the time between symptom onset and physician diagnosis is 5-7 years. Diagnosis delay is attributed to nonspecific presentation of chronic back pain, requiring clinical experience to recognize early AS.

Objectives: To identify obstacles to early diagnosis of AS by assessing the knowledge of nonrheumatology health care providers (HCPs) on inflammatory back pain (IBP) and possible barriers to referral to a rheumatologist.

Methods: Survey content was first conceptualized based on concept elicitation interviews with HCPs, and questionnaires were developed by the study investigators to identify clinical characteristics, symptom presentation, and diagnostic measures that lead an HCP to suspect IBP and their perspectives on the referral process. The survey was then cognitively tested with HCPs from 10 specialties (family medicine, internal medicine, dermatology, gastroenterology, ophthalmology, orthopedics, chiropractic, pain management, physical therapy, and psychiatry), revised, and finalized. HCPs from these 10 specialties were invited to participate in the cross-sectional web-based survey hosted by Survey Sampling International between June 27 and July 20, 2018. HCPs who were currently licensed, actively practicing in the US, and had referred a patient with suspected IBP (except ophthalmology) or referred a patient with uveitis/iritis (ophthalmology only) within the past 12 months were eligible to participate. Descriptive statistics were used to analyze the data.

Results: Of 2395 HCPs screened, 1690 were eligible and included in our study. Overall, HCPs saw a median of 100 patients with chronic back pain within the past 12 months of the survey. Regarding criteria leading to suspicion of IBP, 61% of HCPs indicated morning stiffness > 30 minutes, 29% sleep disturbance due to back pain, 28% pain that improves with activity, and 16% alternating buttock pain. Among HCPs who would order diagnostic blood work, = 90% selected C-reactive protein, erythrocyte sedimentation rate, antinuclear antibody (ANA), and rheumatoid factor (RF), while 76% selected HLA-B27 (**Figure 1**). Most HCPs suspected underlying conditions of rheumatoid arthritis (RA; 94%), AS (90%), and psoriatic arthritis (81%) as related to IBP. Almost 40% of HCPs would treat patients with suspected IBP themselves; of these, = 80% would recommend nonsteroidal anti-inflammatory drugs and physical therapy (**Figure 2**). Regarding referrals, 57% of HCPs would refer patients with suspected IBP to another physician, but only 13% would refer immediately; 49% would perform further evaluations, 24% would wait until initial treatment response, 11% would monitor patient for some time, and 3% would consult with another physician before referring. Upon referral, 90% of HCPs estimated a wait time of up to 2 months for their patient to see another specialist. Of 1670 HCPs queried, 80% indicated that the specialist's expertise in treating autoimmune disease is the most important factor influencing their referral.

Conclusion: Most HCPs did not recognize IBP criteria in patients with chronic back pain. As most considered RA to be the underlying condition, ANA and RF were ordered as diagnostic workup. Many HCPs opted to treat and monitor patients with suspected IBP before referral, and most reported a wait time of up to 2 months for their patients to see a specialist.

Figure 1. Diagnostic blood tests health care providers elected to order or recommend when suspecting inflammatory back pain

Figure 2. Treatment recommendations by health care providers who opted to treat patients with suspected inflammatory back pain themselves

Acknowledgement: This study was sponsored by Novartis Pharmaceuticals Corporation, East Hanover, NJ.

Disclosure of Interests: Marina Magrey Grant/research support from: M. Magrey received research funding from AbbVie and UCB for clinical trials, served as a consultant for Novartis, and was a member of advisory boards for Eli Lilly, Novartis, and UCB, Consultant for: M. Magrey received research funding from AbbVie and UCB for clinical trials, served as a consultant for Novartis, and was a member of advisory boards for Eli Lilly, Novartis, and UCB, Esther Yi Consultant for: E. Yi is a postdoctoral fellow at the University of Texas at Austin and Baylor Scott and White Health, providing services to Novartis Pharmaceuticals Corporation., Daniel Wolin Employee of: D. Wolin is an employee of RTI Health Solutions., Mark Price Employee of: M. Price is an employee of RTI Health Solutions., Costel Chirila Employee of: C. Chirila is an employee of RTI Health Solutions., Eric Davenport Employee of: E. Davenport is an employee of RTI Health Solutions., Yujin Park Employee of: Y. Park is an employee of Novartis.

