

Rheumatology in MSK



RHEUMATOLOGY.PHYSIO



Jack March | Rheumatology.Physio

Agenda



- Rheumatology Overview
- Specific Conditions
- Aims and objectives of treatment
- Specific condition management

Slides



<https://rheumatology.physio/courserheum>

Who am I?



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@physiojack

Other Resources



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Rheumatology

AT A GLANCE



RHEUMATOLOGY.PHYSIO

A QUICK REFERENCE GUIDE TO:
Axial Spondyloarthropathy
Lupus
Osteoporosis
Rheumatoid Arthritis
Gout
And More...

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Contents

Page 2 Axial Spondyloarthritis
Page 3 Rheumatoid Arthritis
Page 4 Osteoarthritis
Page 5 Osteoporosis
Page 6 Psoriatic Arthritis
Page 7 Fibromyalgia Syndrome
Page 8 Polymyalgia Rheumatica
Page 9 Lupus
Page 10 Sjogrens
Page 11 Gout

PLEASE REMEMBER – THIS GUIDE IS NOT A REPLACEMENT FOR CLINICAL REASONING, IF YOU ARE UNSURE GET ADVICE



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Why discuss Rheum in MSK?

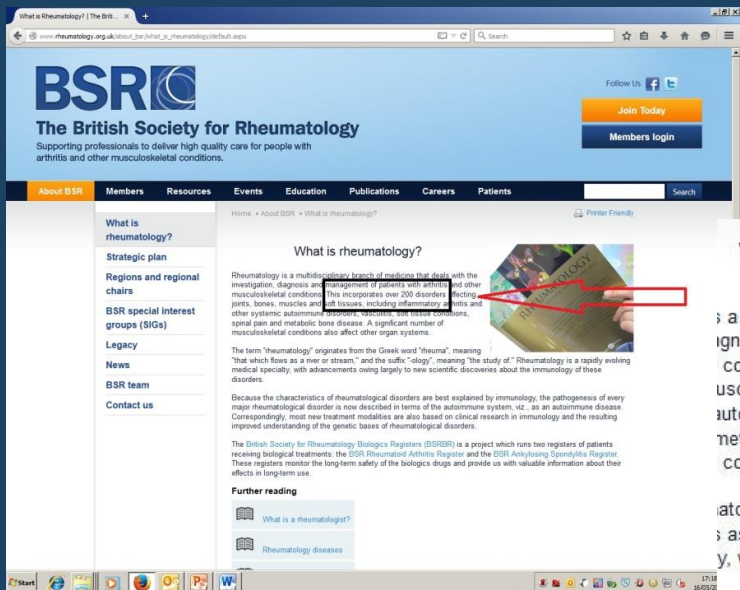


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Some questions for you..?



Recognition



What is rheumatology?

Rheumatology is a multidisciplinary branch of medicine that deals with the investigation, diagnosis and management of patients with arthritis and other musculoskeletal conditions. This incorporates over 200 disorders affecting joints, bones, muscles and soft tissues, including inflammatory arthritis and other systemic autoimmune disorders, vasculitis, soft tissue conditions, spinal pain and metabolic bone disease. A significant number of musculoskeletal conditions also affect other organ systems.



The term "rheumatology" originates from the Greek word "rheuma", meaning "that which flows as a river or stream," and the suffix "-ology", meaning "the study of." Rheumatology is a rapidly evolving specialty, with advancements owing largely to new scientific discoveries about the immunology of these disorders.

Conditions (Arthropathies)



Rheumatoid arthritis

Spondyloarthritis

- Ankylosing spondylitis
- Psoriatic arthropathy
- Enteropathic spondylitis

Reactive arthritis

Juvenile Idiopathic Arthritis

Crystal arthropathy

Septic Arthritis

Conditions (Arthropathies)



Conditions (CTDs)



Lupus

Sjogrens

Scleroderma

Myositis (variants)

Mixed/undifferentiated

Hypermobility (variants)

Vasculitis

Giant Cell/Temporal Arteritis

Conditions (CTDs)



Features of Inflammation



Heat
Redness
Swelling

PAIN



Stiffness (Early morning
>30mins)
Night pain
Better with activity
Worse with rest
Better with anti-
Inflammatories

Systemic Condition?



