Clinical pathway indicator	*Overall Adjusted OR(95%CI)*	*Abortion Adjusted OR(95%CI*
Blood chemistry tests	0.99 (0.47-2.11)	0.78 (0.36-1.70)
Imaging	1.09 (0.72-1.65)	1.14 (0.72-1.81)
antiphospholipid antibody tests	**0.56 (0.37-0.85)**	**0.34 (0.20-0.56)**
ANA or anti-ENA	**0.64 (0.42-0.96)**	**0.43 (0.27-0.68)**
No exposure or wash out of MTX/LEF	**0.52 (0.31-0.86)**	**0.44 (0.25-0.75)**
No exposure to biological drugs	*Not estimable*	*Not estimable*
Rheumatological follow-up in outpatient visits	0.85 (0.56-1.28)	0.65 (0.40-1.04)
Diagnostic pathway	1.05 (0.46-2.38)	0.84 (0.36-1.98)
Therapeutic pathway	**0.48 (0.29-0.80)**	**0.44 (0.25-0.75)**
Follow-up.	0.85 (0.56-1.28)	0.65 (0.40-1.04)
Ideal pathway	**0.59 (0.37-0.95)**	**0.38 (0.21-0.67)**
General population	*Reference*	*Reference*
Ideal pathway	0.89 (0.57-1.37)	0.70 (0.40-1.23)
No ideal pathway	**1.48 (1.12-1.95)**	**1.81(1.31-2.49)**

Conclusions: The optimal management of pregnancy (stratification of pre-conceptional obstetric risk, modulation of therapy) in women with RA is associated with a reduced risk of unfavourable pregnancy outcome, bringing back that risk to that expected for a general obstetric control population.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5682

SAT0702 INFLUENCE OF OBESITY AND GENDER ON DRUG EFFECTIVENESS IN RHEUMATOID ARTHRITIS DEPENDS ON THE OUTCOME CONSIDERED

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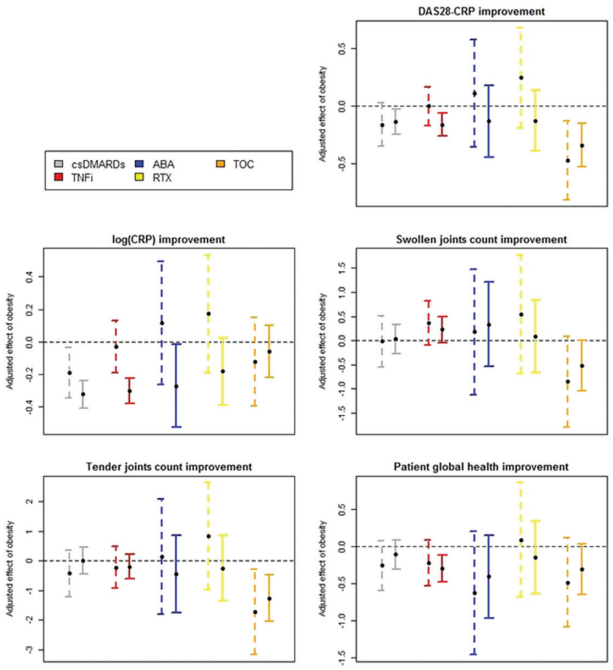
Background: While effectiveness of TNF inhibitors (TNFi) and, to some extent, tocilizumab (TOC), has been shown to be affected by obesity in patients with rheumatoid arthritis (RA), no such effect has been found for abatacept (ABA) and rituximab (RTX). Also, it remains unresolved whether gender is an effect modifier for obesity, e.g. due to different body fat distributions in men and women.

Objectives: Assess whether obesity affects drug effectiveness of common DMARDs, taking into account potential differences between sexes. As measures for effectiveness, the degree of improvement regarding DAS28-CRP as well as its components after 6 months of treatment were considered.

Methods: Data of 8,623 RA patients included since 2009 in the German observational cohort study RABBIT were analysed. Patients had to have a BMI ≥18.5 and at least 6 months of follow-up. Multiple imputation of missing values in outcomes was performed. The influence of obesity (BMI ≥30) on drug effectiveness was investigated by multiple linear regression, adjusting for age, baseline value of the outcome of interest, disease duration, prior bDMARD failure, glucocorticoid therapy, number of comorbidities, joint erosions, autoantibody status, and smoking habits.

