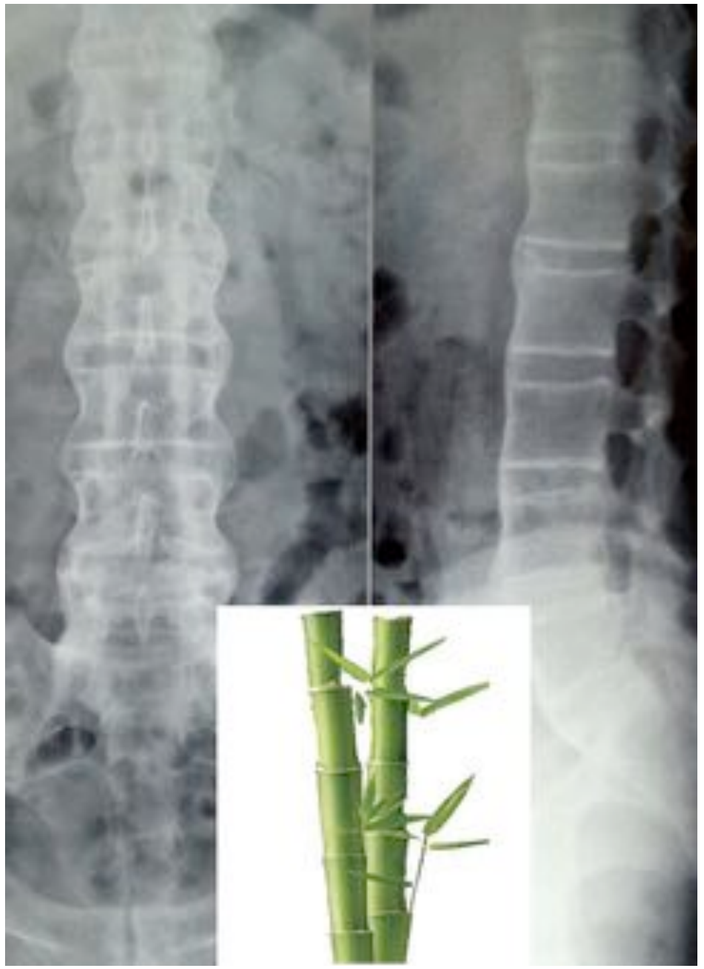


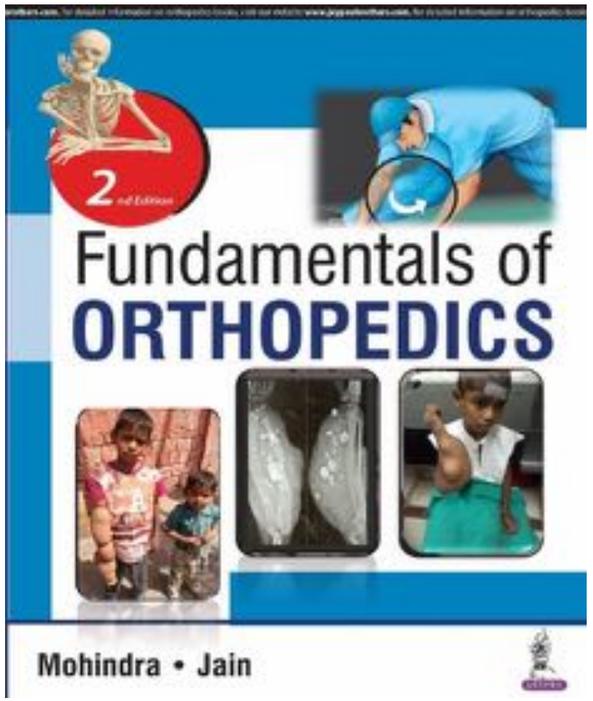


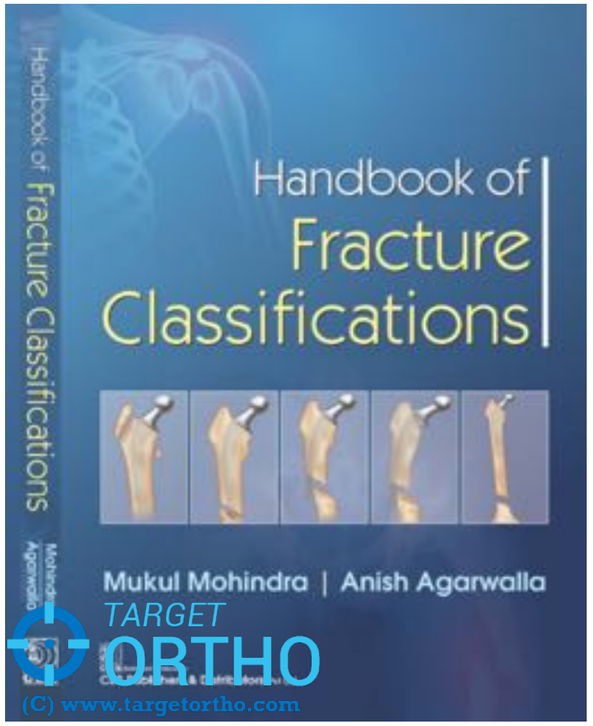
Romanus lesion

Anderson lesions









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