classification (ASAS) criteria for axial SpA formally recognised the utility of MRI in diagnosis.¹ There are conflicting reports whether there had been any recent improvement in the period of diagnostic delay after application of ASAS criteria.²

Objectives: To evaluate the period from symptoms onset to diagnosis in Egyptian patients with axial SpA before and after application of ASAS criteria for axial SpA and to examine possible reasons for delayed diagnosis.

Methods: The study included all axial SpA patients attending a university tertiary referral centre for regular follow up in the period between May 2016 to November 2017. The patients were divided into 2 groups; group 1 included patients with a diagnosis of axial SpA before the beginning of 2010 (when ASAS criteria became widely available and in use) and group 2 included patients with a diagnosis of axial SpA after the beginning of 2010. A face-to-face interview was applied for both groups to take medical history, and a questionnaire that contains some clinical aspects of disease was used. Diagnosis delay was described as the gap between first SpA symptom and correct diagnosis of axial SpA. Clinical and functional assessment of axial SpA measured by Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), Bath Ankylosing Spondylitis Functional Index (BASFI), Bath Ankylosing Spondylitis Metrology Index (BASMI). The direct medical cost during years of delay (including costs of medical consultations, medications, investigations, physiotherapy and surgical treatment) had been estimated.

Results: As presented in table 1; more axial SpA cases were in group 2 (diagnosed after the beginning of 2010) with significantly narrower gap of delay, younger age at diagnosis, lesser number of doctor visits, lesser number of unnecessary spinal surgeries, lower total direct estimated costs and better BASDI, BASFI and BASMI.

Abstract AB0858 – Table 1. comparison between axial SpA patients diagnosed before and after 2010

Variable	Group 1 (n=56)(44.4%)	Group 2 (n=70) (55.6%)	p-value
Delay in years:	11.3±3.9	4.6±2.8	0.02**
Mean±SD			
Sex:	49 (83.3)	56 (7.9)	0.3*
Male:	7 (16.7)	14 (92.1)	
Female:			
Age at diagnosis (years):	34.9±6.4	25.8±4.5	0.03**
Mean±SD			
Cost of delay period by \$:	9879.3	2373.9±881.8	<0.001**
Mean±SD	±3827.2		
Doctor Visits during years of delay:	14.3±6	5.6±3.4	<0.001**
Mean±SD			
Spinal Surgery:	34 (65.4%)	18 (34.6%)	<0.001*
Loss of work at time of diagnosis:	36	7	<0.001*
BASDAI:	9.1±1.4	4.3±2.2	<0.001**
Mean±SD			
BASFI:	9.1±1.4	3.9±2.2	<0.001**
Mean±SD			
BASMI:	8.9±1.2	2.2±2	<0.001**
Mean±SD			

*: Chi-square test. SD: Standard Deviation. **: Independent sample t test. Significance p value<0.05.

Conclusions: Application of ASAS criteria for axial SpA has resulted in a significant decrease in the diagnostic gap which is reflected in a significant decrease in age at diagnosis and in the costs of unnecessary medications. On the other side, the gap is still large and more sensitive criteria are still needed.

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AB0859

SIMILARITIES AND DIFFERENCES BETWEEN NON-RADIOGRAPHIC AND RADIOGRAPHIC AXIAL SPONDYLOARTHRITIS IN PROOF CHINA COHORT

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Background: National observational studies, mostly from Europe, have reported some differences between radiographic axial spondyloarthritis (axSpA) and non-radiographic axSpA (nr-axSpA).

Objectives: To compare demographic and clinical characteristics of patients (pts) with nr-axSpA and radiographic axSpA (ankylosing spondylitis, AS) in a Chinese subpopulation in the PROOF study.

Methods: PROOF is a prospective observational study evaluating clinical and radiographic outcomes in axSpA pts in rheumatology clinical practice in 29 countries over 5 years. Pts diagnosed ≤1 year before study enrollment with axSpA fulfilling ASAS classification criteria were eligible. Investigator confidence with the axSpA diagnosis was ascertained on a numeric rating scale (0–10) at enrollment and end of follow-up. Baseline characteristics are reported, including demographics and clinical characteristics (table 1). Classification as nr-axSpA or AS was according to the radiologic criterion of the modified New York criteria. If there was a disagreement in classification (nr-axSpA or AS) between a local and central reader, the radiograph was evaluated by a second central reader, who was blinded to previous assessments; the final classification was based on the decision of 2 of 3 readers.

