



# Axial SpA - NASS champion perspective

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Axial SpA

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# Case Study- 1

*“Mr J” reported of 4/12 of left sided tennis elbow and 2 years on and off right-side rotator cuff tendinopathy, worsening 5 years of left knee pain to FCP (first contact practitioner) in 2022.*

## Questions –

1. What else do we want to know about him?

Answers- Age? Any other symptoms, onset- MOI? , social history?

2. What special questions would you ask?

Answers- EMM – eyes, stomach, skin , FH inflammatory sx.,

EMS>30 mins, early morning waking, GH- well

3. Any other questions?

4. Answers- fatigue, tiredness, weight loss, fever?



# History and Outcome

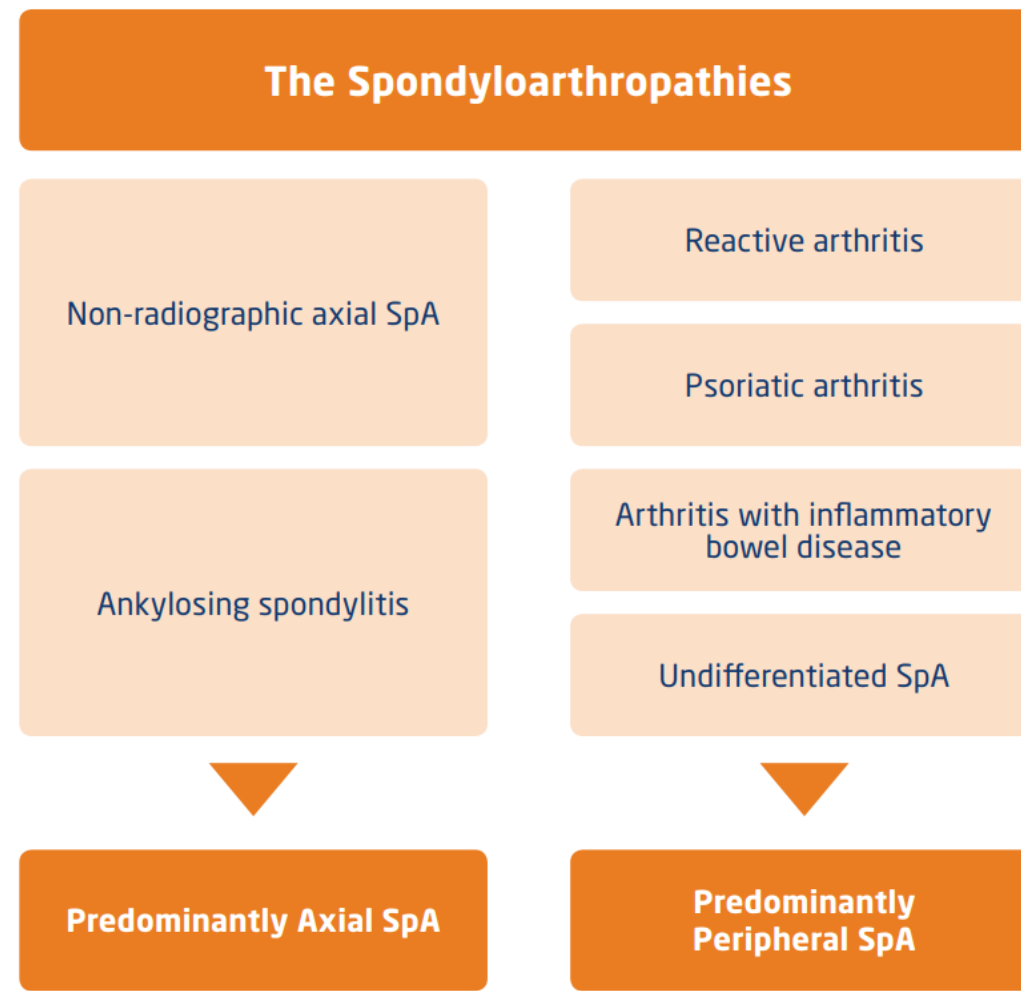
Year	Complaint	Diagnosis	Rx
2010	Back pain- working as labourer	Mechanical back pain	Exercises and pain medication
2013	Left knee pain- playing football	Anterior knee pain	Referred to physiotherapy
2016	Stomach issues	Acid reflux	PPI
2020	Tiredness /fatigue, out of work post rotator cuff pain	Stress + shoulder tendinopathy	Sertraline +physiotherapy
2021	Back pain, knee pain and stomach issues, tiredness and fatigue All post covid+ in 2021	Long covid	Long covid management programme
2022	Left tennis elbow , ongoing right shoulder pain, worsened left knee pain- FCP appointment booked by GP reception	Referral to Rheumatology for suspected Ax Spa Rheumatology Ordered MRI HLAb27 +	Managed with exercises and biologics

12 years from symptom initiation

# Spondyloarthropathies (SpA)

## Types and definition

- Spondyloarthropathies- are chronic , inflammatory, rheumatic diseases.
- Characteristics- Enthesitis, EMMs, sacroiliitis, HLA B27 + FH
- Types-
  - Axial SpA- Spine and SIJ
  - Peripheral SpA- Peripheral joints



# What is Axial Spondyloarthritis (Axial SpA)?

Umbrella term for inflammatory arthritis affecting spine and Sacroiliac joints.

