burden of 1.7 (SD±0.8), 57 GI reactions (9.8%, 41 pts) with an average burden of 2.9 (SD±1.1), 102 SK reactions (17.5%, 64 pts) with an average burden of 2.9 (SD±1.1) and 109 INFs (18.7%, 79 pts) with an average burden of 3.3 (SD±1.0). Prevalence of INJ and GI reactions was significantly higher among ETN users than among ADA users (INJ: 76 ADRs/265 ETN users (28.7%) vs 30 ADRs/196 ADA users (15.3%), P=0.007; GI: 30/265 (11.3%) vs 9/196 (4.6%), P=0.01). The prevalence of INFs and SK reactions did not differ. The perceived burden of GI reactions was higher for ETN than for ADA users (3.1 ±1.0 vs 2.0 ±0.7, p=0.006) but did not differ for other clustered ADRs. The number of patients using other bDMARDs was too low for further analysis. Prevalence of bDMARD-induced headache was 1.9% (12 ADRs/583 pts) with an average burden of 3.4 (SD±0.9). Prevalence of bDMARD-induced fatigue was 4.3% (25 ADRs) with an average burden of 2.7 (SD±1.0).

Conclusion: Almost half of the RA patients reported bDMARD-induced ADRs. From the patients' perspective INJ reactions have the highest prevalence with a relatively low burden, whereas INFs and headache are less prevalent but give the highest burden of the analysed ADRs. Further studies are required to obtain more insight into the perceived differences in ADRs between bDMARDs.

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FRI0098 SWITCHING RATE OF BIOLOGICAL DMARDS IN RHEUMATOID ARTHRITIS PATIENTS: TREASURE – REAL LIFE DATA

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Background: In rheumatoid arthritis (RA), biologic DMARDs are important treatment options in resistant patients. Inefficacy or side effects may cause switching between these drugs.

Objectives: This study aimed to determine features of patients switching from one biologic DMARD to another in RA treatment and to investigate associated reasons for switching.

Methods: This multicenter, prospective observational cohort study used the TReasure database in which web-based registration of RA and spondyloarthritis patients are being performed in 15 centers across different regions of Turkey. In this study, data of RA patients switching from one biologic agent to another were analyzed. Demographic and clinical data, follow-up duration, time to switch, and reasons for switching were retrieved from the database.

Results: Of the included 2115 RA patients, 829 (39.2%) switched between biologic agents (switched group) and 1286 (60.8%) continued to receive their current therapies (continued group). The median follow-up duration of all patients was 3.7 years and the median time to switch was 1.1 years. In the switched group, the proportion of females and the median HAQ-DI score were higher as well as disease duration was longer (Table 1). Among the biologic agents used at first, 60.9% of the patients were receiving an anti-TNF agent and 39.1% of the patients were receiving other biologic agents (Table 2, figure 1). In the switched group (n=829), the main reasons for switching were secondary inefficacy (n=269), primary inefficacy (n=238), and side effects (n=178) followed by primary or secondary unknown inefficacy (n=30), patient's demand (n=21), physician's request (n=16), willing to be pregnant (n=7), other (n=31), and unknown (n=54).

Table 1. Demographic and clinical features of the study groups

	N	Switched Group	N	Continued Group	p
Age, year, median (min-max)	829	54 (19-84)	1286	55 (18-91)	0.121
Sex, n (%) Female		688 (83.0)		1000 (77.8)	**0.003**
Sex, n (%) Male		141 (17.0)		286 (22.2)	
Body mass index, median (min-max)	823	27.74 (14.33-66.1)	1256	28.05 (15.59-58)	0.640
Disease duration, year, median (min-max)	806	12 (0-43)	1245	8 (0-41)	**<0.001**
ESR, mm/h, median (min-max)	538	34 (2-120)	1029	33 (2-174)	0.311
CRP, mg/dL, median (min-max)	533	15.7 (0.04-335)	1019	14.7 (0-11062)	0.859
RF positivity, n (%)	776	508 (65.5)	1193	785 (65.8)	0.878
Anti-CCP positivity, n (%)	585	345 (59.0)	945	582 (61.6)	0.309
Swollen joint count, median (min-max)	250	3 (0-24)	612	3 (0-32)	0.994
Tender joint count, median (min-max)	253	6 (0-30)	609	7 (0-44)	0.217
PtGA-VAS, median (min-max)	432	70 (0-100)	954	70 (0-100)	0.347
Pain-VAS, median (min-max)	345	70 (0-100)	879	70 (0-100)	0.142
Fatigue-VAS, median (min-max)	337	70 (0-100)	873	70 (0-100)	0.066
HAQ-DI score, median (min-max)	300	1 (0-3)	832	0.9 (0-2.95)	**0.040**
CDAI score, median (min-max)	115	15.5 (0-72)	293	21.5 (0-89)	0.117
SDAI score, median (min-max)	113	37.5 (1.72-137)	290	43 (2-389)	0.057

