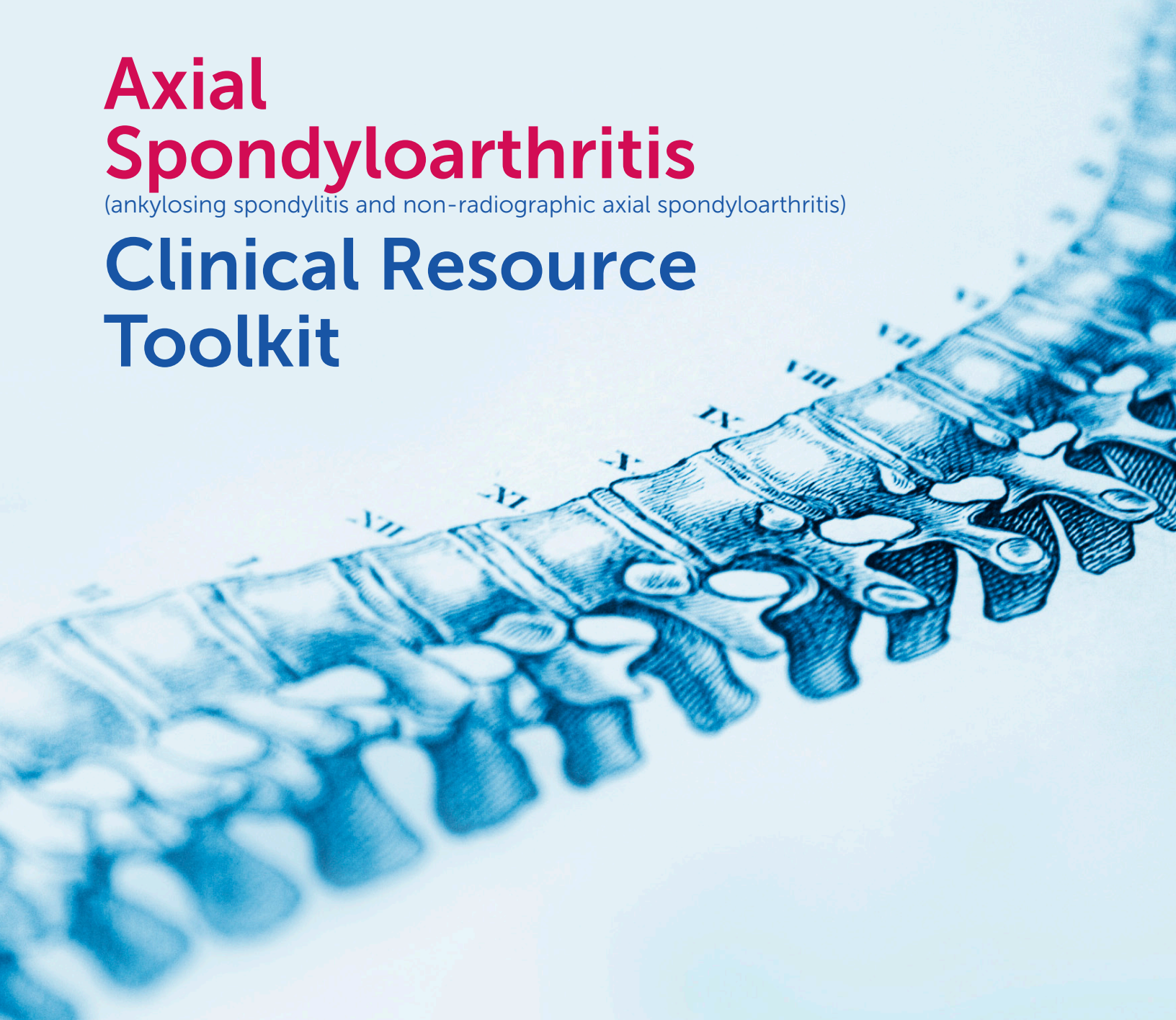


Axial Spondyloarthritis

(ankylosing spondylitis and non-radiographic axial spondyloarthritis)

Clinical Resource Toolkit



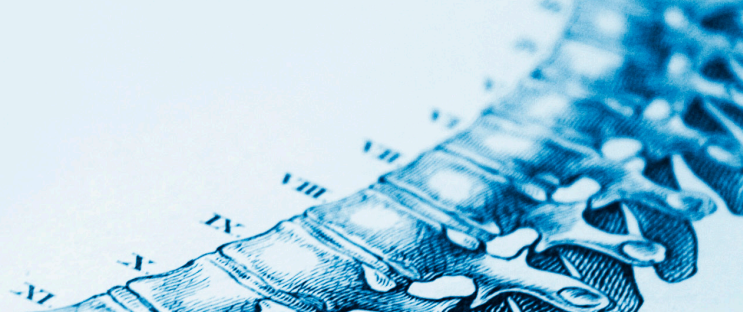
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AxSpA Clinical Resource Toolkit Version 1, November 2019
US-P-DA-RH-1900030



Inspired by **patients.**
Driven by **science.**

How to Use the Axial Spondyloarthritis (axSpA) Clinical Resource Toolkit



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The clinical resource toolkit contains eight components:

- 1) Inflammatory Back Pain (IBP) patient questionnaire
- 2) Inflammatory Back Pain (IBP) patient questionnaire and HCP triage form
- 3) Example axSpA diagnostic pathway
- 4) Important considerations when ordering an MRI
- 5) Disease infographic
- 6) Patient visit planning tool
- 7) 2019 American College of Rheumatology (ACR)/ Spondylitis Association of America (SAA)/Spondyloarthritis Research and Treatment Network (SPARTAN) AS and nr-axSpA treatment guidelines
- 8) Reference guide for axSpA disease criteria and activity measures

Each component is intended to be used as follows:

Inflammatory Back Pain (IBP) patient questionnaire and HCP triage form

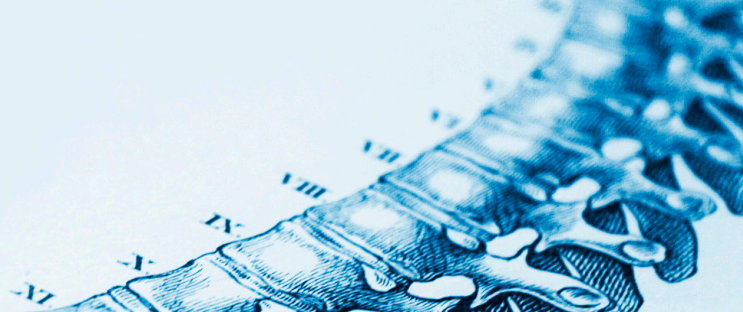
The IBP patient questionnaire and HCP triage forms may be used by the rheumatologist to obtain additional information for a patient who already has been referred by another healthcare provider (e.g., primary care physicians, orthopedists, chiropractors). The HCP triage form may be sent by the rheumatologist to the referring physician to obtain information and/or lab results before the patient's visit to his or her practice.

- Inflammatory back pain screening tool
 - Criteria for IBP are fulfilled if at least 4 of 5 questions are answered yes.

Example axSpA diagnostic pathway

In the absence of validated diagnostic criteria, diagnosing axSpA can be a challenging and lengthy process for patients and providers. This supplemental resource was adapted from Rudwaleit et al. 2014 and provides example diagnostic pathways showing the probability of the patient having axSpA at each point of medical evaluation. While there are no validated diagnostic criteria for axial spondyloarthritis, this resource provides an example of how an expert clinician may approach the diagnostic process in axSpA.

How to Use the Axial Spondyloarthritis (axSpA) Clinical Resource Toolkit



Important considerations when ordering an MRI

This supplemental resource describes important considerations when ordering an MRI. The first page is intended to help the rheumatologist consider specifics to include in their MRI order. The second page may be shared with radiologist colleagues to provide them with a more detailed supplemental reference about positioning and scoring requirements for performing MRIs for potential AS and nr-axSpA patients.

axSpA infographic

This resource is intended to be given to diagnosed AS and nr-axSpA patients. The infographic could be used to help them learn more about the disease or discuss symptoms and disease-related manifestations with their rheumatologist.

