renal function. This subject was excluded to ensure a conservative estimate of the impact of renal impairment on upadacitinib exposure. Results from the categorical analysis were consistent with the results from the primary regression analysis.

Conclusions: Renal impairment has only a limited effect on upadacitinib pharmacokinetics. Upadacitinib mean plasma exposures (AUC) in subjects with severe renal impairment are within 44% of mean exposures in subjects with normal renal function. This is in agreement with the known limited role of urinary excretion in upadacitinib elimination.

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AB0480 FOLIC ACID SUPPLEMENTATION DELAYS CLINICAL IMPROVEMENT IN RHEUMATOID ARTHRITIS PATIENTS TREATED WITH METHOTREXATE

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Background: Methotrexate (MTX) is the disease-modifying anti-rheumatic drug (DMARD) most commonly used in the treatment of rheumatoid arthritis (RA), and folic acid (FA) supplementation is usually employed to prevent MTX-related adverse effects.¹ However, the need of FA supplementation remains controversial, as it might influence the efficacy of MTX therapy.²

Objectives: The aim of this retrospective study was to evaluate the effects of FA supplementation on both efficacy and safety of low-dose MTX in the treatment of RA patients.

Methods: 120 RA patients (mean disease duration 11±30 months, mean age 61±13 SD years), according to ACR criteria,³ who started low-dose MTX treatment were retrospectively evaluated. Patients were not complaining of serious diseases other than RA. Two groups of patients were selected: patients supplemented with FA (#58) and patients not-supplemented with FA (#62). MTX dose, prednisone dose, disease activity (DAS28), and adverse event (AE) were recorded at 3, 6, 9, 12, 24, 36, and 48 months. At baseline, MTX mean dose was 8.3±1.9 and 8.1±1.4 mg/weekly, prednisone mean dose was 7.4±3.1 and 5.3±3.2 mg/daily, and mean DAS28 was 5.1±1.2 and 4.8±1.1, respectively for both groups. The patients were followed-up until MTX discontinuation, new DMARD/BiologicDMARD addition, need for FA supplementation, or after 48 months of therapy (mean follow-up 40±20 months). The maximum MTX dose administered during the follow-up was 15 mg/weekly. Statistical analysis was performed by non parametric tests.

Results: DAS28 decreased in both groups during the study. However, DAS28 was found significantly lower (p<0.04) in patients without FA supplementation, when compared with patients taking FA supplementation, at months 3, 6, 9, and 12. Patients without FA supplementation required significantly lower (p<0.01) doses of both prednisone and MTX during the follow-up. AEs were observed in 26% of patients with FA supplementation, as well as in 43% of patients without FA supplementation. The difference was statistically significant (p=0.049). No difference in AE type was observed between the groups (mainly, transaminase or mean red blood cell volume elevation, oral mucositis, urinary tract infections). AEs have been successfully managed in the majority of cases by either discontinuing MTX for two weeks or adding FA if required.

Conclusions: In RA patients taking low-dose MTX, FA supplementation decreases the efficacy of the treatment, delaying the clinical responsiveness. The lack of administration of FA increases the risk of AEs; however, by considering the benign type of AEs usually observed in this subset of patients, the treatment with low doses of MTX might be started without FA supplementation, and the FA administration deferred until AE appearance.

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AB0481 TRANSCUTANEOUS VAGUS NERVE STIMULATION IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Rheumatoid Arthritis is a prevalent, autoimmune disease causing joint destruction and severe physical disability. In various studies the vagal nerve has been postulated to play a role in modulation of systemic inflammation.

Objectives: Our aim was to investigate the effect of transcutaneous stimulation of the vagal nerve (t-VNS) in patients with rheumatoid arthritis. We hypothesised that stimulation of the vagal nerve and thereby enhanced parasympathetic tone would increase the activity of the vagal nerve and improve experienced clinical pain.

Methods: Sixteen patients with rheumatoid arthritis and flare (DAS28-CRP>3.2) and twenty without flare were recruited. Three bilateral electrical stimulations of the vagal nerve were done with a handheld device for 4 days. Cardiac vagal tone (CVT) was assessed with linear vagal scale (LVS) and DAS28-CRP were collected on the 1st, 2nd and 5th day.

