Objectives: The aim of our study was to evaluate the socio-professional impact of RA and AS.

Methods: Using the Biological National Registry (BINAR) data, which includes ten tunisian rheumatology centers, we identified patients ≥ 18 years with AS and RA according to the ACR and EULAR 2010 criteria (RA) and ASAS 2009 (AS), receiving biotherapy for less than two years.

Results: 298 patients were included in the study. The percentage of patients with RA was 58.7 % and those with AS 41.3%. The sex ratio was 0.6. The average age of the onset of the disease was 49.1 years $\pm$ 14.1 years [18–79]. For marital status, 72% were married, single (25%), widowed (2.6%) and divorced (0.4%). 22.4% of patients were illiterate, 32.7 % (primary), 28.3% (secondary) and 16.6% had an university level. For the RA population, a high disease activity (DAS28-ESR > 5.1) was detected in 36% of patients, an erosive arthritis in 73.1% and 7.2% had a coxitis. In the AS group, an elevate BASDAI (BASDAI ≥ 4) was detected in 56.9% of patients and 39% had coxitis. All patients have received Biological therapy concomitant with corticosteroids (59.1%), methotrexate (42.6%), salazopirine (20.8%) and leflunomide (4.7%). 54% of patients had a comorbidity, of which 1.7% was depression. More than half of our patients (54.3%) were unemployed, 40 % were professionally active, and 5.7% were retired due to the rheumatic condition. Absence from work was observed in 15.1% of cases with a total duration exceeding three months in 55.5% of cases. 37.9 % of patients were physically active: regularly (9.8%), irregularly (28.1%) and (62.1%) were sedentary. For the functional impact, HAQ score was 1.31 ± 0.7 for RA and BASFI was 5.2 ± 4.8 for AS. The working abandonment is significantly associated to: marital status ($p=0.039$), low level of education ($p=0.04$), depression ($p<0.001$), high activity of AS ($p=0.004$) and BASFI > 4 ($p=0.001$).

Conclusion: RA or AS requiring biotherapy have a high socio-economic impact and are responsible for absenteeism at work and even for early working abandonment. Early therapeutic management and a global assessment are essential in order to improve quality of life and working conditions. Longitudinal studies are needed to assess the effect of biological therapy on the socio-professional impact of these chronic inflammatory rheumatic disease.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.4884

AB0183

EARLY RA PATIENTS SEEN IN PRACTICE WHO HAVE CO-EXISTENT NON-ARTICULAR PAIN HAVE SIGNIFICANT WORSENING OF PROMIS® 29 DOMAIN SCORES. RESULTS FROM THE CATCH US STUDY

V. Bykerk¹, C. Benson¹, G. Vitone¹, A. Tirpack¹, S. J. Bartlett^{2,3}, C. Bingham³.

¹Hospital for Special Surgery, New York, United States of America; ²McGill University, Montreal, Canada; ³Johns Hopkins University, Baltimore, United States of America

Background: Non-articular pain (NAP) can co-exist with synovitis in RA. Its presence is associated with higher pain and worse function per legacy patient reported outcomes (PROs) both of concern to people with RA. It is not known if the presence of NAP significantly changes PROMIS 29 health domains.

Objectives: To determine if co-existing NAP (both regional or widespread pain) is associated with important differences in PROMIS 29 domain scores for symptoms and impacts.

Methods: Patients (pts) with early RA, were recruited from two practice settings in the Consortium of early arthritis cohorts, USA (CATCH-US) (New York and Baltimore) between Jan 2015-Dec 2019 (n=96). Data were from baseline (bl) visits; pts must have completed a body pain diagram (BPD) (CHOIR Bodymap®) and the PROMIS-29V.1, and provided legacy PRO and clinical measures. Pts were grouped as i) no-NAP and ii) NAP based on presence of pain in non-articular regions (1-3 regions - regional, 4-5 -widespread). PROMIS 29 domain scores were compared between groups, as were related legacy PROs and clinical outcomes routinely used to assess disease activity. Data are descriptive; continuous variables were compared using t-tests.