1 in 200 in adults in UK –twice as many as MS and Parkinsons

- Ankylosing Spondylitis (AS) radiographic Axial SpA
  - Changes to the sacroiliac joints seen in x-ray
- Non radiographic Axial SpA (nr-AxSpA)
  - X-ray changes not present
  - Inflammation is visible on MRI – **7/10 cases**
  - Individual has a range of other symptoms
  - More prevalent in females than males





# When...

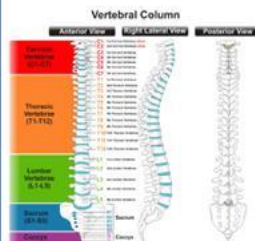
...should you request MRI

- If x-ray cannot establish sacroiliitis then MRI is recommended.
- MRI of the SIJ and spine should be considered at the point of first assessment by a rheumatologist.
- All eligible patients with suspected axial SpA should have MRI as part of their diagnostic assessment.

# What...

...are the key radiological features to make a diagnosis, a combination of:

- | Spine   | SIJs   |
|---|--|
| <ul style="list-style-type: none"><li>• Multiple corner inflammatory lesions</li><li>• Multiple corner fatty lesions</li><li>• New bone formation</li></ul> | <ul style="list-style-type: none"><li>• Bone marrow oedema</li><li>• Fatty infiltration</li><li>• Erosion</li><li>• New bone formation</li></ul> |



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# 8.5

Years to diagnosis of axial spa is too long.

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# Where...

...should you scan based on spondyloarthritis protocol

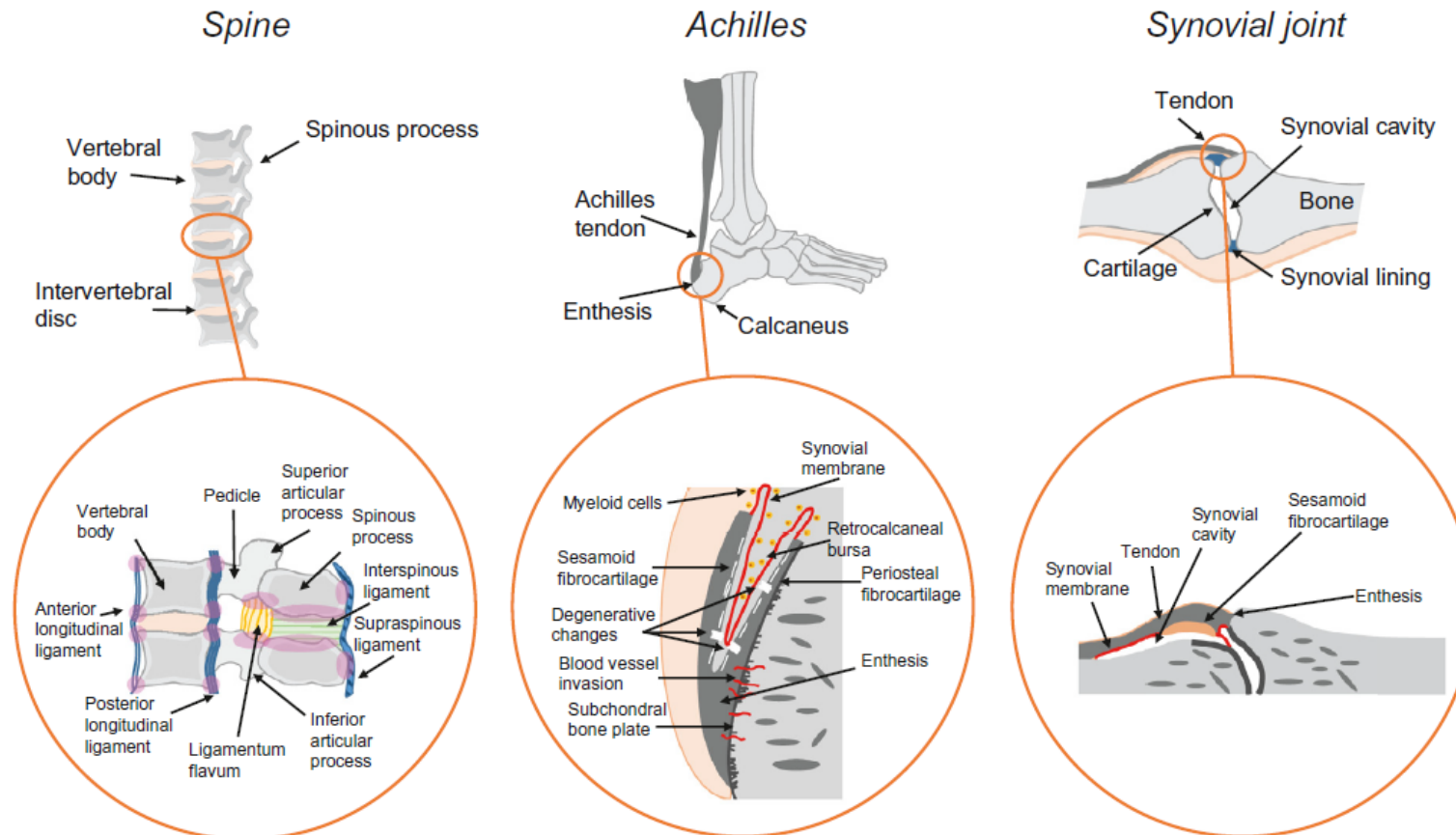
- MRI for axial SpA imaging should request the SIJ plus spine.
- Should include lumbar and thoracic spine as a minimum, or the whole spine if required.
- Use T1 weighted STIR sequences by sagittal images with extended lateral coverage.



