

across multiple clinical trials (1.3/100 PY [95% CI, 0.2–4.8]).<sup>1</sup> In pts at risk for IBD requiring biologic therapy, ADA is a reasonable therapeutic option based on the observed low IBD event rates in ADA clinical trials and its demonstrated efficacy in treating UC and CD pts.

#### References:

[1] Braun, J. et al., *Arthritis & Rheum*, 2007; 57:639–47.

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### FRI0445 FAECAL CALPROTECTIN, BUT NOT ANTI-SACCHAROMYCES CEREVISIAE ANTIBODIES, IS LINKED TO WORSE DISEASE STATUS IN AXIAL SPONDYLOARTHRITIS PATIENTS WITHOUT INFLAMMATORY BOWEL DISEASE: RESULTS FROM THE SPARTAKUS COHORT

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**Background:** Inflammatory bowel disease (IBD) is a common comorbidity in axial spondyloarthritis.

**Objectives:** To study faecal calprotectin (F-calprotectin) levels and anti-*Saccharomyces cerevisiae* antibodies (ASCA) and their associations with disease status and gastrointestinal (GI) symptoms in axial spondyloarthritis.

**Methods:** Consecutive patients with a clinical axial spondyloarthritis diagnosis were examined and classified as non-radiographic axial spondyloarthritis (nr-axSpA); Assessment of SpondyloArthritis international Society [ASAS] criteria; n=26) or ankylosing spondylitis (AS; modified New York criteria; n=45). Only patients without known IBD were included. F-calprotectin and ASCA IgA and IgG antibodies in serum were measured by commercially available enzyme-linked immunosorbent assay kits (Calpro AS; ORGENTEC Diagnostika).

**Results:** Elevated levels of F-calprotectin ( $\geq 50$  mg/kg) were observed in 15% of nr-axSpA and 40% of AS patients (non-significant difference, with reservation for small groups). Overall, worse mean disease activity/disability scores were observed among patients with elevated versus normal F-calprotectin levels (Table), whereas no association was seen between F-calprotectin and GI symptoms. Similar results remained after exclusion of patients with monoclonal antibody type anti-TNF therapy. Elevated levels of ASCA IgA were observed in 8%/2% of nr-axSpA/AS patients, and IgG in 28%/26%. Only 2 subjects were ASCA double positive. Neither disease activity/disability measures nor GI symptoms were associated with ASCA status.

|                          | Nr-axSpA<br>(n=26) | AS<br>(n=45) | F-Calprotectin   |                        | p-value* |
|--------------------------|--------------------|--------------|------------------|------------------------|----------|
|                          |                    |              | <50 mg/kg (n=38) | $\geq 50$ mg/kg (n=18) |          |
| Male sex                 | 10 (39%)           | 26 (59%)     | 16 (42%)         | 10 (56%)               | 0.346    |
| Age, years               | 45 (10)            | 58 (13)      | 54 (13)          | 55 (14)                | 0.847    |
| Disease duration, years  | 18 (10)            | 32 (14)      | 26 (14)          | 31 (15)                | 0.339    |
| HLA-B27 positive, y/n    | 24 (92%)           | 38 (86%)     | 32 (84%)         | 17 (100%)              | 0.083    |
| ASAS 3m NSAID score      | 25 (37)            | 31 (36)      | 21 (33)          | 37 (40)                | 0.221    |
| Antibody anti-TNF, y/n   | 10 (39%)           | 12 (27%)     | 14 (36%)         | 4 (22%)                | 0.274    |
| VAS global               | 41 (21)            | 35 (25)      | 32 (25)          | 45 (16)                | 0.023    |
| VAS pain                 | 40 (23)            | 37 (28)      | 34 (26)          | 42 (23)                | 0.142    |
| VAS fatigue              | 41 (28)            | 39 (27)      | 34 (28)          | 46 (21)                | 0.056    |
| BASDAI                   | 3.5 (1.7)          | 3.5 (2.6)    | 3.1 (2.3)        | 4.2 (2.3)              | 0.076    |
| BASFI                    | 1.9 (1.4)          | 3.0 (2.9)    | 2.2 (2.2)        | 3.9 (3.1)              | 0.029    |
| ASDAS-CRP                | 2.0 (0.8)          | 2.2 (1.1)    | 1.8 (0.9)        | 2.6 (0.9)              | 0.034    |
| CRP, mg/L                | 3.1 (3.0)          | 4.7 (4.6)    | 3.0 (2.7)        | 5.7 (5.5)              | 0.157    |
| F-calprotectin, mg/kg    | 45 (64)            | 84 (117)     | 21 (13)          | 172 (129)              | NA       |
| ASCA IgA, E/ml           | 3.7 (7.3)          | 2.1 (1.9)    | 2.9 (5.8)        | 3.0 (3.8)              | 0.175    |
| ASCA IgG, E/ml           | 10 (20)            | 6.5 (6.3)    | 6.9 (6.8)        | 11 (24)                | 0.854    |
| Often stomach pain, y/n  | 17 (65%)           | 25 (56%)     | 23 (61%)         | 11 (61%)               | 0.967    |
| Frequent defecation, y/n | 7 (27%)            | 9 (20%)      | 9 (24%)          | 5 (28%)                | 0.741    |
| Frequent diarrhoea, y/n  | 12 (46%)           | 12 (27%)     | 12 (32%)         | 8 (44%)                | 0.348    |

