

visit, male patients achieved BASDAI < 4 more significantly than female patients (79.57% vs. 71.54%,  $p < 0.0010$ ). However, the proportion of patients who achieved ASDAS low disease activity (< 2.1) and ASDAS inactive disease (< 1.3) were not significantly different between gender (71.14% vs. 71.5%,  $p = 0.8892$ ; 38.82% vs. 39.44%,  $p = 0.8265$ , respectively). The difference in BASDAI between the first follow-up visit and baseline was statistically significantly related to gender after adjusting for other clinical information at baseline ( $p = 0.0033$ ). In the same analysis, the difference in ASDAS was not significantly related to gender ( $p = 0.1303$ ). **Conclusion:** Depending on the method of calculating disease activity, the interpretation of treatment response of bDMARDs may differ between gender.

**Table 1. The results of the multivariate generalized linear model of the relationship between the change in disease activity scores and clinical variables, including gender**

Gender	Age	Disease duration	HLA-B27	Radiographic disease	Smoking	Ex-smoker	Current smoker	Baseline value
BASDAI								
beta	0.4054	0.0190	0.0036	-0.4990	0.1918	.	0.1025	0.4557 -0.7609
SE	0.1377	0.0041	0.0089	0.1712	0.1758	.	0.1439	0.1298 0.0257
p	0.0033	0.0000	0.6888	0.0036	0.2752	0.0016	0.4764	0.0005 0.0000
ASDAS								
beta	0.1030	0.0079	0.0103	-0.2953	0.1022	.	0.0652	0.2964 -0.8320
SE	0.0680	0.0020	0.0045	0.0857	0.0880	.	0.0713	0.0647 0.0237
p	0.1303	0.0001	0.0214	0.0006	0.2459	0.0000	0.3609	0.0000 0.0000

BASDAI, Bath ankylosing spondylitis disease activity index; ASDAS, ankylosing spondylitis disease activity score; SE, standard error

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#### SACROILIAC MRI FINDINGS IN PATIENTS WHO WERE REQUESTED A SACROILIAC STUDY: SACROILIITIS AND OTHER DIAGNOSES

**Keywords:** Spondyloarthritis, Gender/diversity issues, Imaging

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**Background:** Magnetic resonance imaging (MRI) is the most sensitive imaging modality for the detection of sacroiliitis. Diagnosing sacroiliitis on MRI is not always straightforward and can be challenging in some cases.

**Objectives:** To evaluate the prevalence of sacroiliitis (according to ASAS criteria) and other diagnoses in sacroiliac MRI. To analyse/compare these diagnoses by sex, age and service requesting the study.

**Methods:** This is a cross-sectional, multicentre, descriptive, retrospective study in a hospital and/or specialised care setting. Consecutive MRI examinations (in adults) of the sacroiliac joints (SIJ) performed between 1 de Enero de 2019 y el 31 de Diciembre del 2019 were retrospectively evaluated for the presence of structural and active sacroiliitis findings according to the Assessment of SpondyloArthritis International Society guidelines. Alternative diagnoses, including degenerative changes, diffuse idiopathic skeletal hyperostosis (DISH), osteitis condensans ilii (OCI), septic sacroiliitis/discitis, stress reaction and anatomic variants, were registered.

**Results:** We evaluated 1,283 MRI examinations, 526 (41%) males, average age  $46.7 \pm 14$  years. 71.6% of the requests are from the Rheumatology service, 15.8% from Orthopedic Surgery and Traumatology and 12.5% from other services. 70% of the MRIs were reported by a radiologist expert in the locomotor system. Findings suggestive of axial spondyloarthritis were found in 353 (27.5%). Sacroiliitis was found in 71 examinations (25%) and alternative diagnoses were suggested in 87 (31%) (OCI 8.9%, anatomic variants 5.3%, septic sacroiliitis/discitis 5.3%, degenerative findings 4.3%, DISH 1.5%, stress reaction 0.7%, tumor 0.3%). A normal examination was found in the remaining 123 examinations. Patients with alternative diagnoses were older than those with sacroiliitis (62 vs. 47 years of age, respectively,  $P > 0.05$ ). Alternative diagnoses in the SIJ were significantly more common in females (66) than in males (21),  $P < 0.05$ .

**Table 1.**

MRI Diagnosis	Principal	2nd	3rd diagn
Without alterations	452 (35.2)	6 (0.5)	3 (0.2)
Degenerative changes of the SIJ	152 (11.8)	37 (2.9)	5 (0.4)
Sacroiliitis with erosions	147 (11.5)		
Sacroiliitis BME + erosions	157 (12.2)	11 (0.9)	
Degenerative disc disease L5-S1	103 (8)	141 (11)	12 (0.9)
BME (without ASAS criteria)	82 (6.4)	32 (2.5)	4 (0.3)
Sacroiliitis with BME	73 (5.7)		
Other	40 (3.1)	29 (2.3)	7 (0.5)
Lumbosacral transition abnormality	18 (1.4)	27 (2.1)	10 (0.8)
Osteitis condensans ilii	17 (1.3)	7 (0.5)	2 (0.2)
Fracture	12 (0.9)	2 (0.2)	
Tumor	16 (1.2)	4 (0.3)	
Diffuse idiopathic skeletal hyperostosis (DISH)	6 (0.5)	1 (0.1)	1 (0.1)
Anatomical variants of SIJ	6 (0.5)	11 (0.9)	1 (0.1)
Septic Arthritis	2 (0.2)		
Gout		1 (0.1)	

**Conclusion:** A substantial proportion of patients with suspected sacroiliitis had normal SIJ while the rest were more commonly diagnosed with pathologies other than inflammatory sacroiliitis. A referral by an experienced rheumatologist may improve the sensitivity and specificity of this important examination.

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#### COSTOVERTEBRAL AND COSTOTRANSVERSE JOINT INVOLVEMENT IN SPONDYLOARTHRITIS BY ROUTINE CHEST COMPUTED TOMOGRAPHY

**Keywords:** Spondyloarthritis

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**Background:** In spondyloarthritis (SpA) patients, costovertebral (CV) and costotransverse (CTr) joint are affected however these involvements are not routinely examined in clinical practice. Clinical characteristics of these involvements need further assessment.

**Objectives:** In this study, we aimed to determine the characteristics of CV and CTr joint involvements in SpA patients by routine chest computed tomography (CT).

**Methods:** SpA patients who have been requested a chest CT for any reason between January 2010 and December 2020 were retrieved from medical records and included in this retrospective cross-sectional analysis. Of these subjects, 281 had a diagnosis of SpA confirmed with patients records and sacroiliac imaging. After the patient population was created, the patients were sorted according to the registration number and divided into groups of ten. One patient was selected from each group. Thirty age- and sex-matched rheumatoid arthritis (RA) patients and 30 healthy controls were selected. Thorax CT were re-examined for CV and CTr joints by an experienced radiologist. All joints were classified as: Normal (0); suspicious [1], mild [2], moderate [3], and severe [4]. A total of 44 joints were evaluated for each patient, 24 CV and 20 CTr joints.

**Results:** Of the SpA patients, 206 (73.3%) were diagnosed with AS, 63 (22.4%) with psoriatic arthritis (PsA), and 12 (4.3%) with non-radiographic axial SpA (nr-AxSpA). 34 (54%) of PsA patients had axial PsA. Total scores of CV joint were different between diseases (AS 35 (0-96), PsA 16 (0-73), axial PsA 16 (0-73), peripheral PsA 20 (1-53), nr-AxSpA 6.5 (0-42), RA 15.5 (0-50), healthy control 13 (0-48) ( $p < 0.001$ ))