Results: Pts (n=96) had a mean age(sd) of 47.9 (14.9), 83% female, 67% white, 13% smokers, 21% obese, 82% seropositive, 51% mod/high CDAI, symptom duration 7.3 (5.4 months) and a comorbidity index (RDCI) of 0.7 (1.0). At study entry most had started RA treatments: 32% csDMARD with MTX, 22% non-MTX csDMARDs, 40% oral steroids, 13% biologics or JAKi's; 28% were treatment naive. Patients reporting NAP were more often white, smokers, obese, but did not differ otherwise. MDSJC28 was higher, mostly effected small joints, and affected regions on BPD were excluded for NAP classification. All but one (anxiety) of PROMIS 29 domain scores differed significantly between groups; similar differences were seen in legacy PRO scores and in some clinical outcomes (Table). Most clinical measures did not differ between groups.

Conclusion: In this cohort of early RA patients almost 1/3 with co-existent NAP unrelated to synovitis had significantly worse legacy PRO and PROMIS scores. These data provide rationale for using generic PROMIS measures as they identify symptoms and impacts, that may be unrelated to synovitis, providing information that could improve patient-oriented care in clinical practice. Clinicians

should assess for and treat NAP as part of target-based care. Reasons for (injury, mechanical, disuse) and best treatment of NAP require further research.

Table. PROMIS Scores differ between patients with and without NAP as do Legacy PROs in real world early RA patients.

	NAP Any Pattern (n=26)	No Co-existing NAP (n=70)	p-value
Baseline Characteristics			
Age	50.2 (14.1)	47.1 (15.1)	0.356
Female sex	84%	81%	..
Current Smoker	19%	5%	..
RF+ / ACPA+	57% / 62%	62% / 76 %	..
BMI	27.2 (6.7)	26.1 (6.4)	0.236
RDCI (0-9)	0.68 (1.03)	0.69 (0.97)	0.963
Symptom Duration, mos	7.4 (1.3)	7.4 (0.6)	0.979
Legacy PROs and Clinical Measures			
ESR mm/hr	22.5 (6.8)	16.7 (2.3)	0.425
CRP (mg/dl)	1.03 (0.260)	1.02 (0.19)	0.965
Pain (0-10)	4.5(2.4)	3.0 (2.5)	0.009
Pt global (0-10)	4.5 (2.6)	2.6 (2.3)	0.002
Stiffness (0-10)	5.1(2.5)	3.07 (2.90)	0.002
MDHAQ (0-3)	2.2 (1.7)	0.9 (1.2)	0.001
RAPID 3 (0-10)	2.8 (2.3)	1.8 (1.8)	0.036
ESR mm/hr	22.5 (6.8)	16.7 (2.3)	0.425
CRP (mg/dl)	1.03 (0.26)	1.02 (0.19)	0.965
MDTJC 28	4.1 (5.4)	2.9 (3.8)	0.290
MDSJC 28	6.9 (6.3)	3.4 (3.9)	0.013
MD Global (0-10)	4.1 (2.3)	3.4 (2.0)	0.183
DAS28 ESR	4.14 (2.25)	3.14 (1.39)	0.123
CDAI	19.6 (13.6)	12.2 (9.5)	0.015
PROMIS Scores			
Function	44.03 (8.79)	49.47 (7.02)	0.007
Anxiety	53.2 (10.5)	50.4 (9.4)	0.238
Depression	52.6 (9.2)	47.1 (8.0)	0.012
Sleep Disturbance	55.3 (8.4)	50.3 (8.4)	0.013
Fatigue	58.3 (7.9)	49.3 (9.5)	<.001
Social Participation	43.7 (9.9)	50.7 (10.4)	0.004
Pain Interference	60.2 (8.0)	52.7 (8.9)	0.007

Data are mean(sd) unless noted

Disclosure of Interests: Vivian Bykerk: None declared, Caroline Benson: None declared, Gregory Vitone: None declared, Aidan Tirpack: None declared, Susan J. Bartlett Consultant of: Pfizer, UCB, Lilly, Novartis, Merck, Janssen, Abbvie, Speakers bureau: Pfizer, UCB, Lilly, Novartis, Merck, Janssen, Abbvie, Clifton Bingham Grant/ research support from: Bristol-Myers Squibb, Consultant of: Bristol-Myers Squibb
DOI: 10.1136/annrheumdis-2020-eular.3749

AB0184

ADHERENCE TO TREATMENT IN AN ITALIAN COHORT OF PATIENTS AFFECTED BY CHRONIC INFLAMMATORY ARTHROPATHIES TREATED WITH BIOLOGIC AGENTS

M. Colaci¹, M. L. Aprile², Y. Dal Bosco², C. Schinocca². ¹University of Catania, Clinical and Experimental Medicine, Catania, Italy; ²Ospedale Cannizzaro, Catania, Italy

Background: The lack of adherence to treatment in patients affected by chronic diseases, such as rheumatic diseases, remains a relevant issue. Indeed, "inefficacy" or "intolerance" to therapies prescribed could hide a scarce compliance of a considerable percentage of patients.