DOI: 10.1136/annrheumdis-2019-eular.501

SAT0339 **WHAT IS THE IMPACT OF IMAGING ON DIAGNOSTIC ASCERTAINMENT OF PATIENTS PRESENTING WITH UNDIAGNOSED BACK PAIN AND WHAT IS THE IMPACT OF CENTRAL EVALUATION? DATA FROM THE SCREENING IN AXIAL SPONDYLOARTHRITIS IN PSORIASIS, IRITIS, AND COLITIS (SASPIC) COHORT**

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Background: Although MRI of the sacroiliac joints (SIJ) is the most sensitive imaging modality for early diagnosis of axial spondyloarthritis (axSpA) it is costly and not readily available. Therefore, clinicians still rely primarily on radiography. The relative degree to which radiography and MRI changes diagnostic ascertainment of axSpA in patients presenting with undiagnosed back pain has not been formally studied.

Objectives: We aimed to assess the relative impact of radiography and MRI evaluation on diagnostic ascertainment of axial SpA in patients presenting with undiagnosed back pain to rheumatologists, and the impact of central evaluation.

Methods: The multicenter Screening for Axial Spondyloarthritis in Psoriasis, Iritis, and Colitis (SASPIC) Study is aimed at early detection of axial SpA. Consecutive patients ≤45 years of age with ≥3 months undiagnosed back pain with any one of psoriasis, acute anterior uveitis (AAU), or colitis undergo routine clinical evaluation by a rheumatologist for axial SpA and MRI evaluation is ordered per rheumatologist decision. The rheumatologist determines the presence or absence of axial SpA at 3 consecutive stages: 1. After the clinical evaluation; 2. After the results of labs (B27, CRP) and radiography; 3. After the results of MRI evaluation. The eCRF, radiographs, and MRI scans were also assessed centrally.

Results: The SASPIC cohort comprises 246 patients (52.4% male, mean age 34.5 years, mean symptom duration 7.3 years, mean back pain duration 7.1 years, B27+ 36.2%) referred with AAU (29.7%), psoriasis

Table 1

Stage of global assessment	Data source	axSpA YES	axSpA YES with confidence >7	NOT axSpA	axSpA NO with confidence <4
1. N = 246	Clinical	169 (68.7%)	50 (20.3%)	77 (31.3%)	40 (16.3%)
2. N = 246	Clinical plus radiography	141 (57.3%)	66 (26.8%)	105 (42.7%)	78 (31.7%)
Patients who had MRI					
1. N = 149	Clinical	107 (71.8%)	23 (15.4%)	42 (28.2%)	19 (12.8%)
2. N = 149	Clinical plus radiography	94 (63.1%)	30 (20.1%)	55 (36.9%)	38 (25.5%)
3. N = 149	Clinical plus radiography plus MRI	70 (47.0%)	44 (29.5%)	79 (53.0%)	70 (47.0%)

Table 2

Stage of global assessment	Data source	axSpA YES, number (%)	axSpA NO, number (%)
2. N = 246	Clinical plus radiography	141 (57.3%)	105 (42.7%)
2. N = 246	Clinical plus radiography after central reader assessment	79 (32.1%)	167 (67.9%)
3. N = 149	Clinical plus radiography plus MRI	70 (47.0%)	79 (53.0%)
3. N = 149	Clinical plus radiography plus MRI after central reader assessment	45 (30.2%)	104 (69.8%)

(18.7%), Crohn's colitis (31.3%), ulcerative colitis (20.3%). MRI was conducted in 149 patients. The number of patients diagnosed with axSpA by the local rheumatologist decreased after radiography and then decreased further after MRI while confidence in the diagnosis progressively increased (Table 1). After central evaluation of all patient data, the number of patients diagnosed with axSpA decreased substantially compared to assessment by local readers (Table 2).