Results: 464 (21.8%) pts in PROOF were enrolled in China; 307 (66.2%) were classified as AS and 157 (33.8%) as nr-axSpA according to the investigators. Confidence with the axSpA diagnosis was 9.0±1.5. The final classification based on central assessment of sacroiliac radiographs was confirmed in 372 (80%) pts included in further analyses; 301 pts (80.9%) were classified as AS and 71 (19.1%) as nr-axSpA. AS pts had longer time since diagnosis, more frequent and higher CRP elevations, and were more often male and treated with TNF inhibitors (table 1). HLA-B27 positivity and prevalence of other SpA features were comparable between the 2 groups. Most disease burden assessments were comparable, but ASDAS-CRP, BASFI, and SF-12v2 physical component score were higher in AS pts (table 1).

Abstract AB0859 – Table 1. Baseline Demographics and Clinical Characteristic of the Chinese PROOF Subpopulation

Characteristic	nr-axSpA (n=71)	AS (n=301)	P Value*
Age, y, mean ± SD	30.1±8.9	29.4±8.7	0.517
Time since back pain onset, mo, mean ± SD	28.9±47.1	36.8±50	0.216
Time since diagnosis, mo, mean ± SD	1.7±2.1	2.8±3.5	0.005*
Male sex, n (%)	40 (56.3)	239 (79.4)	<0.001**
Number of positive SpA parameters, mean ± SD	3.5±1.1	3.6±1.3	0.508
SpA parameters, n (%)			
HLA-B27+	54 (77.1)	237 (81.2)	0.503
Inflammatory back pain	68 (95.8)	291 (96.7)	0.720
Peripheral arthritis	21 (29.6)	97 (32.2)	0.777
Enthesitis (heel)	22 (31.0)	62 (20.6)	0.082
Dactylitis	3 (4.2)	10 (3.3)	0.720
Uveitis	4 (5.6)	18 (6.0)	1.000
Psoriasis	0	2 (0.7)	1.000
IBD	0	0	—
Good response to NSAIDs	44 (62.0)	175 (58.1)	0.556
Family history of SpA	13 (18.3)	45 (15.0)	0.471
Elevated CRP, n (%)	22 (31.0)	157 (52.2)	0.002*
CRP, mg/L	10.2±20.4	16.5±21.4	0.033*
ASDAS-CRP	2.2±1.0	2.6±1.0	0.013*
BASDAI, NRS (0–10)	3.3±1.9	4.3±1.9	0.946
Patient global, NRS (0–10)	3.7±2.4	3.9±2.3	0.828
BASFI, NRS (0–10)	1.3±1.4	1.9±1.8	0.002*
SF-12v2 PCS	45.2±6.6	42.1±8.2	0.001*
SF-12v2 MCS	44.3±9.7	45.4±9.4	0.358
WPAI-SHP TAI	31.7±20.6	34.7±23.8	0.289
NSAID	55 (77.5)	213 (70.8)	0.304
Methotrexate	3 (4.2)	19 (6.3)	0.779
Sulfasalazine	27 (38.0)	88 (29.2)	0.156
Steroids	1 (1.4)	4 (1.3)	1.000
Analgesics	1 (1.4)	4 (1.3)	1.000
TNF-α inhibitors	8 (11.3)	79 (26.3)	0.008**

AS=ankylosing spondylitis; ASDAS-CRP=AS Disease Activity Score containing C-reactive protein; BASDAI=Bath Ankylosing Spondylitis Disease Activity Index; BASFI=Bath Ankylosing Spondylitis Functional Index; CRP=C reactive protein; HLA-B27=human leukocyte antigen B27; MCS=Mental Component Summary; nr-axSpA=non radiographic axial spondyloarthritis; NSAID=non steroidal anti-inflammatory drug; PCS=Physical Component Summary; SF-12v2=Short Form 12-item Health Survey version 2; TNF=tumour necrosis factor; WPAI-SHP TAI=Work Productivity and Activity Impairment Questionnaire-Specific Health

Problem Total Activity Impairment. ^a*P* values from 2-sided *t* test for scale variables and Fisher exact test for categorical variables; statistical comparison between nr-axSpA and AS; **p*<0.05, ***p*<0.001.