N (%) or mean (SD). \*Chi<sup>2</sup>/Mann-Whitney U-test for comparison of categorical/continuous variables between the F-calprotectin groups. Missing data: ASCA IgA/IgG 4%, F-calprotectin 21%. y/n, yes/no; 3m, 3 months; NA, not applicable.

**Conclusions:** Elevated levels of F-calprotectin and ASCA IgG antibodies are both common in axial spondyloarthritis patients without IBD, and elevated F-calprotectin may be a marker of more severe spondyloarthritis. Neither F-calprotectin nor ASCA levels were associated with self-reported GI symptoms.

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### FRI0446 PREVALENCE AND CHARACTERISTICS OF SPONDYLOARTHRITIS ACCORDING TO ASAS CRITERIA IN PATIENTS WITH INFLAMMATORY BOWEL DISEASE – RESULTS FROM THE SPICE COHORT

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**Background:** Musculoskeletal symptoms are considered as one of the most frequent extra-intestinal manifestation in Inflammatory Bowel Disease (IBD) patients with a prevalence of up to 40% involving axial and/or peripheral joints. Data on the prevalence of musculoskeletal disease, in particular of SpA are limited and vary considerably due to different criteria the studies have used to define musculoskeletal disease in IBD patients.

**Objectives:** To define the prevalence of axial and peripheral spondyloarthritis (SpA) according to Assessment of Spondyloarthritis International Society (ASAS) in patients with Crohn's disease (CD) and ulcerative colitis (UC).

**Methods:** The SPICE cohort (Spondyloarthritis in Inflammatory Bowel Disease Cohort Erlangen) comprises prospectively recruited colonoscopy-proven Crohn's Disease (CD) or Ulcerative Colitis (UC) patients, who received a pre-defined and standardized musculoskeletal assessment by the rheumatologist. Duration and activity of gastrointestinal and rheumatic disease (axial and peripheral) was documented and fulfillment of ASAS classification criteria for axial and peripheral SpA was tested.

**Results:** 102 IBD patients (62 with CD and 40 with UC) with a median (IQR) disease of 11.0 (18.0) years were assessed. 38.2% fulfilled ASAS criteria for SpA with no difference between CD and UC. ASAS axial SpA criteria were fulfilled by 12%. ASAS peripheral SpA criteria by 31.4% of the IBD patients. Inflammatory back pain was present in 24.5% with MRI signs of sacroiliitis in 48% of IBD patients with inflammatory back pain. Disease activity according to ASDAS-CRP was moderate to high in 91% of the patients with axial SpA. Peripheral arthralgia was present in 71.6%, while arthritis was found in 18.6% of the IBD patients.

**Conclusions:** Both major forms of IBD show a similar burden of musculoskeletal disease. More than one third of inflammatory bowel disease patients show axial or peripheral SpA according to ASAS criteria. Peripheral SpA is more commonly found than axial SpA.

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### FRI0447 SEVERITY OF SACROILIITIS AND ERYTHROCYTE SEDIMENTATION RATE ARE ASSOCIATED WITH A LOW TRABECULAR BONE SCORE IN YOUNG MALE PATIENTS WITH ANKYLOSING SPONDYLITIS

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**Background:** The trabecular bone score (TBS) is a novel method used to evaluate bone microarchitecture. To date, the risk factors associated with a low TBS in AS are unknown and no study has examined the association between TBS and vertebral fracture in ankylosing spondylitis (AS) patients.