Conclusion: In a setting of undiagnosed back pain and higher risk for axial SpA, imaging is primarily helpful in ruling out SpA and reducing false positives. Despite this, central evaluation raises concerns regarding ascertainment of false positive SpA in routine practice.

Disclosure of Interests: Walter P Maksymowych Grant/research support from: AbbVie, Pfizer, Janssen, Novartis, Consultant for: AbbVie, Eli Lilly, Boehringer, Galapagos, Janssen, Novartis, Pfizer and UCB Pharma; Chief Medical Officer for Canadian Research and Education Arthritis, Raj Carmona Grant/research support from: Amgen, Abbvie, Janssen, Consultant for: Amgen, Abbvie, BMS, Eli Lilly, Merck, Novartis, Janssen, Takeda, UCB, James Yeung: None declared, Jon Chan Grant/research support from: Janssen, UCB, Novartis, Pfizer, Celgene, Consultant for: Amgen, Celgene, Eli Lilly, Janssen, Amgen, Abbvie, Novartis, Pfizer, UCB, Sandoz, Merck, Liam Martin: None declared, Sibel Aydin Consultant for: Abbvie, Celgene, UCB, Novartis, Janssen, Sanofi, Dianne Mosher: None declared, Ariel Masetto Grant/research support from: Amgen, Sanofi, Consultant for: Sanofi, Pfizer, Bristol-Myers Squibb, Novartis, Boehringer Ingelheim, Speakers bureau: Novartis, Stephanie Keeling Consultant for: AbbVie, Pfizer, Eli Lilly, Janssen, Amgen, Astrazeneca, UCB, Olga Ziouza: None declared, Sherry Rohekar Consultant for: Abbvie, Amgen, BMS, Celgene, Eli-Lilly, Janssen, Merck, Novartis, Pfizer, Roche, Sanofi, UCB, Joel Paschke: None declared, Amanda Carapellucci: None declared, Robert G Lambert Consultant for: Bioclinica, Parexel, Abbvie

DOI:10.1136/annrheumdis-2019-eular.6080

SAT0340

CHARACTERIZATION OF PATIENTS WITH AXIAL SPONDYLOARTHRITIS BY PRESENCE OF ENTHERSITIS: DATA FROM THE CORRONA PSORIATIC ARTHRITIS/ SPONDYLOARTHRITIS (PSA/SPA) REGISTRY

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Background: Entersitis is a common extra-axial manifestation in patients with axial spondyloarthritis (AxSpA)^{1,2}; however, not much is known about the prevalence of entersitis in AxSpA and its impact on disease burden in US real-world settings.

Objectives: This study describes characteristics of patients with AxSpA who had entersitis vs patients without entersitis.

Methods: This study included patients aged ≥ 18 years with AxSpA enrolled in the Corrona PsA/SpA Registry between March 2013 and August 2018. Entersitis at enrollment was assessed via the Spondyloarthritis Research Consortium of Canada (SPARCC) Entersitis Index. Patient demographics, clinical characteristics, treatment profiles, disease activity, quality of life, and work productivity were compared between patients with and without entersitis using *t* tests or Wilcoxon rank-sum tests for continuous variables and χ^2 or Fisher's exact tests for categorical variables.

Results: Of 477 patients with AxSpA, 121 (25.4%) had entersitis. Symptom and disease duration were similar between patients with and without entersitis. In patients with entersitis, a higher proportion were female, were more likely to have non-radiographic AxSpA and a history of depression, serious infections, and fibromyalgia vs those without entersitis (all *P* < 0.05; **Table 1**). Current treatment with biologics or conventional

Table 1. Demographic and Clinical Characteristics and Treatment Profiles in Patients With AxSpA Stratified by Presence of Entersitis at Enrollment

