Rheumatology in MSK

RHEUMATOLOGY.PHYSIO

RHEUMATOLOGY.PHYSIO

COURSE.

Jack March I Rheumatology.Physio

Agenda

RHEUMATOLOGY.PHYSIO

- RA
- SpA (Ax & P)
- PMR
- Gout
- Osteoporosis

Slides

RHEUMATOLOGY.PHYSIO

https://rheumatology.physio/course-rheum

- CourseRheum

Who am I?

RHEUMATOLOGY.PHYSIO

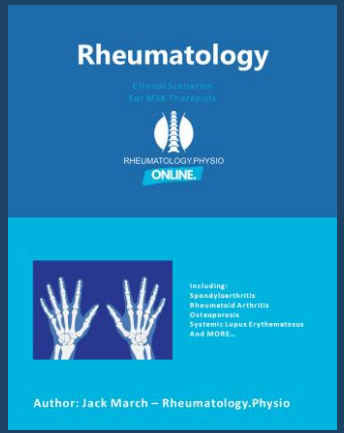
RHEUMATOLOGY.PHYSIO
ONLINE.

CHEWS HEALTH

THE physio matters PODCAST

Other Resources

RHEUMATOLOGY.PHYSIO



Why discuss Rheum in MSK?

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Rheumatoid Arthritis

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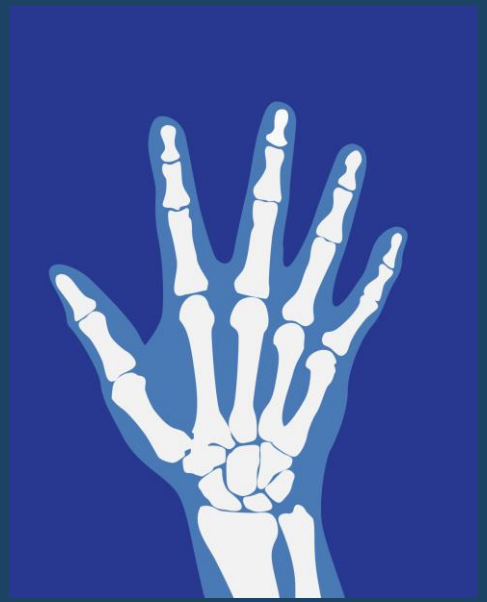