Results: At baseline, obese patients were comparable to others in age (both mean 58 years) and gender (women: 75% vs. 74%). They were less likely to be seropositive (66% vs. 75%), had less erosions (40% vs. 52%) but more often ≥3 comorbidities (43% vs. 30%). With the exception of infliximab, around 90% of patients or more received the recommended drug dosage regardless of their weight (assuming a tolerance interval for norm in case of weight-dependent infliximab and tocilizumab dosages). For women treated with TNFi or csDMARDs as well as for patients treated with TOC, obesity had a negative influence on the improvement in DAS28-CRP after 6 months of treatment (figure 1). With the exception of patients treated with TOC, this influence seemed to be caused mostly by inflammation, while for joint swelling or pain no associations were observed. Men and women treated with TNFi differed significantly regarding the effect of obesity on the improvement of log(CRP) values.



Abstract SAT0702 – Figure 1. Influence of obesity on the RA disease course regarding the improvement in DAS28-CRP and its components after 6 months of treatment, as assessed by multiple linear regression. Shown are point estimates and 95% confidence intervals for obesity effects, separately for men (left, dashed line) and women (right, solid line) in five treatment groups.

Conclusions: The influence of obesity on drug effectiveness depends on the considered outcome and, to some extent, on gender. It may therefore be worthwhile to assess it separately for men and women.

Acknowledgements: This abstract is part of the METARTHROS cooperation funded by the German Federal Ministry of Education and Research (01EC1407D).

Disclosure of Interest: M. Schäfer: None declared, Y. Meissner Speakers bureau: Pfizer, J. Kekow: None declared, S. Berger: None declared, S. Remstedt Speakers bureau: AbbVie, Biogen, BMS, Celgene, Chugai, Hexal, Janssen Biologics, MSD, Novartis, Pfizer, Roche, Sanofi-Aventis, UCB, A. Strangfeld Speakers bureau: AbbVie, BMS, Lilly, MSD, Pfizer, Roche, UCB, J. Listing: None declared, A. Zink Speakers bureau: BMS, Lilly, Pfizer, Roche, UCB

DOI: 10.1136/annrheumdis-2018-eular.3738

SAT0703 RACIAL DISPARITIES IN GOUT AND HYPERURICEMIA – A UNITED STATES GENERAL POPULATION STUDY

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Background: Although African-Americans (AAs) have a higher prevalence of risk factors for gout and hyperuricemia (e.g., hypertension, obesity, and chronic kidney disease [CKD]) than Whites, data on their disease burden of gout and hyperuricemia remains scarce.

Objectives: To examine potential racial/ethnic disparities in the prevalence of gout and hyperuricemia, using a nationally-representative sample of United States (US) adults over the past 10 years (The National Health and Nutrition Examination Survey [NHANES] 2007–16).

Methods: Using data from 26 332 participants aged ≥20 years (13 539 females and 12 793 males) from NHANES 2007–16, we calculated the age-standardised prevalence of gout and hyperuricemia by race/ethnicity. Gout was defined by report of a diagnosis by a health professional, and hyperuricemia as a serum urate >7.0 mg/dL (0.42 mmol/L) from participants' blood samples. Logistic regression was used to adjust for covariates, while taking into account clusters and strata of the complex survey design of NHANES.

Results: The age-standardised prevalence of gout was 3.7% for Whites and 4.7% for AAs, with the age-standardised prevalence of hyperuricemia being 12.7% and 14.9% for Whites and AAs, respectively. Compared to Whites, AAs had a 65% higher odds of gout among females (age-adjusted OR, 1.65; 95% CI, 1.14 to 2.38) and a 31% higher odds of gout among males (age-adjusted OR,

1.31; 95% CI, 1.05 to 1.63). Further adjustment by body-mass index (BMI) attenuated these associations to non-significance for both sexes (table 1). AA females had a higher odds of hyperuricemia than White females (age-adjusted OR, 2.17; 95% CI, 1.72 to 2.73), but not males (age-adjusted OR, 1.08; 95% CI, 0.95 to 1.22; *P* for interaction=0.002) (table 1). Among females, this association attenuated after further adjustment for BMI, hypertension, CKD, type 2 diabetes mellitus, household income, and education, but remained significant (adjusted OR, 1.52; 95% CI, 1.19 to 1.95).