Characteristic	No Entersitis (N = 356)	With Entersitis (N = 121)	P Value
Non-radiographic AxSpA, n (%)	56 (15.7)	34 (28.1)	< 0.01
Age, mean (SD) [n], years	47.3 (14.1) [351]	47.3 (13.1) [120]	0.99
Female, n/m (%)	112/351 (31.9)	61/121 (50.4)	< 0.01
White, n/m (%)	319/344 (92.7)	105/119 (88.2)	0.16
Work status, n (%)	n = 351	n = 121	0.30
Full time	214 (61.0)	69 (57.0)	
Part time	22 (6.3)	7 (5.8)	
Disabled	42 (12.0)	24 (19.8)	
Retired	44 (12.5)	12 (9.9)	
Other	29 (8.3)	9 (7.4)	
BMI, mean (SD) [n], kg/m ²	29.8 (6.8) [345]	29.9 (6.9) [120]	0.83
Symptom duration, mean (SD) [n], years	16.8 (11.8) [340]	17.3 (13.1) [118]	0.67
Disease duration, mean (SD) [n], years	10.2 (10.7) [347]	8.2 (10.3) [120]	0.09
Comorbidities, n (%)			
Cardiovascular disease	140 (39.3)	56 (46.3)	0.18
Hypertension	109 (30.6)	37 (30.6)	0.99
Depression	53 (14.9)	29 (24.0)	0.02
Hyperlipidemia	52 (14.6)	21 (17.4)	0.47
Uveitis	40 (11.2)	13 (10.7)	0.88
Metabolic syndrome	27 (7.6)	9 (7.4)	0.96
Diabetes mellitus	20 (5.6)	11 (9.1)	0.18
Psoriasis	22 (6.2)	7 (5.8)	0.88
Serious infections	16 (4.5)	12 (9.9)	0.03
Fibromyalgia	11 (3.1)	11 (9.1)	0.01
Ulcerative colitis	18 (5.1)	3 (2.5)	0.31
Any cancer (excluding NMSC)	16 (4.5)	5 (4.1)	0.87
Crohn disease	14 (3.9)	6 (5.0)	0.63
Prior csDMARD use, n (%)	47 (13.2)	30 (24.8)	< 0.01
Prior biologic use, n (%)	97 (27.2)	47 (38.8)	0.02
Number of prior biologics, n (%)			0.01
0	259 (72.8)	74 (61.2)	
1	68 (19.1)	26 (21.5)	
≥ 2	29 (8.1)	21 (17.4)	
Current biologic use, n (%)	237 (66.6)	84 (69.4)	0.56
Current csDMARD use only (no biologics or tsDMARDs), n (%)	30 (8.4)	12 (9.9)	0.62
Methotrexate (any), n (%)	37 (10.4)	21 (17.4)	0.04

AxSpA, axial spondyloarthritis; BMI, body mass index; csDMARD, conventional synthetic disease-modifying antirheumatic drug; NMSC, non-melanoma skin cancer; tsDMARD, targeted synthetic disease-modifying antirheumatic drug.

Table 2. Disease Activity, Quality of Life, and Work Productivity in Patients With AxSpA Stratified by Presence of Entersitis at Enrollment

