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.

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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) 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:

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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 (Ratingen 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,

Table 1. Characteristics of women SCQM

General and disease characteristics	Parous n=438	Nulliparous n=288
Age, years, median(IQR)	49 (40-57)*	45 (34-57)
Body mass index, kg/m², median(IQR)	24 (22-28)*	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)*	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)	-

*p-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.

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. [a]Range considering flare duration from 1 to 7 days. [b]Range considering flare duration from 1 to 3 days. [c]Range considering flare duration from 4 to 7 days.

adjusting for potential confounders, such as age, disease duration, DAS 28 and treatment. In a subanalysis we explored if the x-ray progression was more severe during the active parous period, operationally defined as the 10 years following the first pregnancy or miscarriage.
Results: A total of 726 women were analysed, of which 438 (60%) were parous, with a median number of pregnancies of 2 (IQR: 2–3), a mean of 4.8 x-rays per patient and 10.9 years of follow-up. Baseline patients and disease characteristics were balanced, but parous women were older than nulliparous (median of 49 vs 45 years, p=0.001) (Table 1). During follow-up, erosion progression did not differ significantly between parous and nulliparous women (p=0.94). In a subanalysis, the radiographic progression during the active parous period was not different [0.6% (95% CI: 0.5 to 0.8) vs 0.5% (95% CI: 0.4 to 0.7) by year, respectively, p=0.28]. The decrease of the HAQ-DI score overtime was not different between parous and nulliparous women (p=0.21), and it was not different during the active parous period [-0.02 (95% CI: -0.03 to - 0.01) vs -0.02 (95% CI:- 0.03 to - 0.01) by year, respectively, p=0.67]. We did not find differences in radiographic progression or HAQ-DI score between women with a single pregnancy and multiparous women.
Conclusions: In women with RA, the progression of structural damage and of functional disability did not differ between parous and nulliparous women. Among parous women, the active parous period was not associated with more radiographic damage progression. Although postpartum period is associated with increase in disease activity, our results suggest that parity does not have a negative long term impact on structural damage.
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[1] Camacho EM, et al. Ann Rheum Dis. 2010; 69:1834–37.
[2] Pikwer M, et al. Arthritis Res Ther. 2015 Dec 12;17:358.
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FRI0702 2-YEAR OUTCOME OF 1077 PATIENTS WITH RECENT-ONSET INFLAMMATORY ARTHRITIS

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Background: Recent-onset inflammatory arthritis (IA) may represent a broad range of diseases. Few studies have examined the full spectrum of diagnostic outcomes in an unselected cohort of recent-onset IA patients.
Objectives: To describe the disease spectrum and 2-year outcome of recent onset IA in a large multicenter study in Norway.
Methods: Data from the Norwegian Very Early Arthritis Clinic (NOR-VEAC), a 2-year longitudinal observational study of 1118 patients (age 18–75 yrs) with inflammatory arthritis of ≤16 weeks duration, were used. Exclusion criteria were arthritis due to crystal deposits, trauma, osteoarthritis and septic arthritis. Herein we included all patients with follow-up information. Descriptive methods were applied to describe the whole range of diagnostic outcomes (clinical diagnoses made by the treating rheumatologist), as well as disease persistency (defined as disease modifying anti-rheumatic drug (DMARD) use and/or persistent joint swelling) vs resolution of disease for each clinical diagnosis. Patients with temporary DMARD use were classified as no-DMARD users if they were observed for ≥1 year after DMARD cessation. If a patient dropped out of the study before 2 years, the last outcome information was used in a last observation carried forward approach.
Results: 1077 patients (96.3%) were included in the current analyses, of these 64.9% had 2-year follow-up data. Duration of joint swelling before inclusion [median (25–75 perc.)] was 34 (13–66) days, mean (SD) age 46.1 (14.8) years, 54.7% were females, 16.9% anti-CCP positive, and 21.9% anti-CCP and/or RF positive. Presentation as mono-, oligo- (2–4 swollen joints), and polyarthritis (≥5 swollen joints) had approximately the same frequency, 32.5, 35.7 and 31.8%, respectively.
After 2 years 33.0% used DMARDs, and a further 9.3% had joint swelling without DMARD use. The arthritis resolved in the remaining 57.6%. The final clinical diagnoses and their respective outcomes are shown in Figure 1. The most common final diagnoses were undifferentiated arthritis (UA) (39.9%), rheumatoid arthritis (RA) (22.7%), reactive arthritis (17.1%), psoriatic arthritis (6.0%) and sarcoid arthropathy/Löfgren's syndrome (6.2%). A final diagnosis of sarcoid arthropathy, reactive arthritis and UA carried the best prognoses, with resolution of arthritis without DMARDs in 91.0, 85.9 and 73.7%, respectively. Patients presenting with polyarthritis developed persistent disease more often than patients with oligo- or monoarthritis (67.6%, 34.9 and 26.0%, respectively) (p<0.001).
Conclusions: Among 1077 patients with IA of ≤16 weeks duration, UA was the most common diagnosis after 2 years, 22.7% were diagnosed with RA and 6.0% with psoriatic arthritis. The arthritis resolved without DMARDs in the majority of the patients. This is, as far as we know, the first study to describe the whole range of diagnostic outcomes in an unselected cohort of recent-onset arthritis, as well as the persistency of disease according to each diagnosis.
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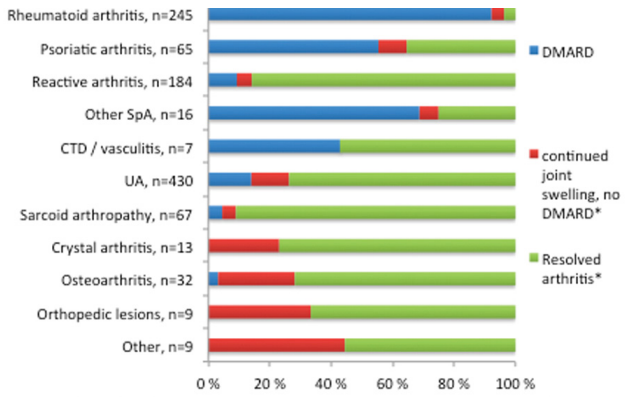

