Rheumatology Overview

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Rheumatology

Overview of talk

- Pattern recognition
- Rheum core curriculum
- Acute monoarthritis
- Polyarthritis
- Quiz
- Backache

Pattern recognition in rheumatology

- Number of joints involved
  - Monoarthritis (1)
  - Oligoarthritis (2-4)
  - Polyarthritis (>5)
- Inflammatory vs degenerative
- Symmetrical / asymmetrical
- Central / peripheral
- Large joints / small joints/both

Pattern recognition in rheumatology

- Onset
  - acute
  - insidious
  - additive
  - intermittent
  - migratory
- Age, gender, family hx, extraarticular features, fever

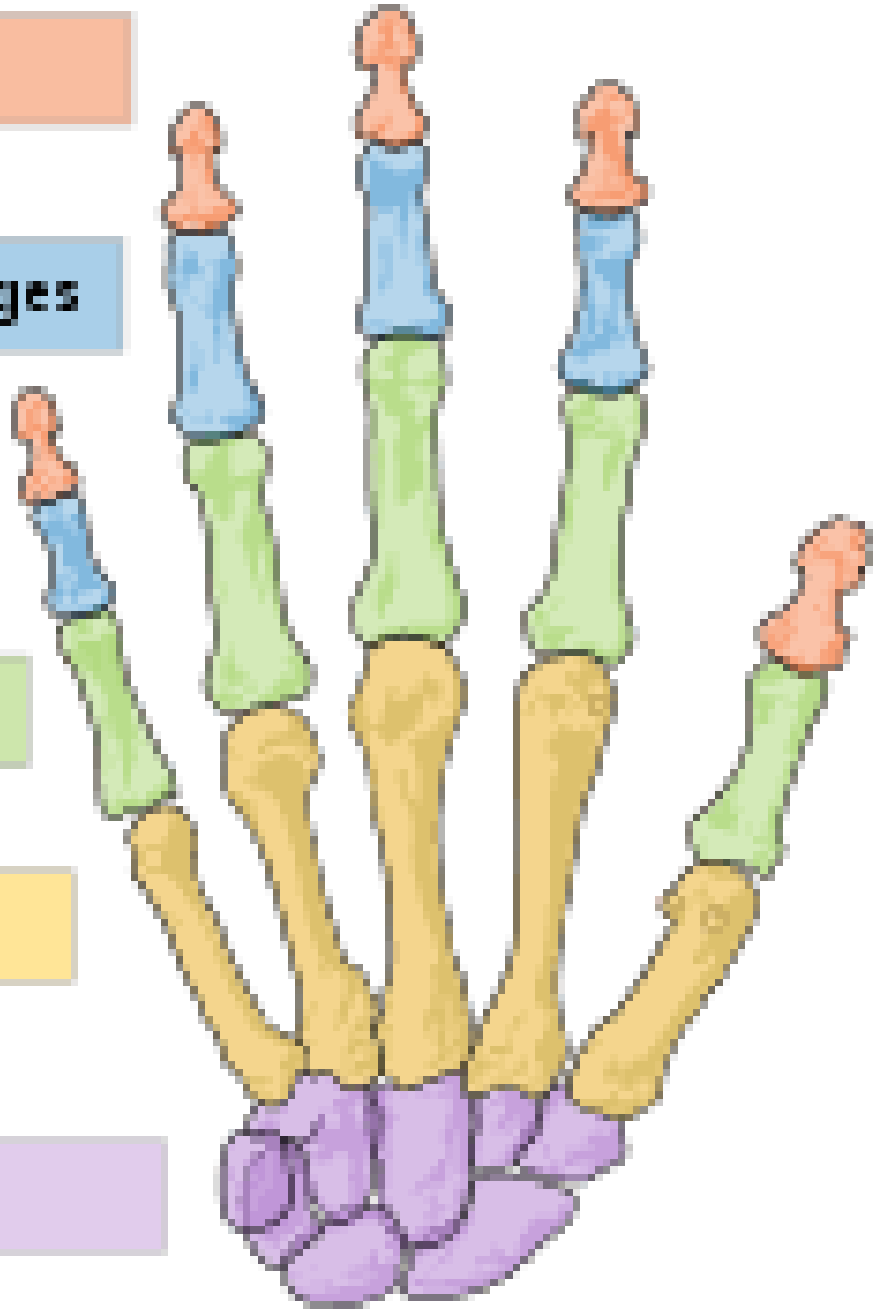
Distal phalanges

Intermediate phalanges

Proximal phalanges

Metacarpals

Carpals



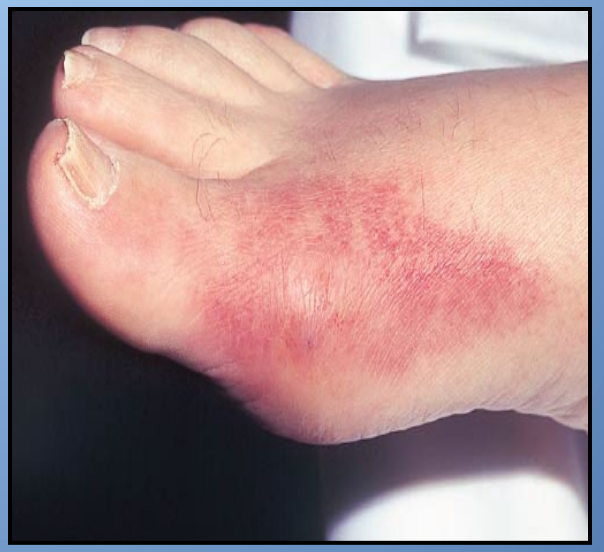
	Key presentation		5 common causes (CORE KNOWLEDGE)	5 other causes ("NICE TO KNOW")
JOINT PAIN +/- SWELLING	Mono arthritis	acute	• Septic arthritis (gonococcal, staph aureus)	• Haemarthrosis (warfarin, haemophilia, trauma)
			• Gout	• Periarticular problems (bursitis, tendinitis)
		chronic	• Infection- TB	• Infection- fungal
			• Osteoarthritis	• Neuropathic joint
	Poly arthritis		• Rheumatoid arthritis	• HIV polyarthritis
			• Psoriatic arthritis	• Reactive arthritis
			• Chronic tophaceous gout	
			• Osteoarthritis	
BACKACHE	Mechanical		• Degenerative and disc disease	• Spinal stenosis
	Inflammatory			• Spondyloarthropathy eg ankylosing spondylitis
	Infection		• TB	• Bacterial- TB, staph aureus
	Neoplasm		• Metastatic disease (Breast, lung, prostate)	• Myeloma
	Endocrine		• Osteoporotic fracture	
	Referred			• Abdominal aortic aneurysm • Pancreatitis, Ca pancreas
MUSCULOSKELETAL PAIN SYNDROMES	Localised		• Soft tissue (tendinitis/bursitis)	
	Generalised		• Fibromyalgia	• Polymyalgia rheumatica
			• Depression	• Hypercalcaemia
			• Hypothyroidism	
			• Viral myalgia	
SKIN CHANGES WITH ARTHRITIS			• E nodosum	• SLE
			• Psoriatic arthritis	• Reactive arthritis
				• Dermatomyositis
				• Systemic sclerosis

Acute monoarthritis

Case 1 Mr PJ

30yr businessman

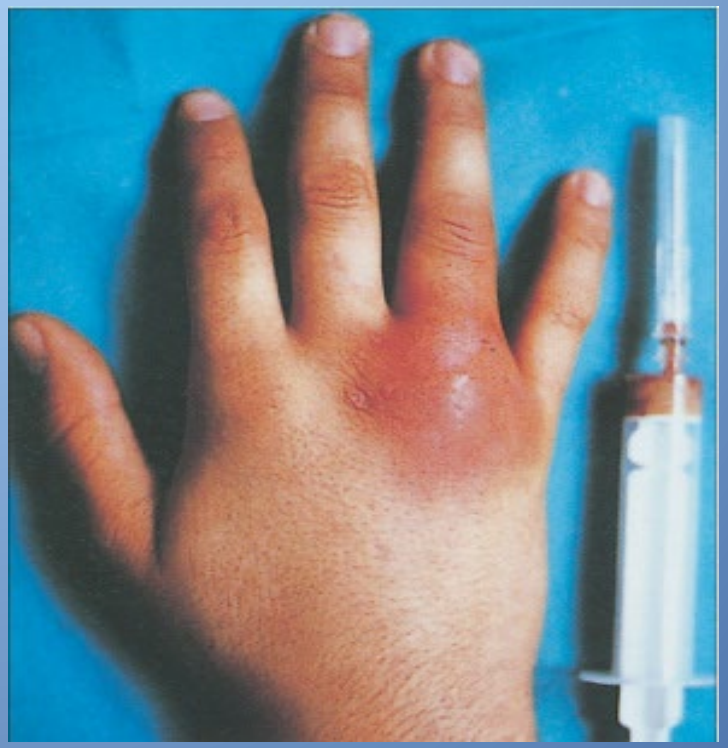
- **Hypertensive**
- **HCTZ 12.5mg daily, smoker and drinks 2 quartz of beer most weekdays.**
- **Woke up at 3am with a very painful big toe, unable to walk or go to work.**



Acute monoarthritis

Case 1 Mr EC

- 17 year old type 1 diabetic
- Very tender R MCP x 3 days
- No fever

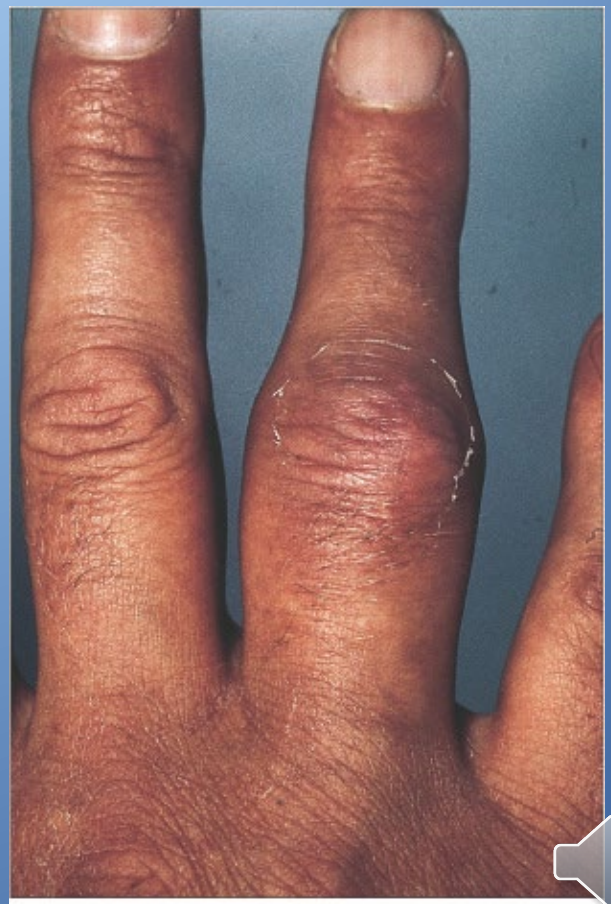


ΔΔ RED HOT JOINT

1. Septic Arthritis
2. Crystal arthropathy (gout)

3. Trauma
4. Haemarthrosis
5. polyarticular diseases

occasionally, present as monoarthritis



Gout

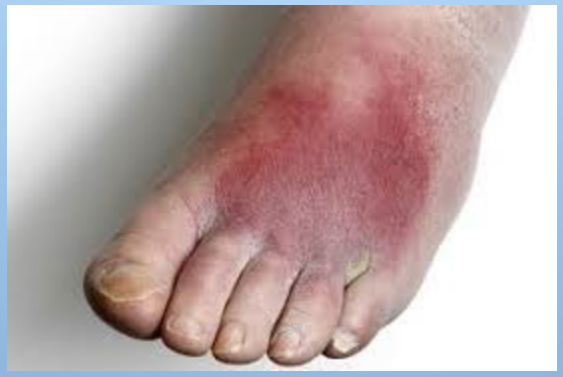
One Chronic Disease, 4 Stages

Asymptomatic Hyperuricemia	Acute Flares	Intercritical Segments	Advanced Gout
Elevated serum urate with no clinical manifestations of gout	Acute inflammation in the joint caused by urate crystallization	The intervals between acute flares	Long-term gouty complications of uncontrolled hyperuricemia