Conclusions: Clinical features and disease burden were generally similar between nr-axSpA and AS pts in the Chinese PROOF subpopulation. AS pts were more frequently men, had higher inflammatory burden (CRP and ASDAS-CRP), more functional impairment, and were more frequently treated with TNF inhibitors.

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AB0860 ACUTE PHASE REACTANT CHANGE IN ANKYLOSING SPONDYLITIS PATIENTS

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Background: The aim of this study is to investigate the levels of acute phase reactants (APRs) in patients with ankylosing spondylitis (AS) at the time of diagnosis and during follow-up. We also evaluated the associations between APR levels and disease activity.

Methods: The study included 948 patients with AS who were followed-up at Dokuz Eylul University School of Medicine Rheumatology outpatient clinic. The patients' erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) levels across all visits were retrospectively reviewed through the Turkbio registry and the hospital's database. Disease activity and follow-up parameters as BASDAI, ASDAS, BASFI and BASMI were taken from Turkbio visit charts. The correlation between APR and follow-up parameters were evaluated with Spearman correlation coefficient analysis.

Results: There were 948 AS patients (69% male, mean age 46.6±12.1 years) who fulfilled the 1984 modified New York criteria. At first visit, high levels of CRP and ESR were observed in 626 (68.5%) and 578 (64.6%) patients respectively. During follow-up 84.6% of patients had high CRP and 69.5% patients had high ESR at any visit (figure 1). However in 10% of AS patients APRs did not increase at any visits.

There was good correlation between ESR and CRP (*r*=0.666, *p*<0.001). A better correlation was observed at first visit between CRP and BASDAI (*r*=0.81, *p*=0.23) or ASDAS (*r*=0.468, *p*<0.001) compared to ESR and BASDAI (*r*=0.111, *p*=0.02) or ASDAS (*r*=0.334, *p*<0.001) (table 2). Compared to BASDAI, ASDAS with either ESR (*p*<0.001) or CRP (*very high disease activity-p* <0.001, *inactive disease-p*=0.001) had better performance in evaluating the activity of the patient in inactive and very high levels of severe disease (table 2).

Abstract AB0860 – Table 1. Demographic and clinical features

Age; Mean±SD (yrs)	46.6±12.1
Age at onset of illness; Mean±SD (yrs)	27.3±10.5
Age of diagnosis; Mean±SD (yrs)	34.5±12.0
Females/Males sex, n (%)	293 (%30.9)/655 (%69.1)
HLA-B27 Positive/Negative/Unknown	237 (%25)/100 (%10.5)/611 (%64.5)

Abstract AB0860 – Table 2. Correlation between first visit ESR/CRP and disease activity parameters

	ESR		CRP	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
BASDAI	0111	0,02	0,81	0023
BASMI	0123	0003	0205	0,00
BASFI	0219	0,00	0224	0,00
ASDAS	0334	0,00	0468	0,00

Abstract AB0860 – Figure 1

Abstract AB0860 – Figure 1. Ven diagram of patients that elevation only ESR/CRP or with both elevation together at any visit

Conclusions: In over 80% patients with AS had elevated levels of CRP, the most frequently used laboratory parameter, during follow-up. CRP is well correlated with ESR, and disease activity parameters as BASDAI, ASDAS, BASFI and BASMI. Compared to BASDAI; ASDAS had better agreement between activity and APRs. Interestingly, in 10% of AS patients APRs did not increase in follow-up.

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AB0861 HEALTH STATUS IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS (AXSPA) AS DETERMINED BY THE ASSESSMENT OF SPONDYLOARTHRITIS INTERNATIONAL SOCIETY HEALTH INDEX (ASAS-HI)

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Background: The ASAS-HI is a new instrument based in the International Classification of Functioning, Disability and Health to assess the impact of axSpA; ASAS-HI has been validated in Mexican patients.