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# Pathophysiology

Abnormal response to biomechanical stress leading to an innate inflammatory response.





# Axial SpA what are the key symptoms?

Inflammatory arthritis affecting spine and Sacroiliac joints.

1. Back pain before the age of 40
2. Back pain developed – gradual onset
3. Chronic back pain lasting greater than 3 months
4. Early morning stiffness > 30 mins improves as day goes on
5. Back pain improves with exercise / movement + NSAIDS
6. Back pain worse with rest, keep changing positions
7. Alternating buttock pain- 12% have Axial Spa
8. Regular waking at night 2/3 am improving with movements

Symptoms starting slowly  
Pain in the lower back  
Improves with movement  
Night time waking  
Early onset (under 40)

Complete the NASS symptom checker\*: [Symptom checker](#)

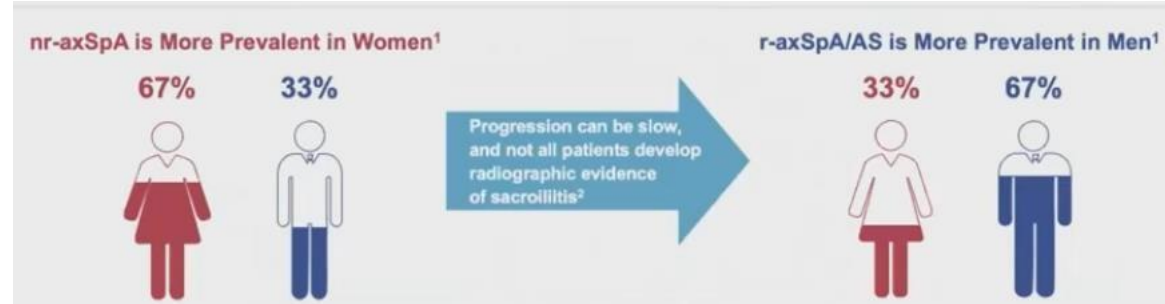
\*Sieper J, van der Heijde D, Landewe R, Brandt J, Burgos-Vagas R, Collantes-Estevez E, et al. New criteria for inflammatory back pain in patients with chronic back pain: a real patient exercise by experts from the Assessment of SpondyloArthritis international Society (ASAS). *Annals of the rheumatic diseases*. 2009;68(6):784-8.

Rudwaleit M, Metter A, Listing J, Sieper J, Braun J. Inflammatory back pain in ankylosing spondylitis: a reassessment of the clinical history for application as classification and diagnostic criteria. *Arthritis Rheum*. 2006;54(2):569-78.

Calin A, Porta J, Fries JF, Schurman DJ. Clinical history as a screening test for ankylosing spondylitis. *JAMA*. 1977;237(24):2613-4

# Gender in axial SpA

**Axial SpA affects both women and men from a young age. It is no longer seen as a male disease. Females have a 2 year longer time to diagnosis around the world.**



- Men with axial SpA show a higher rate of radiological progression compared with women.
- Non-radiographic axial SpA (nr-axSpA) is more prevalent in women. (67% vs 33%)
- Ankylosing Spondylitis or radiographic axial SpA is more prevalent in men. (67% vs 33%)
- Women with axial SpA have, in general, higher disease activity scores (higher BASDAI, lower ASQoL, lower BASMI)
- Women with axial SpA also have more peripheral manifestations compared to males (enthesitis, IBD, Psoriasis and Peripheral Arthritis)

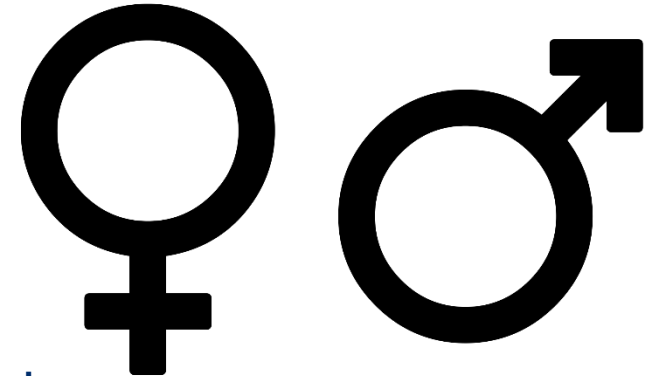
- Xabier Michelena, Clementina López-Medina, Helena Marzo-Ortega, Non-radiographic versus radiographic axSpA: what's in a name?, *Rheumatology*, Volume 59, Issue Supplement\_4, October 2020, Pages iv18–iv24, <https://doi.org/10.1093/rheumatology/keaa422>  
 - Boonen A et al. Semin Arthritis Rheum. 2015;44(5):556-562  
 - Rudwaleit M and Sieper J. Nat Rev Rheumatol. 2012;8(5):262-266

# Key signs to consider for female patients

Presentation in women is often less likely to be in line with the traditional symptoms of axial SpA and requires a more **holistic assessment**.