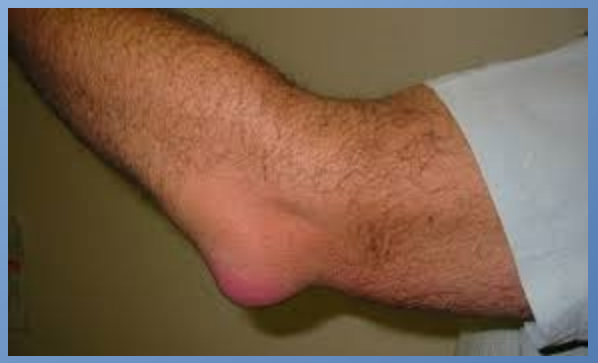
Uncontrolled Hyperuricemia

(Mimics of monoarthritis)

- Cellulitis

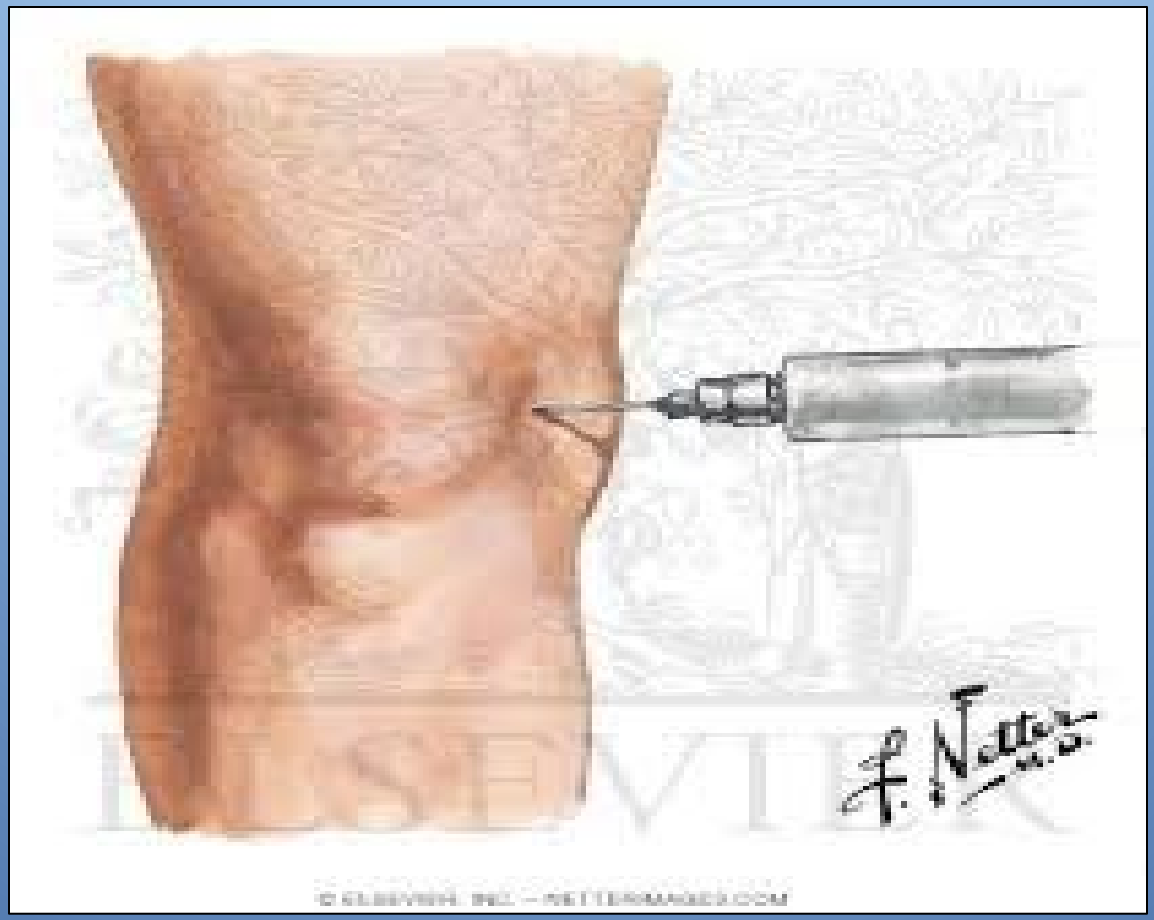


- Bursitis eg olecranon / suprapatellar



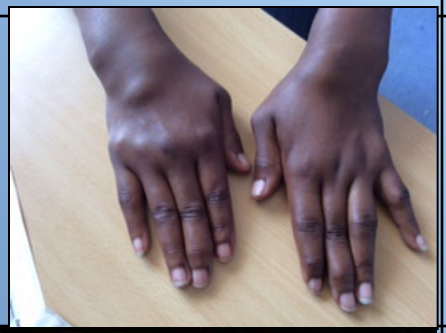
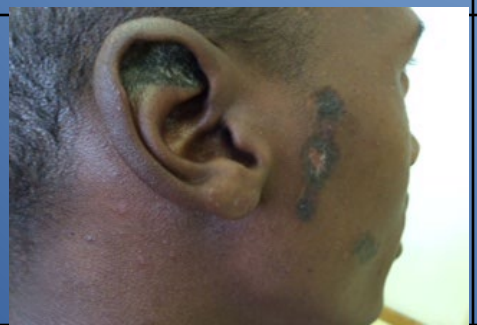
- Tendinitis eg rotator cuff

Most useful investigation for monoarthritis?



Polyarthritis: Mrs V

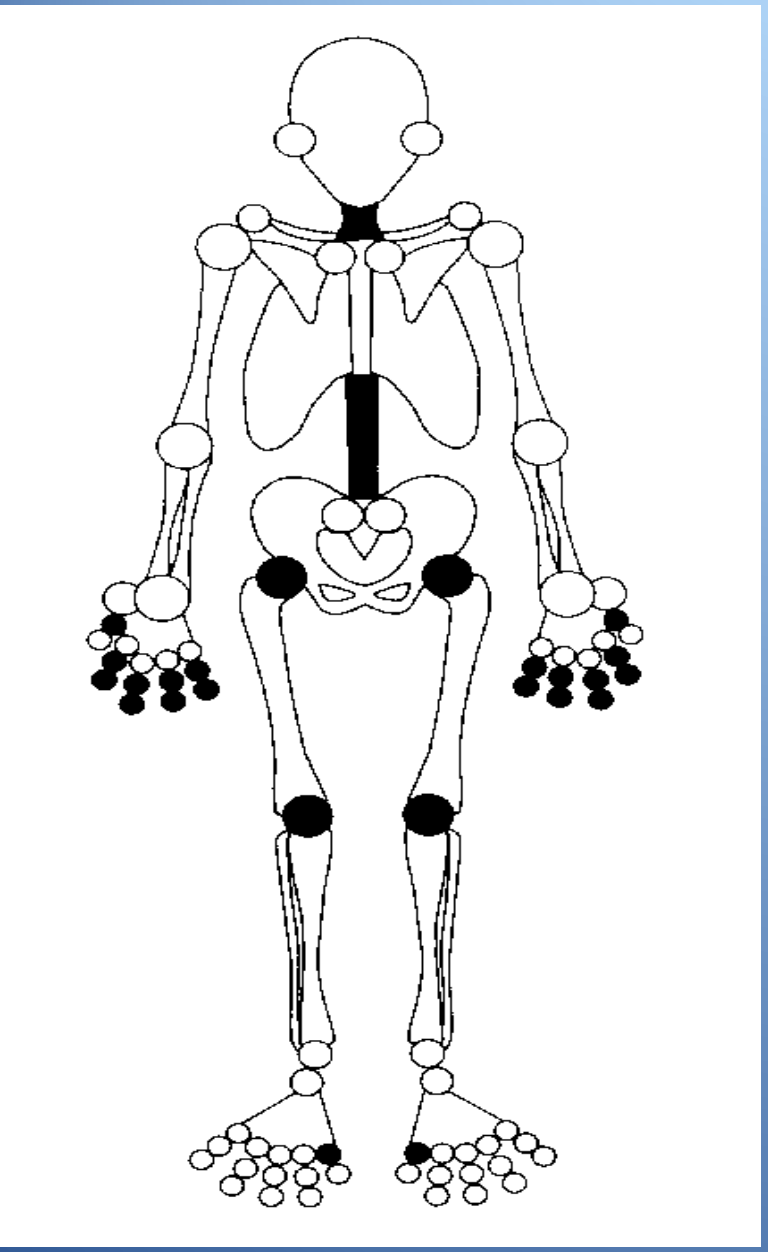
- A 46 year old domestic worker has had painful swollen hands for 2 years, and recently her elbows shoulders and knees are also stiff and painful.
- She finds it difficult to move these joints in the morning, but improves over the day.
- She struggles to walk to the taxi and has missed 2 or 3 days of work every week for the last 4 weeks because of pain, and is unable to wash her clothes.
- What is the ΔΔ?

Diagnosis	Because	But
RA 	Common 1/100 Symmetrical Small and large joints	Check HIV, check ANA
PsA 	Fairly common Can mimic RA	Skin (NB hidden areas) Nails Scalp 
HIV associated arthritis	Can mimic RA	No stigmata HIV Check HIV Elisa
SLE 	Inflam arthritis of small joints common presenting complaint, affects 30% of SLE patients	Check skin renal CNS serositis ANA

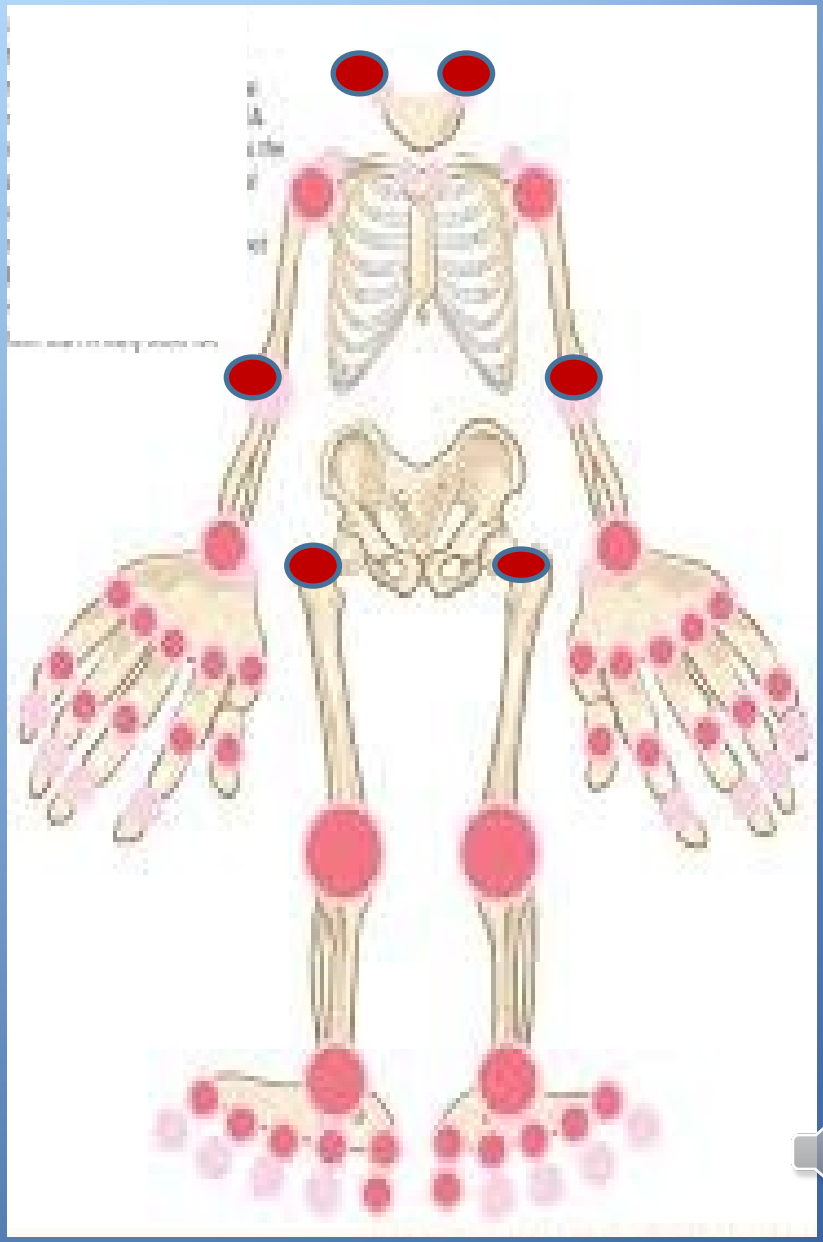
Could this be OA?

