Table 1. The factors associated with serum VEGF levels longitudinally

	Univariate analiz		BASDAİ+CRP Model		ASDAS -CRP Model	
	B (%95 CI)	p	B (%95 CI)	p	B (%95 CI)	p
Hip involvement	181.74 (12.71- 350.77)	**0.035**	357.04(112.35- 601.73)	**0.04**	338.36 (102.40-574.3)	**0.005**
Duration of delay in diagnosis	-6.91 (-14.05- 0.24)	**0.058**	-13.93 (-24.56 to -3.31)	**0.01**	-14.36 (-24.68 to -4.03)	**0.006**
Gender	-216.88 (-390.6 to -43.2)	**0.014**	-154.23 (-336.94- 28.48)	**0.09**	-162.6(-336.70- 11.4)	**0.006**
HLA-B27 positivity	-233.4 (-440.67 to -26.11)	**0.027**	-135.78(-326.08- 54.52)	0.16	-126.54(-309.2- 56.1)	0.17
BASDAI	4.12 (1.06- 7.18)	**0.008**	5.60 (2.16- 9.05)	**0.001**		
ASDAS-CRP	110.04 (58.18- 161.88)	**<0.001**			132.31(74.70- 189.92)	**<0.001**
Serum CRP level	5.86 (1.02- 10.7)	**0.018**	4.09 (-0.99- 9.183)	0.11		

Objectives: In this study, we aimed to evaluate the relationship between serum biomarkers (serum leptin, VEGF, MMP-3) and disease activity as well as the changes of those biomarker levels during TNFi treatment.

Methods: Patients with axSpA who put on their first TNFi and had serum samples at baseline and 6th month of therapy were included in the analysis The demographic, clinical and laboratory characteristics disease activity and function parameters (BASDAI, BASFI, ASDAS-CRP, serum CRP levels) at baseline and 6th months were recorded. Levels of serum leptin, VEGF and MMP-3 were studied by ELISA method. The relationship between serum biomarkers and disease activity scales in addition CRP levels were tested by correlation analysis. The factors affecting the change in seruml biomarkers level in 6th month were also analyzed by GEE which is a longitudanal analysis method.

Results: A total of 74 patients (mean age (SD) 48.7 (12.8) years, 54.1% male, 68.9% with AS) were included in this study. Baseline median BASDAI scores (IQR) were 5.8 (2.4), ASDAS scores (IQR) 3.7 (1.5) and median CRP levels (IQR) 12 (23). Disease activity parameters (BASDAI, BASFI, ASDAS-CRP) were significantly decreased at 6th month of therapy (p<0,001, p<0,001, p<0,001, respectively). The correlation between baseline serum biomarker levels (leptin, MMP3, VEGF) and between biomarkers level and disease activity were eveluated and only serum MMP-3 levels were found to be associated with baseline ASDAS-CRP (p=0.02). Serum VEGF level decreased significantly compared to the baseline at the 6 th month of TNFi treatment (p<0.001), however, serum leptin and MMP-3 levels were not associated with disease activity and affected by biologic treatment (p=0.89, p=0.50, respectively). In the longitudinal analysis, serum VEGF level were significantly associated with gender, hip involvement, delay in diagnosis in addition to disease activity (Table 1).

Conclusion: TNFi treatment is not only effectively control disease activity but also cause significant decrease in serum VEGF levels in patients with axSpA. Considering the role of VEGF in radiographic progression it could be a promising biomarker in axSpA

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2022-eular.4305

AB0774

PARADOXICAL REACTIONS, ESPECIALLY PSORIASIS IN RHEUMATOLOGY PATIENTS RECEIVING BIOLOGIC THERAPY FROM THE TREASURE DATABASE: A 5-YEAR FOLLOW-UP STUDY

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Background: Biologic agents have altered our ability to treat chronic inflammatory diseases effectively. Although paradoxical reactions (PRs) were initially described with TNF-α inhibitors, they have been reported with newly developed biologic agents or classes too (1). Due to the potential consequences of PRs, it is critical to identify and treat these drug class side effects as soon as possible.

Objectives: The aim of this study was to characterize PRs, especially psoriasis, in a large cohort of patients treated with biologic agents and to investigate their clinical implications.