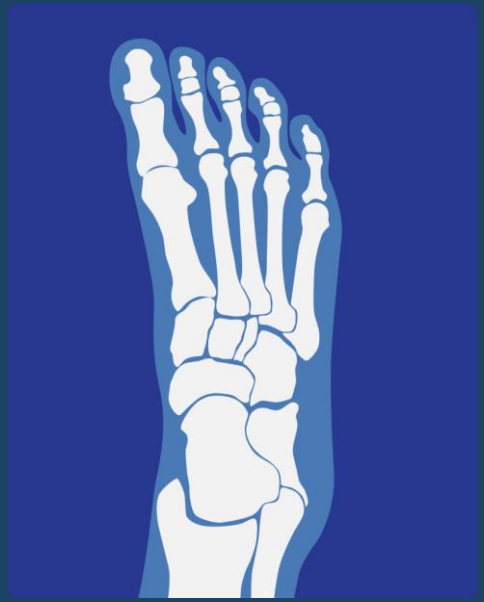

Rheumatoid Arthritis

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Rheumatoid Arthritis

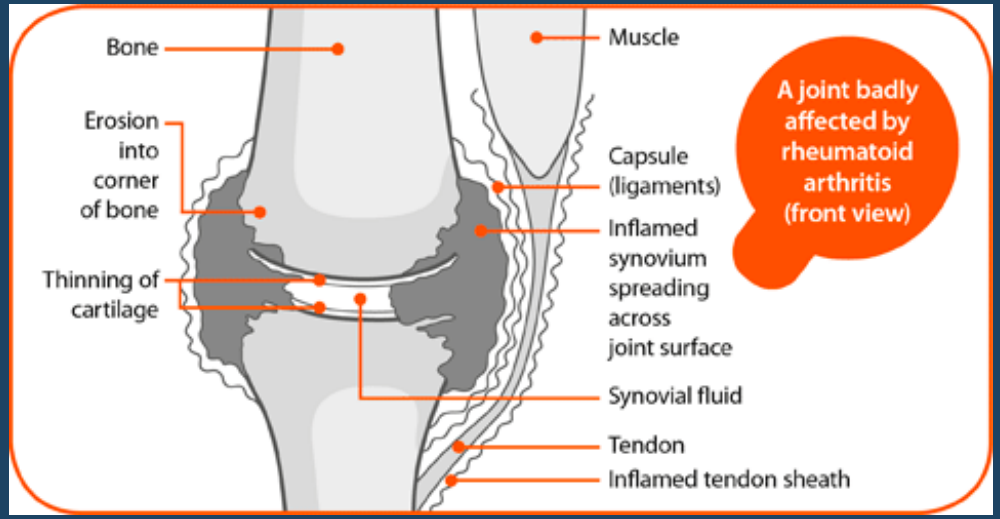

Image courtesy of ARUK

CSA

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Stage 1 - Diagnosing "Clinically Suspected Arthralgia"(1)

Joint Symptoms of recent onset (<1 year)
MCPJs affected
Morning stiffness (>60 mins)
Symptoms worst in early morning
1st degree relative with RA
Difficulty making a fist
Positive MCPJ or MTPJ squeeze test

A score of 3+/7 symptoms is consistent with "Clinically Suspected Arthralgia"(1)

RA

Leiden Clinical Prediction Rule.(2)

What is the age in years? Multiply by 0.02 _____

What is the sex?
- a. In case Female — 1 point _____

What is the distribution of involved joints?
- a. In case small joints hands/feet: — 0.5 point _____
- b. In case symmetric — 0.5 point _____
- c. In case upper extremities — 1 point _____
- d. In case upper and lower extremities — 1.5 points _____

What is the score for morning stiffness on a 100-mm VAS?
- a. In case 26-90 mm — 1 point _____
- b. In case >90mm — 2 points _____

What is the number of tender joints?
- a. In case 4-10 — 0.5 points _____
- b. In case 11 or higher — 1 point _____

What is the number of swollen joints?
- a. In case 4-10 — 0.5 points _____
- b. In case 11 or higher — 1 point _____

What is the C-reactive protein level?
- a. In case 5-50 mg/litre — 0.5 points _____
- b. In case 51 mg/lire or higher — 1.5 points _____

Is the patient Rheumatoid Factor positive?
- a. If yes — 1 point _____

Are the anti-CCP antibodies positive?
- a. If Yes — 2 Points _____

Total score _____

A score of 9+ is optimal prediction, 8+ is high risk.(3)

What to do?