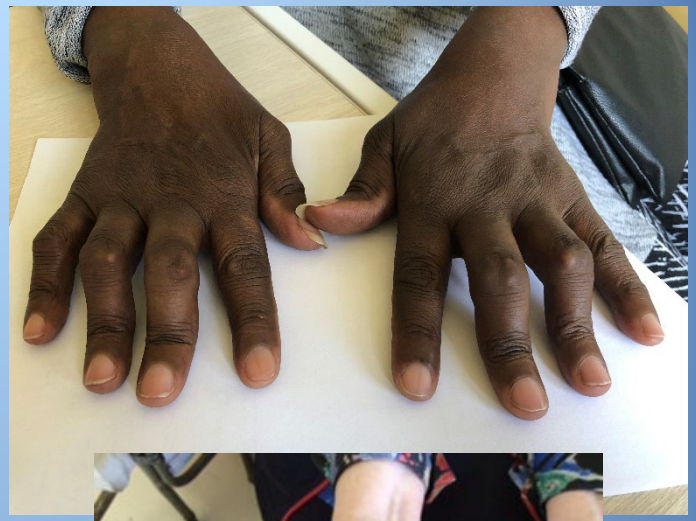
- NO
  - Age (46)
  - EMS (struggles with stiffness in the morning which improves during the day)
  - Boggy swelling (synovitis) vs bony swelling
  - Pattern of joint involvement