Abstract SAT0703 – Table 1. ORs of Gout and Hyperuricemia According Race/Ethnicity, NHANES 2007–16

	Gout		Hyperuricemia	
	Age-adjusted OR (95% CI)	Age and BMI-adjusted OR (95% CI)	Age-adjusted OR (95% CI)	Age and BMI-adjusted OR (95% CI)
Female				
White	1.00 (Referent)	1.00 (Referent)	1.00 (Referent)	1.00 (Referent)
African American	1.65 (1.14–2.38)	1.33 (0.92–1.92)	2.17 (1.72–2.73)	1.62 (1.27–2.05)
Male				
White	1.00 (Referent)	1.00 (Referent)	1.00 (Referent)	1.00 (Referent)
African American	1.31 (1.05–1.63)	1.24 (1.00–1.53)	1.08 (0.95–1.22)	1.02 (0.89–1.17)

Conclusions: These nationally-representative data indicate that AAs have a larger disease burden of gout and hyperuricemia than Whites, particularly among women. This burden appears to be at least partly due to a higher prevalence of risk factors for hyperuricemia in AAs.[1]

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Disclosure of Interest: M. Chen-Xu: None declared, C. Yokose: None declared, H. Choi Grant/research support from: Ironwood and Ardea/AstraZeneca, Consultant for: Horizon and Selecta

DOI: 10.1136/annrheumdis-2018-eular.6059

SAT0704 COLLECTION OF ANTI-RHEUMATIC MEDICATION DATA FROM BOTH PATIENTS AND RHEUMATOLOGISTS SHOWS STRONG AGREEMENT IN A REAL WORLD CLINICAL COHORT: RESULTS FROM THE ONTARIO BEST PRACTICES RESEARCH INITIATIVE (OBRI)

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Background: Collection of Anti-Rheumatic Medication (ARM) information from both patients and rheumatologists is considered a strength for Rheumatoid Arthritis (RA) registries and cohorts. However, it is important to assess the agreement between these two data sources.

Objectives: We aimed to examine the agreement of ARM use, their administration routes, and start and stop dates between self-reports and rheumatologist reports in the Ontario Best Practices Research Initiative (OBRI).

Methods: Adult Patients enrolled in the OBRI who consented to both patient interviews and rheumatologist evaluations were included. Patients in the OBRI are interviewed every six months, while rheumatologist assessments are conducted as per routine care. For this analysis, we included patients who enrolled in OBRI on or after Sep 1 st 2010 and compared ARM use reports where rheumatologist visits and interviews occurred within 60 days of each other. ARM included conventional synthetic Disease-Modifying Antirheumatic Drugs (csDMARDs) and biologic DMARDs (bDMARDs). Cohens' Kappa statistics of agreement between the two data sources were calculated. Kappa values 0.61–0.80 were considered to represent good and 0.81–1.00 as very good agreement. To examine factors associated with agreement, a multivariate backward stepwise logistic regression was used to model the odds of agreement for ARM use. The agreement and absolute time gap (days) for starts and stops dates between self-reports and rheumatologist reports were also assessed and presented by median and interquartile range (IQR) in a subset analysis.

Results: 2154 patients (78.7% female) were included with a mean (SD) age at OBRI enrolment of 57.8 (12.6) year. Mean (SD) disease parameters were: disease duration: 8.4 years (9.9); DAS28: 4.2 (1.6); physician global: 4.0 (2.5); and health assessment questionnaire (HAQ) disability Index: 1.1 (0.8). For csDMARDs use, the prevalence was 74.2% based on self-reports and 76.6% based on rheumatologist reports. The prevalence of bDMARDs use was approximately 20.0% based on both reports.

Overall agreement for ARM use between self-reports and rheumatologist reports was good. In the regression model, increased HAQ-pain index (OR: 0.66; 95% CI: 0.60–0.73) and physician global (OR: 0.95; 95% CI: 0.92–0.98) were significantly associated with the lower agreement. By contrast, post-secondary education (OR: 1.20; 95% CI: 1.02–1.40), and seeing an academic rheumatologist (OR: 1.47; 95% CI: 1.25–1.73) were significantly associated with the higher agreement between two data sources.

