survival for bDMARD naïve vs. non-naïve patients was similar for all diagnoses (RA, $p=0.15$; PsA, $p=0.23$; ax-SpA $p=0.71$), with trend towards better drug survival in bDMARD naïve RA and PsA patients (figure). 4 year drug survival in bDMARD naïve/non-naïve patients were: RA, 54/48%; PsA, 47/43%; ax-SpA, 48/46%, respectively. Subgroup analyses of patients with and without concomitant sDMARDs showed similar findings. A trend was seen towards better 3 month responses in bDMARD naïve vs. non-naïve patients, with statistically significant better responses for DAS28 in PsA and BASDAI and ASDAS in ax-SpA (table 1).

Conclusions: Golimumab drug survival was similar in bDMARD naïve vs. non-naïve RA, PsA and ax-SpA patients. A trend was seen towards better responses for bDMARD naïve patients. Identified predictors for golimumab drug discontinuation was female gender and no concomitant sDMARDs in PsA and female gender in ax-SpA.

Disclosure of Interest: B. Michelsen Consultant for: Novartis, J. Sexton: None declared, T. Kvien Grant/research support from: AbbVie, BMS, MSD, Pfizer, Roche and UCB, Consultant for: AbbVie, Biogen, BMS, Boehringer Ingelheim, Celgene, Celltrion, Eli Lilly, Epirus, Hospira, Merck-Serono, MSD, Mundipharma, Novartis, Otkal, Orion Pharma, Hospira/Pfizer, Roche, Sandoz and UCB

DOI: 10.1136/annrheumdis-2018-eular.1885

SAT0265

THE RESPONSE TO TNF-BLOCKERS TREATMENT OF SPA PATIENTS IS INFLUENCED BY THE INTERPLAY BETWEEN HLA-B27 AND GUT MICROBIOTA COMPOSITION AT BASELINE

M. Vallier¹, M. Chamailard¹, S. Ferreira², S. Menegatti³, E. Bianchi³, L. Rogge³, M. Dougados^{4,5}, C. Miceli-Richard^{3,4}. ¹NLRH, Institut Pasteur; ²Genoscreen, Lille; ³Immunoregulation Unit 25, Institut Pasteur; ⁴Service de Rhumatologie, Hôpital Cochin; ⁵Inserm U1153, Clinical Epidemiology and Biostatistics, PRES Sorbonne Paris-Cité, Paris, France

Background: The response to TNF-blockers in axial spondyloarthritis (AxSpA) is at least partially influenced by HLA-B27 through a still poorly understood mechanism.

Objectives: Given that HLA-B27 regulates the gut microbiota composition in rats^{1,2}, we seek to evaluate the predictive value of the gut microbiota composition in AxSpA patients on their responsiveness to TNF-blockers.

Methods: A total of 58 patients was monocentrically recruited between October 2014 and May 2015. At baseline, these patients had an active disease despite NSAIDs intake and were eligible for treatment with a TNF-blocker, while having no history of inflammatory bowel disease (IBD). The mean BASDAI ($\pm$ SD) was 45.6 ± 21.4 ; ASDAS 2.8 ± 0.9 and CRP 9.7 ± 11.4 mg/L. Among these patients, 56 fulfilled the ASAS classification criteria (imaging arm) with sacro-iliitis on X-rays ($n=37$) or objective signs of inflammation on MRI ($n=48$). Two patients fulfilled the clinical arm. These patients were not subjected to antibiotics within 3 months before stool sample collection. Bacterial 16S rRNA gene sequencing of the V3-V4 region was performed on stools samples before and 3 months after TNF-blocker

treatment. Beta diversity metrics were calculated on the abundance of operational taxonomic units (OTU) after their taxonomic assignment on quality-filtered sequences.