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- Priority 1 - RHEUMATOLOGY

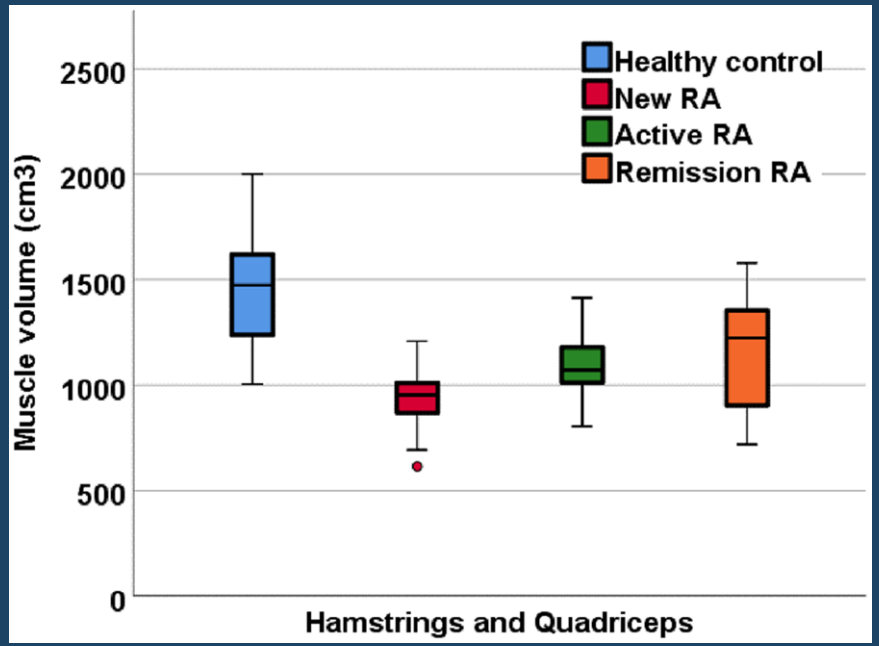
- Bloods – ESR, CRP, Anti-CCP, RF
- U/S
- Advice

Stage 4

Advise patient on modifiable risk factors. These can reduce likelihood of progression to RA

a. Smoking
b. BMI
c. Diet

Muscles



Matthew Farrow, John Biglands, Steven Tanner, Elizabeth M A Hensor, Maya H Buch, Paul Emery, Ai Lyn Tan, Muscle deterioration due to rheumatoid arthritis: assessment by quantitative MRI and strength testing, *Rheumatology*, , keaa364, https://doi.org/10.1093/rheumatology/keaa364

Differential Diagnosis

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Differential Diagnosis

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- Gout
- Other Inflammatory Arthropathy (PsA, AxSpA, Lupus, Reactive Arthritis)
- Osteoarthritis
- Persistent pain conditions
- Ca

Case study time

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Coffee…

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Spondyloarthritis

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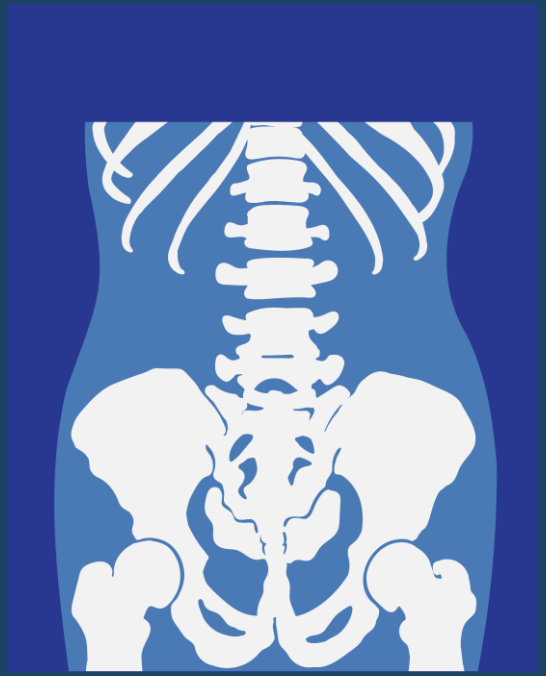

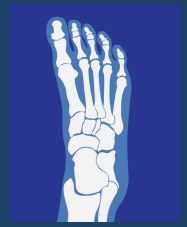

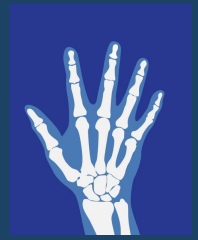

SpA

AxSpA

- Ankylosing Spondylitis
- nr-AxSpA
- r-AxSpA
- Enteropathic
- Psoriatic

PSpA

- Psoriatic
- Enteropathic
- Something else, who knows. It complicated.