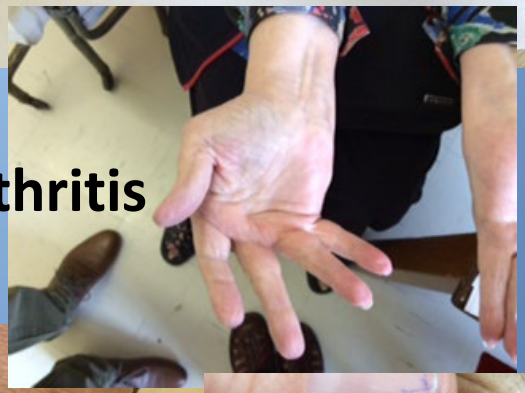
Primary OA



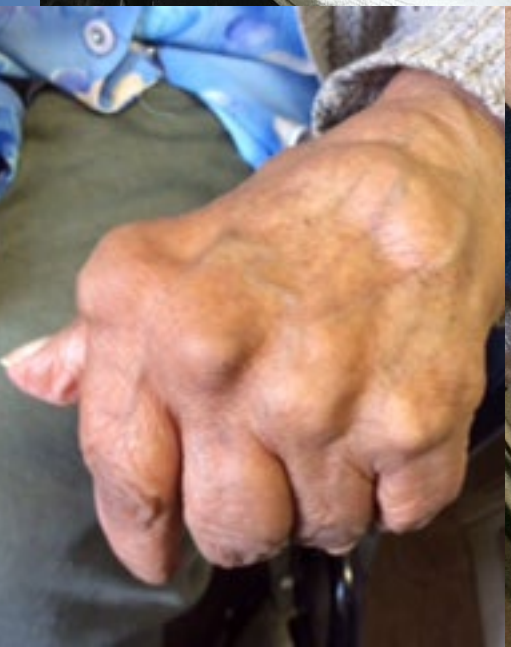
RA

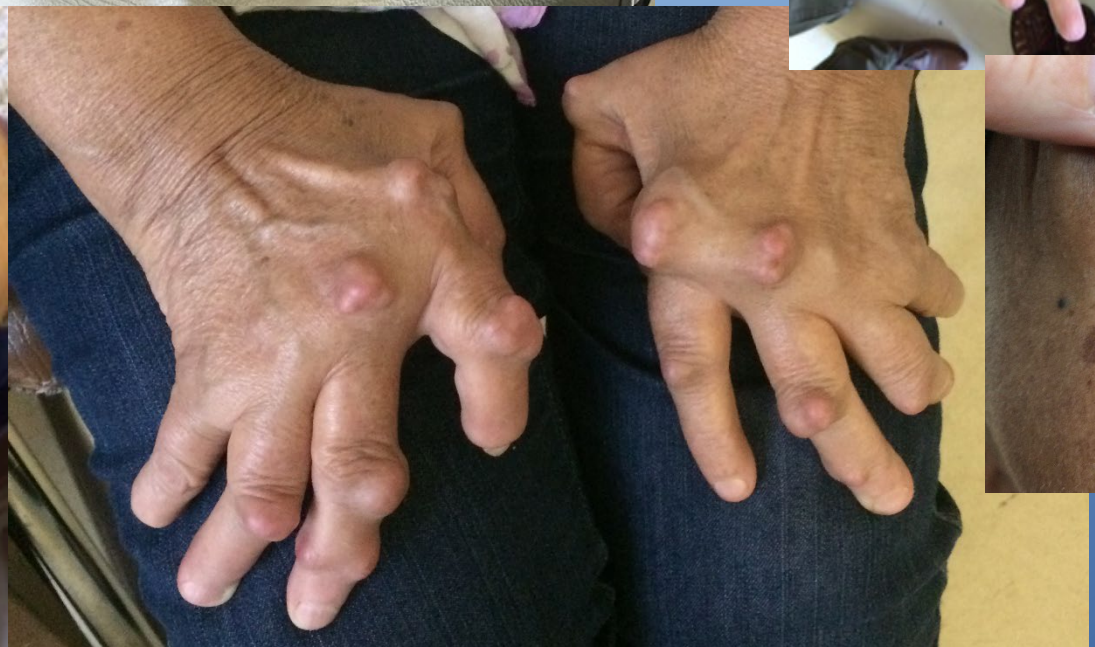


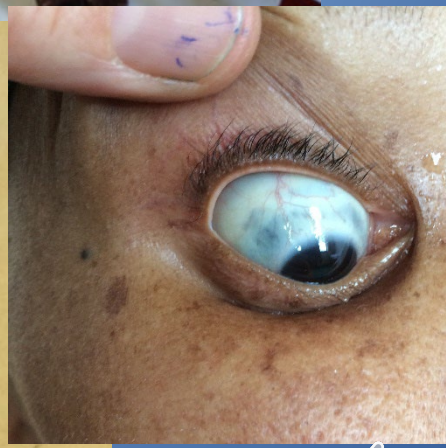


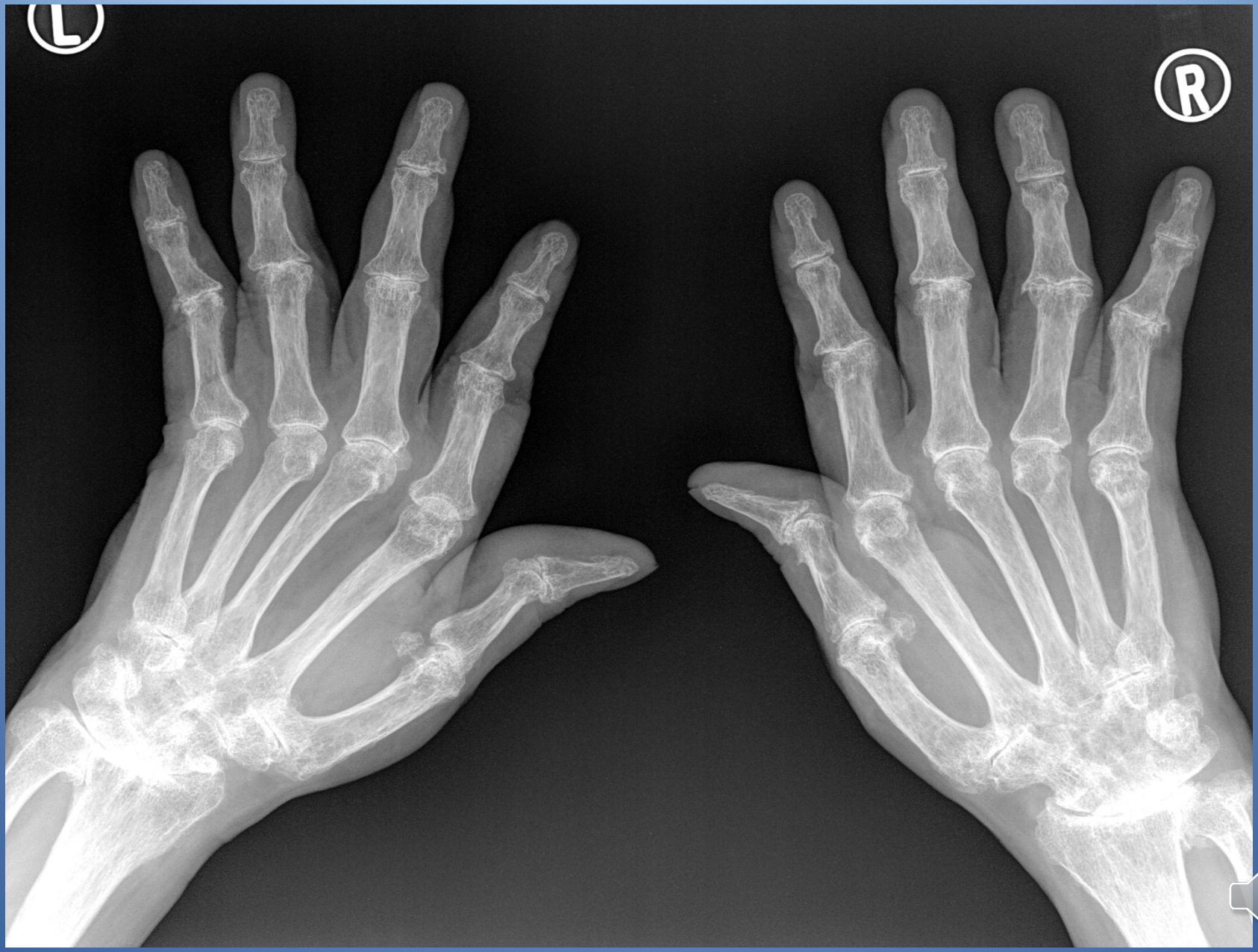


Rheumatoid arthritis





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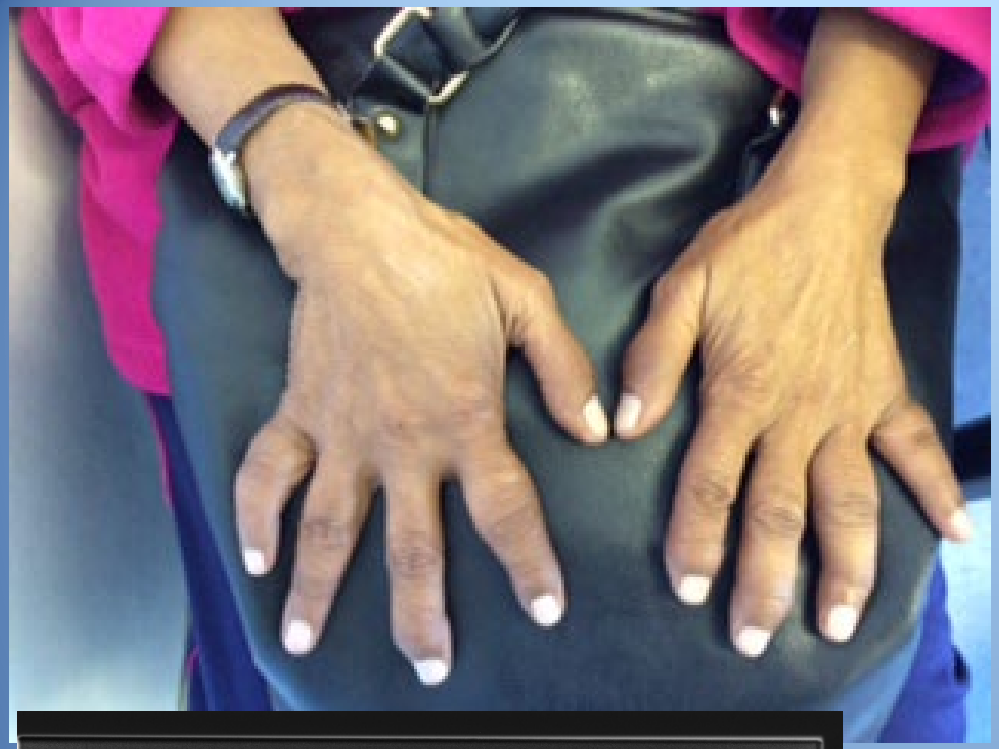
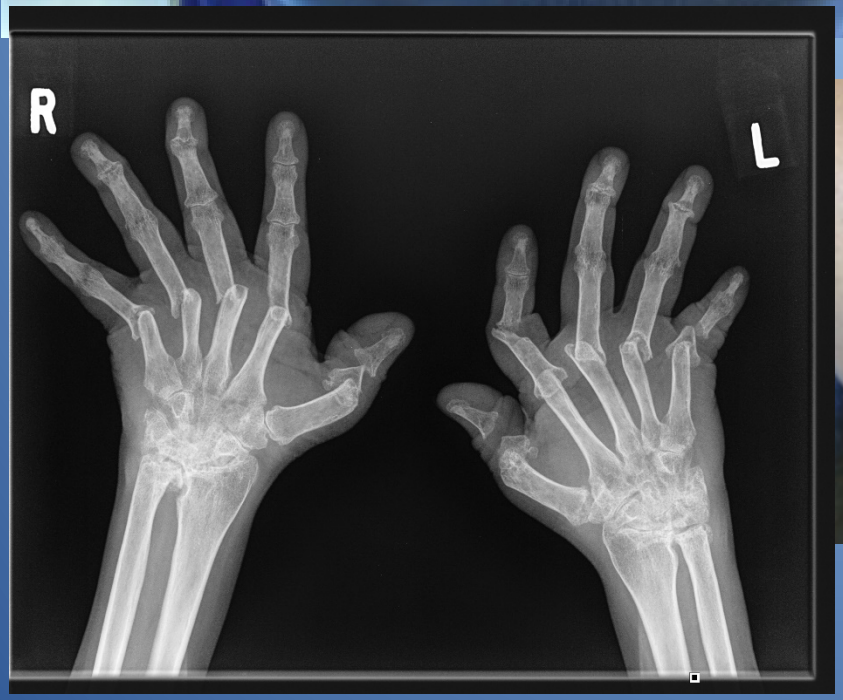
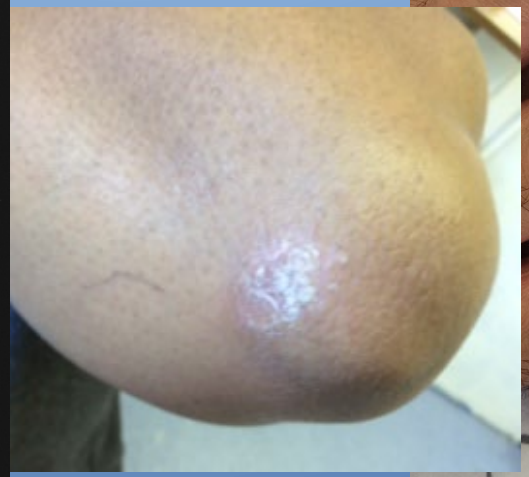
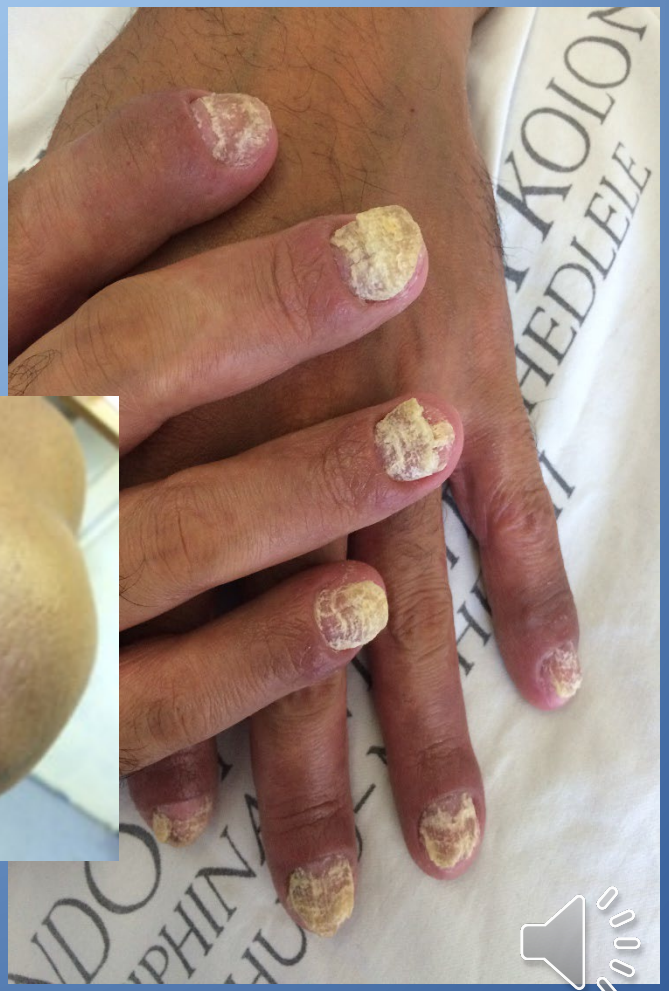
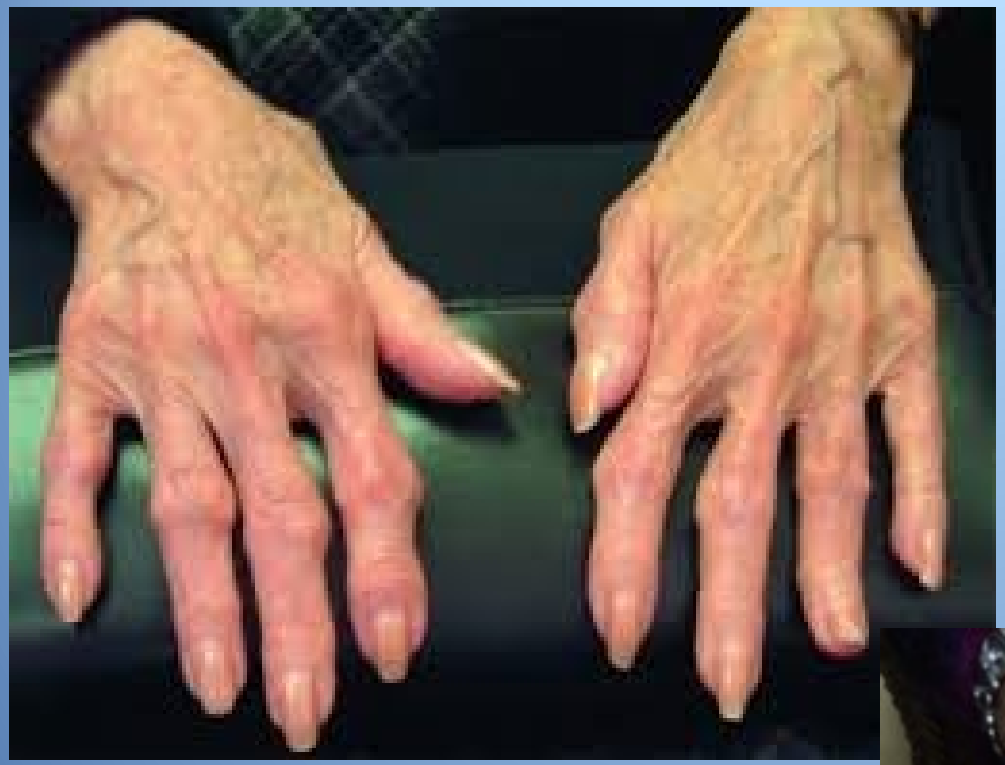
Psoriatic arthritis