- Women present differently to men.
- Women have greater subjective disease activity.
- Women are more likely to have widespread pain.
- Women have more functional impairment, despite less damage.
- Women more often have non-radiographic axial SpA with negative imaging.
- Women are more likely to have a <sup>++</sup>CRP & <sup>++</sup> incidence of - HLA-B27

Women are more likely to have extra musculoskeletal manifestations.

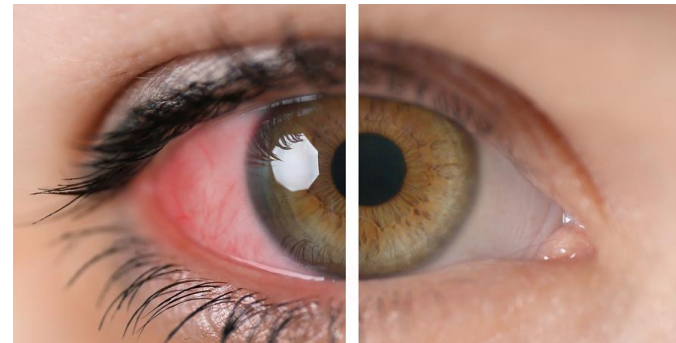


# Extra-musculoskeletal manifestations (EMM) of axial SpA?

Extra-musculoskeletal manifestations (EMMs) are common, important features of axial spondyloarthritis (axial SpA).

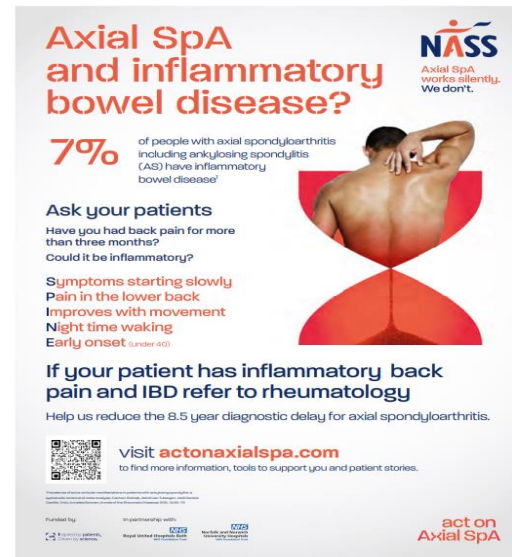
The most prevalent being –

- Acute anterior uveitis (AAU)- 26%
- Inflammatory bowel disease (IBD)- 7%
- Psoriasis- 9%



Other EMMs are:

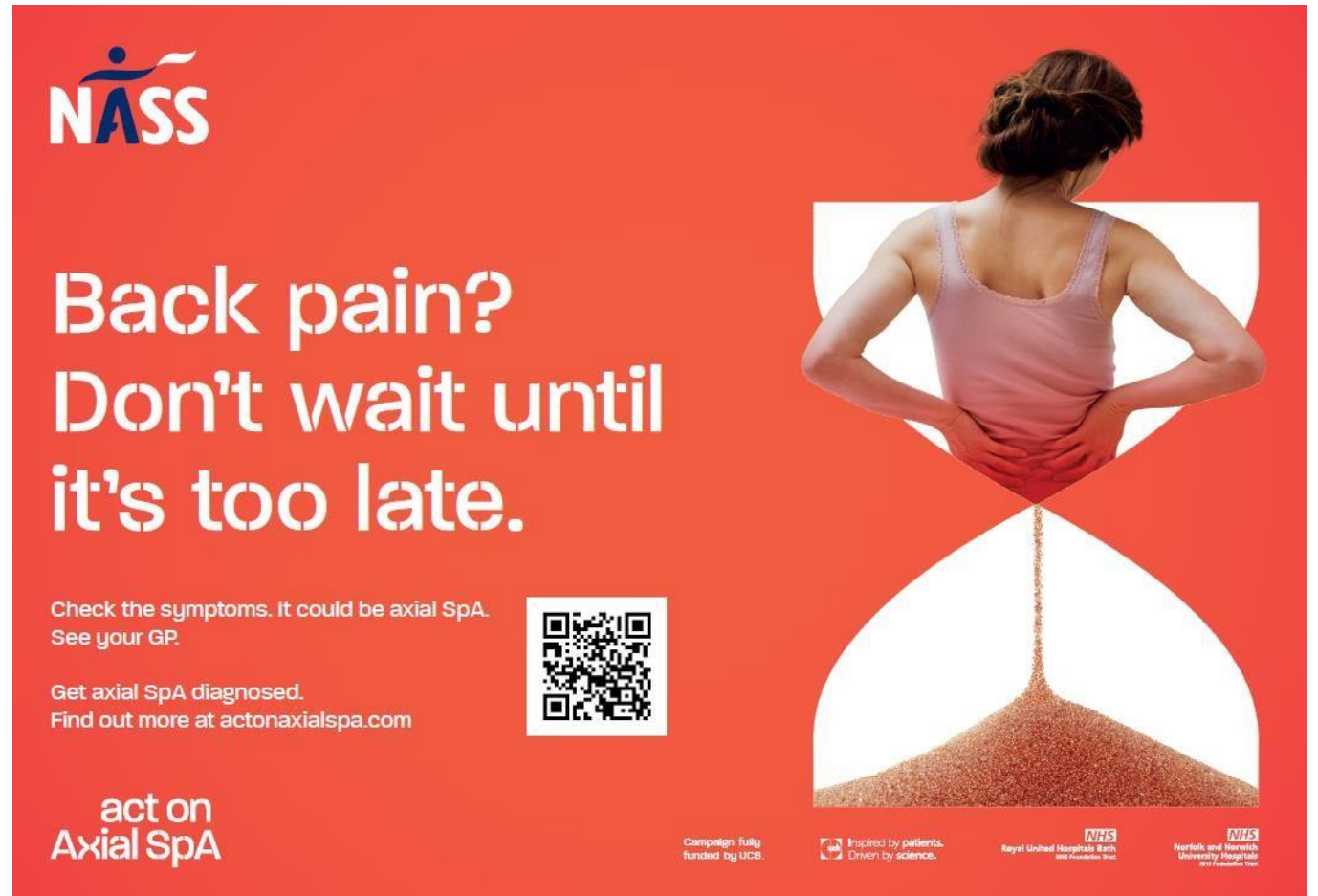
- Enthesitis 70-80%
- Dactylitis- 6%


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# Do I screen every back pain patient?

- Onset typically starts late teens early 20's (average age 24-26yrs)
- Inflammatory pain
- Functional impairment
- Can have lifelong impact and long term implications if left untreated
- Diagnosis is difficult and often delayed
- Mental health issues- 59%


The poster features a woman from behind, wearing a pink tank top, with her hands on her hips. Her back is framed by a white hourglass shape. The top half of the hourglass is empty, while the bottom half is filled with a pile of reddish-brown granules, suggesting the passage of time. The background is a solid red color.

**NASS**

## Back pain? Don't wait until it's too late.

Check the symptoms. It could be axial SpA.  
See your GP.

Get axial SpA diagnosed.  
Find out more at [actonaxialspa.com](http://actonaxialspa.com)



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Campaign fully funded by UCB.

Inspired by patients.  
Driven by science.

NHS  
Royal United Hospitals Bath  
NHS Foundation Trust

NHS  
Norfolk and Norwich  
University Hospitals  
NHS Foundation Trust

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# Diagnostic criteria – the challenge

## ASAS Inflammatory Back Pain Questionnaire

### Making the Golden Moment an evidence-based ASAS score

	YES	NO	ODDS
1. Did your back pain start before the age of 40 years?	<input type="radio"/>	<input type="radio"/>	9.9
2. Did your back pain begin slowly and develop gradually over time?	<input type="radio"/>	<input type="radio"/>	12.7
3. Do you have back pain at night, which improves upon getting up?	<input type="radio"/>	<input type="radio"/>	20.4
4. Do you find there is no improvement in your back pain when resting?	<input type="radio"/>	<input type="radio"/>	7.7
5. Does your back pain improve with exercise?	<input type="radio"/>	<input type="radio"/>	23.1

A score of 4 or more has ~78% sensitivity and ~80% specificity

Source: [dx.doi.org/10.1136/ard.2008.101501](https://doi.org/10.1136/ard.2008.101501)