Inflammatory Back Pain

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- Stiffness
- Nocturnal pattern
- Better with activity/worse with rest
- Onset. Insidious <45
- Improvement with anti-inflammatories

Extra articulars

- Psoriasis
- Inflammatory Bowel Disease
- Uveitis
- Crohns/colitis
- Dactylitis
- Enthesitis

- Fibromyalgia

AxSpA Men/Women

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Men	Women
- More likely radiographic - Increased Inc. Uveitis - More likely to meet Modified NY Criteria	- More likely n-radiographic and slower to progress - Increased EAMs (enthesitis, psoriasis, IBD) - Greater subj disease activity, widespread pain and work productivity loss

SCREEND'EM
BEFORE YOU TREAT'EM

A clinical tool to help identify spondyloarthropathy (SpA) in patients with tendinopathy.

SKIN

6-42% of patients with psoriasis develop psoriatic arthritis.

COLITIS OR CHROHN'S

Arthritis is one of the most common extra-intestinal manifestations of inflammatory bowel disease. The prevalence of SpA in patients with Chrohn's is estimated to be 26% at 6 year follow up.

RELATIVES

There is a strong relationship between SpA and HLA-B27 positive patients.

Family members of patients with SpA who are HLA-B27 positive have a 16-fold increase chance of developing ankylosing spondylitis if they are also HLA-B27 positive.

EYES

Acute anterior uveitis (AAU) can cause a painful, red eye with photophobia and blurred vision. 40% of patients presenting with idiopathic AAU have undiagnosed SpA. 50% of patients with AAU are HLA-B27 positive and >50% of these have SpA.

EARLY MORNING STIFFNESS

Inactivity related stiffness that lasts for more than 30 minutes is suggestive of inflammatory disease.

NAILS

Nail lesions occur in 87% of SpA patients and include:

- small depressions in the nail (pitting)
- thickening of the nails
- painless detachment from the nail bed (onchylosis).

DACTYLITIS

Sausage like swelling of the digits is a hallmark sign of psoriatic arthritis, occuring in 50% of cases.

ENTHESITIS

98% of SpA patients have at least one abnormal enthesis. The most common sites are the Achilles tendon, plantar fascia and patellar tendon.

MOVEMENT & MEDICATION EFFECT

SpA patients report improvement with activity but not with rest, and a favourable response to NSAIDs.