Patient visit planning tool

This supplemental resource is intended to be distributed to diagnosed patients and filled out prior to their next appointment. This may help the patient keep track of their disease and help the rheumatologist to assess the patient's clinical response to their current treatment plan.

ACR/SAA/SPARTAN treatment guidelines for AS and nr-axSpA

The published axSpA treatment guidelines are intended to provide the rheumatologist with the recommended ACR/SAA/SPARTAN treatment guidelines for patients with AS and nr-axSpA.

ACR: American College of Rheumatology
<https://www.acr.org/>

SAA: Spondylitis Association of America
<https://www.spondylitis.org/>

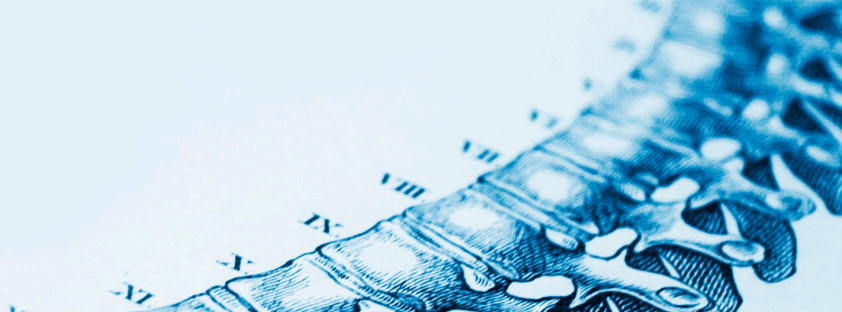
SPARTAN: Spondyloarthritis Research and Treatment Network
www.spartangroup.org/

Reference guide for AS and nr-axSpA disease criteria and activity measures

This supplemental resource is intended to provide the rheumatologist with detailed descriptions of key AS and nr-axSpA disease criteria and activity measures. Therefore, some resources in the guide are only appropriate for use as educational resources to help clinicians understand and interpret clinical trials and are not applicable for clinical practice.

Clinical Toolkit:

IBP Questionnaire and HCP Triage Form



Inflammatory back pain screening tool

Have you experienced back pain for > 3 months?

If Yes, proceed with the following questions

1. Did the back pain start before the age of 40?	Yes	No
2. Did the back pain develop gradually?	Yes	No
3. Does the back pain improve with exercise?	Yes	No
4. Does the back pain NOT improve with rest?	Yes	No
5. Does the back pain occur at night and improve after getting up?	Yes	No
Total questions answered Yes* =		

Adapted from ASAS IBP criteria: Sieper J et al. *Ann Rheum Dis*. 2009;68:784–788.

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Version Date: April 2019 US-P-CZ-nraxp-1900033

***Criteria for IBP are fulfilled if at least 4 of 5 questions are answered Yes.**

Labs and Radiographic evaluation (please provide original reports and images)

HLA B-27 Positive

Yes No Not Done

Elevated CRP (If yes, specify level)

Yes_____ No Not Done

Sacroiliac (SI) joint X-Ray (Ferguson view), optional

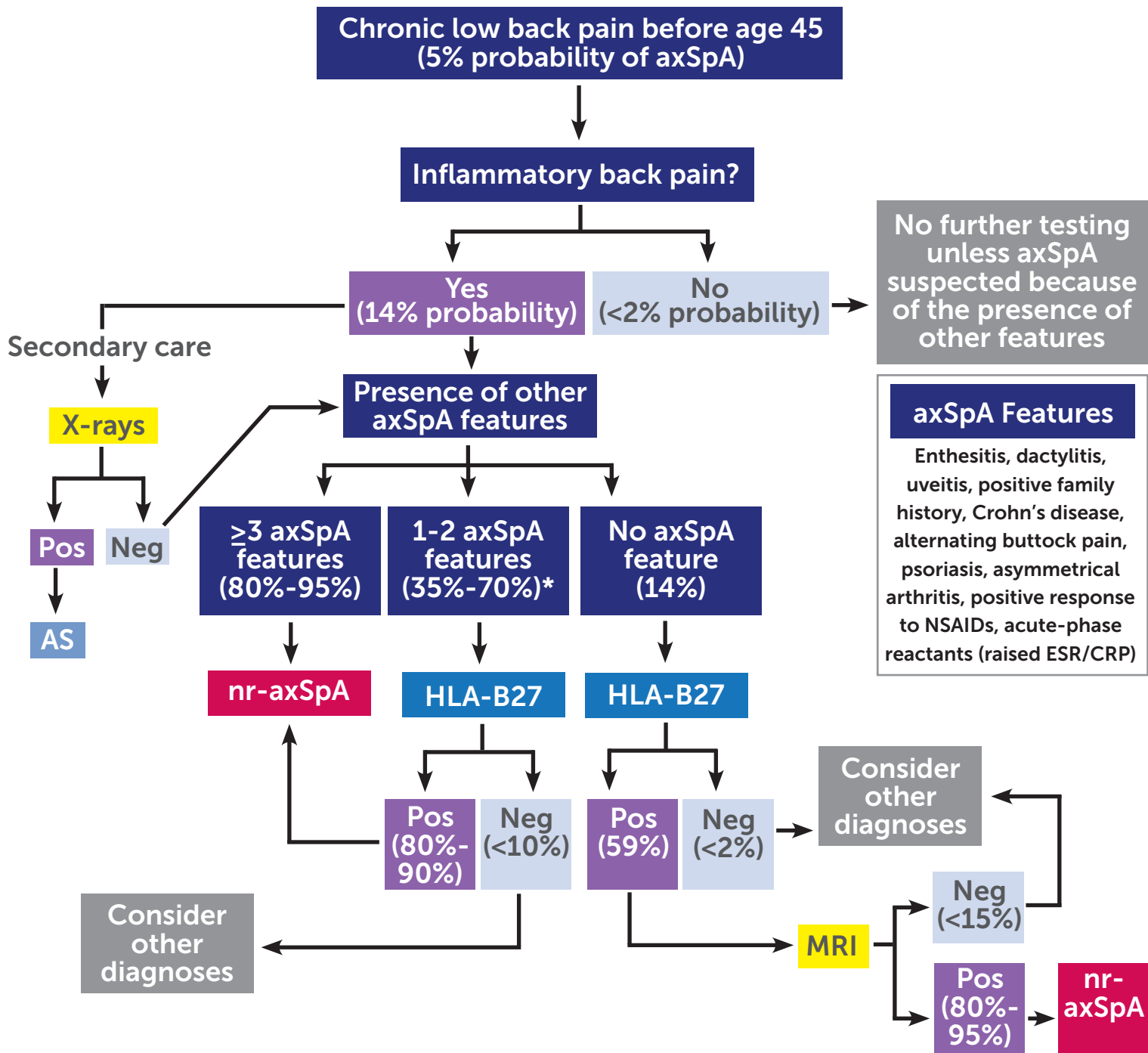
Yes No Not Done

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AxSpA Clinical Resource Toolkit Version 1, November 2019

An Example Diagnostic Pathway for axSpA¹⁻³

from *Annals of Rheumatic Diseases*



*Dependent on which features are positive. If the probability of disease exceeds 90%, the diagnosis of axSpA is considered definite. If the probability is 80% to 90%, the diagnosis is considered probable.

1. Rudwaleit M, et al. *Ann Rheum Dis*. 2004;63(5):535-543. 2. Deodhar A. Rheumatologists make progress defining spectrum of axial spondyloarthritis.