Results: Cardiac vagal tone was significantly lower in patients with flare in comparison to patients without flare (3.2 vs. 4.9 LVS, p=0.03). t-VNS did not alter CVT in patients with flare, however decreased CVT in patients without flare (baseline: 4.9, 2nd day: 3.8 LVS, p=0.03). A decrease in DAS28-CRP in patients with flare was seen in response to t-VNS (baseline: 4.2, 5th day: 3.9, p=0.03), due to decrease in CRP (baseline: 8.2, 5th day: 6.0 mg/L, p=0.02) and number of swollen joints (baseline: 5.4, 5th day: 4.4, p=0.01) and tender joints (baseline: 3.7, 5th day: 2.8, p=0.02) in RA patients with flare. A negative association between baseline CVT and baseline DAS28-CRP was found in all RA patients, showing that lower CVT was associated to higher disease activity.

Conclusions: Baseline CVT was lower in RA patients with flare, possibly due to higher level of inflammation, and the observed decrease in DAS28-CRP was not associated to CVT modulation.

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AB0482 SIMILAR EFFICACY OF TOFACITINIB ON DISEASE ACTIVITY IN RHEUMATOID ARTHRITIS PATIENTS WITH AND WITHOUT PREVIOUS BIOLOGICALS; RESULTS FROM THE TURKBIO REGISTRY

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Background: The aim of this study was to investigate the drug survival, its efficacy and safety in patients with RA based on the database from the Turkish TURKBIO registry

Methods: A total of 180 patients were treated with TOFA for RA. Drug survival was assessed. In 118 patients with available data, treatment response was evaluated using the number of sensitive and swollen joints, VAS values, DAS28, HAQ and CRP at weeks 12, 24, 48 and 60

Results: At baseline, RA patients had a median (Q1-Q3) disease duration of 14 years. 75 patients had used ≥1 biologics previously. The other demographic and clinical features of the patients were shown in table 1. Median (Q1-Q3) followup period was 137 weeks. After 48 and 137 weeks, 75% and 48% of the patients respectively, maintained TOFA (figure 1). The most common reason for drug discontinuation was ineffectiveness of treatment (63%), followed by adverse events (23%). After 12 weeks, all disease activity parameters were reduced significantly compared to the baseline and most of them continued to be reduced until week 60. No difference was observed in disease activity parameters between the groups

Abstract AB0482 – Table 1

	Week 0	Week 12	Week 24	Week 36	Week 48	Week 60	*p	**P	***p
Patients with response data, (n)	118	39	41	31	32	28			
Disease activity level, n (%)									
Remission		7 (6)	17 (47)	10 (32)	16 (59)	12 (43)	17 (63)		
Moderate		64 (59)	14 (39)	12 (39)	7 (26)	10 (36)	8 (30)		
High		29 (27)	1 (3)	1 (3)	1 (4)	2 (7)	2 (7)		
DAS28, Median (Q1-Q3)	4.4 (3.7–5.1)	2.8 (2–3.5)	3 (2.4–3.6)	2.2 (1.9–3.3)	3.1 (1.9–4.2)	2.1 (1.9–4.1)	<0.001	<0.001	<0.001
Swollen joint (0–28); Median(Q1-Q3)	2 (0–4.3)	0	0	0	0	0	<0.001	<0.001	<0.001
Tender joint (0–28); Median (Q1-Q3)	4 (2–10)	0 (0–1.3)	0 (0–2)	0 (0–0)	0 (0–2)	0 (0–0)	<0.001	<0.001	<0.001
CRP (mg/L); Median (Q1-Q3)	13 (4.7–29)	4.8 (3–12.8)	4.3 (3–10.3)	4 (3–9)	6 (3–12)	9 (3–17.5)	0.005	0.015	0.110
Patient global score (0–100); Median	62.5 (42–80)	44 (12–60)	30 (20–50)	27(12–31)	30.5 (15–69)	27.5 (13–46)	<0.001	0.001	<0.001
HAQ score; Median	1 (0.8–1.5)	0.5 (0–1.3)	0.6 (0.1–1.3)	0.5 (0.3–0.8)	0.6 (0.2–1.2)	0.6 (0–1)	0.003	0.008	0.001

Abstract AB0482 – Table 2. Disease activity parameters baseline and weeks 12, 24, 36, 48 and 60