Objectives: To investigate the status of health in Mexican patients with axSpA using the ASAS-HI

Methods: This is multicenter, cross-sectional study of 377/423 patients with axSpA (ASAS criteria) referred by 64 rheumatologists with private or institutional practice across the country in a period of six months. Sociodemographic and clinical data were collected at each site and analysed centrally.

Results: The ASAS imaging arm were fulfilled 87.5% and the clinical by 61.8%; HLA-B27 was positive in 80.1%; 71.6% were males; 51.9% received bDMARDs. Mean ages at onset and diagnoses were 25.8 (9.9) and 32.8 (11.7) years; median age was 41.6 (13.7) years. The correlation between ASAS-HI and BASDAI, BASFI, and EQ-5D was significant. ASAS-HI mean score was 6.4 (4.2); the cut off was six; values below six meant good health, which corresponded to 203 (53.84%) patients. Univariate analysis disclosed significant differences between groups in variables that were significant in the regression models (see below) and in health care coverage, enthesitis, joint counting, glucocorticoids, HLA-B27, sacroiliitis, BASMI, and ASDAS. In the multivariate analysis, two models were associated ASAS-HI: 1) sex, education, comorbidities, joint surgery, and physician global assessment; 2) BASDAI, BASFI, and EQ-5D

Conclusions: ASAS-HI cut off of six identified good health in 46.15% of patients with axSpA. ASAS-HI correlated with other measures of disease activity, functioning, and quality of life. In multivariate analysis, ASAS-HI associated with those measures as we all as with demographic and clinical variables.

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AB0862

ANTERIOR THORACIC FATTY CORNER LESIONS ARE USEFUL IN AXIAL SPONDYLOARTHRITIS (SPA) DIAGNOSIS—DATA FROM A MULTICENTER BACK PAIN-MRI COHORT IN HONG KONG

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Background: A fatty corner lesion (FCL), as defined by fat infiltration at the vertebral corner in T1 Magnetic Resonance Imaging (MRI) sequence, has been reported to be useful in Spondyloarthritis (SpA) diagnosis.

Objectives: Our objective is to systematically evaluate the diagnostic utility of FCLs in a large, multicenter back pain-MRI cohort in Hong Kong.

Methods: Three hundred and one patients with back pain were recruited from 3 rheumatology centres. Clinical, biochemical and radiological parameters were collected and all patients underwent a whole spine and sacroiliac (SI) joints MRI. FCLs from C4 to L5 levels were scored. Results were compared to expert-diagnosed axial SpA to determine the usefulness of FCLs in disease diagnosis.

Results: Anterior FCLs of whole or thoracic spine were found to be useful in axial SpA diagnosis. (AUC 0.622; $p=0.003$, AUC 0.640; $p=0.001$ respectively) Applying FCLs to the Modified New York (MNY) criteria and Assessment of SpondyloArthritis international Society (ASAS) axial SpA criteria, a minimum of 5 FCLs at whole spine level had a sensitivity of 66.4% and 91.6%, specificity of 98.4% and 91.9% respectively. Applying a minimum of 3 FCLs at thoracic spine level to the MNY criteria and ASAS axial SpA criteria yielded a sensitivity of 68.5% and 92.0%, specificity of 95.2% and 93.5% respectively. Three FCLs improves both classification criteria.

Conclusions: FCLs are useful in axial SpA diagnosis. A minimum of 3FCLs at the thoracic level is useful for the disease diagnosis.

Disclosure of Interest: None declared

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AB0863

ANALYSIS OF THE FREQUENCY OF UVEITIS IN SPONDYLOARTHRITIS PATIENTS AND ASSOCIATIONS WITH CLINICAL PARAMETERS OF THE DISEASE

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Background: Acute anterior uveitis is the most common extra-articular manifestation of spondyloarthritis (SpA). The ocular inflammation in SpA is restricted to the uvea, usually unilateral and in some cases may precede the clinical characteristics of SpA.

Objectives: The aim of this study is to analyse if the presence of uveitis is associated with a different clinical manifestation, laboratorial, radiological and therapeutic among spondyloarthritis patients.