**Objectives:** To examine factors related to a low trabecular bone score (TBS) and the association between TBS and vertebral fracture in patients with (AS).

**Methods:** One hundred patients (all male, aged <50 years) who fulfilled the modified New York criteria for the classification of AS were enrolled. The TBS and bone mineral density (BMD) were assessed using dual-energy X-ray absorptiometry (DXA). Clinical variables, inflammatory markers, and the presence of vertebral fracture were also assessed. Spinal radiographic progression was measured using the Stokes AS spine score (SASSS). Multivariate linear regression analysis was performed to identify factors associated with TBS.

**Results:** The mean TBS at the lumbar spine was  $1.38 \pm 0.13$ . The TBS showed a negative correlation with disease duration and inflammatory markers, and a positive correlation with BMD at the lumbar spine, femoral neck, and total hip. It also showed a negative correlation with sacroiliitis grade. BMD at the lumbar spine positively correlated with SASSS, whereas TBS showed a negative correlation. A significant decrease in TBS values was observed in patients with spinal radiographic progression ( $p=0.001$ ). Multivariate analysis showed that ESR and sacroiliitis were independently associated with TBS ( $p=0.006$  and  $<0.001$ , respectively). Ten patients had morphometric vertebral fractures. The mean TBS was lower in patients with vertebral fracture than in age-matched patients without fracture ( $p=0.028$ ).

**Conclusions:** The TBS in young male patients with AS is associated with the ESR and severity of sacroiliitis. The TBS may be useful as a tool for assessing osteoporosis in AS.

**Disclosure of Interest:** None declared

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**FRI0448 EVALUATION OF SUPPURATIVE HIDRADENITIS IN PATIENTS WITH CHRONIC ARTHRITIS TREATED WITH FULL AND TAPERED BIOLOGICAL DISEASE-MODIFYING ANTIRHEUMATIC DRUGS**

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**Background:** Suppurative Hidradenitis (SH) is an inflammatory skin disease which often responds poorly to treatment. It is a disorder of the apocrine glands (axillary, inguinal and anogenital regions) that can result in infection, inflamed nodules, cysts, abscesses and sinus tracts. There is a 1–4% incidence of SH in patients with spondyloarthropathies and inflammatory bowel disease, possibly due to innate immune system deregulation. The use of biological disease-modifying antirheumatic drugs (bDMARD), specifically tumor necrosis factor inhibitors, has been useful in cases when other therapies fail.

**Objectives:** To evaluate the prevalence of SH using the SH-questionnaire in bDMARD-treated chronic arthritis patients.

**Methods:** This cross-sectional study included 325 patients diagnosed with chronic arthritis. Patients were recruited consecutively from the Biological Therapy Unit of the Hospital General Universitario Gregorio Marañón and evaluated from January to March of 2015. All patients had been undergoing full or tapered bDMARD treatment for at least 1 year and none had any history of SH. Those patients deemed to be in clinical remission were on tapered bDMARD dosage. All patients self-completed the validated SH-questionnaire (1) which was considered positive when one answer was affirmative and when lesions presented in  $>1$  anatomical location. Patient pathologies were subclassified into 2 groups: i) peripheral arthritis (PerAR) which includes rheumatoid arthritis (RA), psoriatic arthritis (PsA) and peripheral spondyloarthropathies (PerSpA); ii) axial spondyloarthropathies (AxSpA). Clinical evaluation was performed by the same physician for all patients. Demographic, clinical and laboratory variables were recorded and disease status was assessed through the relevant clinical index, i.e. DAS28-ESR, DAS28-CRP, SDAI, CDAI, BASDAI, BASFI, ASDAS-CRP.