There was a good and very good agreement for reported administration route of bDMARDs and csDMARDs, respectively. The median absolute time gap (IQR) of start dates and stop dates for ARM use reported by two data sources was 7 days 1–27 and 19 days, 5–48 respectively.

Conclusions: The results of this analysis suggest that ARM reports from the two data sources have strong agreement in the OBRI. This agreement is even better for patients who have post-secondary education and are being treated by an academic rheumatologist.

Disclosure of Interest: M. Movahedi Employee of: OBRI, A. Cesta Employee of: OBRI, X. Li Employee of: OBRI, C. Bombardier Grant/research support from: OBRI was funded by peer reviewed grants from CIHR (Canadian Institute for Health Research), Ontario Ministry of Health and Long-Term Care (MOHLTC), Canadian Arthritis Network (CAN) and unrestricted grants from: Abbvie, Amgen, Bristol Myers Squibb, Celgene, Hospira, Janssen, Pfizer, Roche, and UCB, Consultant for: Dr. Bombardier holds a Canada Research Chair in Knowledge Transfer for Musculoskeletal Care and a Pfizer Research Chair in Rheumatology

DOI: 10.1136/annrheumdis-2018-eular.2136

SAT0705 ASSOCIATION BETWEEN FRACTURE SITES IN PATIENTS WITH A HISTORY OF PARENTAL FRACTURE

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Background: Fragility fractures (FF) are fractures due to low energy force. Factors predisposing to FF in the general population include reduced bone mineral density (BMD), and family history of osteoporosis. FF most commonly occur in the vertebrae, proximal femur, and distal radius. Studies have demonstrated increased risk of FF in patients with decreased BMD and parental history of FF, particularly hip fracture.[1,2] Few data exist on the association between sites of fracture in patients with a history of parental fracture, especially whether they co-exist at several sites and if particular factors are associated with discrete sites.

Objectives: We aimed to find the correlation between sites of FF in patients with a history of parental fracture, and identify and examine the clinical association with any clusters of fractures.

Methods: 2094 patients with a history of parental FF and personal history of at least one FF, presenting for BMD estimation from their primary or secondary care practitioner, from 2006–2016, were included. Parameters recorded: height, weight, age at scan, average fat mass, site of fracture(s), smoking, alcohol, corticosteroid use, aromatase inhibitor use, Depo-Provera use, hormone replacement therapy (HRT), rheumatoid arthritis (RA), polymyalgia rheumatica (PMR), breast or prostate cancer, and coeliac disease.

Factor analyses with polychoric correlation matrices were applied to determine association between fracture sites. Any associations with Eigenvalues of more than one were then examined using a logistic model to analyse the effect of the above risk factors.

Results: Fracture sites with Eigenvalue of more than one (tibia/fibula, spine, ribs, pelvis) were compared to sites with least co-variability (humerus, forearm, femur). The two cohorts were significantly different in age; therefore, an age-adjusted model is reported below (table 1). Smoking, HRT, and increased age significantly impacted clustering of fractures in the tibia/fibula, spine, ribs, and pelvis, compared with clustering at the humerus, forearm, and femur.

Abstract SAT0705 – Table 1. Age-adjusted predictors of fracture for tibia/fibula/spine/ribs/pelvis vs. humerus/forearm/femur (* denotes significance)

Variable/Fracture cluster	OR (95% CI)
Corticosteroid	0.878 [0.748–1.031]
Smoking	0.879 [0.779, 0.992] *
Alcohol	0.954 [0.808–1.127]
Rheumatoid arthritis	1.393 [0.928–2.092]
Polymyalgia rheumatica	0.907 [0.465–1.769]
HRT	0.635 [0.420, 0.961] *
Aromatase inhibitors	0.950 [0.772, 1.170]
Breast/prostate cancer	1.489 [0.610–3.636]
Gender	0.804 [0.589–1.096]
Age at scan (years)	1.011 [1.003, 1.019] *
Height (cm)	0.989 [0.978–1.000]
Weight (kg)	0.995 [0.989–1.000]