Methods: TReasure database, which was launched in 2017, is a web-based prospective observational cohort comprised of patients with rheumatoid arthritis (RA) and spondyloarthritis (SpA) from 17 centers located throughout Turkey. Characteristics of patients with PRs and clinicians' treatment approaches and outcomes were evaluated using descriptive statistics.

Results: 3147 RA and 6071 SpA patients were evaluated. 139 (1.5%) patients (40 (28.8%) with RA and 99 (71.29%) with SpA) developed a PRs (Table 1). The rate of paradoxical psoriasis was 90.6% and 9.7% of the patients had a family history of psoriasis. Females constituted 64% of the patients. The mean age was 46±12 years and the disease duration were 146±92 months. Mean time interval between the PRs and diagnosis was 99,6±86 months, whereas median 12 (1-132) months between the PRs and the biological agent. Adalimumab (30.9 %), etanercept (20.1 %), and infliximab (18.7 %) were the three most frequently used agents during the PRs. However, 8.6% of the patients developed PRs with non-TNF agents. Only seven patients (5.1%) who had PRs discontinued the drug, while 28 patients (20.6%) continued to receive the agent that caused the PRs. Majority of patients were switched to other TNF-α inhibitors (48.5%) and non-TNF agents (25.7%). When we limited our analysis to paradoxical psoriasis patients, we observed complete remission in 43.5% of patients and progression in only six (4.7 %) of patients. (Figure 1).

Table 1. Characteristics of RA and SpA patients who developed paradoxical reactions

	N	Patients (N, %)
Paradoxical reactions (PRs)	139	
Psoriasis		126 (90.6%)
Uveitis		6 (4.3%)
Sarcoidosis		2 (1.4%)
IBD		1 (0.7%)
Other*		4 (4.3%)
Primary disease	139	
RA		40 (28.8%)
SpA		99 (71.29%)
Time interval between PRs-diagnosis of RA/SpA (months)	124	99,6±86† 72 (3-420) ††
Time interval between PRs-biological onset (months)	126	22±25† 12 (1-132) ††
BMI, kg/m^2	123	28±5† 27,8 (17,3-49,7) ††
Smokers (Current/ex)	131	61 (46.6%) / 10 (8.5%)
Biological agents used during PRs	139	
TNF-α inhibitor used**		127 (91.3%)
Secukinumab		2 (1.4%)
Abatacept		6 (4.3%)
Rituximab		4 (2.9%)
Biological agents used after PRs	101	
Etanercept		31 (22.8%)
Adalimumab		15 (11%)
Secukinumab		12 (8.8%)
Other***		43 (57.5%)

PRs: Paradoxical reactions IBD: Inflammatory bowel disease. *Drug-induced lupus:3 Vasculitis:1. ** Adalimumab: 43 (30.9%), Etanercept: 28 (20.1%), Infliximab: 26 (18.7%), Certolizumab: 20 (14.4%), Golimumab: 10 (7.2%). *** Certolizumab: 9 (6.6%), Tofacitinib: 9 (6.6%), Infliximab: 7 (5.1%), Tocilizumab: 5 (3.7%), Golimumab: 4 (2.9%), Ustekinumab: 4 (2.9%), Rituximab:3 (2.2%), Abatacept: 1 (0.7%), Anakinra: 1 (0.7%). † mean ± standard deviation. †† median (min-max)

Conclusion: Clinicians should be aware that PRs may develop with biologic agents other than TNF-α inhibitors. Additionally, it is important to keep in mind that the development time of PRs could be variable. The mechanism(s) behind PRs remain unknown, and there is no currently available diagnostic or therapeutic protocol (2). The decision whether to continue or discontinue biologic agents should be individualized. We found that the majority of patients can be managed without discontinuing biologic agents. Finally, we believe that the experience of our large cohort can help physicians in clinical practice where sufficient protocol is lacking.

