AS can involve a severe inflammatory response and drastic changes in bone.^{21,24} How does inflammation lead to manifestation?





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AS, ankylosing spondylitis; ASAS, Assessment of SpondyloArthritis international Society; ASDAS, AS Disease Activity Score; axSpA, axial spondyloarthritis; CRP, C-reactive protein; IBP, inflammatory back pain; IL, interleukin; MRI, magnetic resonance imaging; nr-axSpA, non-radiographic axSpA; NSAID, nonsteroidal anti-inflammatory drug; QoL, quality of life; SIJ, sacroiliac joint.

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The Classification and Progression of axSpA

axSpA can be difficult to identify and is often misdiagnosed, but careful evaluation of patients with lower back pain is important to help diagnose and manage the disease as early as possible.¹⁻³

> Learn how to evaluate your patients with lower back pain, and in those with axSpA, classify the spectrum of their disease and **recognize** the impact of disease progression.

ASAS Classification Criteria for axSpA⁴

The Natural History of axSpA⁵

In patients with ≥ 3 months of chronic back pain and age of onset < 45 years





Sex Differences from a Corrona registry analysis:12 62% of males 58% of females with axSpA had IBP with axSpA had IBP

Women with axSpA experience higher incidences of axial and peripheral articular pain, including pain involving the sacroiliac joint, lumbar spine, thoracic spine, and cervicothoracic junction.14

B



Features

• HLA-B27, ERAP, and IL-23R genes, among others, have been associated with development of axSpA⁸⁻¹⁰ • Genetics determine > 90% of the susceptibility to axSpA¹¹

Sex Differences from a Corrona registry analysis:12 65% of females 73% of males with axSpA with axSpA were HLA-B27+ were HLA-B27+

Patient Impact

axSpA patients who are HLA-B27+ have a significantly lower age of disease onset.¹³

DISEASE ACTIVITY

Features • Defined as no progression of damage²¹



Features

- Radiographic sacroiliitis is present in patients with AS¹¹
- AS may progress, with 60% of patients with radiographic axSpA eventually developing syndesmophytes and ankylosis in the spine¹¹

Sex Differences from a pooled analysis of AS patients:15 70% were male 30% were female

Males are more likely to develop syndesmophytes in the spine than females.²²

Patient Impact

Pain, stiffness, and fatigue associated with spinal fusion are major contributors to disease burden and limit physical function.²³



Features

- Can be defined as:19
- ASAS partial remission
- ASAS partial remission plus imaging remission
- ASDAS inactive disease
- The majority of patients do not spontaneously remit²⁰



Features

- Other than IBP, patients with nr-axSpA can manifest with peripheral or extraarticular symptoms (see ASAS Classification Criteria, left)¹⁵
- Radiographic sacroiliitis is not present/evident in patients with nr-axSpA, but MRI may illustrate SIJ bone marrow edema⁷
- Over 15 years of follow-up, 74% of nr-axSpA patients did not progress to AS¹⁶

Sex Differences from a pooled analysis of nr-axSpA patients:¹⁵ 47% were male 53% were female

Males with axSpA may experience higher progression in the lumbar spine than females, while females exhibit higher progression in the cervical spine.¹⁷

Patient Impact

Patients with nr-axSpA have a similar disease burden compared to patients with radiographic damage (AS). Patients have similar disease and symptoms duration.18

Adapted from The Rheumatologist.5

The terms AS and nr-axSpA are distinguished by the degree of "radiographic sacroiliitis" assessed by conventional radiography: in the absence of these changes, other lesions associated with SpA may be detected by MRI.5-7

These terms should only be used for classification of patients with axSpA and not as separate diagnoses.⁶