Objectives: We aimed to evaluate the adherence to treatment in a series of patients affected by chronic inflammatory arthropathies treated with biologic agents.

Methods: We recruited 175 consecutive patients (M/F: 56/120; mean age 52.6 $\pm$ 12.3 years) affected by rheumatoid arthritis (98), psoriatic arthropathy (45) or ankylosing spondylitis (32) treated with subcutaneous biologic agents. All patients completed the Morisky Medication Adherence Scales (MMAS-8)¹, in order to estimate their adherence to therapy. Moreover, we achieved from all cases the Patient Global Assessment (PGA), the Visual Analogue Scale (VAS) for articular pain, the Health Assessment Questionnaire (HAQ), and the report of eventual adverse events.

Results: Considering MMAS-8, 23/175 (13.1%) patients were low adherent to treatment (score < 6), and 59/175 (33.7%) presented medium-grade adherence (score 6-7).

Adherence to treatments tended to be higher in males (mean MMAS-8 7.3 $\pm$ 1.1 vs. 6.9 $\pm$ 1.6; $p=0.073$), while it was not associated with age, education level, type of articular disease, presence of adverse events, or treatment with the type of traditional or biologic DMARDs.

Higher mean levels of PGA (51.3 vs. 38.8; $p=0.012$), VAS (52.6 vs. 44.3; $p=0.08$), and HAQ (0.9 vs. 0.5; $p=0.001$) was reported in low-adherent patients compared with full adherent subjects.

Conclusion: Our study confirmed that the percentage of patients showing low adherence to therapy is relevant. Moreover, the association of lower adherence to treatments with higher values of the subjective clinimetric indexes suggests to pay attention to the apparent ineffectiveness or loss of efficacy of therapy.

References:

[1] Morisky DE et al. J Clin Hypertens 2008; 10:348–354.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.6069

AB0185 PROSPECTIVE PROFILE OF URINE METABOLOME IN RHEUMATOID ARTHRITIS

M. De Oliveira¹, P. V. Alabarse², M. Farinon¹, R. Cavaleiro Do Espírito Santo¹, R. Xavier¹ on behalf of Department of Rheumatology - Clinicas Hospital of Porto Alegre, Brazil - Federal University of Rio Grande do Sul. ¹Federal University of Rio Grande do Sul, Porto Alegre, Brazil; ²University of San Diego, San Diego, United States of America

Background: Rheumatoid arthritis (RA) is a chronic inflammatory disease characterized by increased mortality and associated with metabolic disorders. Since the metabolomic profile is known to vary in response to different inflammatory conditions, metabolome analysis could substantially improve diagnosis and prognosis of RA.

Objectives: To analyze the urine metabolome profile in RA patients and correlate it with disease activity changes over 12 months

Methods: Seventy-nine RA patients, according to ACR/EULAR 2010 classification criteria, between 40 and 70 years old, were recruited and followed for 12 months. Metabolome analysis was performed by Nuclear Magnetic Resonance spectroscopy (NMR), resulting in the identification of 93 metabolites in urine collected at the baseline and after 12 months. Frequency analysis, Pearson Correlation and Multivariate data analysis with orthogonal projections to latent structures (OPLS) method were performed and a statistical significance was considered as $p < 0.05$.

Results: The study population was characterized by the majority of women (86.7%), mean age of 56 years old, around 80% with positive anti-CCP or Rheumatoid Factor. During the one year of follow-up, there was no substantial variation in the DAS28 measurement (baseline: 3.8, after 12 months: 4.0). There was no significant correlation between the metabolome pattern and DAS28 score ($p > 0.05$) over time. However, multivariate analysis (OPLS-DA) demonstrated an adequate differentiation of the population with 0.92 of accuracy (Q2: 0.72 and R2: 0.89). There was a significant increase of L-cysteine, choline, L-Phenylalanine, creatine, L-histidine, oxalacetic acid and xanthine, and a decrease of L-threonine, taurine, butyric and gluconic acid ($p < 0.05$) during the follow-up, metabolites that are involved in the skeletal muscle metabolism.