Multiple systems

- Skin
- Eyes
- Gut
- Nails
- Enthesitis
- Dactylitis

Evidence of relevant:

- Past medical history
- Family History
- Concurrent conditions
- Onset

Specific conditions



Psoriatic Arthritis



Spondyloarthritis

Rheumatoid Arthritis



Specific conditions



Rheumatoid Arthritis



A progressive, (symmetrical) form of autoimmune arthritis, usually involving the small joints of the hands and/or feet.

Multi-systemic, can affect the heart, lungs and eyes.

(NRAS website)

Specific conditions



Rheumatoid Arthritis

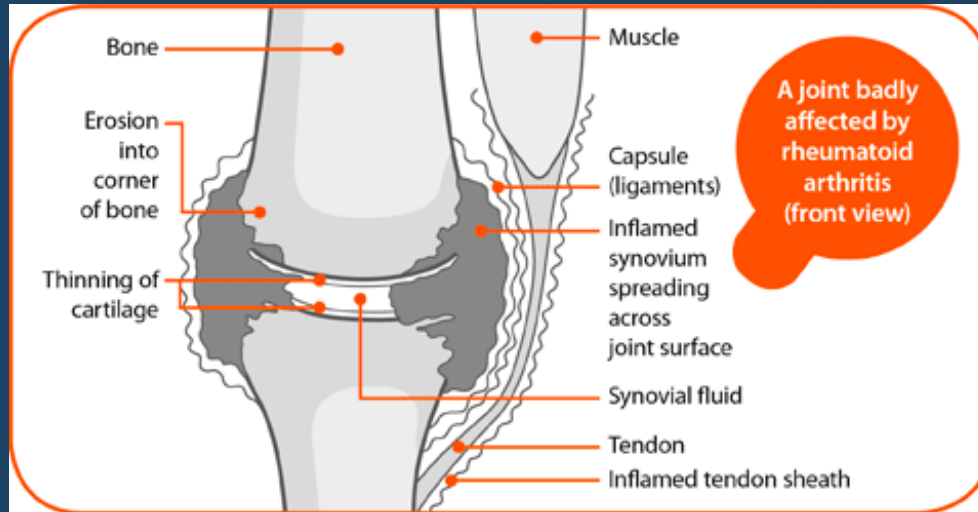


Image courtesy of ARUK

Specific conditions



Diagnosing “Clinically Suspected Arthralgia”

1. Joint Symptoms of recent onset (<1 year)
2. MCPJs affected
3. Morning stiffness (>60 mins)
4. Symptoms worst in early morning
5. 1st degree relative with RA
6. Difficulty making a fist
7. Positive MCPJ or MTPJ squeeze test

A score of 3+/7 is consistent with “Clinically Suspected Arthralgia”

Advice for Physiotherapists Suspecting Rheumatoid Arthritis



Stage 1

Diagnosing "Clinically Suspected Arthralgia"¹

1. Joint Symptoms of recent onset (<1 year)
2. MCPJs affected
3. Morning stiffness (>60 mins)
4. Symptoms worst in early morning
5. 1st degree relative with RA
6. Difficulty making a fist
7. Positive MCPJ or MTPJ squeeze test

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

Stage 2

Assessing level of risk (patient scores 3+ on above or clinician retains high suspicion)

Leiden Clinical Prediction Rule.²

1. What is the age in years? Multiply by 0.02 _____
 2. What is the sex? _____
 - a. In case Female 1 point _____
 3. 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 _____
 4. 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 _____
 5. What is the number of tender joints? _____
 - a. In case 4-10 0.5 points _____
 - b. In case 11 or higher 1 point _____
 6. What is the number of swollen joints? _____
 - a. In case 4-10 0.5 points _____
 - b. In case 11 or higher 1 point _____
 7. What is the C-reactive protein level? _____
 - a. In case 5-50 mg/litre 0.5 points _____
 - b. In case 51 mg/litre or higher 1.5 points _____
 8. Is the patient Rheumatoid Factor positive? _____
 - a. If yes 1 point _____
 9. 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

Stage 3

Clinical application.

