0.0001 respectively). Patients with falls had lower BBS ($p=0.03$) and loss of balance correlated with impairment of the quality of life ($\rho=-0.56$; $p<0.001$).

Conclusion: Balance is impaired in 1/3 of SpA patients and the BBS is associated mainly with functional and metrology indexes, showing that patients with severe cumulative damage are more affected.

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TABLE 1. - Study of BBS (balance berg scale) values according to epidemiological, clinical and treatment variables

	Median BBS with the variable (IQR)	Median BBS without the variable (IQR)	p
Male gender	51(44.0-55.0)	51.0(44.2-53.7)	0.80
White ethnic background	49.0(42.5-53.0)	54.0(30.2-55.0)	0.01
Exposed to tobacco (ex and current)	46.0(41.5-54.0)	52.0(46.5-55.0)	0.03
Bilateral sacroiliitis	51.0(45.0-55.0)	53.5(46.2-55.0)	0.63
Enthesitis	50.0(38.5-55.2)	51.0(44.5-55.0)	0.45
Dactylitis	50.5(42.0-54.2)	51.0(44.0-55.0)	0.73
Uveitis	51.0(46.5-55.0)	50.5(41.7-55.0)	0.26
Peripheral arthritis	52.0(40.7-55.7)	51.0(33.0-54.0)	0.92
HLA B27 presence	52.0(44.5-55.0)	48.5(39.5-51.1)	0.03
Anti TNF- α users	50.5(45.0-54.7)	52.0(39.0-55.0)	0.67
History of falls in the last year	46.5(40.0-50.2)	52.0(44.5-55.0)	0.03

TABLE 2. - Correlation studies of BBS (berg balance scale) values with age, disease duration, disease activity indexes, functional and metrology indexes and quality of life

	Rho	95% confidence interval	p
BASDAI	-0.28	-0.51 to -0.008	0.03
ASDAS VHS	-0.32	-0.54 to -0.05	0.01
ASDAS CRP	-0.33	-0.55 to -0.06	0.01
BASFI	-0.71	-0.82 to -0.55	<0.0001
BASMI	-0.80	-0.88 to -0.67	<0.0001
ASQoL	-0.56	-0.72 to -0.35	<0.0001
Age (years)	-0.50	-0.68 to -0.25	<0.0001
Disease duration (years)	-0.10	-0.36 to 0.17	0.44

BASDAI=Bath Ankylosing Spondylitis Disease Activity Index; ASDAS=Ankylosing Spondylitis Disease Activity Score, ESR=erythrocyte sedimentation rate; CRP=C reactive protein; BASMI=Bath Ankylosing Spondylitis Metrology Index; BASFI=Bath Ankylosing Spondylitis Functional Index; ASQoL=Ankylosing Spondylitis Quality of Life questionnaire.

Disclosure of Interests: None declared

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AB0715 ASSESSMENT OF BODY COMPOSITION IN LEAN MASS AND FAT MASS IN SPONDYLOARTHRITIS

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Background: Mohamed Montacer Kchir bsorptiometry Absorptiometer (DEXA) is the gold standard for the study of body composition. It allows to sepMohamed Montacer Kchirarate the 2 compartments lean mass (LM) and fat mass (FM), and to study their distribution at the android and gynoid level

Objectives:

- Evaluate the change in total body composition measured the DEXA in patients with spondyloarthritis (SpA) compared to a control group.
- Evaluate the distribution of LM/FM at the android and gynoid levels.
- Study the influence of disease activity and bone mass on body composition.

Methods: This was a case-control study involving 50 patients with SpA compared to 50 controls. Each control was comparable in age and sexe to the matched patient.

Results: The mean age was 36 years in the SpA group and 35,5 years in the control group. Eighty per cent of the patients with SpA were male. The mean BASDAI was $4,64 \pm 2,5$. The mean ESR rate was

$32,37 \pm 20,95$, the mean CRP rate was $18,05 \pm 27,22$ [0-141]. The mean body mass index (BMI) was $25,4 \text{ Kg/m}^2$ ($25,74 \text{ Kg/m}^2$ in the control group). The mean bone mineral density (BMD) at the lumbar spine was 1.033 g/cm^2 (with a mean T score of -1.5 DS and Z score -1.3 DS) while it was 0.956 g/cm^2 at upper end of the femur level (with a mean T score of -0.8 and a mean Z score of -1.2 DS). In controls, the mean BMD was 1.055 g/cm^2 and 1.013 g/cm^2 at the lumbar spine and upper end of the femur respectively (with a mean T score of -1.4 DS and -0.5 SD and a mean Z score of -1.4 and -0.3 respectively at the lumbar and superior femoral sites). In the SpA group, the mean value of whole body FM was 31.6%, whereas this average was around 36% in controls. FM was distributed as follows: 39.2% at the android level versus 37.7% at the gynoid level. For LM, the whole body average was 68.4%, while the average was 60.8% at the android level and 62.3% at the gynoid level. The 2 groups (patients and controls) were comparable in terms of BMD, T score and Z score measurements at different lumbar and superior femoral sites. The SpA group and their healthy controls were comparable in terms of FM and LM measurements and their distributions. We found a significant correlation between the rate of CRP and the measurements of FM at the android level ($r = -0.358$, $p = 0.023$) (and conversely the LM at the android level). However, we found no association between disease activity (BASDAI) and body composition.