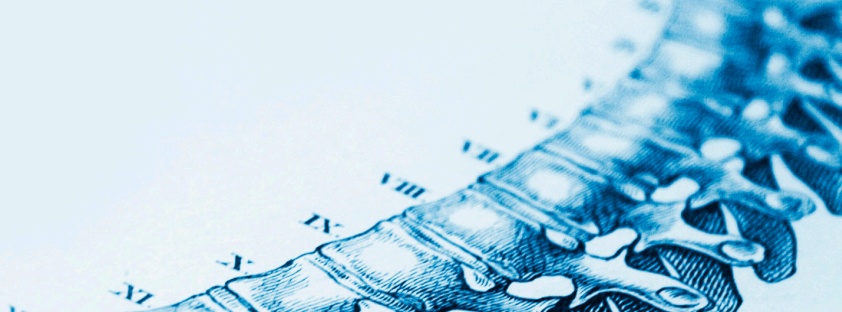
The Rheumatologist. <https://www.the-rheumatologist.org/article/rheumatologists-make-progress-defining-spectrum-of-axial-spondyloarthritis/>.

Published May 1, 2014. Accessed January 2, 2019. 3. UCB, Inc. Data on file.

Reproduced from *Ann Rheum Dis*. Rudwaleit M, et al. 63, 535-543, © 2004 with permission from BMJ Publishing Group Ltd.

Important Considerations

when ordering an MRI



This supplemental resource describes the important considerations for ordering an MRI. The first page is intended to help the rheumatologist understand what specifics to consider including in their MRI order. The second page may be shared with radiologist colleagues to provide them with a more detailed supplemental reference about positioning and scoring requirements for performing MRIs for potential AS and nr-axSpA patients.

MRI Order Components	Sample MRI Order
Indication for exam	<ul style="list-style-type: none">• Lumbar and sacroiliac pain and stiffness• X-ray negative• Spondyloarthritis suspected
Location	Sacroiliac Joint
Contrast/no contrast	No contrast
Contraindication to contrast	Not Applicable

It is important to establish a partnership with your patient's radiologist

- Communicate suspected diagnosis and relevant patient medical history
- Review location and angle for viewing SI joint
- Discuss sequences for diagnosis and scoring
- Recommend precautions for safety and patient comfort

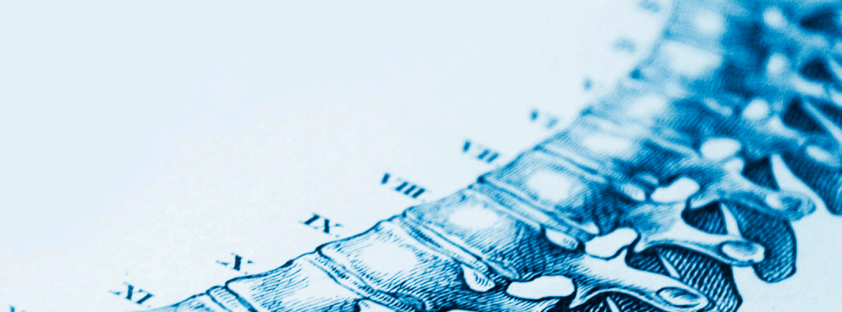
See next page for information on sequences
Consider sharing the following page with radiologist colleagues

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AxSpA Clinical Resource Toolkit Version 1, November 2019

Important Considerations

When ordering an MRI



Positioning, Coils, and Scouts

- Patient lies supine, as straight as possible
- Use anterior and posterior coils
- Scout images in 3 planes, axial scout to include hip joints; repeat axial if necessary
- True sagittal scout is needed in addition to 3 plane scout

Location and Angles

- Coronal-oblique or tilted coronal orientation: rotate stack so it is parallel to the longitudinal axis of the sacrum between S1&S3

Sequences for Diagnosis and Scoring

Sequences for Scoring: parameters for imaging at 1.5T

- **T1 TSE and Short Tau Inversion Recovery (STIR) (or equivalent)**
- **Common parameters:**
 - 15 slices, 4 mm thick, 10% gap or 20 slices, 3 mm thick, 10% gap
 - FOV 280 mm, square (to include iliac crests)
 - Phase encode left/right (can be anterior/posterior whichever produces less artifact)
 - NSA 1, Oversampling 100%
- **T1 TSE - TR 400-500ms (2 concatenations), TE 10-15ms, ETL 3, Matrix frequency 512, phase 256**
- **STIR - TR 3500+ms, TI 155-180ms, TE 50+ms, ETL 7, Matrix frequency 384, phase 256**

Sequences for Diagnosis and Scoring

Sequences for Diagnosis: parameters for 1.5T (may require adjustment for 3T)

- **Semi-axial or tilted axial orientation: stack rotated so that it is perpendicular (90°) to the semi-coronal sequence**
- **Axial sequence: True axial" T2 TSE + FS (with spectral presaturation of fat) – 25 slices, 4 mm thick with 10% gap, TR 3000+ms, TE 80+ms, FOV 280 mm, ETL 7-13, Matrix frequency 448, phase 256**
- **Erosion specific sequences – requires good resolution**
 - **A semi-coronal high resolution T1 weighted sequence with fat saturation, either 2D or 3D is recommended.**
There are 3 common ways to do this:
 - a) Spin echo T1 with fat saturation (T1FS) – available on all MRI systems, or
 - b) Spin echo T1 Dixon – to include the water only reconstruction, or
 - c) 3D gradient echo T1 FS sequence – such as: Siemens VIBE, Philips THRIVE, General Electric FAME/LAVA, Toshiba 3D QUICK

Suggest:

- Semi-coronal, 180-220mm FoV, square, with optimization of parameters according to sequence and MRI platform.
- 3D gradient echo T1 FS sequence works very well at 3T but T1FS is reliable and widely available.

Lambert RGW, Maksymowych WP. SpondyloArthritis Research Consortium of Canada (SPARCC) Magnetic Resonance Imaging of the Sacroiliac Joints Acquisition Protocol. https://www.carearthritis.com/docs/MRI_SI_Joint-SPARCC_MRI_acquisition_protocol_v5.1-2019_06_25.pdf

For most up to date information on MRI ordering visit: <http://www.carearthritis.com/>

What is Axial Spondyloarthritis?

Axial Spondyloarthritis (axSpA) is a painful but treatable chronic inflammatory disease that primarily affects the spine and sacroiliac joints (SIJs)¹

axSpA refers to a category of diseases that includes nr-axSpA and AS

Leading symptom:

Inflammatory back pain that improves with exercise, but not with rest¹

Disease onset:

Usually before the age of 45, often in the 20s^{3,4}

Prevalence:

Similar to Rheumatoid Arthritis, 0.2-1.4% of adults have axSpA^{3,5,6}

axSpA is equally common in both Men and Women^{4,7}

nr-axSpA

Non-radiographic axial spondyloarthritis

The presence or absence of structural damage to SIJs on X-ray differentiates nr-axSpA and AS²

AS

Ankylosing spondylitis

No definitive SIJ damage on X-ray²

Frequent abnormal MRI or elevated CRP and a combination of SpA features

nr-axSpA is more common in Women^{9,10}

57%

60% of patients with nr-axSpA do not convert to AS after 10 years

Definitive SIJ damage on X-ray²

Bony growths leading to spine fusion in ~60-70% of AS patients^{1,8}

AS is more common in Men^{9,10}

65%

Some patients with nr-axSpA and AS share common clinical features^{2,8,11-13}...

