and 406 (36.09%) biologic therapy. The frequency of use of the biologic therapy was: abatacept (73 patients/6.49%), etanercept (66/5.87%), tocilizumab (60/5.33%), adalimumab (54/4.8%), infliximab (50/4.44%), rituximab (49/4.36%), golimumab (37/3.29%), certolizumab (17, 1.51%). The time of use of the biological drugs is presented in table 1.

Abstract AB0417 – Table 1. Time (in years) of use of biological drugs in patients with rheumatoid arthritis

DRUG	MEAN	MAXIMUM
ABATACEPT	1.95	8
ADALIMUMAB	1.70	12
CERTOLIZUMAB	0.63	2.0
ETANERCEPT	1.49	9.0
GOLIMUMAB	0.65	2.0
INFLIXIMAB	1.56	9.0
RITUXIMAB	1.27	6.0
TOCILIZUMABE	2.0	6.0

Conclusions: The therapeutic profile of this cohort of Brazilian RA patients shows some interesting results. The relatively high number of patients on biologics, compared to other studies, may be related to fact that the centres involved were reference centres, probably dealing with more difficult cases.

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AB0418

THE EFFECT OF CONCOMITANT METHOTREXATE ON SERUM TNF INHIBITORS LEVELS AND CLINICAL RESPONSE IN PATIENTS WITH RHEUMATOID ARTHRITIS IS DOSE DEPENDENT AND GREATER THAN OTHER DMARDS

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Background: Several factors influence on the pharmacokinetics(PK) of TNF inhibitors(TNFi). One of the most relevant influencing factors is the development of antidrug- antibodies(ADA), which is associated with low circulating drug levels and loss of clinical efficacy. Previous studies, mostly about Adalimumab (Ada), have demonstrated a beneficial effect of concomitant use of methotrexate(MTX) in patients(pts) under TNFi therapy by reduction of immunogenicity. There are other csDMARDs(OD) as leflunomide, hydroxycloquine or sulfasalazine which may have also an effect on PK.

Objectives: To investigate the effect of csDMARDs on the presence of serum TNFi levels and on the clinical response during the first year of Ada or Infliximab (Ifx) treatment in RA pts. Secondly, to evaluate if MTX has a dose-dependent effect on these outcomes.

Methods: This is an inception cohort including pts with RA starting Ifx or Ada in a tertiary hospital since 1999. At baseline, 6 and 12 months clinical(DAS28, EULAR response and ΔDAS28) and serological(drug and ADA levels) parameters were measured. Patients were clustered according to the use of concomitant csDMARDs at baseline in three groups: i)TNFi monotherapy;ii)TNFi +MTX;iii) TNFi +OD. Pts within the TNFi +MTX group were also classified according to the MTX dose:MTX <15 mg/week(TNFi +MTX <15) and MTX ≥15 mg/week(TNFi +MTX ≥15).

Results: A total of 92 RA pts[Ada(n=25) or Ifx(n=67)] under TNFi were included. The number and percentage of pts in each group were as follows:TNFi monotherapy, 12 pts(13%);TNFi +MTX, 59 pts(64%);TNFi +OD 21 pts(23%). According to MTX dose, the distribution was:TNFi +MTX <15, 18 pts(20%);TNFi +MTX ≥15, 41 pts(45%). Considering the overall of pts receiving any dose of MTX, the percentage of them with drug levels after 12 months(71%) was numerically higher than in the other groups(20% in TNFi +OD and 9% in TNFi monotherapy,p=0.1). However, after stratifying pts by MTX dose, we observed that circulating drug levels at 12 months were more frequent in higher dose of MTX(54% of the pts with TNFi +MTX ≥15) compared to patients with TNFi +MTX <15 (17%), with TNFi +OD (20%) and with TNFi monotherapy (9%);p=0.002). According to EULAR

response, pts treated with TNFi +MTX(81%) achieved more frequently a good response compared with the other groups (11% on TNFi +OD and 8% on TNFi monotherapy, p=0.6). Moreover, differences on clinical response were observed depending on MTX dose. While 58% with TNFi +MTX ≥15 were good EULAR responders, 23% with TNFi +MTX <15 achieved this. Overall, the best effect on clinical response was observed in the group of MTX; p=0.4. Finally, the TNFi median survival time(mst) was significantly higher in pts with TNFi +MTX than in pts with TNFi +OD or on TNFi monotherapy(5 years vs 2 years vs 2.15 years, respectively;p=0.03). Analysing by MTX dose, drug survival was superior for high (≥15) and low MTX doses(<15) (mst 5.2 and 3.3, respectively)compared to OD and/or TNFi monotherapy although the difference was not statistically significant p=0.09.

Conclusions: In RA pts under Ifx or Ada treatment, the presence of TNFi in serum, the clinical response and the TNFi survival are influenced by MTX but not by OD. Moreover, a MTX dose-dependent effect is closely associated with these outcomes.