# Referral thresholds

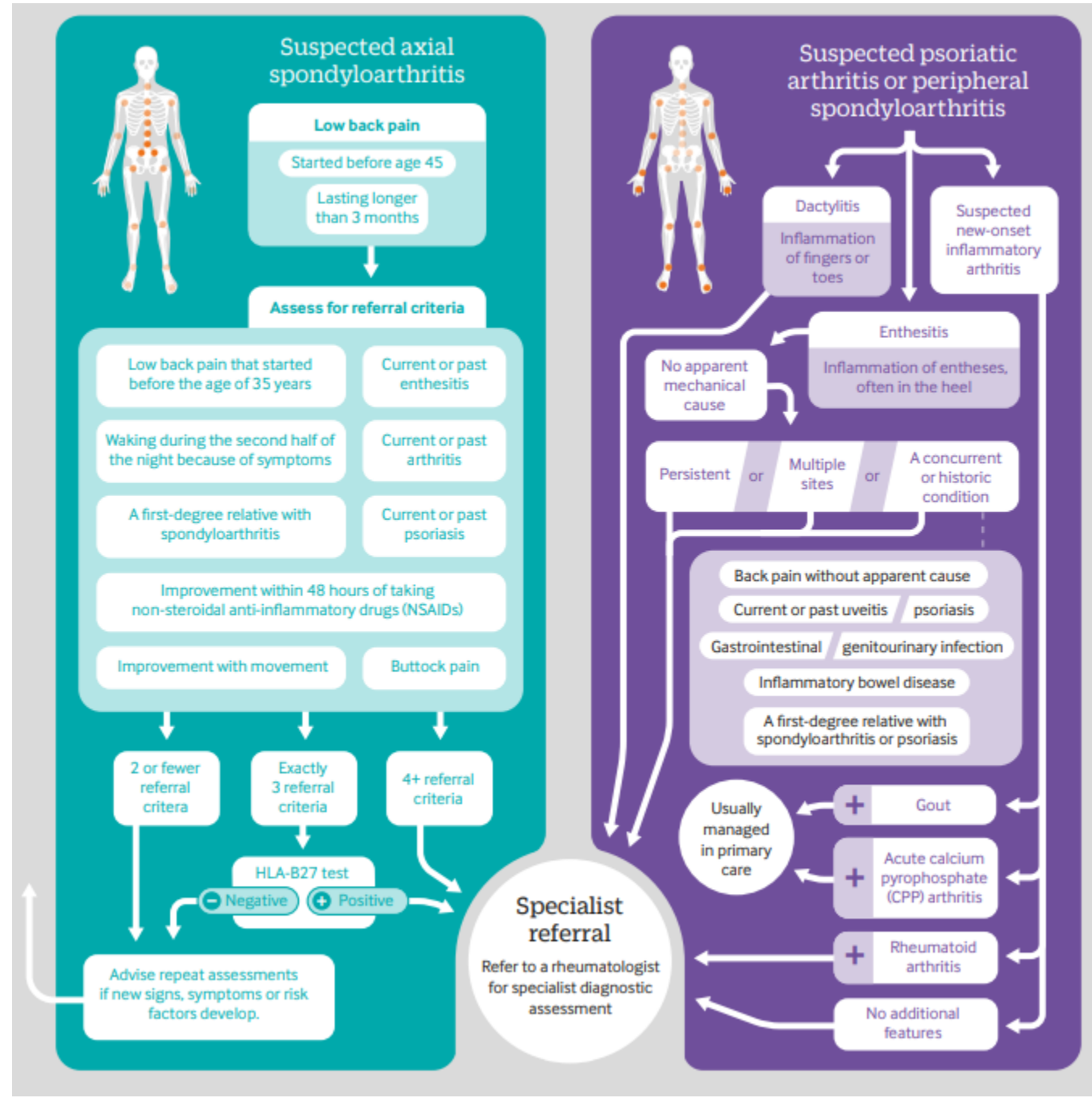
## NICE guidelines

## ASAS guidelines

	YES	NO	ODDS
1. Did your back pain start before the age of 40 years?	○	○	9.9
2. Did your back pain begin slowly and develop gradually over time?	○	○	12.7
3. Do you have back pain at night, which improves upon getting up?	○	○	20.4
4. Do you find there is no improvement in your back pain when resting?	○	○	7.7
5. Does your back pain improve with exercise?	○	○	23.1

<https://www.bmj.com/content/bmj/suppl/2017/02/28/bmj.j839.DC1/mcak020217.wi.pdf>