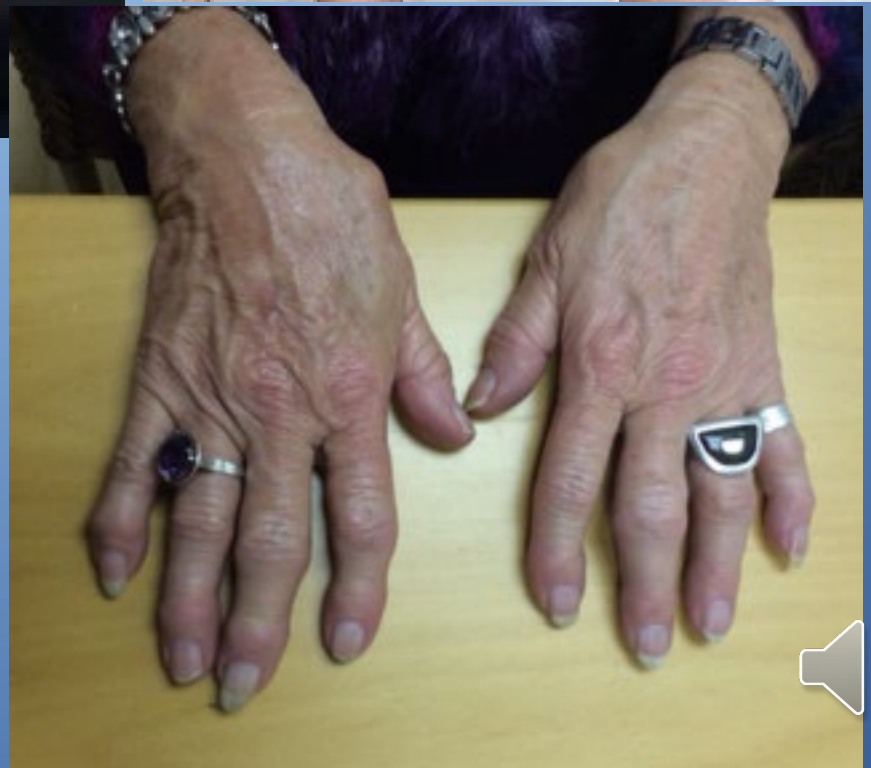




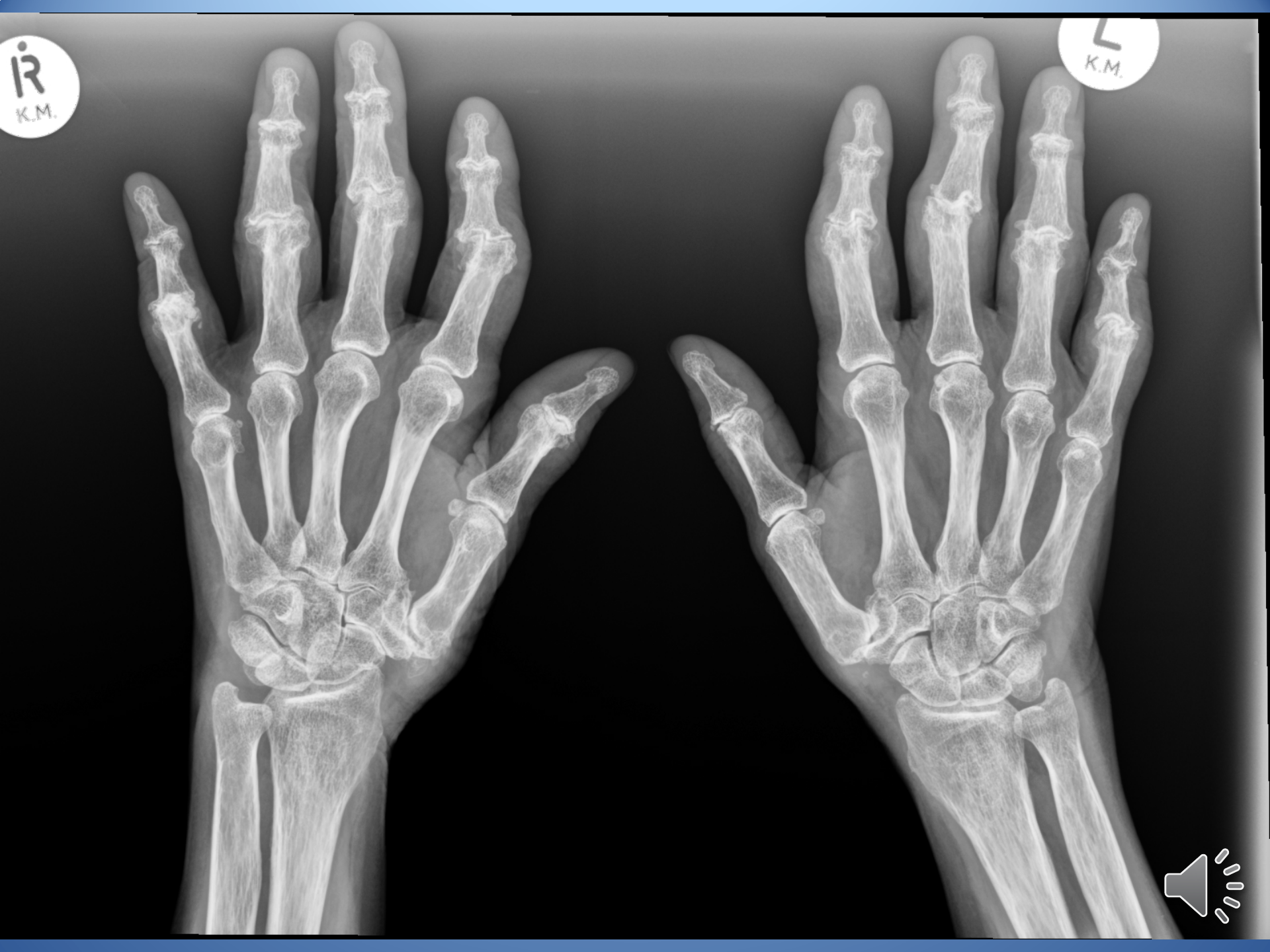








Osteoarthritis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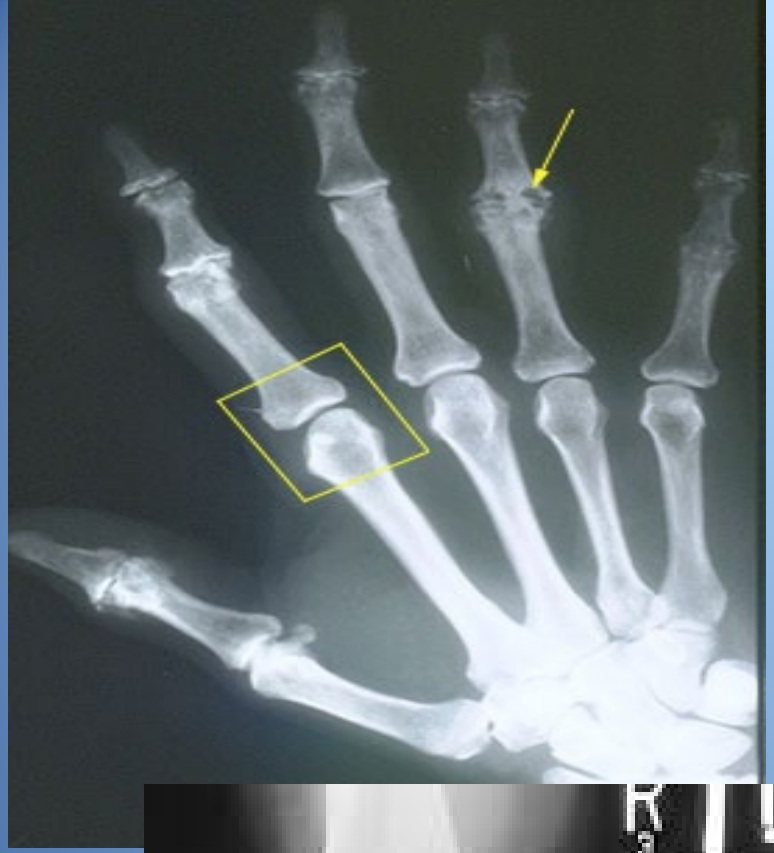
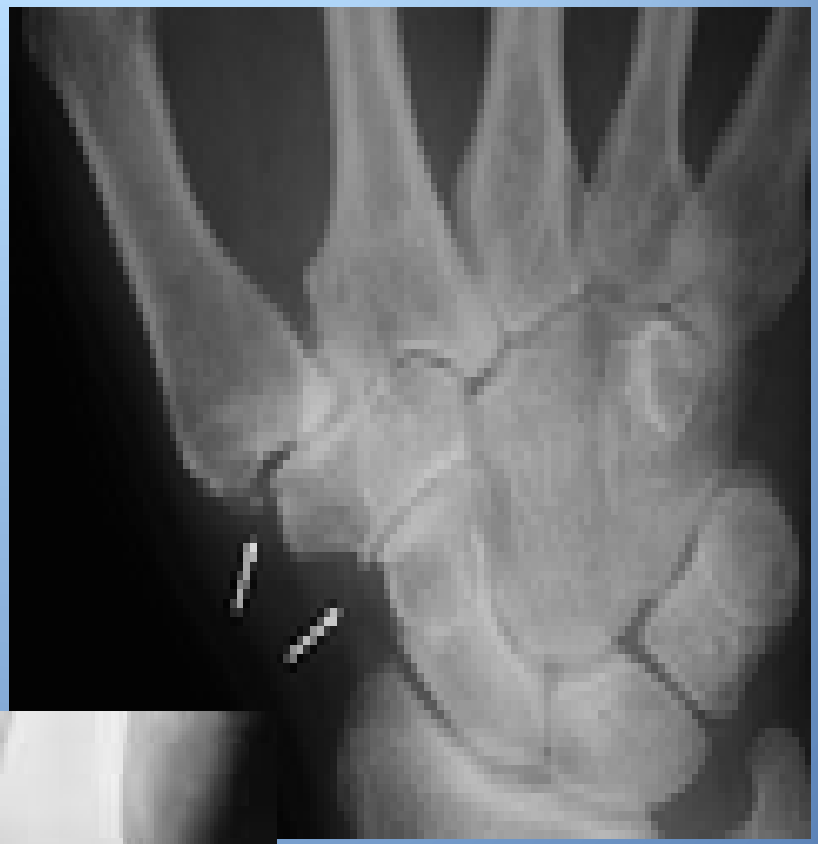
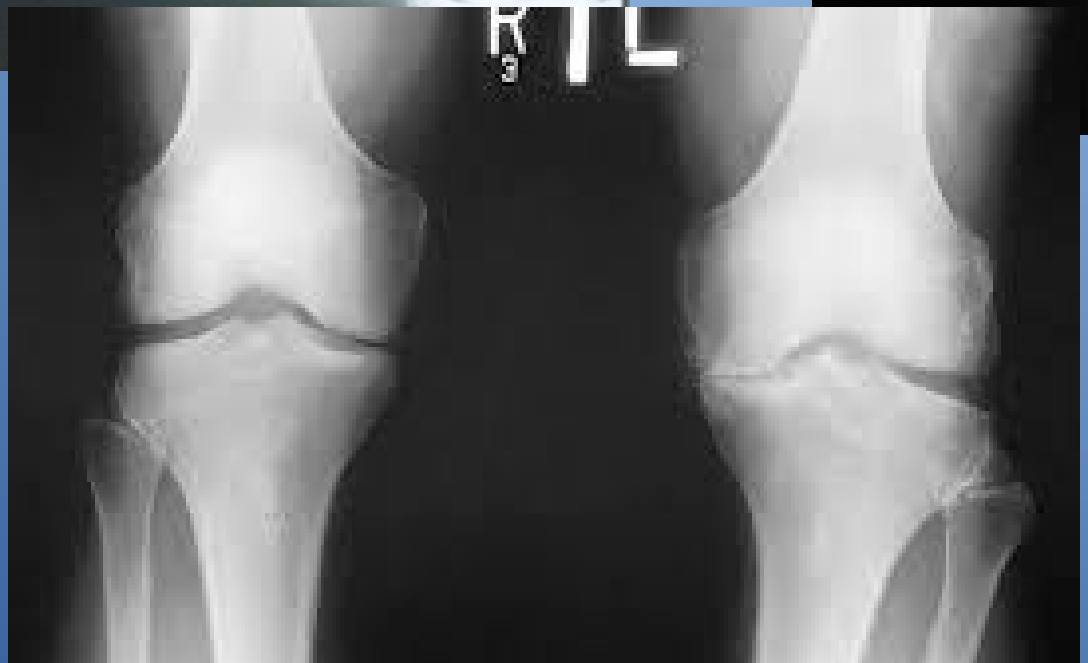
K.M.
L
K.M.