If clinically suspected Arthralgia is present and/or score of 8+ on Leiden CPR further investigations are warranted.

If clinician retains suspicion but above scores are not met due to lack of investigations completed or other reasoning commence further investigations.

Proceeding in presence of suspected RA risk

1. Referral to Rheumatology must be completed as a matter of priority before requesting any other investigations.
 - a. Discuss with local Rheumatology department regarding procedure/access.
2. If able request following investigations
 - a. C-Reactive Protein blood test
 - b. ESR blood test
 - c. Rheumatoid Factor blood test
 - d. Anti-CCP blood test

Stage 4

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

- a. Smoking
- b. BMI
- c. Diet

Note

Differential Diagnoses – other conditions can masquerade similar to Rheumatoid Arthritis. These may have differing onset, associated symptoms/conditions and presentations.

Gout, Other inflammatory arthropathy (Psoriatic Arthritis, Lupus, Axial Spondyloarthropathy, Reactive Arthropathy), Osteoarthritis, Persistent pain conditions.

**This document is a guide only, it should not replace clinical reasoning or judgement.
If unsure seek further advice as appropriate.**

References

1. van Steenbergen et al. EULAR definition of arthralgia suspicious for progression to rheumatoid arthritis. *Ann Rheum Dis* 2017;76:491-496.
2. van der Heijde-van Mil et al. A Prediction Rule for Disease Outcome in Patients With Recent Onset Undifferentiated Arthritis. *ARTHRITIS & RHEUMATISM* 2017;59(2):415-440
3. Mouton et al. Diagnostic accuracy of a clinical prediction rule (CPR) for identifying patients with recent-onset undifferentiated arthritis, who are at a high risk of developing rheumatoid arthritis: A systematic review and meta-analysis. *Seminars in Arthritis and Rheumatism*; 2014 43:498-507



What to do?



- 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

- Smoking
- BMI
- Diet

Differential Diagnosis



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Differential Diagnosis



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

Specific conditions



Spondyloarthritis



A painful, progressive form of inflammatory arthritis. It mainly affects the spine but can also affect other joints, tendons, ligaments, eyes and bowels.
(NASS website)

Inflammatory Back Pain



- 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

Eyes/Fingers...



SCREEND'EM BEFORE YOU TREAT'EM

A clinical tool to help identify spondyloarthritis (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 Crohn'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 (onycholysis).



DACTYLITIS

Sausage like swelling of the digits is a hallmark sign of psoriatic arthritis, occurring 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



ISBN/EAN: 978-90-75823-92-9, d18 page 32

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Thanks to:
Paul Kirwan
@pdkirwan

Name..... Date of Birth.....Date.....

Tendon Health Questionnaire

Tendon health can be influenced by a host of different factors. Please spend a few minutes completing this questionnaire so we can use the information to help form the best treatment plan for you.

Please tick any boxes that apply to you then your therapist will discuss this with you in more detail;

Past medical history

Have you or any member of your immediate family had any history of the following?

Ankylosing Spondylitis Psoriasis or Psoriatic arthritis Rheumatoid Arthritis Thyroid problems
Inflammatory bowel disease Crohn's Diverticulitis Diabetes Previous history of tendon pain

Medication

Have you taken any of the following medications in the last year? Please provide the names if known:

Antibiotics Statins Steroids Medication names.....

General Health

Height Weight..... BMI (if known).....

Have you had any of the following symptoms in the last year?