Characteristic	No Entersitis (N = 356)	With Entersitis (N = 121)	P Value
ASDAS, mean (SD) [n]	2.5 (1.2) [212]	2.9 (0.9) [79]	< 0.01
BASDAI (0-10), mean (SD) [n]	4.1 (2.4) [340]	5.3 (2.2) [118]	< 0.01
BASFI (0-10), mean (SD) [n]	3.3 (2.7) [338]	4.5 (2.8) [119]	< 0.01
Lateral lumbar flexion (average of left and right), mean (SD) [n], cm	21.5 (18.8) [308]	28.1 (21.1) [116]	0.01
Entersitis, n (%)	—	121 (100.0)	—
SPARCC Entersitis Index (1-16), mean (SD) [n]	—	3.9 (2.9) [121]	—
Dactylitis, n (%)	7 (2.0)	4 (3.3)	0.40
Dactylitis count (1-20), mean (SD) [n]	3.6 (3.9) [7]	2.0 (2.0) [4]	0.35
Tender joint count (0-68), mean (SD) [n]	1.3 (4.2) [347]	8.2 (10.8) [121]	< 0.01
Swollen joint count (0-66), mean (SD) [n]	0.5 (2.0) [347]	1.3 (3.3) [121]	< 0.01
DAPSA, mean (SD) [n]	15.6 (8.3) [54]	28.6 (21.1) [12]	0.02
DAPSA group, n (%)	n = 54	n = 12	0.03
Remission	2 (3.7)	1 (8.3)	
Low	25 (46.3)	2 (16.7)	
Moderate	21 (38.9)	4 (33.3)	
High	6 (11.1)	5 (41.7)	
cDAPSA, mean (SD) [n]	12.5 (7.9) [109]	22.1 (18.1) [21]	0.02
Physician global assessment, mean (SD) [n]	23.5 (21.9) [345]	36.6 (21.9) [117]	< 0.01
Physician global assessment of psoriasis, mean (SD) [n]	0.5 (1.0) [70]	0.1 (0.5) [38]	0.03
Patient pain (VAS 0-100), mean (SD) [n]	43.5 (29.5) [331]	57.5 (26.7) [111]	< 0.01
Patient fatigue (VAS 0-100), mean (SD) [n]	45 (28.6) [353]	56.5 (27.5) [121]	< 0.01
Morning stiffness, n (%)	318 (89.3)	117 (96.7)	0.72
< 30 minutes	71 (22.3)	28 (23.9)	
≥ 30 minutes	247 (77.7)	89 (76.1)	
Patient global assessment (VAS 0-100), mean (SD) [n]	54.1 (32.9) [115]	49.8 (29.7) [24]	0.56
HAQ-DI (0-3), mean (SD) [n]	0.6 (0.6) [299]	0.9 (0.7) [89]	< 0.01
EQ VAS (0-100), mean (SD) [n]	66.4 (22.0) [344]	59.7 (22.7) [120]	< 0.01
WPAI domains, mean (SD) [n]			
Current employment, n/m (%)	241/351 (68.7)	75/119 (63.0)	0.26
% Work time missed	5.8 (16.8) [218]	9.0 (18.8) [71]	0.06
% Impairment while working	25.3 (24.4) [230]	38.3 (27.4) [71]	< 0.01
% Overall work impairment	27.6 (26.6) [210]	41.4 (29.6) [69]	< 0.01
% Activity impairment	35.6 (29.3) [343]	49.8 (29.5) [121]	< 0.01

ASDAS, Ankylosing Spondylitis Disease Activity Score; AxSpA, axial spondyloarthritis; BASDAI, Bath Ankylosing Spondylitis Disease Activity Index; BASFI, Bath Ankylosing Spondylitis Functional Index; cDAPSA, Clinical Disease Activity Index for Psoriatic Arthritis; DAPSA, Disease Activity Index for Psoriatic Arthritis; EQ VAS, EuroQol visual analogue scale; HAQ-DI, Health Assessment Questionnaire Disability Index; SPARCC, Spondyloarthritis Research Consortium of Canada; VAS, visual analogue scale; WPAI, Work Productivity and Activity Impairment Questionnaire.

synthetic disease-modifying antirheumatic drug (csDMARD) monotherapy was similar regardless of presence of entersitis; however, patients with entersitis were more likely to have prior csDMARD and biologic use, as well as current methotrexate use. Patients with entersitis had worse disease activity (ASDAS, BASDAI, and BASFI scores); tender and swollen joint counts; physician global assessment; and DAPSA and cDAPSA scores), spinal mobility measures, quality of life (pain, fatigue, HAQ scores, and EQ VAS scores), and greater work impairment than patients without entersitis (all *P* < 0.05; **Table 2**).

Conclusion: Among patients with AxSpA in this US real-world study, the presence of entersitis was associated with worse disease activity and quality of life compared to patients without entersitis.