Eye inflammation or sensitivity to light (Uveitis)

Skin disease (Psoriasis)

Chronic inflammation of the digestive tract (Inflammatory Bowel Disease)

Swelling of fingers or toes (Dactylitis)

Usually involving larger joints, e.g., knees (Peripheral Arthritis)

Inflammation of tendons where they attach to bone (e.g., back of the heel) (Enthesitis)

... and experience a significant and similar disease burden²



Inflammatory back pain
(improves with activity, not rest)



Severe stiffness & reduced mobility,
especially in the mornings



Fatigue & difficulty sleeping



Decreased quality of life



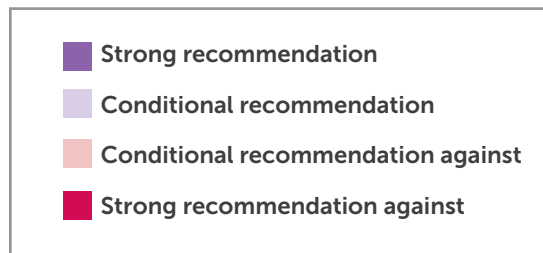
Limited social activities



Limited work and home productivity

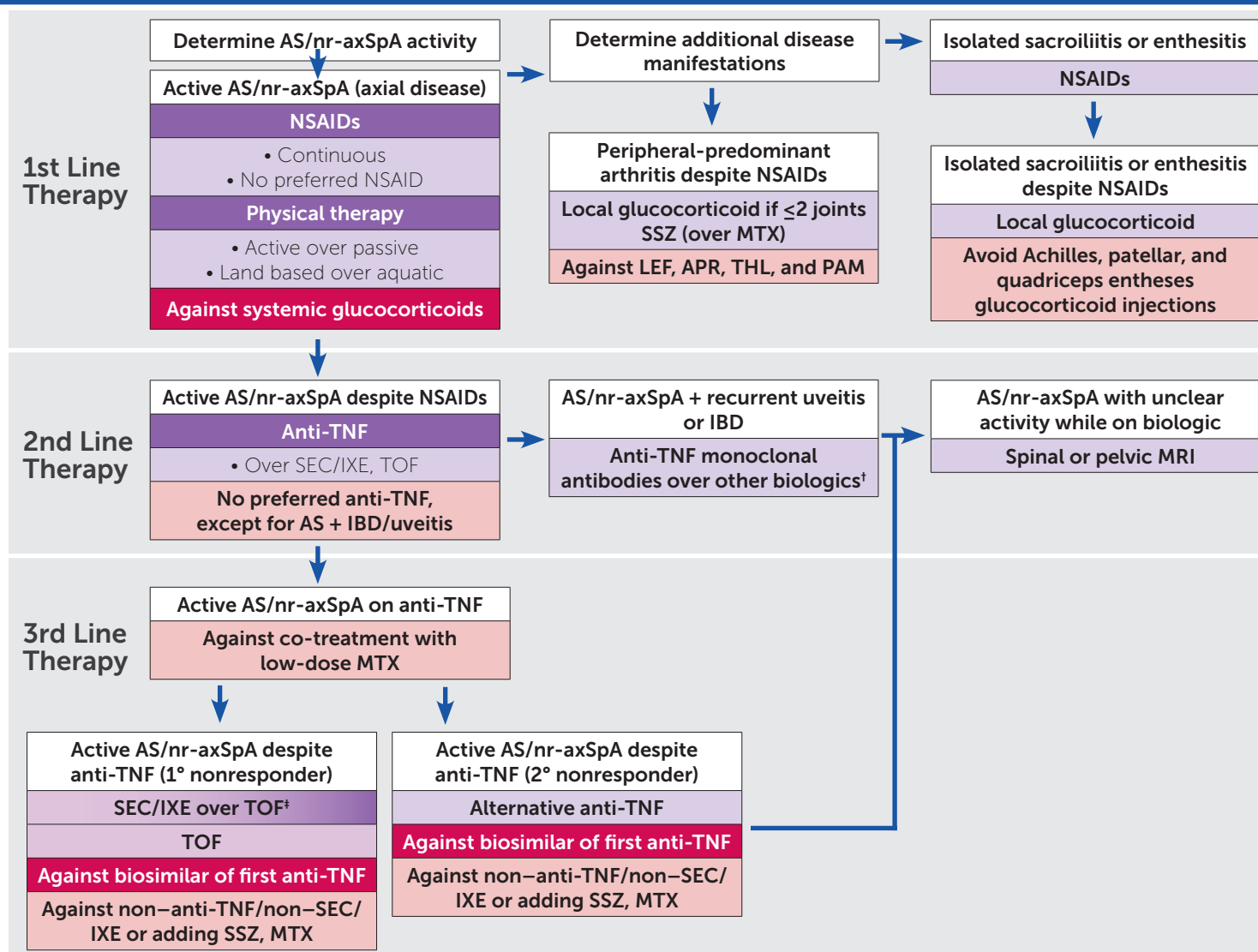
THE 2019 ACR/SAA/SPARTAN

Recommendations for Patients With Active AS and nr-axSpA^{1,*}



General Adjunctive Management (All Stages)
 In adults with active AS/nr-axSpA, ACR conditionally recommends unsupervised back exercises, formal group or individual self-management education, fall evaluation/counseling. Monitor using validated axSpA disease activity measures, and CRP or ESR regularly.

Treat-to-target
 In adults with active AS/nr-axSpA, ACR conditionally recommends **against** using the treat-to-target strategy, which aims at a target of ASDAS <1.3 (or 2.1) over a treatment strategy based on physician assessment



*Recommendations for nr-axSpA extrapolated from evidence in AS. †Adalimumab or infliximab are preferred over etanercept. Certolizumab pegol or golimumab may also be considered. ‡Strong recommendation for AS but conditional recommendation for nr-axSpA. APR, apremilast; ASDAS, Ankylosing Spondylitis Disease Activity Score; CRP, C-reactive protein; ESR, erythrocyte sedimentation rate; IXE, ixekizumab; LEF, leflunomide; MTX, methotrexate; NSAID, nonsteroidal anti-inflammatory drug; PAM, pamidronate; SEC, secukinumab; SSZ, sulfasalazine; THL, thalidomide; TOF, tofacitinib.
 1. Ward MM, et al. Arthritis Care Res (Hoboken). 2019. doi: 10.1002/acr.24025. [Epub ahead of print].
 Used with permission from Ward MM, et al. Arthritis Care Res (Hoboken). 2019. doi: 10.1002/acr.24025 © John Wiley and Sons and American College of Rheumatology.

THE 2019 ACR/SAA/SPARTAN

Recommendations for Patients With Stable AS and nr-axSpA^{1,*}

- Strong recommendation
- Conditional recommendation
- Conditional recommendation against
- Strong recommendation against

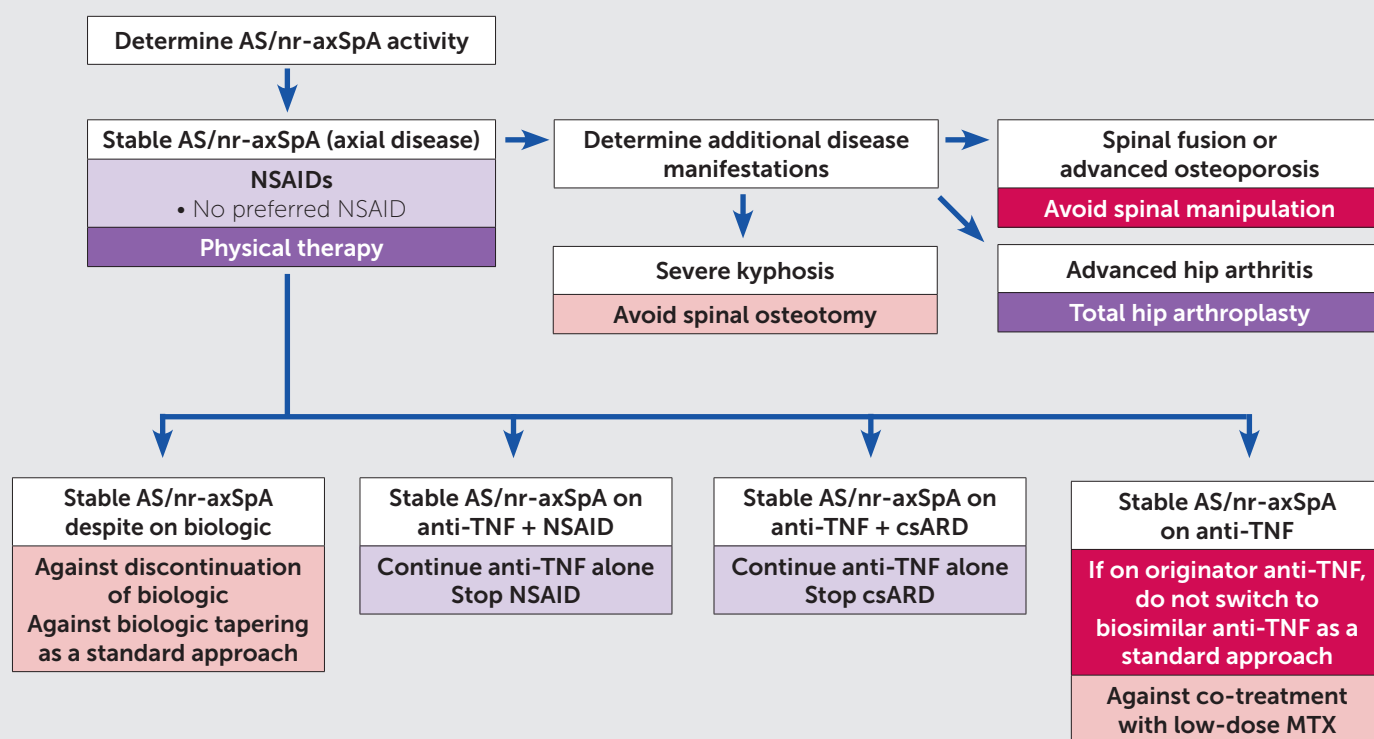
General Adjunctive Management (All Stages)