Early morning stiffness Red, hot swollen joints Eye problems (redness, pain, blurred vision)
Changes to your skin or nails (rashes, nail pitting, thickening or colour changes) Back or buttock pain

Any history of stress, anxiety, or depression? Yes No

Mental well being at present - please tick which best applies to you;

I am not anxious, stressed or depressed
I am moderately anxious, stressed or depressed
I am extremely anxious, stressed or depressed

On average, how many hours sleep do you get per night?..... Do you wake feeling refreshed? Yes No

Do you have raised cholesterol? Yes No or high blood pressure? Yes No
Are you approaching the menopause? Yes No
Are you a smoker Ex-smoker or non-smoker (please tick as appropriate)

Do you worry about causing lasting damage to your tendon?
Please tick one answer that best applies to you at present;

Never Seldom Quite often Very often Always

Thank you for completing this form!



Thanks to:
Tom Goom @tomgoom

www.running-physio.com/tendonq/

What to do?



- Priority 1 - RHEUMATOLOGY
- Bloods – ESR, CRP, HLA-B27
- MRI (SpA protocol)
- Anti-Inflammatories?

MRI protocol



- Whole spine and SIJs
- Sagittal 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

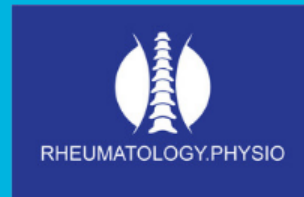


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DDx



- 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



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



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

Nails...



Nails...



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Thanks to:
Paul Kirwan
@pdkirwan

What to do?



- Priority 1 – RHEUMATOLOGY
- Bloods – ESR, CRP, RF*, (HLA-B27**)
- MRI/ultrasound
- Anti-Inflammatories?
- Dermatology?

* -ve 87%

** 50-60%

Coffee...



Specific conditions



Gout/Pseudogout

- 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)

Specific conditions

Fibromyalgia



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Specific conditions



Fibromyalgia

Table 3

Fibromyalgia criteria—2016 revision

Criteria

A patient satisfies modified 2016 fibromyalgia criteria if the following 3 conditions are met:

- (1) Widespread pain index (WPI) ≥ 7 and symptom severity scale (SSS) score ≥ 5 OR WPI of 4–6 and SSS score ≥ 9 .
- (2) Generalized pain, defined as pain in at least 4 of 5 regions, must be present. Jaw, chest, and abdominal pain are not included in generalized pain definition.
- (3) Symptoms have been generally present for at least 3 months.
- (4) A diagnosis of fibromyalgia is valid irrespective of other diagnoses. A diagnosis of fibromyalgia does not exclude the presence of other clinically important illnesses.

Specific conditions

Fibromyalgia



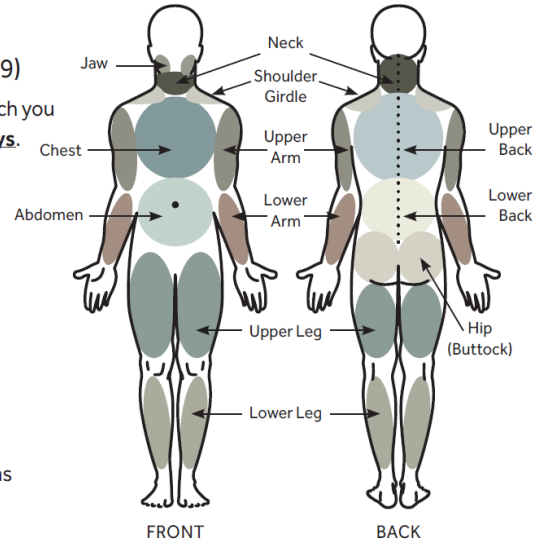
Widespread Pain Index (WPI)

(1 point per check box; score range: 1–19)

Please check the boxes below for each area in which you have had pain or tenderness **during the past 7 days.**