Created by Paul Kirwan

@pdkirwan

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THE KNEE RESOURCE

designed by freepik.com

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Thanks to:
Paul Kirwan
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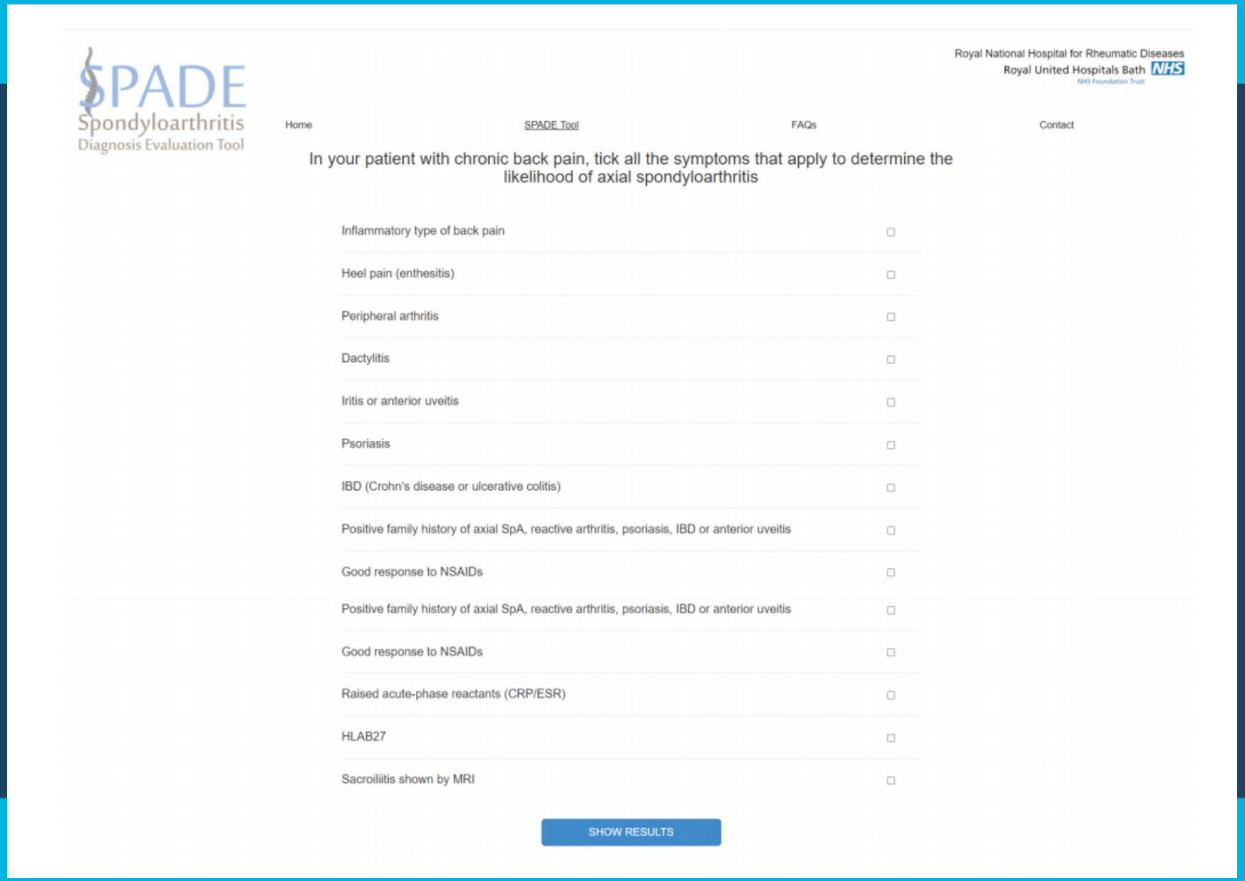
SPADE



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SPADE

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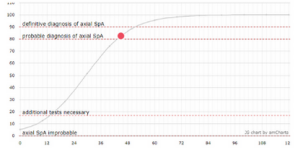
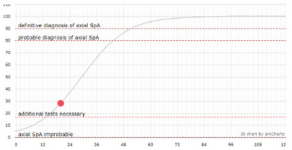
SHOW RESULTS



Probable diagnosis of Axial SpA

This patient has probable Axial SpA – assessment by a rheumatologist is recommended

SHOW RESULTS

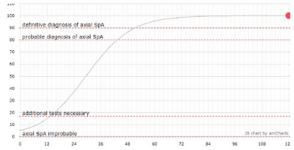


Additional tests necessary

This patient may have Axial SpA but further tests are necessary – assessment by a rheumatologist is recommended

If you would like to let us know the outcome of the diagnosis, please do this via the Contact page.

SHOW RESULTS

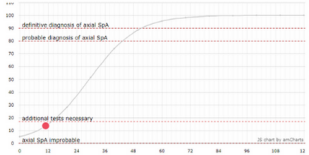


Definitive diagnosis of Axial SpA

This patient is very likely to have Axial SpA - assessment by a rheumatologist is recommended

If you would like to let us know the outcome of the diagnosis, please do this via the Contact page.

SHOW RESULTS



Axial SpA improbable

This patient is unlikely to have Axial SpA – please reassess for an alternative diagnosis

If you would like to let us know the outcome of the diagnosis, please do this via the Contact page.

What to do?

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- Priority 1 - RHEUMATOLOGY

- Bloods – ESR, CRP, HLA-B27
- MRI (SpA protocol)
- Anti-Inflammatories?