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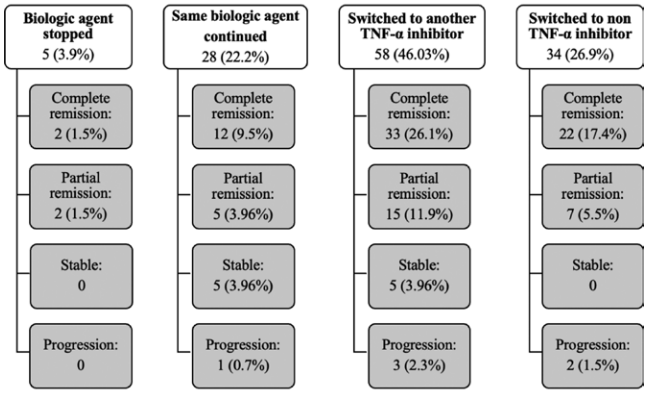
Figure. Management and outcomes of patients with **paradoxical psoriasis (N (%))** *



* The total number was not matched because the data of some patients could not be accessed.

Disclosure of Interests: None declared
DOI: 10.1136/annrheumdis-2022-eular.4439

AB0775 EFFICACY, SAFETY AND SURVIVAL OF SECUKINUMAB IN SPONDYLOARTHRITIS.

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Background: Secukinumab (SCK) is a fully human monoclonal antibody that selectively inhibits IL-17A indicated for both axial and peripheral spondyloarthritis (SpA) and psoriatic arthritis (PsA). In this paper we present our experience with SCK since its approval, in a tertiary hospital.
Objectives: To describe the efficacy, survival and safety of SCK treatment in real clinical practice in patients with SpA and PsA.
Methods: We performed a descriptive, retrospective analysis of patients diagnosed with SpA according to ASAS criteria and PsA according to CASPAR criteria. For this purpose, data were collected from the medical records of 75 patients treated with SCK in the rheumatology service.
To evaluate efficacy in the Spa group, analytical variables (C-reactive protein (CRP)), the Ankylosing Spondylitis Disease Activity Score (ASDAS) scale and the patient's visual analog scale (VAS) were analyzed. In the PA group, VAS and CRP were assessed at baseline and at 12 months. Survival was evaluated with respect to the causes of drug discontinuation and its association with individual baseline characteristics, such as metabolic syndrome. Safety was evaluated by analyzing intercurrent infections or neoplasms requiring discontinuation.
Results: Seventy-five patients with spondyloarthritis included in treatment with SCK were analyzed, 40 had Spa and 34 had PAs. The mean age at diagnosis was 45.1 years (SD 11.3) and the median time from diagnosis to onset of SCK was 4.5 years (IQR 1-10) (Table 1).

Table 1. Baseline characteristics

	SpA	APs	Total
Age at diagnosis	45.1 (SD11.8)	44.9 (SD10.9)	45.1 (SD11.3)
Age at begging of SCK	53.5 (SD 9.3)	52.2 (SD 10)	52.9 (9.6DE)
Hypertension	10 (25.0%)	10 (29.4%)	20 (27.0%)
Dyslipidaemia	17 (42.5%)	17 (51.5%)	34 (46.6%)
Diabetes mellitus	5 (12.5%)	6 (17.6%)	11 (14.9%)
Body Mass Index	27.9 (SD4.4)	30.5 (SD8.4)	29.2 (SD6.7)
Tobacco	14 (35.0%)	10 (29.4%)	24 (32.4%)
Cardiovascular disease	5 (12.5%)	2 (5.9%)	7 (9.5%)
Previous sDMARD			
-Methotrexate	13 (32.5%)	24 (70.6%)	37 (50%)
-Leflunomide	1.7% (15%)	12 (35.3%)	18 (24.2%)
Initial corticosteroids	7 (18.4%)	15 (44.1%)	22 (30.6%)

Fifty-seven patients (76%) were on treatment with anti-TNF prior to SCK initiation. The mean number of anti-TNF prior to SCK was 1.8 (SD 1.2). Twenty-six patients (35.1%) received were on treatment with SCK at a dose of 150 mg and 48 (64.9%) with 300 mg every 4 wk. The mean CRP before starting SCK was 8.46 mg/L (SD 18.38) and VAS 4.83 (SD 2.99).
Statistically significant improvement was observed in both pathologies in VAS (-2.1 SD 3.1) (p 0.003). Despite the improvement in CRP, in both groups of -3.7 mg/L (SD 15) was not statistically significant. Regarding ASDAS, in the Spa group, 2 patients (5.3%) showed great improvement (>3.1), 9 patients (23.7%) clinical improvement (>1.1), 17 patients (42.5%) improvement (<1.1), 6 patients (15%) showed no improvement and 4 patients (10.5%) worsening.
The overall drug survival to date is 19.41 months (SD 13.76), 20.6 months (SD 14.8) in the Spa group and 18 (SD 12.6) in the AP group (Figure 1).