- | | |
|---|--|
| <input type="checkbox"/> Shoulder girdle, left | <input type="checkbox"/> Lower leg left |
| <input type="checkbox"/> Shoulder girdle, right | <input type="checkbox"/> Lower leg right |
| <input type="checkbox"/> Upper arm, left | <input type="checkbox"/> Jaw left |
| <input type="checkbox"/> Upper arm, right | <input type="checkbox"/> Jaw right |
| <input type="checkbox"/> Lower arm, left | <input type="checkbox"/> Chest |
| <input type="checkbox"/> Lower arm, right | <input type="checkbox"/> Abdomen |
| <input type="checkbox"/> Hip (buttock) left | <input type="checkbox"/> Neck |
| <input type="checkbox"/> Hip (buttock) right | <input type="checkbox"/> Upper back |
| <input type="checkbox"/> Upper leg left | <input type="checkbox"/> Lower back |
| <input type="checkbox"/> Upper leg right | <input type="checkbox"/> None of these areas |

WPI score: _____



Specific conditions



Fibromyalgia

Symptom Severity (score range: 1–12)

For each symptom listed below, use the following scale to indicate the severity of the symptom **during the past 7 days**.

	No problem	Slight or mild problem	Moderate problem	Severe problem
Points	0	1	2	3
A. Fatigue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Trouble thinking or remembering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Waking up tired (unrefreshed)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

During the **past 6 months** have you had any of the following symptoms?

Points	0	1
A. Pain or cramps in lower abdomen	<input type="checkbox"/> No	<input type="checkbox"/> Yes
B. Depression	<input type="checkbox"/> No	<input type="checkbox"/> Yes
C. Headache	<input type="checkbox"/> No	<input type="checkbox"/> Yes

SS score: _____

Specific conditions



Polymyalgia Rheumatica

- Bilat shoulder (90%) and/or bilat pelvic girdle pain
- Bilat shoulder and/or bilat pelvic girdle stiffness
- Symptoms worse in the early morning >30 mins

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

- ESR >40
- CRP may be raised
- Family History PMR

Specific conditions



Lupus

- Multiple joint pains
- Myalgia
- Fatigue
- Up to 200/100,000 in UK have SLE
- 6:1 Female:Male
- Twice as likely in African American women compared to Caucasian women
- Peak onset age 15-44

Specific conditions

Lupus

- Rashes
- Multiple miscarriages
- Fatigue
- Hair loss
- Cardiovascular disease



Specific conditions



Osteoporosis

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

Osteopenia

- 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



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



Osteoporosis

- DXA scan

Mostly GP managed, Rheum for biologics

Physio for loading program

- Parental fractured neck of femur
- Osteoporosis
- RED-S (Relative Energy Deficiency in Sport)

Specific conditions



Hypermobility

- Connective tissue disorders due to collagen malformation
- Hypermobility is an observation NOT a diagnosis
- Consider various factors
- Don't over or under diagnose syndromes...

Syndromes



Hypermobility Spectrum Disorder vs Hypermobile Ehlers Danlos Syndrome (hEDS)*

- HSD – no extra-articular manifestations
- hEDS – extra-articular manifestations

Syndromes



Hypermobility Spectrum Disorder vs Hypermobile Ehlers Danlos Syndrome (hEDS)

- HSD = hEDS

Syndromes

- Referral
- Local pathway...
- Patient preference



Syndromes



- Why does one person become symptomatic and another not?
- EDS?

- A recent editorial... (are EDS and HSD the same thing? Are they even a variant of FMS/Chronic fatigue?)

Syndromes



■ WHAT DO WE
DOOOOOOOOOOOOOOOOO
OOOOOO?



<https://www.rcgp.org.uk/clinical-and-research/resources/toolkits/ehlers-danlos-syndromes-toolkit.aspx>

Signposting



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The only charity in the UK dedicated to supporting people affected by axial spondyloarthritis (ankylosing spondylitis) (AS). Join as a member today.

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Take home messages



- Be vigilant for inflammatory symptomology
- Get friendly with your Rheumy
- Get friendly with your Radiologist

Thank you



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