and were corrected by the addition of a variable integrating the interaction with time.

Table 1. Determinants of 12-month non-persistence (Cox model)

	Hazard Ratio	IC 95%	P-value
SC-TNFis			
GLM	1.000	—	—
CZP	2.707	2.139 3.426	<0.0001
ETA	1.915	1.665 2.203	<0.0001
ADA	1.418	1.286 1.565	<0.0001
Sex			
Male	1.000	—	—
Female	1.377	1.300 1.458	<0.0001
Age	0.995	0.993 0.997	<0.0001
Deprived socio-economic status: Yes vs No	1.543	1.288 1.849	<0.0001
Number of comorbid conditions (per additional condition)	1.150	1.113 1.187	<0.0001
Biotherapy line (per additional line)	1.176	1.124 1.231	<0.0001
DMARD dispensation: Yes vs No	0.943	0.875 1.015	0.1182
Sulfasalazine dispensation: Yes vs No	0.996	0.915 1.084	0.9257
Long term oral steroids: Yes vs No	0.915	0.806 1.039	0.1719
Hospital admission for IRMD	0.883	0.792 0.984	0.0249
Visits to rheumatologist			
0	1.000	—	—
1–4	0.925	0.800 1.070	0.2959
>4	0.958	0.829 1.108	0.5645
Interaction with time			
Interaction biotherapy * time	1.001	1.001 1.001	<0.0001
Interaction socio-economic status * time	0.999	0.998 1.000	0.0132
Interaction hospital admission for IRMD * time	1.001	1.000 1.001	0.0335

Conclusions: Non-persistent patients were more likely female, with deprived socio-economic status, multiple comorbid conditions, and multiple line of biotherapy. Age, hospital admission for IRMD and treatment with GLM (compared to CZP, ETA and ADA) decreased the risk of non-persistence. Further analyses are needed to assess the impact of non-persistence.

Disclosure of Interest: B. Fautrel Grant/research support from: AbbVie, MSD, Pfizer, Consultant for: AbbVie, Biogen, BMS, Celgene, Hospira, Janssen, Lilly, MSD, NORDIC Pharma, Pfizer, Roche, SOBI, UCB, M. Belhassen Employee of: PELyon, C. Hudry Consultant for: ABBVIE, MSD, BMS, PFIZER, ROCHE, CELGENE, NOVARTIS, BIOGEN, UCB, SANDOZ, AMGEN, Employee of: COCHIN Hospital, M.-C. Woronoff: None declared, N. Gouyette Employee of: MSD France, A. Clément Employee of: MSD France, E. Van Ganse Consultant for: PELyon; ALK ABELLO; AstraZeneca; Bayer; BMS; BIF; GSK; IMS; LASER; MSD, F. Tubach: None declared

DOI: 10.1136/annrheumdis-2017-eular.5052

FRI0700 PHYSICAL ACTIVITY DECREASED SIGNIFICANTLY BUT MODERATELY DURING WEEKS WHERE PATIENTS REPORTED FLARES: A 3-MONTH STUDY OF 170 RHEUMATOID ARTHRITIS (RA) OR AXIAL SPONDYLOARTHRITIS (AXSPA) PATIENTS WEARING AN ACTIVITY TRACKER

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Background: RA and axSpA natural history comprises periods of low disease activity and flares. There is much interest in the concept of flares. Studies have indicated flares may alter patient quality of life, however, there are few data linking flares to quantifiable outcomes.

Objectives: The objective was to assess longitudinally the association between patient-reported flares and physical activity assessed objectively using an activity tracker.

Methods: This prospective multi-center observational study (ActConnect) included patients with definite RA (ACR/EULAR criteria) or axSpA (ASAS criteria) owning a smartphone. Physical activity was assessed continuously over 3 months by the number of steps using an activity tracker, and flares were self-assessed weekly using a specific flare question ("has your disease flared up during the last 7 days?") [1] with a categorical response according to: no flare, 1 to 3 days flare, or >3 days flare. The relationship between flares and physical activity for each week (time point) was assessed by linear mixed models adjusted on rheumatic disease, sex, age, obesity, biologics and employment status.