Conclusion: Changes in body composition (MM/MG) related to chronic inflammatory status may occur during chronic inflammatory diseases. However, few studies in the world have focused on changes in the bodily compartments and their distribution in SpA.

Disclosure of Interests: None declared

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AB0716

ESTABLISHMENT OF BASDAI CUT-OFFS FOR THE DISEASE ACTIVITY STATES BASED ON ASDAS CUT-OFFS IN TAIWANESE ANKYLOSING SPONDYLITIS PATIENTS

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Background: The Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) has been widely utilized to evaluate disease activity in patients with ankylosing spondylitis (AS). However, the cut-off of BASDAI used to indicate high disease activity (i.e., ≥ 4) was determined arbitrarily and was suggested as a criterion to initiate biological therapy for AS patients. The Ankylosing Spondylitis Disease Activity Score (ASDAS) has been developed as a new composite index to assess AS disease activity. The cut-off values for disease activity states has been defined and validated. ASDAS ≥ 2.1 was selected as a criterion of starting biological therapy. However, the BASDAI cut-off values corresponding to the ASDAS cut-off values for disease activity states were unknown.

Objectives: The purpose of this study was to estimate the corresponding BASDAI and ASDAS cut-off in a Taiwanese AS cohort.

Methods: Since November 2016, we assessed the Ankylosing Spondylitis Disease Activity Score (ASDAS) and the Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) regularly and recorded demographic data, comorbidity, family history, medication use for AS patients in Taichung Veterans General hospital (TCVGH) using an electronic patient reported data system linked to an electronic medical record system. We identified 489 AS patients with complete baseline demographic and assessment data from the TCVGH electronic data system during 2016/11–2018/10. We used receiver operating characteristic (ROC) curves with Youden's J statistic to determine the cut-off values of BASDAI that correspond to ASDAS disease activity cut-offs (i.e., 1.3, 2.1 and 3.5).

Results: We included a total of 489 AS patients [114 (23.3%) females, mean age 44.1 years (S.D. 13.9), mean symptom duration 18.0 years (S.D. 11.9), 152 (31.1%) current biologic users]. Mean BASDAI, ASDAS-ESR and ASDAS-CRP scores were 2.1 (S.D. 1.5), 1.6 (S.D. 0.8) and 1.5 (S.D. 0.9) respectively. Mean levels of CRP and ESR were 0.6 (S.D. 1.5) mg/dl and 12.2 (S.D. 14.0) mm/hr respectively. Based on ASDAS-CRP, the numbers (%) of AS patients with inactive disease (<1.3), low disease activity (1.3-2.1), high disease activity (2.1-3.5) and very high disease activity (≥ 3.5) were 210 (42.9), 171 (35.0), 88 (18.0) and 20 (4.1) respectively. Based on ASDAS-ESR, the numbers (%) of AS patients with inactive disease, low disease activity, high disease activity and very high disease activity were 202 (41.3), 174 (35.6), 96 (19.6) and 17 (3.5)

respectively. The best trade-off BASDAI values corresponding to ASDAS -CRP 1.3, 2.1 and 3.5 were 2.1, 3.1 and 3.7 respectively. The optimal BASDAI values corresponding to ASDAS-ESR 1.3, 2.1 and 3.5 were 2.0, 2.6 and 4.8 respectively.

Conclusion: The estimated optimal BASDAI value that corresponds to the recommended ASDAS cut-off ≥ 2.1 for biological therapy initiation was lower than the recommended BASDAI cut-off of ≥ 4 in this Taiwanese AS cohort.

Abstract AB0716 Table 1.. Optimal BASDAI cut-off values corresponding to ASDAS cut-offs using ROC curve with Youden's J statistic in AS patients.

	BASDAI cut-off	AUC (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
ASDAS-CRP 1.3	2.1	0.76 (0.72–0.80)	0.70 (0.65–0.75)	0.82 (0.75–0.88)
ASDAS-CRP 2.1	3.1	0.78 (0.74–0.82)	0.69 (0.62–0.76)	0.87 (0.83–0.91)
ASDAS-CRP 3.5	3.7	0.82 (0.75–0.89)	0.84 (0.66–0.95)	0.81 (0.77–0.84)
ASDAS-ESR 1.3	2.0	0.80 (0.77–0.84)	0.74 (0.69–0.78)	0.87 (0.80–0.92)
ASDAS-ESR 2.1	2.6	0.79 (0.76–0.83)	0.81 (0.74–0.86)	0.78 (0.73–0.82)
ASDAS-ESR 3.5	4.8	0.79 (0.70–0.89)	0.67 (0.46–0.83)	0.92 (0.89–0.94)

