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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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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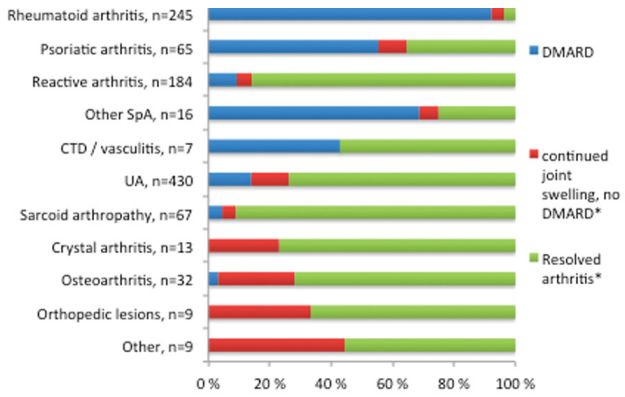

Figure 1. The final clinical diagnoses in 1077 patients with recent-onset inflammatory arthritis, and their respective outcomes
*DMARD use was allowed if the patients were observed ≥1 year after cessation. UA, Undifferentiated arthritis; SpA, Spondyloarthritis; CTD, Connective tissue disease

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

criteria. The incidences of RA, PsA and PMR seem to be similar to those reported in previous study[1–3].

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FRI0704 ANALYSIS OF RISK FACTOR FOR PREGNANCY OUTCOMES IN 142 PREGNANCIES COMPLICATED WITH CONNECTIVE TISSUE DISEASE

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Background: Recently, many connective tissue disease (CTD) patients wish to become a mother because immunosuppressants and biologics enable to improve the outcome of underlying CTD and quality of life respectively. However, Pregnancies in CTD patients often have problems including underlying disease exacerbation, some complications during pregnancy especially in preterm birth, light for date (LFD) and premature rapture of membrane (PROM). Previous study identified that high clinical activities with hypocomplementemia and positive anti-dsDNA antibody were at highest risk for pregnancy loss and preterm delivery in SLE[1)]. It is unclear whether these problems are associated with the activity of underlying CTD or immunosuppressant treatment.
Objectives: We examine the issue of pregnancy and delivery complicated with CTD by the analysis of the cases in our institution.
Methods: We investigated the risk factors of preterm birth, LFD (light for dates) and perinatal complication from exacerbation of underlying disease, anti SS-A antibody, antiphospholipid antibody, doses of corticosteroid, immunosuppressants or biologics before pregnancy in 142 cases which were delivered in our institution.
Results: In 23 among all cases underlying diseases were exacerbated, and these occurred more often in PM/DM (60%), MCTD (33.3%), RA (15.3%) and SLE (13.3%). In SLE, SS, MCTD and PM/DM, preterm births and LFD were closely related to disease exacerbation and dose of corticosteroid, pulse therapy, and these were extracted as risk factors for these perinatal complications. Preterm birth was also associated with low complement (CH50) and high titer of anti-dsDNA antibody, and LFD was associated with high titer of anti-dsDNA antibody before pregnancy. However, there was no significant association with these factors in threatened premature delivery and PROM. In RA, perinatal complications were not influenced by methotrexate and biologics before pregnancy. However, only LFD was related with doses of corticosteroid during pregnancy.
Conclusions: We extracted disease exacerbation and dose of corticosteroid, pulse therapy during pregnancy and also low complement, high titer of anti-double stranded DNA antibody before pregnancy as risk factors of pregnancy outcomes. In pregnancy complicated with CTD, we need to control the disease activity strictly, however, we should consider the increase or pulse therapy of corticosteroid carefully.

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FRI0705 PROGRESSION OF CHRONIC DAMAGE IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS AFTER 5-YEAR FOLLOW-UP: DATA FROM A LARGE MONOCENTRIC COHORT