ASAS IBP template taken from PRIMIS presentation

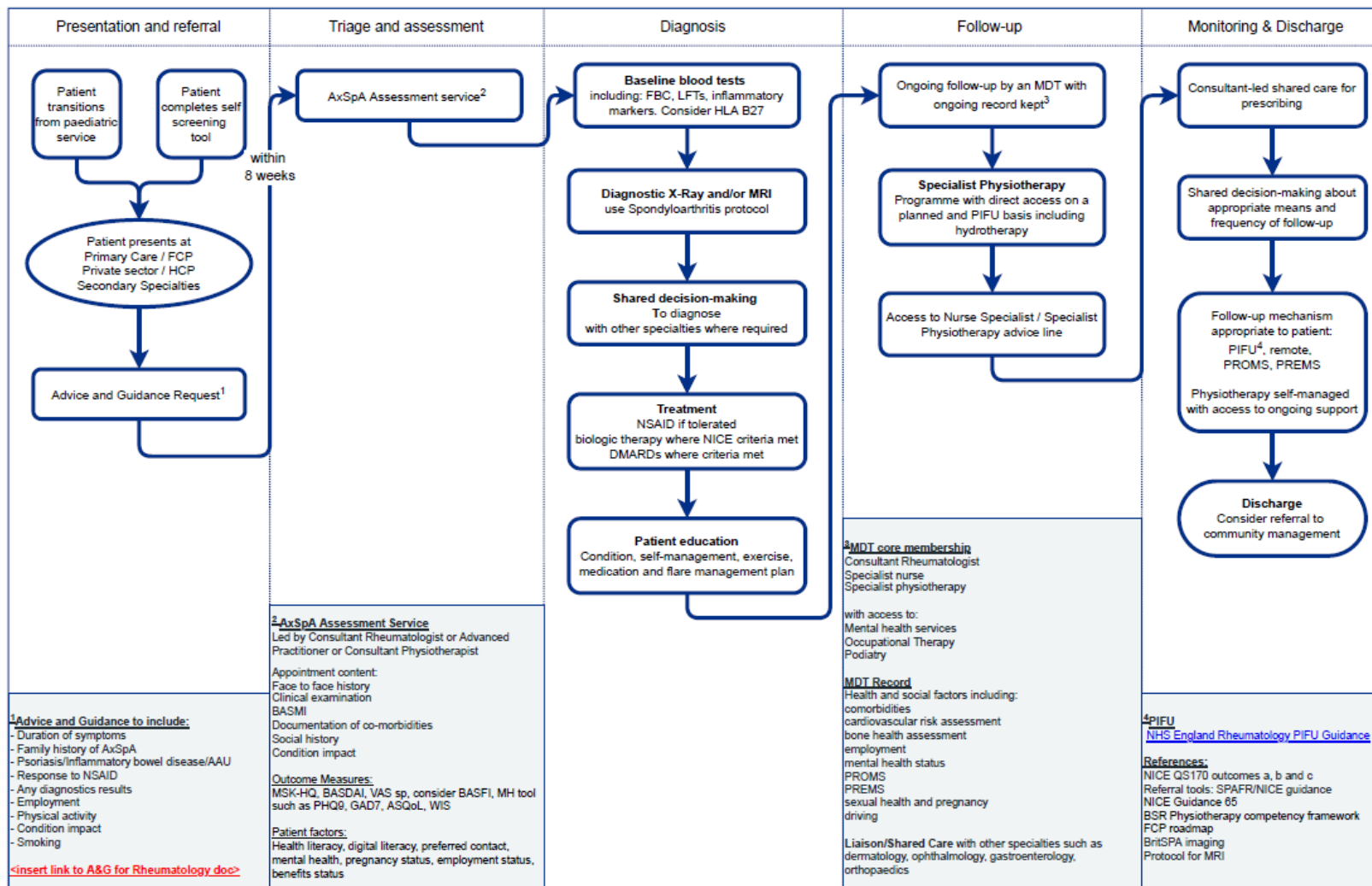


# GIRFT pathway



## GIRFT Axial Spondyloarthritis Rheumatology - Version 1.1

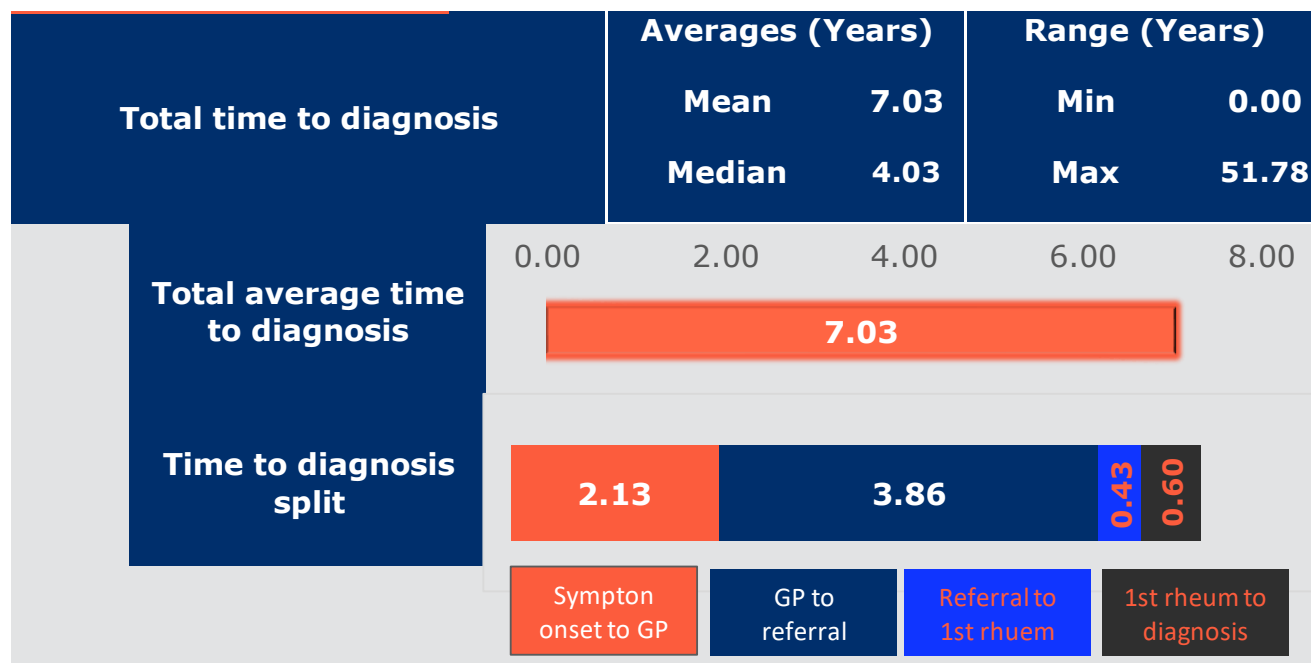
Co-badging logo



# Delay to diagnosis

Quicker diagnosis leads to improved outcomes

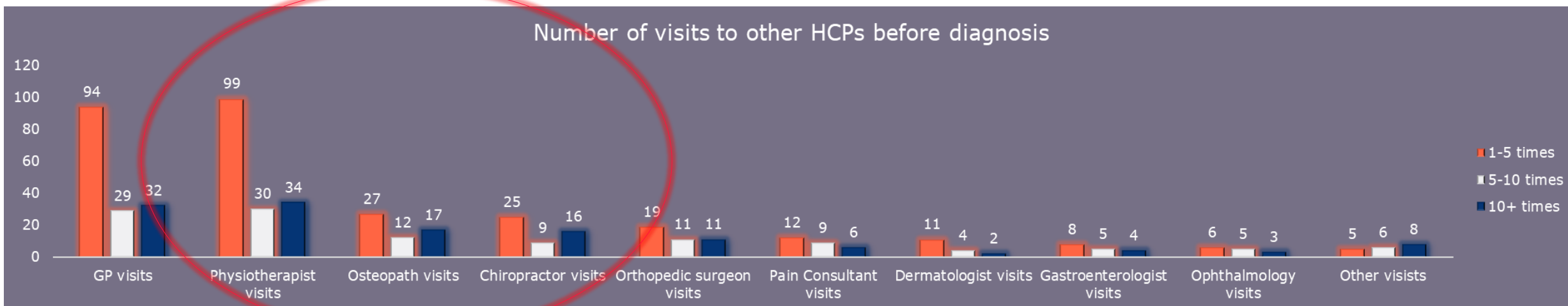
- There are multi-factorial reasons for the delay to diagnosis.



<https://www.actonaxialspa.com/hcp-toolkit/>

# Engagement with other HCPs prior to diagnosis

Lots of patients have engaged with a range of healthcare professionals during their diagnostic journey. There is commonality in the professionals seen and the ones that patients see on multiple occasions.



163 (63%) patients have been seeing physiotherapists

Some patients do see other parts of MSK like Orthopaedic

Only a small proportion report seeing other clinicians linked to Axial SpA EMMs. (17 Derm, 17 Gastro, 14 Ophthalmology)

155 (60%) patients have been seeing their GP multiple times

Osteopaths (56 or 22%) and Chiropractors (50 or 19%) have been involved in patients seeking help



# UK Economy: Paying a high price



Delay to diagnosis  
of axial SpA costs  
the UK economy

**£18.7  
billion**

per year

#WaitingCosts



**8.5** Years to  
diagnosis  
is NOT OK.  
Time to act.

Average time to  
diagnosis from symptom  
onset is **8.5 years**



Affects the **young**  
with average age of  
symptom onset of **26**

**£187k**

Waiting for an axial SpA  
diagnosis costs  
each person an  
average of **£187k**

**One year  
costs less...**

A Gold Standard  
time to diagnosis  
would save the UK  
economy

**£167k**  
per person

## Case study 2

- Mrs P- 35 years old c/o 2 years of Achilles tendinopathy bilaterally , tiredness and nighttime waking with back pain, seen in FCP clinic 2022