MRI protocol

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- Whole spine - Sagittal T1 and STIR
- SIJs - Coronal T1 and STIR
- Talk to your Radiology department!

Example MRI referral – Suspected Spondyloarthritis, coronal images of SIJs, sagittal images of whole spine, please include T1 and STIR sequences.

Differential Diagnosis

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DDx

- DISH
- Back pain (non specific…)
- Vertebral Fracture
- Reactive arthritis (gastroenteritis etc)
- IBD related (crohns, ulcerative colitis)
- Discitis
- Boney metastasis
- Pagets (SIJ fusion)
- Osteitis Condensans

Specific conditions

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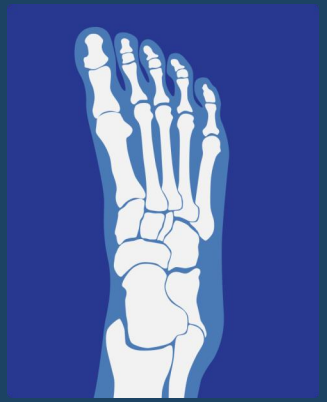
Psoriatic Arthritis



Inflammatory joint disease associated with Psoriasis (Ps)

Prevalence in Ps population is c. 30%

https://www.psoriatic-arthritis.co.uk/

A proportion will have arthropathy symptoms prior to skin involvement… (15-20%)

Extra articulars

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- Current, history or family history Psoriasis
- Nail pitting
- Dactylitis
- Inflammatory back pain
- Enthesitis

Eyes/Fingers…

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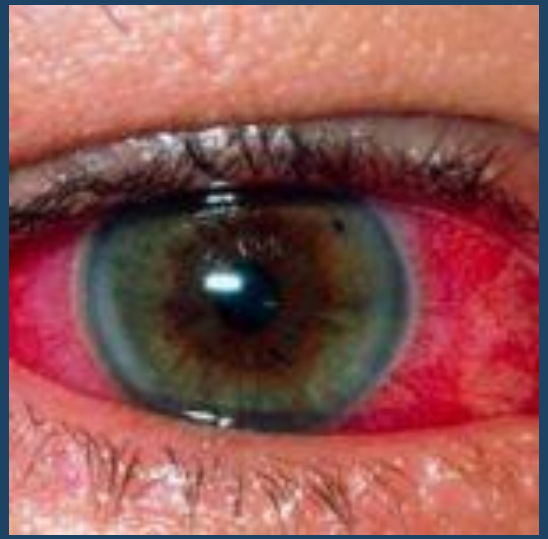

Nails…

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Nails…

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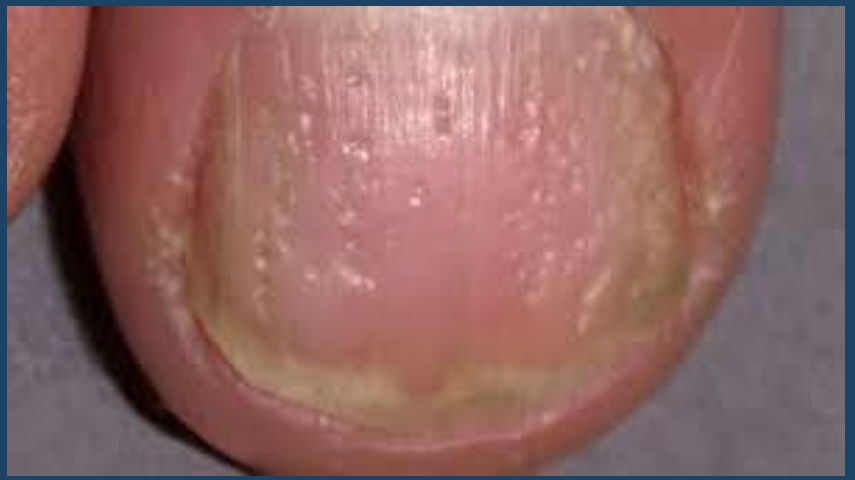

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Thanks to:
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What to do?