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Background: The prevention of chronic damage represents one of the most important target in the management of patients affected by Systemic Lupus Erythematosus (SLE). About 50% of patients develop chronic damage, especially in the early disease phase, due to disease activity, treatment adverse events and comorbidities. Longitudinal studies demonstrated a progressive increase of damage, evaluated by using SLICC Damage Index (SDI).
Objectives: Moving from these evidences, we aimed at evaluating the progression of chronic damage in a monocentric SLE cohort with at least 5-year follow-up and identifying the factors associated with damage progression.
Methods: We analyzed 658 SLE patients diagnosed according to the ACR 1997 revised criteria, referring to a dedicated outpatient clinic. For the present analysis, we evaluated only patients with a minimum follow-up of 5 years and at least one visit per year. Clinical and laboratory data were collected in a standardized, computerized and electronically-filled form, including demographics, past medical history, comorbidities and concomitant treatments. In all patients, chronic damage was determined by using SDI, with the evaluation of 12 organ systems. Disease activity was evaluated by SLEDAI-2K. Furthermore, we calculated the number of flares during the follow-up, defined as an increase in SLEDAI-2K score $\geq$4 from the previous visit, with a minimum interval of 2 months between visits.
Results: According with the inclusion criteria, we analyzed data deriving from 198 SLE patients (17 M/181 F, mean±SD age 46.8±12.1 years, mean±SD disease duration 131±99.7 months). At the first visit 60 patients (30.3%) showed SDI$>$0; in particular SDI=1 was identified in 65%, SDI=2 in 18.3%, SDI=3 in 10%, SDI=4 in 6.7%). At baseline, the presence of chronic damage was significantly associated with age ($P<0.0001$) and disease duration (P=0.001). After 5 years, we registered the progression of chronic damage in 69 patients (34.8%), with a significant increase of SDI values (baseline: median SDI 0.0, IQR 0–1; follow-up SDI: median 0 IQR 0–2, P=0.009). SDI progression resulted significantly more frequent in subjects with damage at baseline (55.0%) in comparison with free-damage patients (26.1%, P=0.0001, Fisher exact test). The progression of chronic damage was significantly associated with neuropsychiatric involvement (P=0.01), disease activity in terms of number of flares during the 5-year follow-up (P=0.001), concomitant anti-phospholipid syndrome (P=0.02) and arterial hypertension (P=0.001).
Conclusions: In our study, we observed a progression of chronic damage in almost 30% of SLE patients after 5 years. In particular, the presence of previous chronic damage seem to be a risk factor for new damage development. Moreover, the lack of disease control and the presence of comorbidities allows damage progression. Taken together, the results of this study underline the need of a better management of SLE patients in order to prevent damage accrual.

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FRI0706 HLA-DRB1 ALLELES ARE ASSOCIATED WITH MARKERS OF ENDOTHELIAL INJURY IN FIRST-DEGREE RELATIVES OF RHEUMATOID ARTHRITIS PATIENTS

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Background: Rheumatoid arthritis (RA) patients experience higher cardiovascular disease (CVD) risk and CVD-related mortality. MHC class II HLA-DRB1 alleles, or the shared epitope (SE), has also been linked to endothelial dysfunction in RA patients. It is not known whether this association exists in individuals who are RA-free, but who are at higher risk due to being a first-degree relative (FDR) of an RA patient.
Objectives: To determine the association between HLA-DRB1 alleles (*0401, *0404, *0405, *0408) and markers of endothelial injury in FDRs of RA patients, a population free of RA and RA-related medications.
Methods: From the Studies of the Etiology of RA, SERA, (a multicenter prospective study of preclinical RA, started in 2002), 113 FDRs who had been positive for any of 5 RA-related autoantibodies (Abs): rheumatoid factor (RF), RF isotypes – IgM, IgG, IgA, or anti-cyclic citrullinated peptide (anti-CCP2) on at least one of their visits, and 100 FDRs who had never been Ab positive were selected, frequency matched on age, sex, and field center site. No FDR met the 1987 ACR Criteria or 2010 EULAR/ACR Criteria for RA. In cross-sectional testing of single samples from baseline, the following were measured: endothelial injury markers: soluble intracellular adhesion molecule-1 (sICAM), soluble vascular cell adhesion molecule-1 (sVCAM) and E-selectin; and high resolution HLA-DRB1 typing for the*0401, *0404, *0405, and *0408 alleles using real-time polymerase chain reaction. ANCOVA was used to evaluate associations between HLA-DRB1 alleles, sVCAM, sICAM, and E-selectin, adjusting for age, sex, race, body mass index (BMI), Ab status, ever smoking, and current statin use.
Results: Among 213 FDRs, age was 50±18 yr, BMI was 27±6, 75% were women, 83% were Caucasian, 35% ever smoked, 11% were currently taking statins, and 38% were SE positive. sVCAM was significantly higher by 135ng/mL in FDRs with the HLA-DRB1*0404 allele (p=0.009) compared to FDRs without the *0404 allele (Table 1). E-selectin was higher by 23ng/mL in FDRs with the HLA-DRB1*0405

Table 1. Differences in levels of endothelial injury markers by HLA-DRB1 alleles in FDRs of RA patients

	n (%)	ICAM (ng/mL)	p-value	VCAM (ng/mL)	p-value	E-selectin (ng/mL)	p-value
SE Positive	81 (38)	11.6 (8.8)	0.19	55.7 (32.5)	0.09	3.7 (2.2)	0.09
401	55 (26)	2.6 (10.0)	0.80	-14.1 (37.0)	0.70	0.4 (2.5)	0.86
404	23 (11)	21.1 (13.9)	0.13	135.4 (50.9)	0.009	6.4 (3.4)	0.06
405	2 (1)	55.1 (44.0)	0.21	186.0 (163.1)	0.26	22.9 (10.8)	0.03
408	6 (3)	-6.6 (25.4)	0.79	7.1 (94.1)	0.94	8.1 (6.2)	0.19

*n=213 (92 Ab+, 121 Ab–).