In adults with stable AS/nr-axSpA, ACR conditionally recommends unsupervised back exercises, formal group or individual self-management education, fall evaluation/counseling. Monitor using validated axSpA disease activity measures, and CRP or ESR regularly.

MRI or X-ray

In adults with stable AS/nr-axSpA, ACR conditionally recommends **against** obtaining spinal or pelvis MRI to confirm inactivity.

In adults with stable AS/nr-axSpA, ACR conditionally recommends **against** obtaining repeat spine radiographs at a scheduled interval.



*Recommendations for nr-axSpA extrapolated from evidence in AS. CRP, C-reactive protein; csARD, convention synthetic antirheumatic drug; ESR, erythrocyte sedimentation rate; MTX, methotrexate; NSAID, nonsteroidal anti-inflammatory drug.

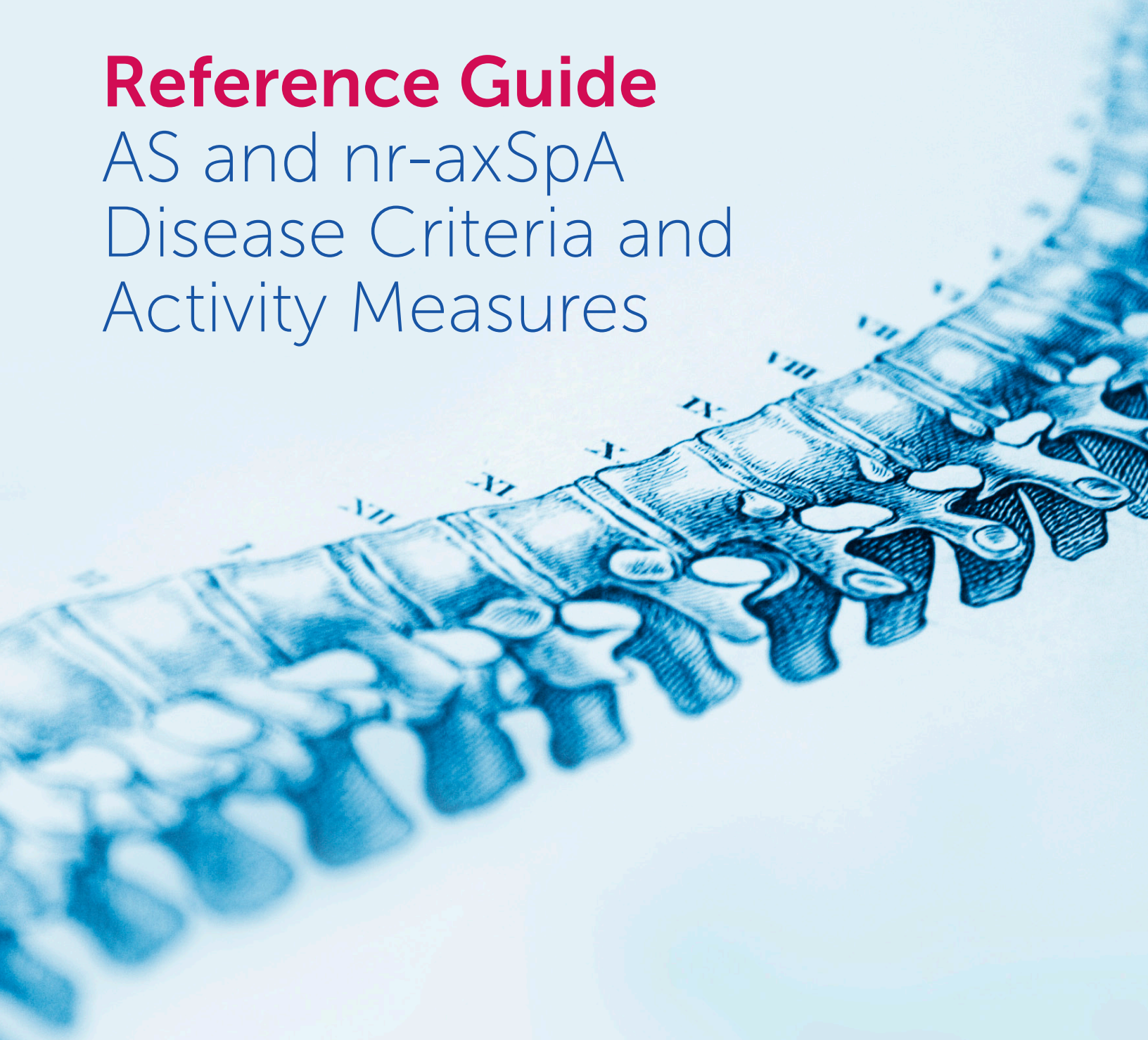
1. Ward MM, et al. Arthritis Care Res (Hoboken). 2019. doi: 10.1002/acr.24025. [Epub ahead of print].

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Reference Guide

AS and nr-axSpA Disease Criteria and Activity Measures

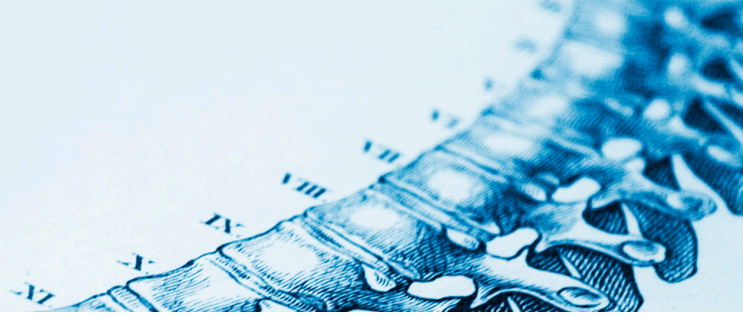


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Inspired by **patients.**
Driven by **science.**



Ankylosing Spondylitis Disease Activity Score (ASDAS)¹⁻³

ASDAS is a validated, highly discriminatory instrument for assessing a patient's disease activity, comprising:

Patient-reported outcomes

1. Back pain
2. Duration of morning stiffness
3. Patient's Global Assessment of Disease Activity
4. Peripheral pain/swelling

Objective evidence of systemic inflammation

5. C-reactive protein (CRP)

$$ASDAS_{CRP} = 0.1216 \times \text{total back pain} + 0.1106 \times \text{patient global} + 0.0736 \times \text{peripheral pain/swelling} + 0.0586 \times \text{duration of morning stiffness} + 0.5796 \times \ln(\text{CRP}+1)$$