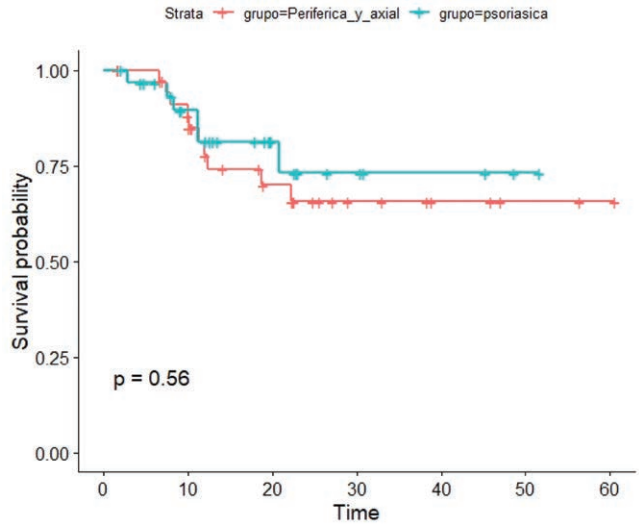

Figure 1. Secukinumab survival in both groups

17 patients (23%) discontinued treatment, with a median duration of 12 months (SD 4.66). 12 (70.6%) due to ineffectiveness, 1 (5.9%) by their own decision, 3 (17.6%) due to persistent mechanical pain and 1 (5.9%) due to neoplasia (gastric adenocarcinoma). The clinical variables of metabolic syndrome were evaluated (Table 1) none of these characteristics had a statistically significant association as a cause of drug discontinuation. No patient presented infections that required discontinuation of the drug. No association was detected between drug discontinuation or the development of metabolic syndrome.
Conclusion: In our cohort, SCK showed a statistically significant improvement in the VAS scale in both groups. A 23.7% of patients with Spa showed clinical improvement according to ASDAS values, 5.3% showed great improvement and 42.5% showed mild improvement. The overall drug survival to date is 19.41 months (SD 13.76) slightly longer in the SpA group than in APs. SCK seems to be a safe drug as none of our patients presented infections during its use.
Disclosure of Interests: None declared
DOI: 10.1136/annrheumdis-2022-eular.4540

AB0776 CLINICAL AND LABORATORY PECULIARITIES OF TREATMENT-REFRACTORY ANKYLOSING SPONDYLITIS.

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Background: Despite the availability of newest guidelines for the treatment of ankylosing spondylitis and various groups of genetically engineered biological drugs, there are still patients with refractory, i.e., resistant to therapy (with two or more genetically engineered drugs), AS, maintaining high clinical and laboratory activity.
Objectives: To analyze the clinical peculiarities of patients with refractory AS and to identify markers for early detection of such cases.
Methods: Patients who received 2 or more GEBDs and demonstrated a primary or secondary failure were considered cases of refractory ankylosing spondylitis. Twenty-four (16 %) patients with refractory AS (mNYC 1984) were enrolled, including 14 males, 10 females. This group was selected from 150 successive AS patients admitted to the clinic of the Scientific Research Institute of Rheumatology in 2020–2021. Ninety-three per cent of patients had HLA B 27, the mean age was 39 [31.5;49] years, the age of onset of the disease was 21.7 [15.5;29] years, the duration of the disease was 17.3 [11;24]. They were treated with drugs of various groups (i-TNF-α, IL-17, 6 and Janus kinase inhibitors). The refractory AS patients were compared to a control group with the corresponding gender, age of onset and duration of the disease admitted successively to the Institute during the same period.
The examination followed the ASAS recommendations. All patients had additional nephelometric assay of SAA level using commercial reagent kits, reference value < 5 mg\L.