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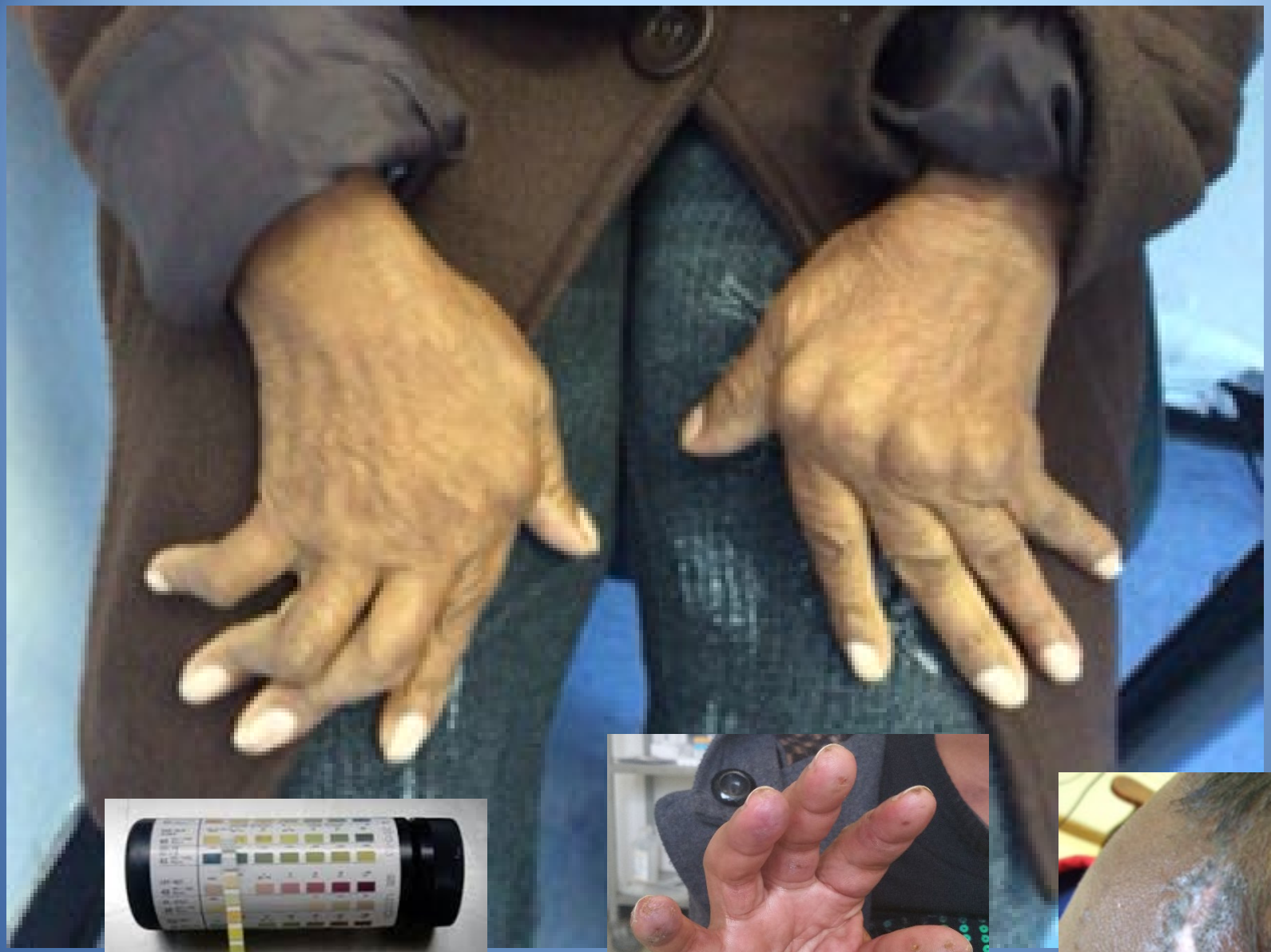
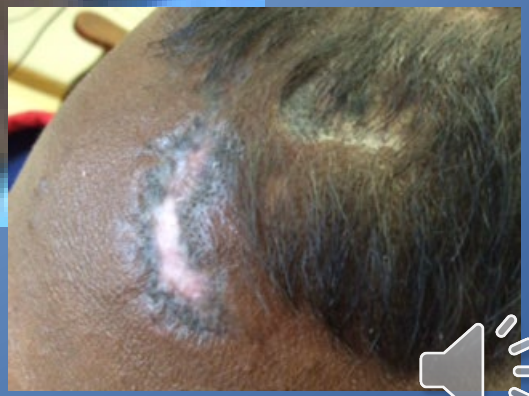
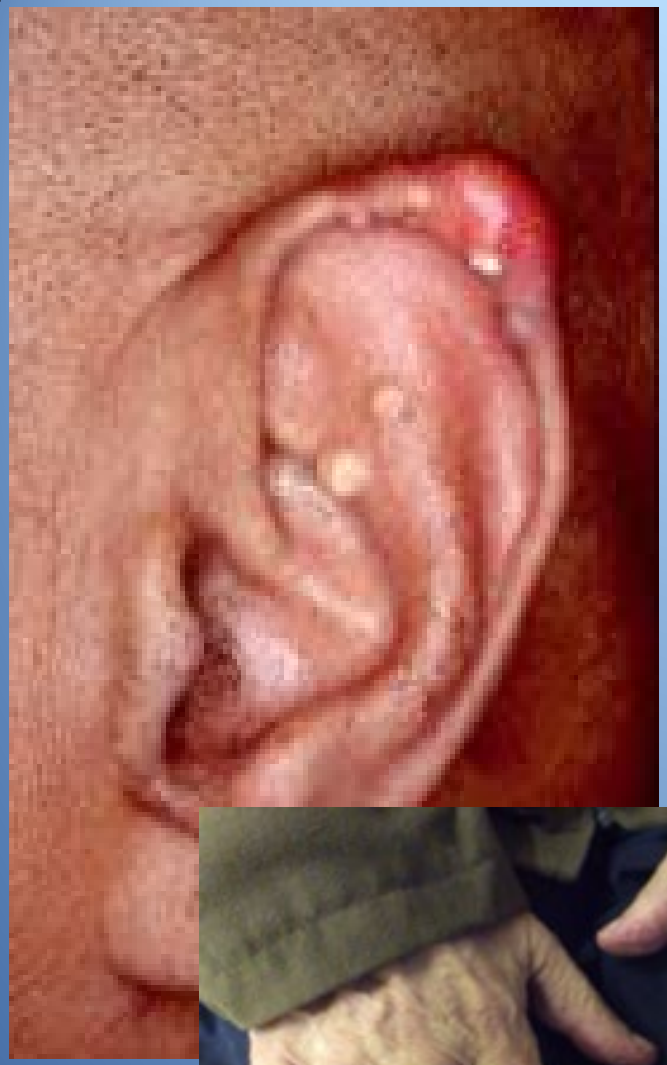
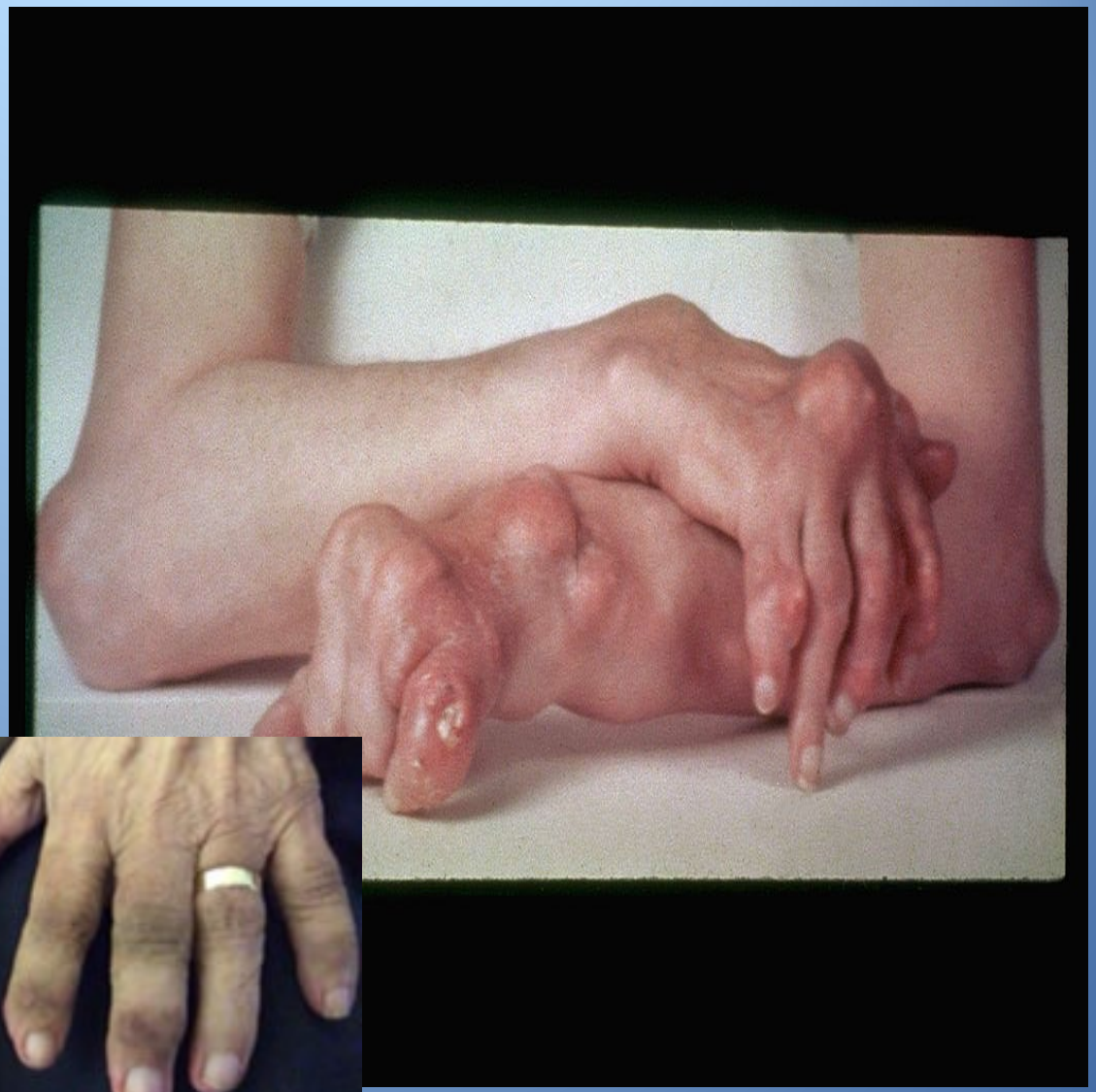
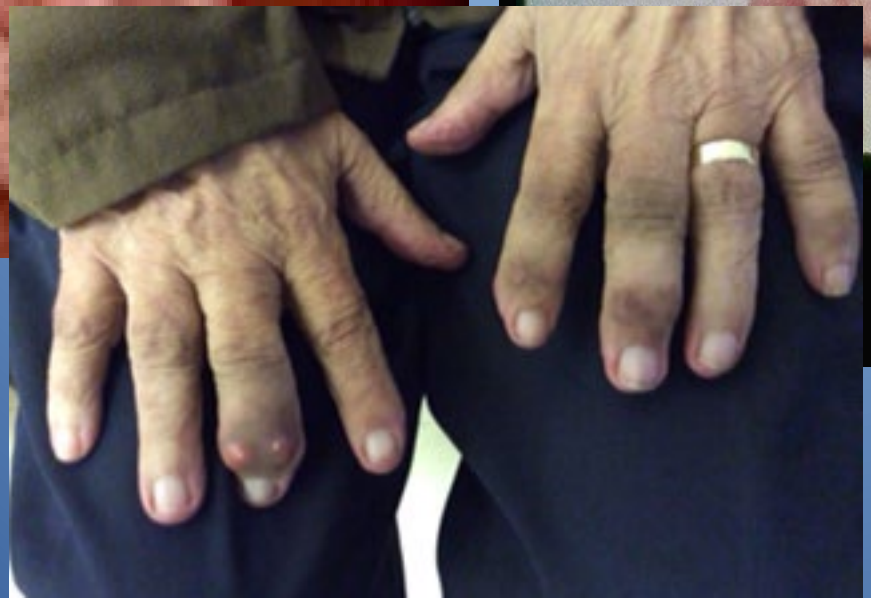
Systemic Lupus Erythematosus