Lowest possible ASDAS value: 0.6
Clinically important improvement (CII): decrease ≥ 1.1 units vs baseline²
Major improvement (MI): decrease ≥ 2.0 units vs baseline – a more stringent outcome than ASAS40²

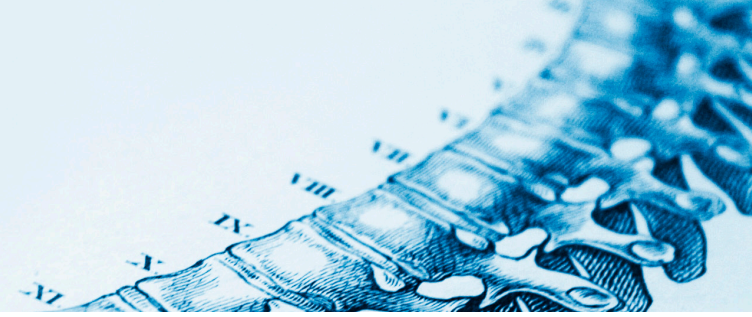


1. Sieper J, et al. *Ann Rheum Dis.* 2009;68(suppl 2):ii1-ii44.
 2. Machado P, et al. *Ann Rheum Dis.* 2011;70(1):47-53.
 3. van der Heijde D, et al. *Ann Rheum Dis.* 2009; 68(12): 1811-1818.

ASDAS Calculator

<https://www.asas-group.org/clinical-instruments/asdas-calculator/>

AS and nr-AxSpA Disease Activity Measures



ASAS Response Criteria¹

ASAS20	<ul style="list-style-type: none"> • Improvement of $\geq 20\%$ and ≥ 1 unit in at least 3 of the 4 domains on a scale of 0 to 10 • No worsening of $\geq 20\%$ and ≥ 1 unit in remaining domain
ASAS40	<ul style="list-style-type: none"> • Improvement of $\geq 40\%$ and ≥ 2 units in at least 3 of the 4 domains on a scale of 0 to 10 • No worsening at all in remaining domain
ASAS partial remission	<ul style="list-style-type: none"> • A value of < 2 units in each of the 4 domains on a scale of 0 to 10
ASAS5/6	<ul style="list-style-type: none"> • Improvement of $\geq 20\%$ in at least 5 of the 6 domains on a scale of 0 to 10

1. Ranganath V, et al. Clin Exp Rheumatol. 2006;24(suppl 43):S14-S21.

ASAS Domains

1. Patient global assessment: VAS
2. Pain: VAS, nocturnal
3. Function: BASFI
4. Inflammation: Mean of BASDAI questions 5 and 6
5. CRP*: Blood sample tests
6. Spinal mobility: BASMI
 - a. CRP and spinal mobility are included only in the ASAS5/6 response criteria

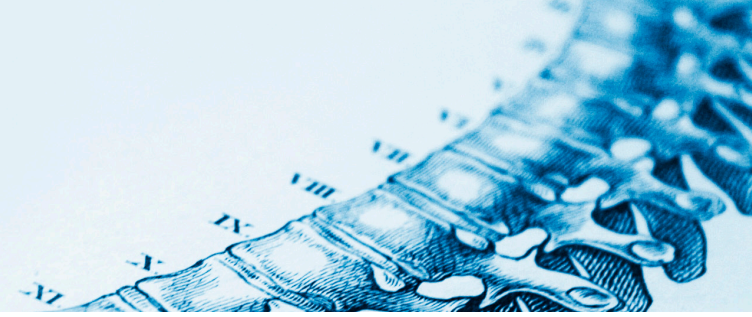
BASMI: Bath Ankylosing Spondylitis Metrology Index

- The BASMI comprises a combination of five clinical measurements that reflect axial mobility:¹
 - Tragus to wall distance
 - Lumbar flexion
 - Cervical rotation
 - Lumbar side flexion
 - Intermalleolar distance
- Each movement is graded according to linear function, and the mean of the scores gives a total BASMI score between 0 and 10.¹

1. Sieper J et al. *Ann Rheum Dis*. 2009;68(suppl II):ii1-ii44. 2. UCB Data on File (AS001 Protocol Amendment 6. 2013. p60)

For more information, modelling and videos of BASMI components, visit: <http://www.carearthritism.com/>

Bath Ankylosing Spondylitis Functional Index (BASFI)



- The BASFI is a patient self-administered questionnaire used to determine physical functional ability in patients.¹
- The mean of these scores is the final BASFI score (range 0–10).¹

*For a BASFI calculator consider visiting <http://basdai.com/BASFI.php>

Practice/Institution: _____ Physician/Investigator's Name: _____

Bath Ankylosing Spondylitis Functional Index* (BASFI)

Patient Name _____ Date _____

Please draw a mark on each line below to indicate your answer to each question relating to the past week.

1. How would you describe your overall level of **fatigue or tiredness**?



2. How would you describe your overall level of **neck, back or hip pain**?



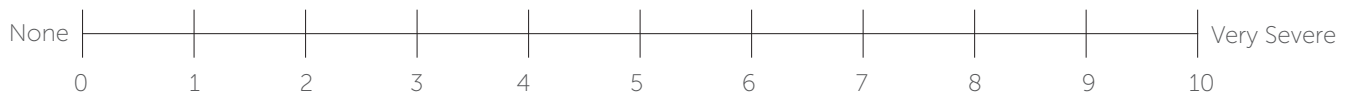
3. How would you describe your overall pain and swelling in joints **other than** the neck, back, and hips?



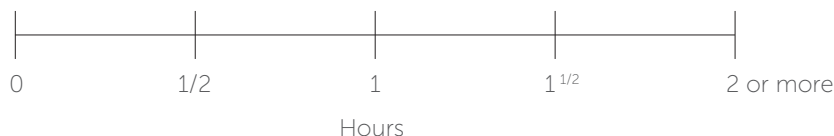
4. How would you describe your overall level of **discomfort** you have had from any areas tender to **touch or pressure**?



5. How would you describe the overall level of **morning stiffness** you have had **from the time you wake up**?



6. How long does your **morning stiffness** last from the time you wake up?



Score: _____

Bath Ankylosing Spondylitis Disease Activity Index (BASDAI)



The BASDAI is a fully patient-reported measure of axial disease activity, in the form of a questionnaire composed of 6 items using numerical rating scales from 0 to 10:¹

Practice/Institution: _____ Physician/Investigator's Name: _____

The Bath Ankylosing Spondylitis Disease Activity Index (BASDAI)

Patient Name _____ Date _____

Please draw a mark on each line below to indicate your ability with each of the following activities during the past week:

1. Putting on your socks or tights without help or aids (e.g. sock aids)?



2. Bending forward from the waist to pick up a pen from the floor without an aid?



3. Reaching up to a high shelf without help or aids (e.g. helping hand)?



4. Getting up out of an armless dining room chair without using your hands or any other help



5. Getting up off the floor without any help from lying on your back?



6. Standing unsupported for 10 minutes without discomfort?



7. Climbing 12-15 steps without using a handrail or walking aid (one foot on each step)?



8. Looking over your shoulder without turning your body?



9. Doing physically demanding activities (e.g. physiotherapy exercises, gardening or sports)?



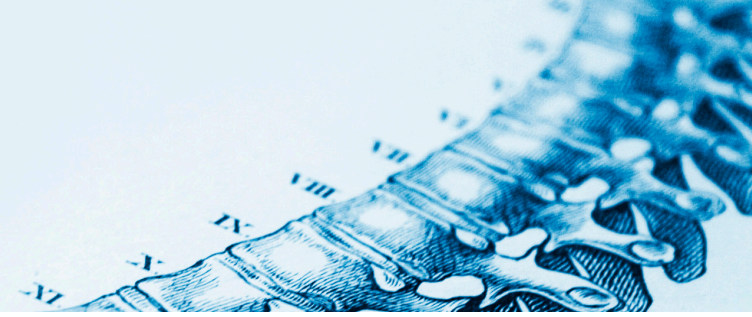
10. Doing a full day of activities whether it be at home or work?