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- Priority 1 – RHEUMATOLOGY

- Bloods – ESR, CRP, RF*, (HLA-B27**)
- MRI/ultrasound
- Anti-Inflammatories?
- Dermatology?

* -ve 87%

** 50-60%

Case study time

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Gout/Pseudogout/CPPD

- Sudden onset often at night
- Swelling, heat, redness, pain peaking after a few hours
- Attack lasts a few days then settles
- 1/14 men (anytime after puberty), 1/35 women (uncommon before menopause)
- Risk factors, BMI (especially abdominal), alcohol (especially beer ☹), FH, DM, vascular conditions (MI, Stroke, high BP, PVD, high cholesterol)

Polymyalgia Rheumatica

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- Acute onset Bilat shoulder (90%) and/or bilat buttock pain
- Bilat shoulder and/or bilat pelvic girdle stiffness
- Symptoms worse in the early morning >45 mins

- Peak onset age 65
- Extremely uncommon prior to age 50
- 3:1 Female:Male

- Raised CRP and/or ESR
- Family History PMR
- 23% have synovitis
- 1/3 develop RA

Polymyalgia Rheumatica

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Positive Features

- Acute onset (new) bilat. Shoulder and or Buttock pain
- Early morning stiffness lasting 45+ mins
- Night pain with severe stiffness
- Fever, weightloss, fatigue
- Age 50+
- Raised ESR and/or CRP

Negative features

- Positive anti-ccp or RF or ANA etc (other clinical diseases more likely)
- Presence of peripheral arthritis
- Presence of headache, jaw claudication, visual symptoms (GCA)

Polymyalgia Rheumatica

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Table 3. European League Against Rheumatism and American College of Rheumatology Provisional Classification Criteria for Polymyalgia Rheumatica

Required Criteria

- Age ≥50 years
- Bilateral shoulder pain
- Abnormal erythrocyte sedimentation rate and/or C-reactive protein

Criteria for scoring algorithm[a]

Clinical criteria	Points
Morning stiffness lasting >45 minutes	2
Hip pain or restricted range of motion	1
Negative rheumatoid factor and anti-citrullinated protein antibody	2
Absence of other joint involvement	1
Ultrasound criteria	**Points**
≥1 shoulder with subdeltoid bursitis, biceps tenosynovitis, or glenohumeral synovitis AND ≥1 hip with synovitis or trochanteric bursitis	1
Both shoulders with subdeltoid bursitis, biceps tenosynovitis, or glenohumeral synovitis	1

[a] Using only clinical criteria, a score of ≥4 had a 68% sensitivity and 78% specificity for discriminating patients with PMR from comparison subjects. Using a combination of clinical criteria and ultrasound criteria, a score of ≥5 had a sensitivity of 66% and specificity of 81% for discriminating patients with PMR from comparison subjects.

PMR, polymyalgia rheumatica

Specific conditions

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Osteoporosis

- Incidence increases with age
- Uncommon prior to age 50
- 2:1 Female:Male

- Over 1/3 women and 1/5 men will sustain a fragility fracture in their lifetime
- At age 75-84 the absolute 10 year risk for sustaining a fragility fracture is approx. 24% for women and 14% for men.

Specific conditions

RHEUMATOLOGY.PHYSIO

Osteoporosis

- Early menopause
- Low BMI
- Crohns/colitis/IBD
- Inflammatory Arthropathies
- Smoking/high alcohol intake
- Eating disorders or food intolerances
- Cancer

- Parental fractured neck of femur
- Osteoporosis

- RED-S (Relative Energy Deficiency in Sport

Specific conditions

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Osteoporosis

- FRAX
- DXA scan

Mostly GP managed, Rheum for biologics

Physio for loading program

Case study time

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