Disclosure of Interest: None declared

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AB0419

FREQUENCY OF DISEASE FLARE AND STUDY OF THE CD4+CD25+HIGHCD127LOW/- CELL POPULATIONS AFTER DISCONTINUATION OF ANTI-TNFA THERAPY IN PATIENTS WITH RHEUMATOID ARTHRITIS IN PERSISTENT REMISSION

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Background: Rheumatoid arthritis (RA) patients in a prolonged remission status represent a population whose future management has yet to be established. Treg cell function in patients with active RA is assumed to be impaired, a trend that seems to be reversed by TNFalpha antagonist therapy (aTNF). Theoretically a deeper remission may be represented by an immunological resetting of immune system, a condition which could enable to consider the possibility of a drug-free remission.

Objectives: To evaluate the incidence of disease flare after cessation of aTNF in pts in remission together with reconstitution of the CD4 +CD25highCD127low/- Tcell subset respect to those patients in the same remission status with persistent low CD4 +CD25highCD127low/-Tcell population, assuming the Treg populations as a markers of deep remission allowing a better selection of those patients at low-risk of flare after aTNF withdrawal.

Methods: inclusion criteria: patients with RA (>18 years) fulfilling the 1987 ACR classification criteria treated with aTNF and synthetic DMARDs for at least 12 months, in remission (DAS28 <2.6/DAS44 <1.6)>6 months, without glucocorticosteroid. Exclusion criteria:<18 years, glucocorticosteroids within the three months before; another inflammatory disease other than RA; ongoing infections. Intervention: aTNF drug withdrawal with continuation of DMARDs previously associated (MTX or LFN); a 24 months of follow up was performed. Serial clinical and instrumental evaluation, blood sampling and radiographs have been performed according to the scheduled protocol. Treg population and several cytokines/chemokines/growth factors were analysed (Human Cytokine/Chemokine Panel I, Millipore).

Results: 23 patients were included, mean age 53 years (SD 12.3), 68% RF +, 52% ACPA +, DAS28 medium 1.41 (SD 0.48); average duration of illness 9.62 years (SD ±5.73). During the 24 month post-suspension follow-up, for a total of 267 person-months, 11 patients presented a flare, for a flare rate of 3.74/100 person-months (CI95% 1.79–6.88). The average observed exacerbation time from aTNF withdrawal was 14.6 months (SD ±9.32). None statistical predictive value of Treg levels regarding disease outcome after aTNF withdrawal was observed IIR (95% CI) 1.38 (0.82–2.30). None significant correlation among cytokines concentrations and disease status/Treg levels was observed. A correlation was observed between the presence of a synovitis with PD1+* at the baseline and the loss of remission [HR 7.062 (1.64–30.41, p 0.009);*higher values were exclusion criteria]. All 3 patients with positive US (PD1) who had flare-up were asymptomatic at baseline.

Conclusions: 47.8% of pts maintained aTNF-induced remission at 24 months continuing only sDMARDs therapy (MTX). Only in 1 case reintroduction of Adalimumab did not allow to regain clinical remission, which was obtained using another therapeutic target (anti-CTL4). The presence of a residual synovitis, although mild (PD1), was correlated with the risk of exacerbation. Further results will be discussed.

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AB0420

DRUG SURVIVAL ON CERTOLIZUMAB AND PREDICTORS THEREOF IN PATIENTS WITH RHEUMATOID ARTHRITIS, PSORIATIC ARTHRITIS, AND AXIAL-SPONDYLOARTHRITIS FROM THE APULIAN BIOPURE REGISTRY

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Background: In BIO.PU.RE. Registry are collected data from patients being treated with Biologics from rheumatologic centres in Apulia (Southern Italy).

Methods: We analysed longitudinal data of consecutive patients, affected with RA, PsA or axial-SpA starting a treatment with certolizumab (CTZ) in the time frame from 1st January 2011 to 30th June 2017. Demographic and disease related characteristics were collected at baseline and at last observation visit. Primary endpoint was the persistence on CTZ, and secondary endpoint was the search of baseline predictors of drug survival and clinical outcomes. Drug survival was evaluated by Kaplan-Meier life table analysis. Estimates hazard ratios (HRs, 95% confidence intervals (CI)) of drug discontinuation or achievement of low-disease/remission in RA, and minimal disease activity (MDA) in PsA at last visit, adjusted for patient's demographics, disease characteristics and prior biologic treatments were computed by Cox-regression stepwise backward models.