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AB0717

RELIABILITY OF SACROILIAC JOINT RADIOGRAPHS IN THE EARLY SPONDYLOARTHRITIS ESPERANZA COHORT

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Background: X-Ray sacroiliitis is the cornerstone in the diagnosis of the ankylosing spondylitis (AS). It is clear that the presence of sacroiliitis is a specific lesion in long standing AS, but little evidence exists on the reliability of this image technique in early axial spondyloarthritis (axSpA), which associates with reduced structural damage. This is relevant because some rheumatologists and pharmacological authorities feel more confident with the diagnosis of AS rather than with non radiographic axial spondyloarthritis (nr-axSpA) forms. On the other hand, according to various research studies, clinicians are subject to potential bias when interpreting radiographs, influenced by their pretest clinical judgment

Objectives: The main objective of this study is to determine the reliability of X-Ray sacroiliitis in the early diagnosis of axSpA.

Methods: This study included 290 radiographs of the SI joints from patients of the Esperanza early spondyloarthritis cohort. Nine readers,

blinded for the diagnosis, participated in the reliability exercise, all of them experienced rheumatologists and members of the Spanish spondyloarthritis working group (GRESER). Patients with axSpA were classified as having AS if the radiographic criteria of the modified NY criteria (presence of radiographic changes in the SIJ of at least grade II bilaterally or at least grade III unilaterally) were fulfilled. The gold standard was the categorical opinion of at least five of the expert readers. For the statistical analysis, the Chi-square and Kappa tests were performed.

Results: The table shows mean kappa values and the agreement reached by each reader. The mean kappa achieved was fair (0.375, range 0.146 - 0.652) and the mean agreement was 73.7% (range: 58.7% - 90%). When the categorical opinion of X-Ray sacroiliitis of at least 5 readers as gold standard was applied, 61 patients were classified as AS and 229, as nr-axSpA. Nevertheless, this scenario varied from 31 to 138 among the readers when the x-ray evaluation was performed by only one reader.

Conclusion: Reliability of X-Ray SIJ in an early SpA cohort was weak among nine experimented readers and the diagnosis of AS was subject to a high variability. At least in doubtful cases, a central evaluation performed by highly qualified readers is advisable.

	Gold standard	Reader 1	Reader 2	Reader 3	Reader 4	Reader 5	Reader 6	Reader 7	Reader 8	Reader 9
Kappa	0.716	0.345	0.468	0.606	0.599	0.459	0.612	0.513	0.809	
Agreement	90.97	68.06	85.52	84.48	85.12	73.79	87.59	78.47	94.14	
SIJ mNY+	61	54	138	31	92	80	137	55	115	48
SIJ mNY TP	61	44	53	25	54	49	61	40	57	46
SIJ mNY FP	229	10	85	6	38	31	76	15	58	2
Sensitivity	73.33%	88.33	59.02	88.52	80.33	100	85.57	93.44	75.41	
Specificity	95.61%	62.72	97.38	83.41	86.40	66.81	93.45	74.45	91.13	
LR +	16.70	2.969	22.53	5.336	5.907	3.013	10.01	3.657	8.502	

SIJ = (SI) joint; mNY+ = number of patients that meet diagnosis of ankylosing spondylitis; TP = true positives; FP = false positives; LR+ = Likelihood ratio +

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AB0718

IDENTIFYING AXIAL SPONDYLOARTHRITIS IN THE UNITED STATES: A POSSIBLE ROLE FOR CHIROPRACTORS

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Background: Approximately 19% of the general population in the United States has chronic back pain (CBP), with 5%-6% of these cases classified as inflammatory back pain (IBP).¹ According to the US National Health and Nutritional Examination Survey, = 15% of patients with IBP have axial spondyloarthritis (axSpA).^{1,2} which can cause irreversible structural damage in the spine, loss of function, and a decreased quality of life. The diagnosis of axSpA is commonly missed, as patients seek care for back pain (BP) from a variety of non-rheumatology providers, including chiropractors.³ Overall, nearly 50% of patients seek chiropractic care for BP.⁴ However, not much is known about the prevalence of different types of BP (acute, chronic, IBP, and BP due to axSpA) in patients seeking chiropractic care in the United States.

Objectives: To investigate the types of providers sought by patients with BP and the prevalence of acute BP, CBP, IBP, and axSpA in patients with BP seeking chiropractic care in the United States. A secondary objective was to investigate how frequently chiropractors refer patients with BP to a rheumatologist.

Methods: PubMed literature searches were performed for all English language articles published through December 2017 to determine which providers are sought by patients with BP as well as the percentage of patients with BP being referred to a rheumatologist following chiropractic consultation. Search terms included "chiropractic," "chiropractor," "axial spondyloarthritis," "ankylosing spondylitis," "inflammatory back pain," "chronic back pain," "acute back pain," "low back pain," "sacroiliac joint," "sacroiliac pain," "back pain epidemiology," "rheumatologist," and "rheumatology." The full text of relevant articles was evaluated for specific data and BP statistics in this care setting.