BASDAI score = $Q1+Q2+Q3+Q4+((Q5+Q6)/2)$

*For a BASDAI calculator consider visiting <http://basdai.com/BASDAI.php>

AS and nr-AxSpA Disease Activity Measures



Total Pain and Nocturnal Pain (NRS)

- The total pain and nocturnal pain NRS measures the pain experienced by subjects via two questions:
 - One assesses the total spinal pain due to spondyloarthritis.
 - The other assesses the total spinal pain experienced at night.
- Pain and nocturnal pain NRS is a validated, patient-administered scale using numerical rating scales from 0 to 10.
- This assessment has been used previously to measure pain in axSpA patients.

Ankylosing Spondylitis Quality of Life (ASQoL)[®]

Disclaimer: Included for informational purposes, not intended for use in a single-patient setting

- The ASQoL is an instrument originally designed to assess AS-specific health-related quality of life.^{1,2}
 - Additional validation has been performed to evaluate for axSpA patients.
- It is an 18-item, patient-reported questionnaire consisting of Yes/No response options and giving a final score between 0 and 18.¹

1. Doward LC et al. *Ann Rheum Dis.* 2003;62(1):20–26. 2. UCB Data on File (AS001 Protocol Amendment 6. 2013. p61)

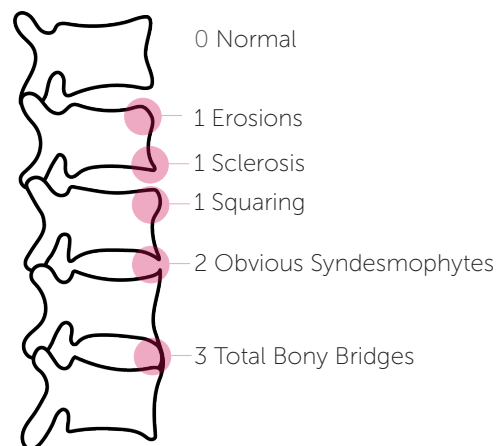
Modified Stoke Ankylosing Spondylitis Spinal Score* (mSASSS)

***Disclaimer: For informational purposes only. To be calculated by expert rheumatologists.**

- Lateral view lumbar and cervical spine
- Anterior sites of the vertebrae are scored for
 - Squaring
 - Erosions
 - Sclerosis
 - Syndesmophytes
- Score range 0-72

mSASSS recommended by ASAS
Creemers MCW, et al. *Ann Rheum Dis.* 2005;64(1):127-129.

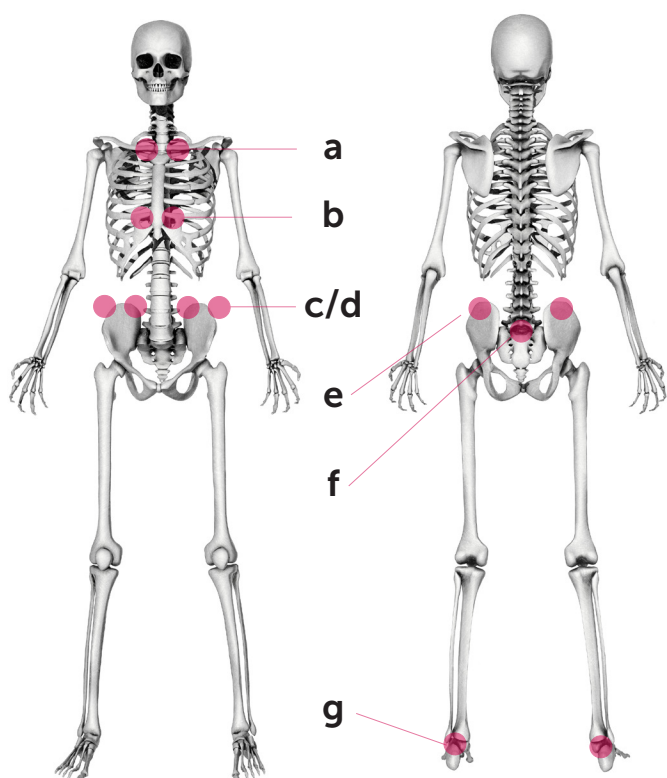
Point Scoring System



Maastricht Ankylosing Spondylitis Enthesitis Score (MASES)

- The MASES is an index of enthesitis, designed to be less time-consuming and more feasible to perform than alternative enthesitis scores, but with comparable properties.¹
- Enthesitis is scored in the following areas by recording response to palpation as painful/not painful (1 or 0). Scores are summated to indicate overall enthesitis.¹

Maastricht Ankylosing Spondylitis Enthesitis Score (MASES) and expanded sites²



Descriptor	Right	Left
1st costochondral (a)	absent present	absent present
7th costochondral (b)	absent present	absent present
Posterior superior iliac spine (e)	absent present	absent present
Anterior superior iliac spine (c)	absent present	absent present
Iliac crest (d)	absent present	absent present
Proximal Achilles (g)	absent present	absent present
Midline		
5th lumbar spinous process (f)	absent present	

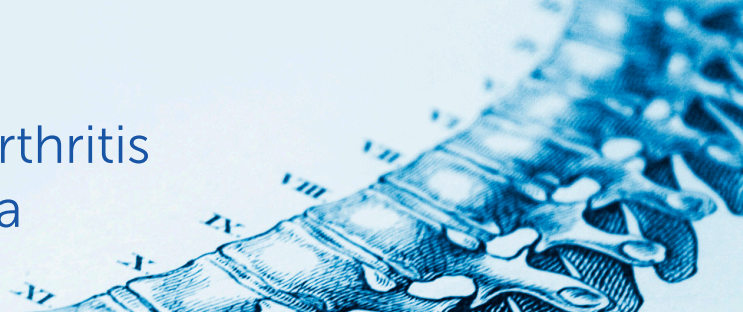
Total Score: _____

Physician's Signature: _____

Heuft-Dorenbosch et al. *Ann Rheum Dis.* 2003;62:127-132.

https://rheuma.charite.de/fileadmin/user_upload/microsites/ohne_AZ/m_cc13/rheuma/Templates/MASES_eng.pdf

Sacroiliac joints (SIJ) Spondyloarthritis Research Consortium of Canada (SPARCC) scoring



Total maximum score is 72:

Presence of "bone marrow edema"	= 48
Presence of "intense edema"	= 12
Presence of "deep edema"	= 12

Scoring Methodology - Ten Steps

1. All scores are dichotomous – present or absent, 1 or 0.
2. Only 6 coronal slices are assessed. Slices 4-9 are usually selected as those representing the largest proportion of the synovial compartment of the SI joints. Images scored at a second time point are selected to correspond as closely as possible to the first time point – normally 4-9, 3-8 or 5-10.
3. Only abnormalities on the STIR sequence are scored. T1 SE images are included for anatomical reference.
4. Score all lesions within the iliac bone. Within the sacrum, score lesions medially as far as the lateral border of the sacral foramina.
5. Sacral inter-foraminal bone marrow signal is used as the reference for normal to determine a threshold for increased signal in periarticular bone.
6. Each SI joint is divided into four quadrants: 1 upper iliac, 2 lower iliac, 3 upper sacrum, 4 lower sacrum. The presence of increased signal in each quadrant is recorded. Maximum score for two SI joints in each coronal slice is 8. Maximum score for 6 coronal slices = 48.
7. A score for "intense" may be assigned to each SI joint on each slice. High signal from slow flowing venous blood within presacral veins acts as a reference for assigning an "intense" reading score to a bone lesion. A score of 1 is assigned if "intense" signal is seen in any quadrant of an SI joint on a single slice. Maximum score per slice is therefore 2, and for 6 slices = 12.
8. A score for "deep" may be assigned to each SI joint on each slice. A lesion is graded as "deep" if there is homogeneous and unequivocal increase in signal extending over a depth of at least 1 cm from the articular surface. A score of 1 is assigned if "deep" signal is seen in any quadrant of an SI joint on a single slice. Maximum score per slice is therefore 2, and for 6 slices = 12.
9. Pre- and post-treatment MR images are scored together with observer blinded to time sequence.
10. Non-Spondyloarthritis control images and reference Spondyloarthritis cases are available at this website to attain familiarity with the scoring method:

https://www.carearthritis.com/docs/MRI_of_the_SIJ-SPARCC_Scoring_methodology.pdf

Glossary of terms

Axial Spondyloarthritis (axSpA)

A category of chronic inflammatory diseases (nr-axSpA and AS) that primarily affect the spine and sacroiliac (SI) joints.