Results: Principal component analysis (PCA) ordination of Bray-Curtis similarity revealed that current smoking (compared with never or ever smokers) and HLA-B27 genotype were significantly associated with the overall composition of the microbiota at baseline. Meanwhile, the abundance of eleven bacterial OTUs was influenced by HLA-B27 genotype at baseline but not after 3 month of treatment. In contrast, we identified a bacterial signature that was linked to the smoking behaviour independently of TNF-blocker treatment, whereas the BASDAI and ASDAS indices were significantly associated to the general composition of the gut microbiota after the 3 month treatment. In line with a previous report³, the abundance of *Ruminococcus gnavus* was not associated with disease activity in the absence of IBD. Interestingly, the abundance of 5 and 7 bacterial OTUs at baseline was associated with the response to TNF-blockers assessed by BASDAI and ASDAS, respectively. Among these candidates, the abundance of one bacterial OTUs belonging to the *Clostridiales* order was associated with a better response to the treatment and with the HLA-B27 genotype.

Conclusions: Anti-TNF treatment was found to modulate the HLA-B27-induced variations of the intestinal microbiota of AxSpA patients. Moreover, the abundance of a subset of OTUs at baseline was found to predict the responsiveness to TNF-blockers. Further functional studies will be conducted to assess how these taxa can be use as predictors of the treatment outcome.

REFERENCES:

- [1] Gill, et al. Effects of HLA-B27 on Gut Microbiota in Experimental Spondyloarthritis Implicate an Ecological Model of Dysbiosis. *Arthritis Rheumatol* 2017.
- [2] Lin, et al. HLA-B27 and human β 2-microglobulin affect the gut microbiota of transgenic rats. *PLoS One* 2014.
- [3] Breban, et al. Faecal microbiota study reveals specific dysbiosis in spondyloarthritis. *Ann Rheum Dis* 2017.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5208

SAT0266

USE OF CONVENTIONAL SYNTHETIC DMARDS AND BIOLOGICAL DMARDS IN PATIENTS WITH ENTEROPATHIC SPONDYLOARTHRITIS: A COMBINED GASTRO-RHEUMATOLOGICAL APPROACH

M.S. Chimenti¹, P. Conigliaro¹, P. Triggianese¹, C. Canofari¹, F. Cedola¹, S. Onali¹, E. Calabrese¹, C. Petruzzello¹, A. Ruffa¹, G. Monteleone², L. Biancone², R. Perricone¹. ¹Department of system medicine, Rheumatology, Allergy and Clinical Immunology; ²Department of systems medicine, Unit of Gastroenterology, University of Rome Tor Vergata, Roma, Italy

Background: Enteropathic spondyloarthritis (eSpA) is a chronic autoimmune disease associated with inflammatory bowel disease (IBD) that is poorly diagnosed and managed.

Objectives: To assess the diagnostic and therapeutic effect of a combined gastro-rheumatological approach in eSpA patients.

Methods: IBD-patients with joint pain referred to a dedicated rheumatologist by gastroenterologist were enrolled. Clinical and biochemical variables, SpA and intestinal disease activity measures, and treatment (biologic; bDMARDs and conventional synthetic; csDMARDs) were recorded at baseline, 3, 6, 12 and 24 months. The association between treatment on demographic and clinical characteristics was evaluated by logistic regression.

Results: From a total of 229 IBD patients, 147 (64.2%) were diagnosed with eSpA; 96 (65.3%) showing peripheral involvement and 51 (34.7%) with axial involvement. The majority (67.3%) of eSpA patients were female ($n=99$), median age and disease duration of 46 and 14.6 years. bDMARD treatment increased over the follow-up period (baseline-24 months: 32.6% $\rightarrow$ 60%; AOR:3.45, 95% CI: 1.93–6.2, $p<0.001$), however, their use was less frequent in elderly patients (AOR: 0.73, 95% CI: 0.56–0.96, $p=0.023$), in ulcerative colitis patients (AOR:0.43, 95% CI:0.2–0.94, $p=0.034$) and in patients with peripheral involvement (AOR:0.53, 95% CI:0.3–1.04, $p=0.067$). csDMARD use was increased in patients with peripheral involvement (AOR: 4.65, 95% CI:2.09–10.33, $p<0.001$) and in patient with ulcerative colitis (AOR:2.30, 95% CI:1.13–4.67, $p=0.021$) (figure 1). CRP, ESR, ASDAS-ESR levels and BASFI were significantly decreased over the follow-up period whereas pMayo score, BASDAI and HAQ-S were unchanged (figure 2).