Figure 9: OPLS-DA score plot of all metabolite features.

Figure 12: Significant features identified by Random Forest. The features are ranked by the mean decrease in classification accuracy when they are permuted.

Conclusion: The observed biomarkers indicate, as expected, that the RA metabolic profile is associated with inflammation injury and skeletal muscle amino acid metabolism. Correlations with disease activity changes was compromised by the stable disease status during the 12 months. More studies evaluating correlations with skeletal muscle function and mass are underway.

Acknowledgments: Disclosure of interest: Marianne Oliveira: None declared, Rafaela Santo: None declared, Mirian Farinon: None declared, Ricardo Xavier Consultant of: Abbvie, Pfizer, Novartis, Janssen, Lilly, Roche

Disclosure of Interests: Marianne de Oliveira: None declared, Paulo Vinicius Alabarse: None declared, Mirian Farinon: None declared, Rafaela Cavaleiro do Espírito Santo: None declared, Ricardo Xavier Consultant of: AbbVie, Pfizer, Novartis, Janssen, Eli Lilly, Roche

DOI: 10.1136/annrheumdis-2020-eular.4481

AB0186 NO PREDICTIVE VALUE OF ADALIMUMAB SERUM LEVELS AND ANTI-ADALIMUMAB ANTIBODIES AT TIME OF ADALIMUMAB FAILURE FOR PREDICTION OF RESPONSE TO THE NEXT bDMARD

N. Den Broeder¹, E. Ulijn¹, M. Wientjes¹, N. Van Herwaarden^{1,2}, I. Meek², L. Tweehuysen¹, A. Van der Maas¹, B. Van den Bemt^{3,4}, A. Den Broeder¹. ¹Sint Maartenskliniek, Rheumatology, Nijmegen, Netherlands; ²Radboudumc, Rheumatology, Nijmegen, Netherlands; ³Sint Maartenskliniek, Pharmacy, Nijmegen, Netherlands; ⁴Radboudumc, Pharmacy, Nijmegen, Netherlands

Background: After adalimumab treatment failure, TNFi and non-TNFi bDMARDs are equally viable as subsequent treatment in RA. However, preliminary data suggest that anti-drug antibodies (ADA) and adalimumab serum levels (ADL) predict response to a subsequent TNFi [1].

Objectives: To assess the association of presence of ADA and/or low ADL with response to a subsequent TNFi bDMARD or non-TNFi bDMARD.

Methods: A retrospective cohort study to assess the predictive value of ADA and ADL for response to a subsequent TNFi or non-TNFi bDMARD in RA patients. All RA patients who received adalimumab (standard dose, ≥ 3 months) and subsequently switched to another TNFi or a non-TNFi (rituximab, tocilizumab, abatacept) in the Sint Maartenskliniek or Radboud University Medical Centre between January 2012 and January 2018 were considered for inclusion in the current study. Further inclusion criteria were the availability of (random timed) serum samples between ≥ 8 weeks after start, and ≤ 2 weeks (for ADL) or ≤ 12 weeks (for ADA) after discontinuation of adalimumab, and clinical outcome measurements (DAS28-CRP/BSE) between 3-6 months after treatment switch. Serum samples were derived from a period of biobanking at every visit of RA patients and an observational cohort study including consecutive bDMARD starters.

The primary outcome of this study was the association between ADL or ADA and EULAR good response (DAS28-CRP/ESR based) to the subsequent bDMARD. When DAS28-based response was unreliable due to glucocorticoid use, or low baseline DAS28 (if switching due to adverse effects), judgement of the rheumatologist was used.

A drug-tolerant competitive enzyme-linked immunosorbent assay (Sanquin, the Netherlands) was used to quantify ADA, and thereafter, ADL was determined via an ELISA. Reference values were ≥ 5 $\mu\text{g/ml}$ for ADL and < 12 AU/ml for ADA [2,3]. Treatment was blinded for ADL and ADA levels.