Ankylosing Spondylitis (AS)

A chronic inflammatory disease that affects the spine and SI joints. Damage to the SI joints is visible on X-ray.

Non-radiographic Axial Spondyloarthritis (nr-axSpA)

A chronic inflammatory disease characterized by active inflammation of the spine and SI joints. Damage to the SI joints is not visible on X-ray but may be visible by MRI.

Sacroiliac Joints (SIJ)

Joints that connect the lower spine and the pelvis.

Clinical Features

Dactylitis

Inflammation or swelling of fingers or toes.

Enthesitis

Inflammation of the entheses, the points where tendons or ligaments insert into the bone.

Inflammatory Bowel Disease (IBD)

Chronic inflammation of the digestive tract.

Peripheral Arthritis

Arthritis in the arms and legs, often in the large joints.

Psoriasis

A chronic inflammatory skin disease that causes skin cells to build up and form scaly, itchy dry patches on the skin.

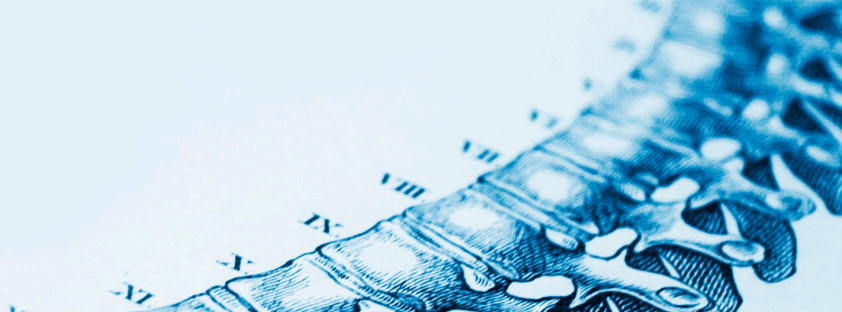
Uveitis

Inflammation of the uvea, the middle layer of the eye wall tissue.

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Clinical Toolkit:

Inflammatory Back Pain Patient Questionnaire



Inflammatory back pain screening tool

Have you experienced back pain for > 3 months?

If Yes, proceed with the following questions

1. Did the back pain start before the age of 40?	Yes	No
2. Did the back pain develop gradually?	Yes	No
3. Does the back pain improve with exercise?	Yes	No
4. Does the back pain NOT improve with rest?	Yes	No
5. Does the back pain occur at night and improve after getting up?	Yes	No
Total questions answered Yes =		

Adapted from ASAS IBP criteria: Sieper J et al. *Ann Rheum Dis.* 2009;68:784–788.

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Patient Visit Planning Tool



Before your next visit to your rheumatologist, answer the following to share your recent symptoms with your doctor

1. In the last month how would you rate the level of your worst pain from your ankylosing spondylitis or non-radiographic axial spondyloarthritis? (0=no pain, 10=worst pain imaginable)

- 0 1 2 3 4 5 6 7 8 9 10

2. Where was the location of your pain? How would you describe it (burning, aching, stinging, throbbing)?

3. What time of day do you experience the most pain?

- morning afternoon night

4. How long are you stiff after getting up in the morning?

5. List anything that worsens the pain

6. List anything that improves the pain

7. How many work days have you missed in the past month?

- 0-1 2 3-5 If more, specify

8. How many days have your daily activities been impacted in the past month?

- 0-1 2 3-5 If more, specify

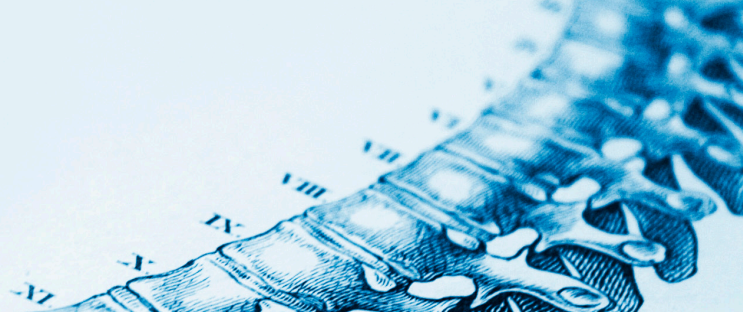
9. How many days have you had difficulty sleeping in the past month?

- 0-1 2 3-5 If more, specify

10. Have you experienced any of the following since your last visit?

- | | |
|--|---|
| <input type="checkbox"/> Eye pain, redness or sensitivity to light | <input type="checkbox"/> Reduced mobility |
| <input type="checkbox"/> Fatigue | <input type="checkbox"/> Pain in areas other than the spine |
| <input type="checkbox"/> Red or scaly patches on the skin | <input type="checkbox"/> Stomach pain or diarrhea |
| <input type="checkbox"/> Increased stiffness | <input type="checkbox"/> Heel swelling or pain |
| <input type="checkbox"/> Depressed mood | |
| <input type="checkbox"/> Other_____ | |

Patient Visit Planning Tool



During your visit be sure to let your doctor know the following:

1. Have you been following your treatment plan?

Yes No

If No, why not?

2. Are you satisfied with your current treatment plan?

Yes No

If No, why not?

3. Have you had any significant health events (hospitalization, procedures, illnesses, etc.) since your last visit?

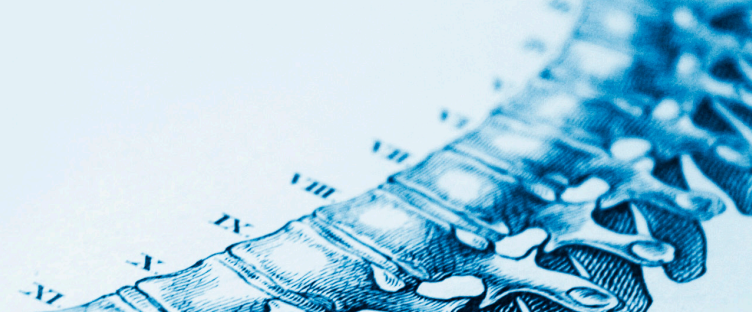
4. Have you started any new over-the-counter or prescription medication or supplements?

Yes No

If Yes, which ones, how much and how often?

5. Do you need any medication refills? If Yes, please list below.

Yes No



Patient Visit Planning Tool

Questions for your doctor:

Important points from your visit today:

Additional Patient Resources



To help manage your disease, please consider discussing diet, exercise and smoking cessation with your physician.

For additional resources to learn more about axSpA, consider visiting:

Creaky Joints

<https://www.creakyjoints.org/>

American College of Rheumatology

<https://www.rheumatology.org/Portals/0/Files/Spondyloarthritis-Fact-Sheet.pdf>

Spondylitis Association of America

<https://www.spondylitis.org/>

****Disclaimer:** These resources are for educational purposes only. Always consult a physician to discuss and verify the information on these websites. UCB does not review or control the content of these websites, and their inclusion on this page does not constitute an endorsement of any content by UCB.