Results: 170/178 patients (91 RA and 79 axSpA patients; 1553 time points)

Abstract FRI0700 – Table 1. Physical activity according to flare status in 170 RA and axSpA patients

	No flare (N=1157 assessments)	Flare (N=396 assessments)	p [†]	Flare ≤3 days (N=304 assessments)	p [‡]	Flare >3 days (N=92 assessments)	p [‡]
Number of steps per day	7197 (±2810)	6688 (±2618)	0.03	6792 (±2597)	0.17	6347 (±2670)	0.02
Range of absolute reduction of steps per day in flare	—	500–3504 ^a	—	931–2794 ^b	—	836–1462 ^c	—
Range of relative reduction of steps per day in flare (%)	—	6.9–48.7 ^a	—	13.5–40.6 ^b	—	12.2–21.3 ^c	—

The mean physical activity levels according to flare status are indicative data from pooled assessments. Results are expressed in mean (±standard deviation). [†]Linear mixed model with flare yes/no as the explanatory variable. [‡]Linear mixed model with no/<3 days/>3 days flares as the explanatory variable. ^aRange considering flare duration from 1 to 7 days. ^bRange considering flare duration from 1 to 3 days. ^cRange considering flare duration from 4 to 7 days.

were analyzed: mean age 45.5±12.4 years, mean disease duration 10.3±8.7 years; 60 (35.3%) were males and 90 (52.9%) received biologics. Disease was well-controlled (mean DAS28: 2.3±1.2; mean BASDAI: 3.3±2.1). Physical activity was moderate (mean steps/day, 7067±2770). Flares were frequent (25.5% of the questionnaires); most (76.8%) were of short duration. Flares, in particular >3 days flares, were independently associated with less weekly physical activity (p=0.02–0.03), leading to a relative decrease of physical activity of 12–21% and an absolute decrease ranging from 836 to 1462 steps/day (Table 1).

Conclusions: Flares were frequent in these low-disease patients, though most flares were of short duration. Flares were related to a moderate decrease in physical activity, confirming objectively the functional impact of patient-reported flares.

References:

[1] VP Bykerk et al, RMD Open, 2016; 2:e000225.doi:10.1136/rmdopen-2015-000225.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.1753

FRI0701 DOES PARITY INFLUENCE JOINT DAMAGE PROGRESSION IN WOMEN WITH RHEUMATOID ARTHRITIS?

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Background: Disease activity and severity of rheumatoid arthritis (RA) appear to be worse in women than in men [1]. The role of parity on disease activity is controversial, since pregnancy is characterized by a lower disease activity, but the postpartum period by an increase in activity [2]. Radiographic joint damage progression represents the cumulative effect of disease activity and allows us to study the long term effect of parity.

Objectives: To study the impact of parity on radiographic progression in women with RA.

Methods: This is an observational cohort study of RA patients included in the Swiss Clinical Quality Management in Rheumatoid Arthritis (SCQM-RA). Patients enrolled are followed-up yearly and have x-rays assessments at regular intervals. Information about female hormonal factors, such as pregnancies, breastfeeding, menstrual cycles and hormonal treatment were retrospectively retrieved using a questionnaire. For this analysis we included women with at least two x-rays and full information on reproductive factors. The primary outcome was the rate of radiographic progression (Ratigen erosion score) and the secondary outcome was functional disability progression (Health Assessment Questionnaire-Disability Index (HAQ-DI)). We compared the rate of progression between parous and nulliparous women using a multilevel regression model for longitudinal data,

General and disease characteristics	Parous n=438	Nulliparous n=288
Age, years, median(IQR)	49 (40–57) ^a	45 (34–57)
Body mass index, kg/m ² , median(IQR)	24 (22–28) ^a	23 (21–27)
Ever smoking, n(%)	281 (64)	163 (57)
Alcohol consumption, n(%)	144 (33)	88 (31)
Disease duration, years, median(IQR)	0.4 (0.1–4.5)	0.4 (0.1–4.7)
ACPA positive, n(%)	294 (67)	201 (70)
Rheumatoid factor, n(%)	295 (67) ^a	217 (75)
DAS 28, median(IQR)	3.8 (2.8–5.0)	4.0 (2.9–5.1)
HAQ-DI, median(IQR)	0.8 (0.3–1.3)	0.6 (0.3–1.3)
Erosion score, %, median (IQR)	2.0 (0.5–4.9)	1.1 (0.1–4.7)
DMARD treatment, n(%)	332 (77)	223 (77)
Biologic treatment, n(%)	48 (11)	37 (13)
Glucocorticoid use, n(%)	120 (27)	72 (25)
Number of pregnancies, median (IQR)	2 (1–3)	—
Ever breastfeeding, n(%)	303 (69)	—

^ap-value <0.05, T-student or Kruskal-Wallis test for continuous variables and Chi-squared or Fisher's exact test for categorical variables. ACPA: anticitrullinated protein antibodies; DAS 28: 28-joint Disease Activity Score ESR; HAQ-DI: Health Assessment Questionnaire–Disability Index; DMARD: disease-modifying antirheumatic drugs.