Table 2. Distribution of the biologic agents used at first and second and the rate of patients switching to another biologic agent

Biologic agents used at first	n (%)	Biologic agents used after switch	n (%)
Etanercept	482 (22.8)	Adalimumab	152 (18.3)
Adalimumab	404 (19.1)	Etanercept	135 (16.3)
Abatacept	265 (12.5)	Rituximab	140 (16.9)
Rituximab	234 (11.1)	Tocilizumab	103 (12.4)
Tofacitinib	209 (9.9)	Abatacept	101 (12.2)
Infliximab	152 (7.2)	Tofacitinib	61 (7.4)
Golimumab	136 (6.4)	Certolizumab	51 (6.2)
Certolizumab	115 (5.4)	Infliximab	44 (5.3)
Tocilizumab	114 (5.4)	Golimumab	38 (4.6)
Anakinra	4 (0.2)	Anakinra	4 (0.5)

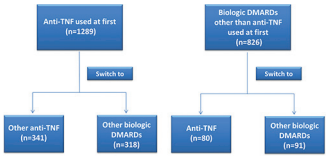

Figure 1. Switching pattern of the switched group

Conclusion: The patients in the Treasure database were followed-up approximately 4 years and about one-third of the patients had to switch from one biologic DMARD to another. The main reasons for this switching were primary (29.2%) and secondary (33.0%) inefficacy and 20% of the patients had to switch due to side effects. According to the switching pattern, about half of the patients using an anti-TNF agent at first switched to another anti-TNF agent and the other half switched to other biologic agents.

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FRI0099

PREDICTIVE FACTORS FOR REMISSION ACHIEVEMENT BY TOCILIZUMAB MONOTHERAPY IN PATIENTS WITH RHEUMATOID ARTHRITIS AFTER INADEQUATE RESPONSE TO METHOTREXATE: A POST HOC ANALYSIS OF THE SURPRISE STUDY

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Background: Interleukin (IL)-6 pathway inhibitors are suggested by European League Against Rheumatism recommendations to have some advantages in rheumatoid arthritis (RA) patients who are not suitable to use methotrexate as comedication compared with other biological disease-modifying antirheumatic drugs. However, it remains to be elucidated what predicts remission achievement by IL-6 pathway inhibitor monotherapy.
Objectives: To identify predictive factors for clinical and structural remission by tocilizumab without methotrexate in patients with RA.
Methods: This is a post hoc analysis of the SURPRISE study, a 2-year randomized, controlled study comparing the efficacy of tocilizumab with (ADD-ON) and without methotrexate (SWITCH) in active RA patients despite methotrexate therapy. The primary endpoint was the DAS28-ESR remission (< 2.6) at week 24. The change in modified total Sharp score from baseline to week 52 (ΔmTSS/year) was also assessed as an endpoint. The effect of clinical parameters, including serum levels of CRP, IL-6, serum amyloid A (SAA), MMP-3, RF and IgG at baseline, on the achievement of DAS28 remission at week 24 was estimated by logistic regression analysis. Multivariate analysis was performed after adjusting for age, gender, height, body weight, body mass index, disease duration, the dose of glucocorticoids, and that of methotrexate.
Results: In SWITCH (n = 96), CRP, SAA, RF and DAS28 at baseline showed predictive value for DAS28 remission at week 24 in univariate analysis. Multivariate analysis confirmed SAA, RF and DAS28 at baseline, but not CRP, as predictive factors, with SAA having the highest value (OR [95%CI] by decrease of 5.0 μg/mL = 1.011 [1.002-1.020], p = 0.01, ROC-AUC = 0.731). SAA of < 50.0 μg/mL showed extremely high predictive value for DAS28 remission (OR [95%CI] = 6.012 [1.997-18.096], p = 0.0008, ROC-AUC = 0.761). Furthermore, structural remission (ΔmTSS/year ≤ 0.5) rate at week 52 was significantly higher in patients with SAA of < 50.0 μg/mL than those with SAA of ≥ 50.0 μg/mL (71% vs 51%, p = 0.048). In contrast, in ADD-ON (n = 98), only DAS28 at baseline showed predictive value for DAS28 remission at week 24 in both univariate and multivariate analysis. In patients with SAA < 50.0 μg/mL, both DAS28 remission (75% vs 77%, p = 0.79) and structural remission (71% vs 68%, p = 0.71) rate were comparable between SWITCH and ADD-ON.
Conclusion: SAA levels at baseline can predict the necessity of concomitant methotrexate in tocilizumab initiation in patients with RA. Patients with low levels of SAA at baseline may benefit similarly from tocilizumab therapy with and without methotrexate in terms of achieving clinical and structural remission.

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