- Any questions you would ask her?

EMS, GIT, Eyes, Skin, FH , improvement with NSAIDS and exercise

- What investigations will you do?
- Inflammatory screen, MRI – STIR images , HLA B27?????
- When to refer onwards ?

?ASAS score, SPADE tool





# History and Outcome

Year	Complaint	Diagnosis	Rx
2011	Back pain- post second child's birth	Mechanical back pain	Exercises and pain medication
2020	Right Achilles tendinopathy	Achilles tendinitis	Referred to physiotherapy
2022	Bilateral Achilles tendinopathy	Achilles tendinitis	Physiotherapy -2 <sup>nd</sup> referral
2021-early	Tiredness /fatigue	Stress and vit D deficiency	Sertraline + OTC Vit D
2021- late	Early morning waking , back pain , stiffness, Achilles tendinopathy b/l, dry skin, dry eyes, tiredness, fatigue , stomach issues,	ESR CRP- normal, diagnosed as fibromyalgia	Physiotherapy referral
2022	Early morning waking , back pain , stiffness, Achilles tendinopathy b/l, dry skin, dry eyes, tiredness, fatigue , Stomach issues, and fibromyalgia Seen in FCP clinic	Spade tool completed, A& G to rheumatology- seen in 3/12 , n R Axial Spa diagnosed –	Managed with hydrotherapy, and exercise classes

10 years from symptom initiation

# Resources for HCPs

- [NICE Guideline NG65](#)
- [GIRFT / BEST MSK pathway](#)
- Ardens MSK Template- ax spa template - tbc
- [SPADE Tool](#) (1)
- Accurx Floreys
- [Primis Pop up Tool](#)
- [ASAS / EULAR guidance](#)
- [Your SpAce- share with your Ax spa patients](#)



**NICE** National Institute for  
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FOR RHEUMATOLOGY



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Thank you for listening  
Find patient and HCP resources on NASS website  
<https://nass.co.uk/>

NASS- Axial SpA works silently- We don't.



<https://www.youtube.com/watch?v=mPCYx5lGNtc>