Results: 345 patients were included in this analysis (table 1). Global median survival time (95% CI) was 30 [23–36] months. Drug survival rate was significantly higher in SpA (63.9%, p=0.009) than in RA (54.0%) or PsA (54.5%). Within each disease, naïve-CTZ patients showed higher survival rates than biologic-experienced patients in RA (63.4% vs 45.7%, p=0.0001), but not in PsA (59.1% vs 52.3%, p=0.60), or SpA (62.5% vs 64.4%, p=0.94). In the whole cohort, the only negative predictor of drug discontinuation was the CTZ-naïve status (HR 0.62, 95 CI 0.40–0.96, p=0.03). This association was even stronger for RA (HR 0.45, 95 CI 0.26–0.77, p=0.004). In SpA, patient's age at baseline was weakly correlated to CTZ stopping (HR 0.96, 95 CI 0.93–0.99, p=0.02), but no predictor of CTZ discontinuation was detected in PsA. No factor did correlate to the achievement of low disease/remission in RA, while co-medication with MTX was significantly associated to the achievement of MDA (HR 3.82, 95 CI 1.26–11.54, p=0.01) in PsA. Globally, the causes of discontinuation were: ineffectiveness (nr 94, 27.2%), adverse event (nr. 40, 11.6%), pregnancy (nr.1, 0.3%), remission (nr. 3, 0.9%), others (nr.13, 3.8%).

Abstract AB0420 – Table 1

	All (nr. 345)	RA (nr. 172)	PsA (nr.88)	Ax- SpA (nr.83)
Age (mean)	46.9±11	48.8±12	44.4 ±10	45.7 ±11
Female	72.9%	86.2%	71.6%	43.3%
BMI (mean)	27.3±5	26.4±4	29.4±5	26.7±5
Dis Durat (mean)	8.8±8	8.7±8	8.6±7	9.2±9
Naïve	37.1%	47.1%	25.0%	28.9%
Prior biologics	62.9%	52.9%	75.0%	71.1%
Glucocorticoids	64.6%	79.3%	50.0%	41.0%
Methotrexate	60.3%	73.0%	45.5%	27.3%
Comorbidities	62.3%	58.0%	68.2%	65.1%
DAPSA (mean)			22.8 ±12	
DAS28 (mean)		4.8±1		5.4±2
Extra-articular				21.7%
HLA-B27 (nr.44)				64.8%
RF/ACPA +		72.4%		

Conclusions: In our real-life experience CTZ seems to have better drug survival in PsA rather in RA and SpA; in all these polyarthritis was observed CTZ-naïve status as negative predictor of drug discontinuation.

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AB0421

LOW RATES OF RETENTION OF BIOLOGIC DMARD MONOTHERAPY IN PATIENTS WITH RHEUMATOID ARTHRITIS IN REAL LIFE SETTINGS

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Background: A number of cross-sectional studies have shown that approximately one quarter of rheumatoid arthritis (RA) patients are being treated with biologic disease modifying anti-rheumatic drugs (bDMARDs) as monotherapy. Data regarding the retention of bDMARD monotherapy in real-life settings are limited.

Objectives: To study the survival rate of bDMARD monotherapy in RA patients in daily clinical practice.

Methods: Multicenter (11 hospital, 3 private office practices), prospective, RA epidemiological study in Greece. At baseline and after one year of follow-up, demographics, disease characteristics, treatments, co-morbidities and serious events (serious infections, cardiovascular events, neoplasms, osteoporotic fractures) were collected via a web-based platform.

Results: 1,323 RA patients with paired evaluations one year apart (mean interval: 13.2±3.7 months) were included. Among 611 bDMARD treated patients, 155 patients (25%) were on bDMARD monotherapy (women: 87%, mean age: 60.4 years, mean disease duration: 15 years, RF and/or anti-CCP positive: 66%, TNFi therapy: 57%). The majority had been previously on and had discontinued their csDMARDs (90%). During follow-up, 15% (n=24) discontinued their bDMARD; most of them stayed off any type of therapy (83%) while the rest continued with synthetic DMARD (csDMARD) monotherapy (17%). From the remaining 131 patients, 96 (73%) remained on bDMARD monotherapy (85%, n=82 on the same biologic) while in 27% (n=35) a csDMARD was added. Serious events occurred in 7.7% of patients (n=12). Overall, at the end of 1st year, approximately half of patients (53%, n=82) remained on their initial bDMARD monotherapy. Factors associated with continuation of the same bDMARD by multivariate analysis were a low HAQ score (OR=0.48, 95% C.I.=0.23–0.99, p=0.047) and corticosteroid use (OR=2.2, 95% C.I.=1.02–5.1, p=0.044) at baseline as well as the absence of a serious event during the 1st year of follow-up (OR=0.14, 95% C.I.=0.016–1.3, p=0.094).

Conclusions: In real life settings, only half of patients who are on bDMARD monotherapy continue the same agent one year later. Low HAQ score, corticosteroid use and absence of a serious event during therapy predicted bDMARD monotherapy survival.

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AB0422

COST EFFECTIVENESS ANALYSIS OF MODIFIED DOSING REGIMEN OF BIOLOGICAL THERAPY IN CHRONIC INFLAMMATORY DISORDER: AN OBSERVATIONAL STUDY

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Background: Cost of biologics in rheumatology is a prime concern in India. Due to lack of reimbursement system, a majority of the patients need to pay from their pocket for the therapy.