**Results:** SH-positive was observed in 25/325 (7.7% vs. 92.3%) patients. Of these 25 patients, 12 (48%) were female and 13 (52%) male. Mean age was 52 years ( $SD \pm 12.9$ ) and mean time since diagnosis was 14 years ( $SD \pm 9.3$ ). Twenty-four out of 25 patients were undergoing anti-TNF treatment (ETN=10, GOL=7, ADL=6, CTZ=1). Eighty-four per cent of patients were undergoing full bDMARD dosage with the remaining 16% on tapered. By subset pathology, 13 SH positives were PerAR type and 12 were AxSpA (5.8% vs. 11.8%,  $p=0.062$ ). On analysis of PerAR subtypes, we found 6 patients had PsA and 5 RA. Evaluating clinical disease activity, we found 9/13 patients in the PerAR group to be in clinical remission according to DAS28-ESR and CDAI ( $p=0.02$  for both). Additionally, we found only 4/12 patients in remission in the AxSpA group as defined under BASDAI, BASFI and ASDAS-CRP ( $p=0.006$ ,  $p=0.005$ ,  $p=0.004$ , respectively).

**Conclusions:** We found more SH-positives in the AxSpA than in the PerAR group, which is consistent with published data. A bDMARD tapered dosage was related to SH-positivity which might be linked to persistent and undetectable chronic inflammation.

**References:**

[1] Esmann S, et al. *Br J Dermatol.* 2010 Jul;163(1):102–6.

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**FRI0449 ANALYSIS OF THE CANADIAN ADALIMUMAB POST-MARKETING OBSERVATIONAL EPIDEMIOLOGICAL STUDY ASSESSING EFFECTIVENESS IN ANKYLOSING SPONDYLITIS (COMPLETE-AS): ASSOCIATION BETWEEN BASELINE EXTRA ARTICULAR MANIFESTATIONS AND PATIENT-REPORTED OUTCOMES**

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**Background:** Ankylosing spondylitis (AS) is an immune mediated inflammatory disease. Although characterized by axial and peripheral joint manifestations, extra articular manifestations (EAMs) are a common clinical feature. EAMs have been found to negatively impact health outcomes including quality of life and work capacity.

**Objectives:** The aim of this analysis was to describe the prevalence of EAMs at baseline and assess their association with patient-reported outcomes (PROs) in a Canadian routine clinical care setting.

**Methods:** COMPLETE-AS is an ongoing observational study expected to enroll 1120 AS patients from 60–80 sites across Canada. All patients enrolled between June/2011 - October/2015 were included in this analysis. Eligible patients are anti-TNF $\alpha$  naïve adults, with active AS as per the judgment of the treating physician, who require change in current AS treatment. Baseline disease parameters assessed were EAMs (collected from medical chart, physician assessment or patient report), disease activity (BASDAI) and functional status (BASFI); baseline PROs assessed were related to mental health (BDI-II), work limitations (WLQ), and quality of life (QoL; SF-36 Physical (PCS) and Mental (MCS) component summaries). Multivariate linear regression models adjusting for baseline BASDAI and BASFI assessed the impact of EAMs on PROs.

**Results:** A total of 569 patients were included in the current analysis. Mean (SD) age and duration of disease was 43.3 (13.4) and 5.9 (9.8) years, respectively. The majority of patients enrolled were male (57.1%), Caucasian (86.1%), HLA B27<sup>+</sup> (67.0%), and RF<sup>-</sup> (93.7%). The most common baseline EAM reported was enthesitis (15.3%), followed by psoriasis (13.0%), inflammatory bowel disease (IBD; 9.1%), and uveitis (3.2%). EAM combination 1 (EAM1: all EAMs) and EAM combination 2 (EAM2: excluding psoriasis), was reported by 33.2%, and 23.7% of patients, respectively.

Regression analysis adjusting for baseline BASDAI and BASFI, found enthesitis, EAM1, and EAM2 to be significant negative predictors of SF-36 PCS scores ( $p < 0.05$ ). Individual EMAs were not found to impact PROs, except for uveitis, found to be a negative predictor of SF-36 PCS scores for which a statistical trend was identified ( $p < 0.15$ ). No association between EAMs and SF-36 MCS, BD-II or WLQ scores were found.

**Conclusions:** In a Canadian routine clinical care setting, a substantial proportion of AS patients requiring a change in treatment report EAMs. Patients with EAMs were found to have significant reduction in baseline QoL specifically related to physical functioning.

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**FRI0450 COMMONALITIES AND DIFFERENCES IN DATA COLLECTION ACROSS EUROPEAN SPONDYLOARTHRITIS REGISTRIES**

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**Background:** High quality data from prospective, real life patients with spondy-