First biological tofacitinib n:105	Response data:n	58	18	15
	DAS28, Median	4.5 (3.7–5.2)	2.4 (1.6–3.6)	3 (2.4–3.6)
	(Das 28<3.1) n	11 (19%)	11 (61%)	8 (53%)
Using other biological drugs before TOFA n:75	response data, n	50	18	16
	DAS28, Median	4.4 (3.7–5)	2.9 (2.4–3.5)	3 (2.3–3.7)
	Das28<3.1 n (%)	4 (8%)	10 (56%)	10 (63%)
	#p	0.577	0.516	0.921
	##p	0.173	1.000	0.879

*p for week 0 vs 12; **p for week 0 vs 48,***p for week 0 vs 60 #p das28median for TOFA versus other biological ##p das28 <3.1for TOFA versus other biological

with and without previous ≥ 1 biologics at weeks 0,12 and 24 (table 2) Remission rate was(43%)at week 60(observed data) (table 2) A total of 9 adverse events (3infection,3allergic rx,2 rash)were observed during the followup period

Conclusions: Treatment with TOFA may provide good response rates in RA patients refractory previous biologicals

Disclosure of Interest: None declared

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AB0483 PHYSICIANS' AWARENESS ON THE USE OF METHOTREXATE BY RHEUMATOID ARTHRITIS PATIENTS

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Background: Methotrexate (MTX) is an anchor drug used in the treatment of rheumatoid arthritis (RA). It is notable that although MTX has severe potential side effects, most of these side effects could be prevented. Patients should be informed very well regarding MTX and prescriptions should be prepared carefully.

Objectives: In this research, we sought to investigate patients with RA and also physicians, awareness regarding use of MTX, which is under-researched.

Methods: Following Fayet et al., the data were collected from rheumatoid arthritis patients (n=98) and physicians (n=82) through a questionnaire that included questions regarding the effects of MTX, MTX administration, drug interaction, side effects, the frequency of patient follow-up and changes regarding daily life. The questionnaire was filled by the patients in the hospital and physicians filled the on-line questionnaire.

Results: 23% patients responded correctly about that MTX is drug modifying anti-rheumatic drugs (DMARD). 88% of the patients stated that they used MTX weekly, only 16% of the patients were able to explain the reason why they used folic acid was reducing the toxicity of MTX and only 5% reported that folic acid did not increase the efficacy of MTX. 95% did not know that trimethoprim should not be combined with MTX. 11% were familiar with haematologic risks. 7% were aware of hypersensitivity pneumonitis. 42% had information regarding laboratory tests. 20% were conscious concerning the need for contraception. 33% noted that alcohol consumption must be limited. The striking findings physicians responded wrongly was that according to 51% physicians, MTX leads to cancer. Surprisingly, approximately 30% physicians responded wrongly concerning surgery protocol.

Abstract AB0483 – Table 1

	Right answer (%)		Wrong answer (%)		Unknown (%)	
	Patient	Physician	Patient	Physician	Patient	Physician
Mechanism of action						
Methotrexate is a disease-modifying drug	23	93	17	7	60	0
Time when MTX becomes effective	12	83	20	12	68	5
Should not be stopped on the disappearance of symptoms	13	98	16	0	71	2
Dosage should not be adjusted to the pain	40	76	15	19	45	5
Maximum dosage allowed	12	82	7	13	81	5
Once weekly administration	88	100	4	0	8	0
Folic acid reduces toxicity of MTX	16	94	5	5	79	1
Decreases efficacy at high doses	3	61	11	28	86	11
Does not increase efficacy of MTX	5	93	10	6	85	1
Should not be combined with trimethoprim	5	71	4	11	91	18
Nonapplicable interactions with analgesics	23	94	16	5	61	1
NSAIDs	22	93	13	3	65	4
Corticosteroids	23	98	13	2	64	0
DMARDs	23	94	12	6	65	0
Nonapplicable interactions with antibiotics	11	88	11	5	78	7

Conclusions: The findings showed that patients with RA, who used MTX frequently, had insufficient information regarding MTX. Notably, patients are lack of information about the side effects of MTX, drug interactions and the need for contraception. Hence, we recommend that patients' knowledge should be increased regarding MTX. Physicians should be provided with training to raise awareness proper use of MTX.