Methods: This was an observational retrospective study with 153 patients with spondyloarthritis attended in the period from 1997 to 2017 in Florianópolis, Brazil. It was analysed demographic, laboratorial, clinical and therapeutic data in spondyloarthritis patients with or without uveitis.

Results: 26.8% of the patients with spondyloarthritis presented uveitis. The presence of complications was rare, with cataract occurring in only four patients and glaucoma in two of them. A higher frequency of acute anterior uveitis in males ($p=0.06$) was observed in patients with a family history ($p=0.19$) and HLA-B27 positive ($p=0.14$). Patients with spondyloarthritis and uveitis more frequently used anti-TNF ($p=0.04$) and presented sacroiliitis on imaging tests ($p=0.02$). There was no association between uveitis and cardiovascular ($p=0.44$), cutaneous ($p=0.13$) or gastrointestinal involvement ($p=0.10$).

Conclusions: Uveitis in patients with spondyloarthritis is common, predominantly in males and more frequently, in HLA-B27 positive patients. Ocular manifestation in spondyloarthritis has a low degree of complication when compared to uveitis from other etiologies. The use of immunobiological agents such as anti-TNF is common in patients with uveitis.

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AB0864

THE IMPACT OF DISEASE ACTIVITY, STRUCTURAL DAMAGE, AND FATIGUE ON PHYSICAL FUNCTION IN PATIENTS WITH ANKYLOSING SPONDYLITIS: DIFFERENCES IN EARLY AND LATE DISEASE

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Background: In patients with ankylosing spondylitis (AS), the physical function impairment caused by the disease is among the biggest concerns for both patients and clinicians. Previous studies have shown that disease activity and structural damage are the main underlying causes for physical function impairment. There is accumulating evidence that suggests fatigue as well contributes to functional limitations. However, the differential impact of these factors on physical function at early and late stage of disease remains unclear.

Objectives: Study the strength of association in AS patients with varying disease duration, between physical function and the three potential determinants of interest: disease activity, structural damage, and fatigue.

Methods: AS patients satisfying the modified New York criteria were followed from 2003 to 2017. Patients completed a standardised annual protocol including demographic and clinical factors, with radiographic data collected biennially. Baseline physical function (BASFI) was analysed for association with factors including disease activity (BASDAI), radiographic changes (mSASSS), and fatigue (FSS). The same analysis was conducted again with patients sub grouped with respect to disease duration (<5 years, 5–9 years, 10–20 years, >20 years), and again with respect to change in BASFI between the first and last patient visit. Multivariable regression analysis was performed to identify independent predictors of physical function at baseline and the change with time.

Results: A total of 611 patients were followed and completed the standard protocol (mean age at initial visit 38.2 years; 74% male; 76.5% HLA-B27+). At baseline BASFI was independently associated (table 1) with BASDAI ($p<0.0001$), CRP ($p<0.0001$), mSASSS ($p<0.0001$), and FSS ($p<0.0001$). In the disease duration subgroup analysis, BASFI was independently associated with BASDAI ($p<0.05$) and mSASSS ($p<0.05$) in all disease durations, and with FSS in subgroups with disease duration of 5 years or greater ($p<0.05$). In the longitudinal analysis, change in BASFI was independently associated with changes in BASDAI ($p<0.0001$) and FSS ($p<0.05$), but not with change in mSASSS ($p=0.283$).

Abstract AB0864 – Table 1

	Univariable analysis		Multivariable analysis	
	β (95% CI)	P	β (95% CI)	P
Sex	0.001 (–0.063–0.066)	0.975	–0.01 (–0.07–0.05)	0.776
CRP	0.282 (0.200–0.364)	<0.0001	0.15 (0.09–0.21)	<0.0001
BASDAI	0.728 (0.672–0.783)	<0.0001	0.62 (0.51–0.73)	<0.0001
mSASSS	0.294 (0.204–0.378)	<0.0001	0.24 (0.18–0.31)	<0.0001
BASDAI	0.61 (0.54–0.67)	<0.0001	0.06 (–0.6–0.17)	0.313
Q1				