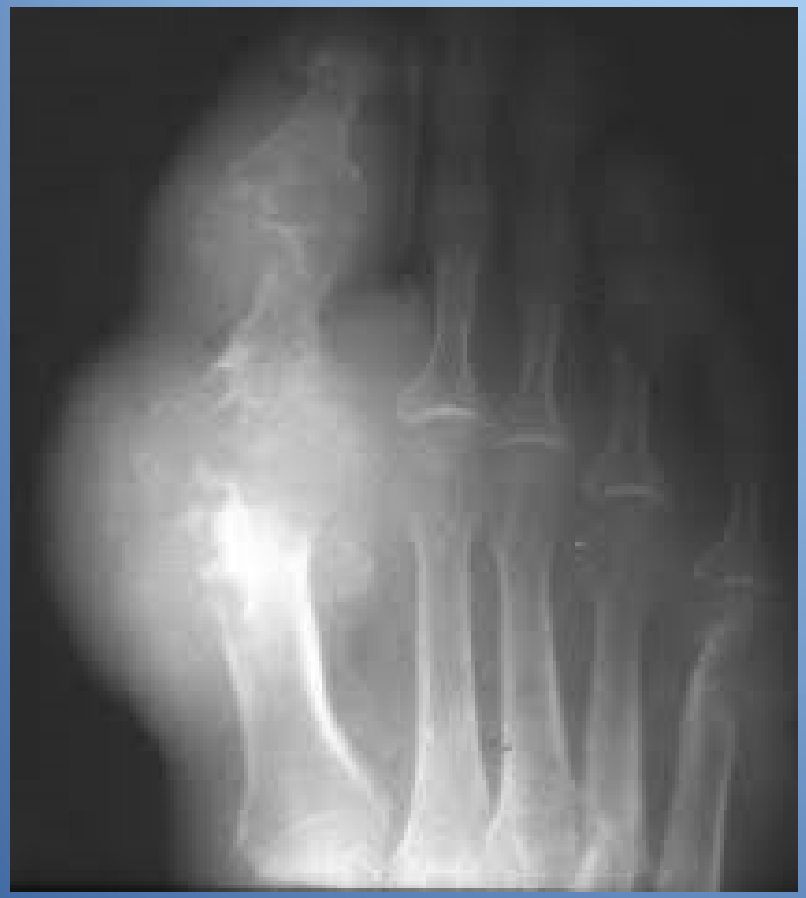


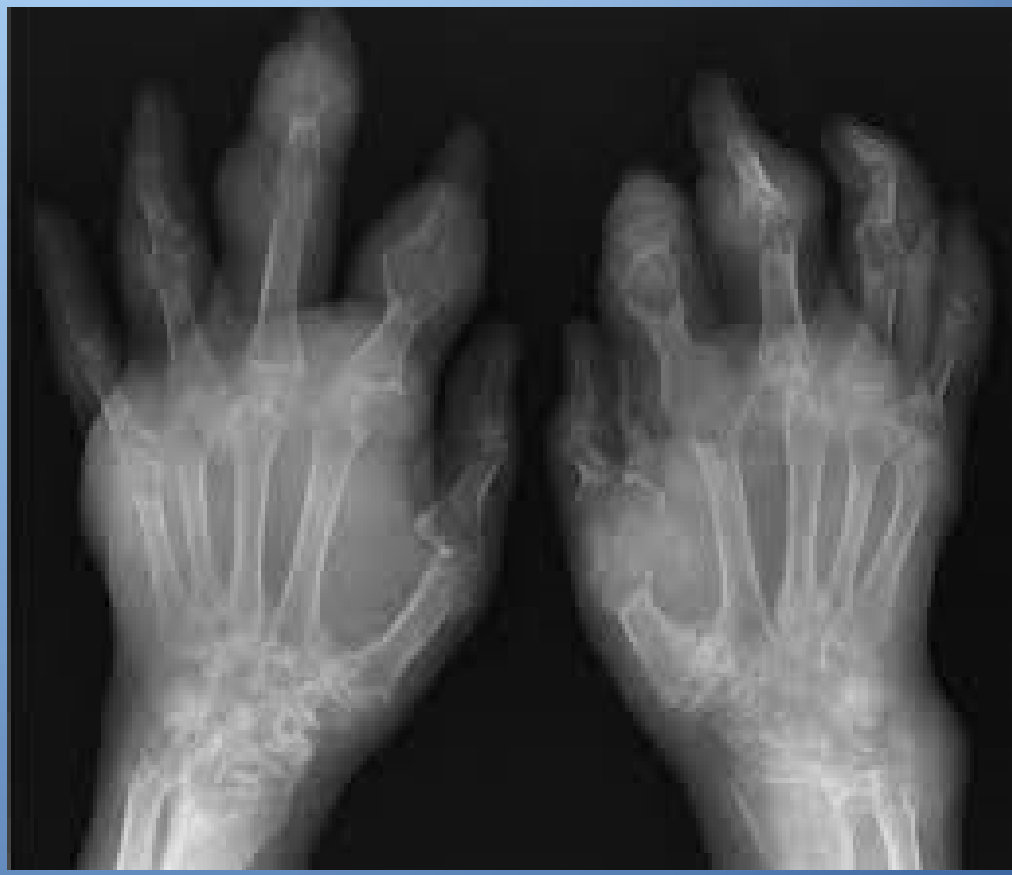






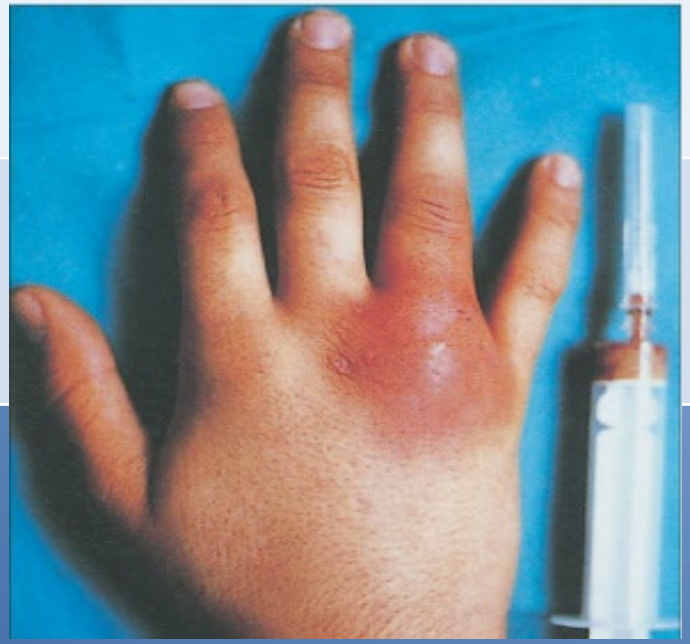
Chronic gout

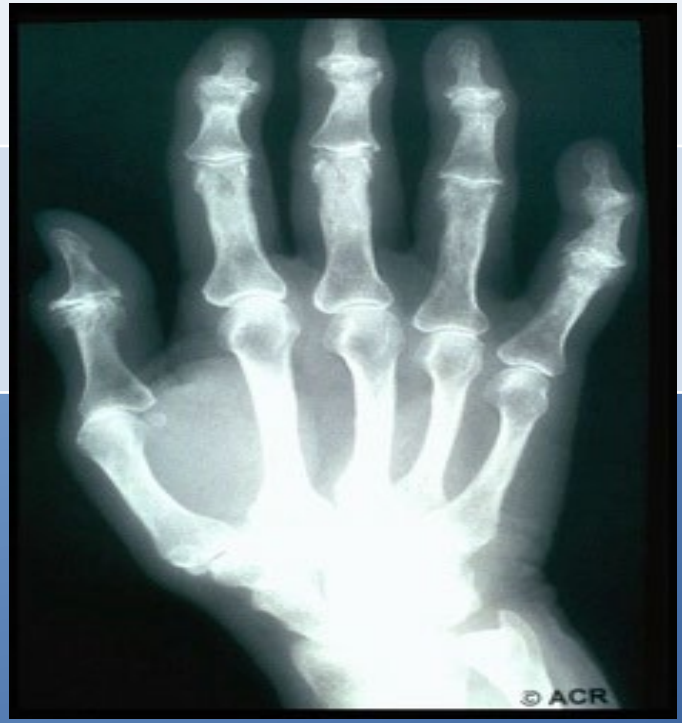




Summary of WORK-UP

MONOARTHRITIS	POLYARTHRITIS
ASPIRATE: cell count, mc&s, crystals X ray joint	RF, CCP, Uric acid, HIV, ANA
Blood culture ETC	X-ray hands and feet





Backache: Mrs G

A 48 year old woman visits your clinic regularly with complaints of lower back pain, which comes and goes. She cares for her bedridden elderly mother, and lifting her aggravates the pain. She does not have stiffness or pain on the morning, but the pain increases during the day, and sometimes pain radiates down her right leg to her big toe. On examination, she is overweight (92 kg), with a normal neurological examination. She has a lumbar lordosis, but normal forward and lateral flexion of her spine.

Your top 3 diagnoses

1. …
2. …
3. …

My top 3 diagnoses

1. Mechanical backache
2. Mechanical backache
3. Mechanical backache

“Mechanical” or “non-specific” backache

- Pain triggered by movement, relieved by rest
- Asymmetrical, non-progressive – acute or insiduous onset cervical or lumbar

What causes mechanical backache ?

- Vast majority of backache have no precise aetiological diagnosis even after extensive investigation (bloods, X rays, MRI)
  - Complex anatomy
    - SPINAL MUSCLES
    - LIGAMENTS
    - NERVES
    - SOFT TISSUES
  - **Investigations contribute little to our understanding of back pain**

What could I be missing?

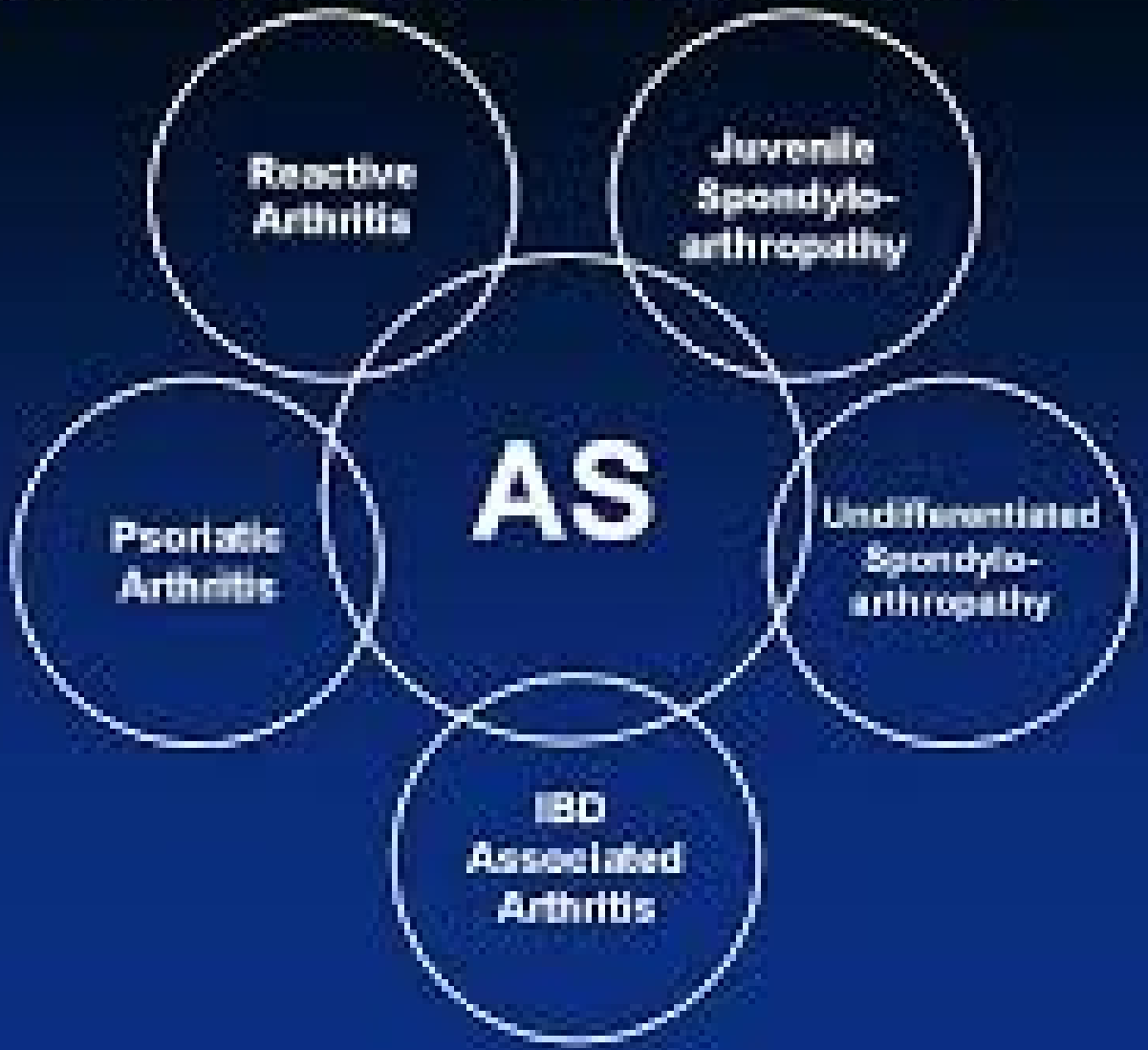
- Inflammatory back problems (Spondyloarthropathies)
- Malignancy (mets/primary bone tumours, myeloma)
- Osteoporotic fracture
- Infection (TB, paraspinal abscess, Brucellosis)
- Widespread pain syndrome (FMS)
- Acute lymphadenopathy
- Thyroiditis
- Meningitis/septicaemia
- ABD problem: AAA, ca pancreas, nephrolithiasis, endometriosis
- Pagets

Inflammatory backache

- 5% of cases of LBP in patients <45 are SpA

- **I**nsidiuos onset
- **P**ain not releived by rest
- **A**ge <40yrs
- **I**mproves with Exercise
- **N**octurnal discomfort, NSAID response

Family of Spondyloarthropathies



Backache Red Flags

Pain	Severe pain Night pain Thoracic pain Well localised pain Persistent >3 months
Consitutional symptoms	fever, LOW, prev malignancy, anaemia
Neurological sx	bladder and bowel, saddle anaesthesia, abn gait, neurological deficit
Age	<20 >55
Inflammatory symptoms	EMS, IPAIN, young patient, buttock pain

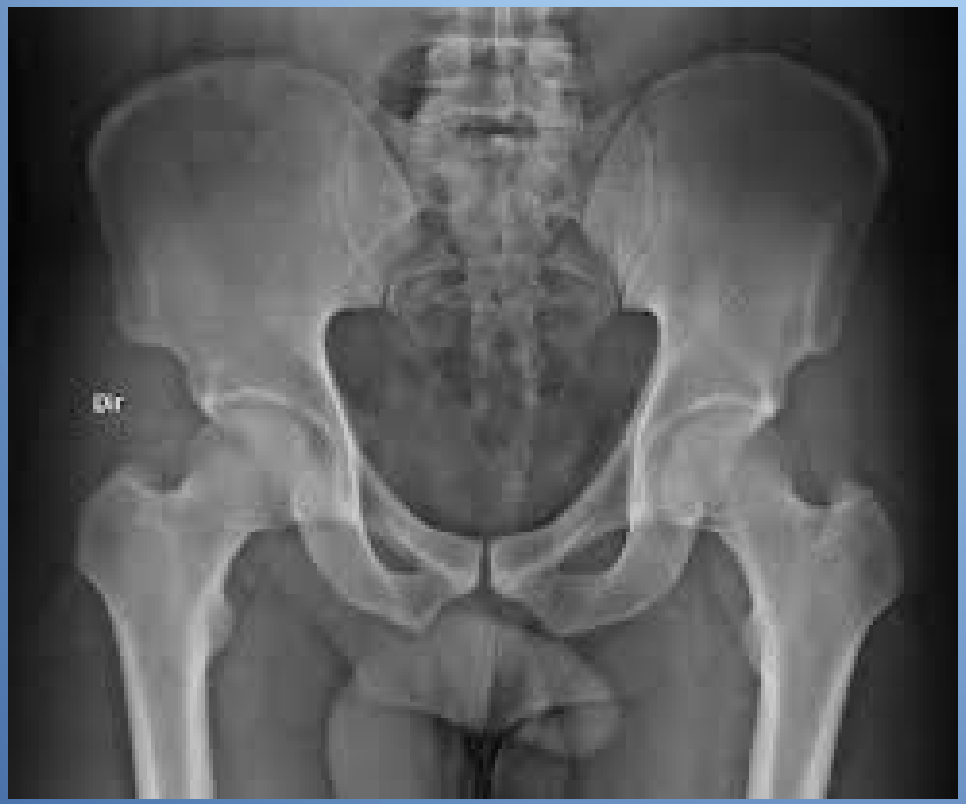
Investigations

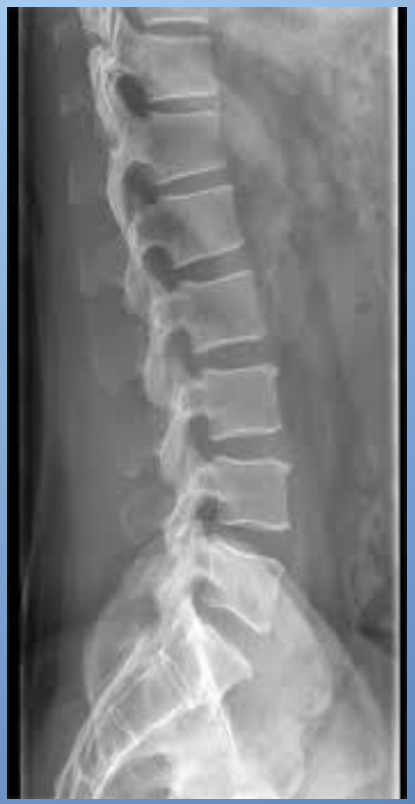
- FBC, CRP, ESR
- If suspecting underlying Ca or metabolic bone disease:
  - Ca^{2+},
  - Alk Phos
- Urinalysis
- Imaging
  - **Not needed** in non-specific acute back pain
- Psychosocial issues (yellow flags)