Figure 1. The final clinical diagnoses in 1077 patients with recent-onset inflammatory arthritis, and their respective outcomes
*DMARD use was allowed if the patients were observed ≥1 year after cessation. UA, Undifferentiated arthritis; SpA, Spondyloarthritis; CTD, Connective tissue disease

FRI0703 NEW INCIDENT CASES OF RHEUMATOID ARTHRITIS, PSORIATIC ARTHRITIS AND POLYMYALGIA RHEUMATICA IN A CITY OF CENTRAL ITALY: RESULTS OF THE CAMPO-RE STUDY

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Background: few studies reported the incidence of rheumatic disease in Italy using the most recent classification criteria.
Objectives: The aim of the CAMPO-RE study was to assess the new incidence cases of Rheumatoid Arthritis (RA), Psoriatic Arthritis (PsA) and Polymyalgia Rheumatic (PMR) attending a primary rheumatologic outpatient's clinic of new institution, integrated in the community of Campobasso, a small town in the centre of Italy.
Methods: Campobasso has a population of 49,501 inhabitants (1st January 2016) and Public Health is managed from a single health authority in the entire area. In Italy, all citizens are registered with a National Health System of General Practitioner Physicians (GPP). Between 1st June 2014 to 31st May 2016 all consecutive adult patients, sent by GPP of the municipality of Campobasso with any diagnosis of musculoskeletal symptoms/signs complains were evaluated in a single rheumatology outpatient clinic of our Academic Unit, that represent the first and unique reference for the GPP about rheumatic diseases in the territory. Subjects were classified using the EULAR criteria for RA, the CASPAR criteria for PsA and the 2012 ACR classification criteria for PMR. New incident cases were calculated using the number of cases as the numerator and population based on 1st January census of the municipality of Campobasso as the denominator.
Results: 1003 adult patients, sent by GPP with articular or musculoskeletal complains were visited in our clinic. Of these, 409 patients inhabitants of the municipality of Campobasso were evaluated for the study. During the 2-years study period we diagnosed 18, 19 and 12 new cases of RA, PsA and PMR respectively, with a new incident cases rate of 18.18, 19.19 and 12.12/100,000/year on the whole population of Campobasso municipality. Age-related incident cases were also calculated (table 1).

Table 1. Annual incident cases of rheumatoid arthritis (RA), psoriatic arthritis (PsA) and polymyalgia rheumatica (PMR) trough two-years observation period in the town of Campobasso

Disease	Number of patients	Male/female	Incident cases (number/ 100,000 pt/year), total	Male (number/ 100,000 pt/year)	Female (number/ 100,000 pt/year)
RA	18	4/14	18.18	4.04	15.15
18–29 yr	1	0/1	7.69	–	16.1
30–49 yr	3	1/2	11.08	7.53	15.14
50–65 yr	7	1/6	31.16	9.52	50.15
>65 yr	7	1/6	32.08	10.86	47.56
PsA	19	10/9	19.19	10.1	9.1
18–29 yr	0	–	–	–	–
30–49 yr	6	3/3	22.66	22.61	22.71
50–65 yr	11	5/6	48.97	47.61	50.15
>65 yr	2	2/0	9.17	21.72	–
PMR	12	3/9	12.12	2.02	10.10
18–29 yr	0	–	0	0	0
30–49 yr	0	–	0	0	0
50–65 yr	0	–	0	0	0
>65 yr	12	3/9	54.99	32.58	71.34

Conclusions: The results of our study could contribute to better define the new incident cases of these rheumatic disease classified with the new classification