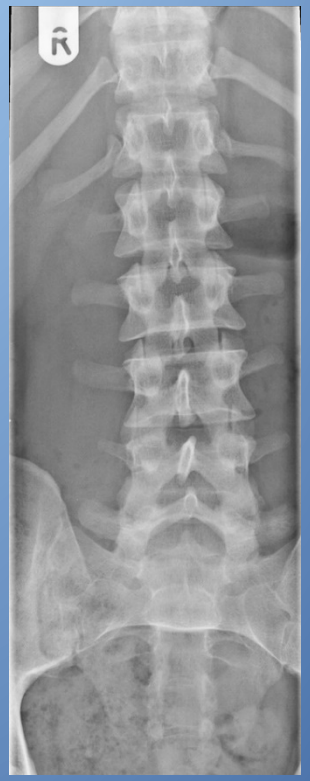
Imaging

- The goal of radiography is to rule out:
  - tumor,
  - infection,
  - instability,
  - spondyloarthropathy and spondylolisthesis.
- Findings often non-specific
- Poor correlation between X ray/MRI findings and symptoms

X rays

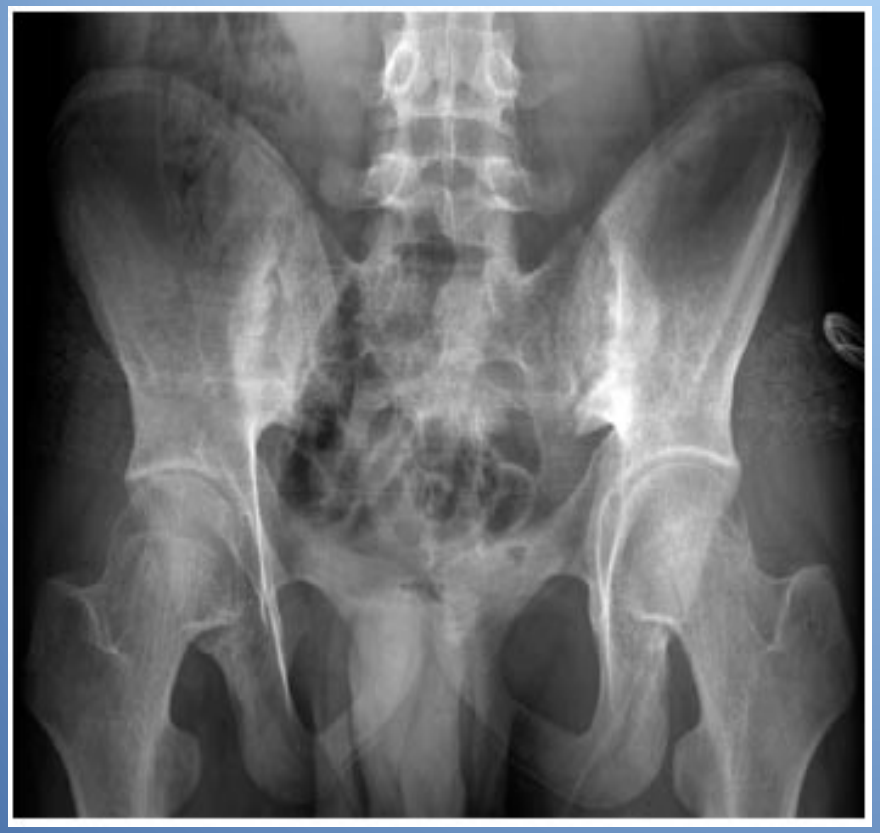


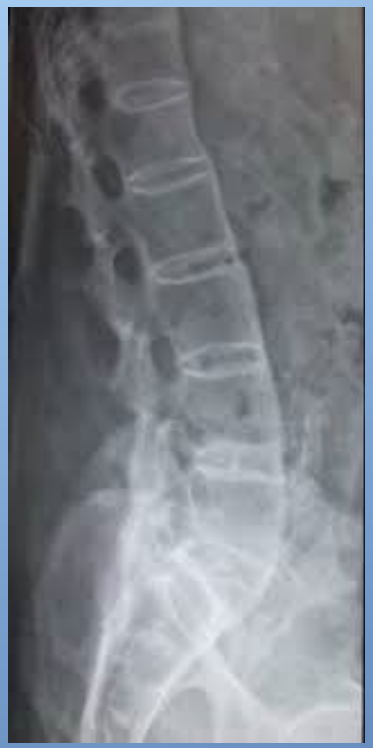


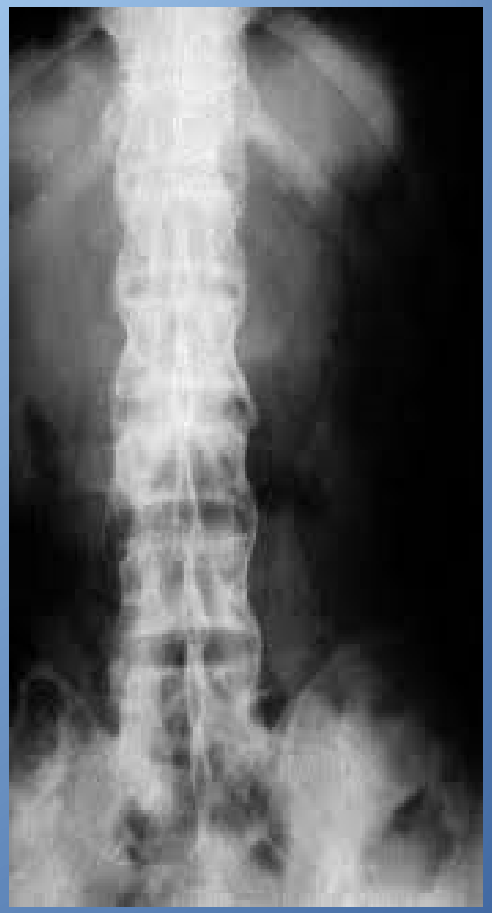


Normal

X rays







Ankylosing Spondylitis

General approach if no Red Flags

- Reassurance and education
  - Most episodes of back pain resolve within 6 weeks, and 90% within 3 months
  - Nerve root sx resolve in 6-8 weeks
- Pain management
  - Paracetemol Tramadol Trypiline
  - (NSAIDS) – don't usually work well for mech LBP
  - Antidepressants Ice, heat Physiotherapy
- Risk factor control

Educate

Arthritis Research UK

Information and exercise sheet

Back pa

The following exer
to push hard to g
exercise, especial
to working agai
feeling extra disc
with. As your back gets used
times you do the exercise. If you are

Exercises

1. Hugging knees to chest

Lying on your back with bent knees, lift one leg and hold on to it with one hand and then lift and hold the other leg. Pull both knees gently closer to your chest, hold for a count of 5, then relax your arms but don't let go completely. Repeat the hug and relax. Some people prefer to hug one knee at a time.

2. Leg stretches

Lying on your back with your knees bent, lift one knee and hold your thigh with both

1

2

Patient.co.uk

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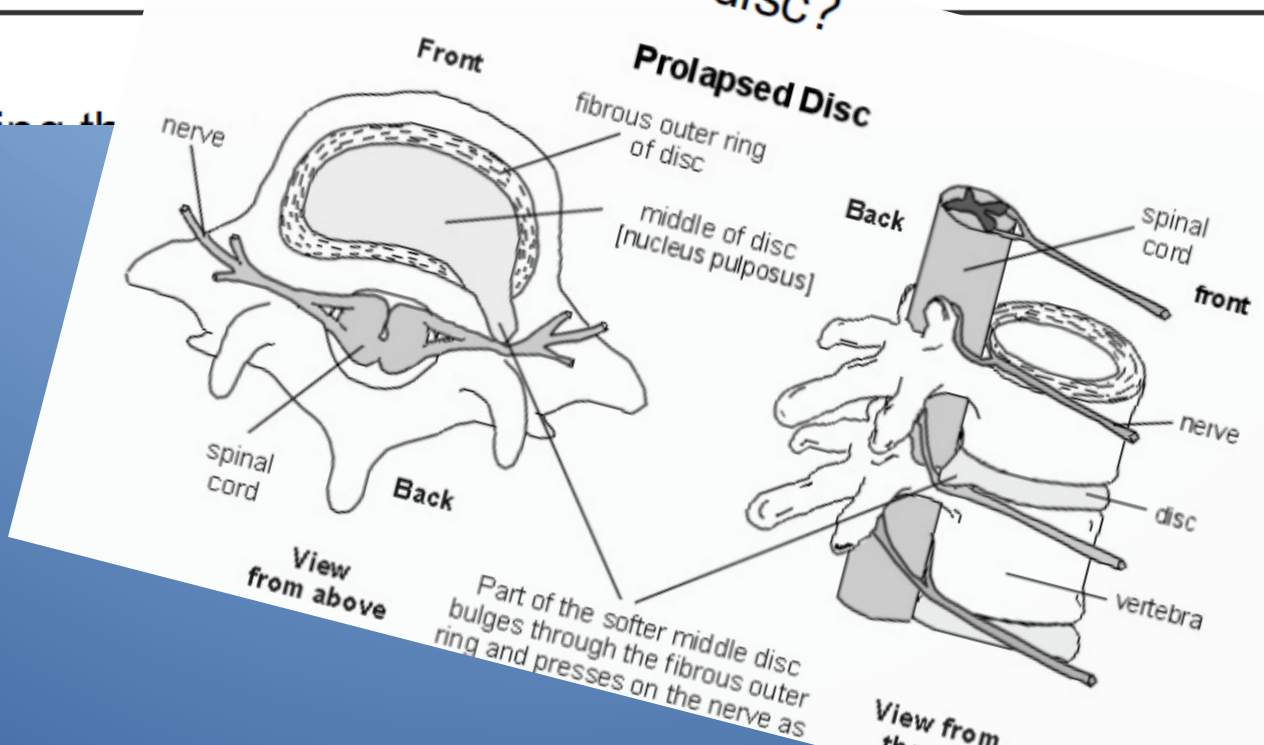
Prolapsed Disc (Slipped Disc)

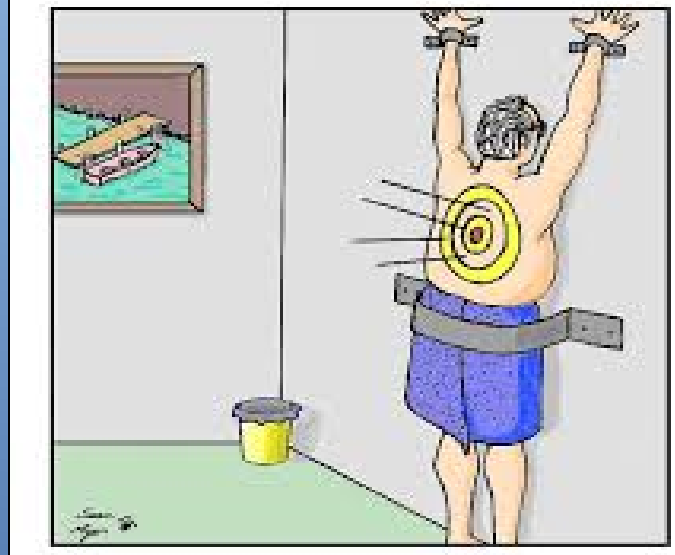
A prolapsed disc often causes severe lower back pain. The disc often presses on a nerve root which can cause pain and other symptoms in a leg. In most cases, the symptoms ease off gradually over several weeks. The usual advice is to do normal activities as much as possible. Painkillers may help. Physic[illegible] treatments such as spinal manipulation may also help. Surgery may be an option if the sym[illegible]. This leaflet is about prolapsed disc in the lumbar spine (lower back). There i[illegible]out disc problems in the neck, called Cervical Spondylosis.

What is a prolapsed disc?



Alternative therapy

- Biokineticist
- Acupuncture
- Massage
- Chiropractor
- Tai Chi/Yoga



A good sign your acupuncturist just might be getting bored with his job.

Lifestyle and work

- Patients should aim to return to normal activities ASAP
  - Improves symptoms
  - Reduces the risk of chronic disability
- Positive lifestyle changes: LOW, posture, physical exercise
- Patients with ongoing pain should be re-evaluated if pain persists after 6 weeks