Results: TOC therapy showed high efficacy in children with RF-negative polyarticular JIA: 81.8/67.3/47.3/23.6% of patients reached the ACR30/50/70/90 criteria for the end of follow-up, respectively. The median time of achieving at least 30% improvement from baseline (ACR30) was 1 month (IQR 1.3).

Univariate analysis showed that earlier age at initiation of Tocilizumab therapy, higher physician's global assessment score using the 100-point Visual Analogue Scale, and longer morning stiffness were the factors associated with reaching ACR90. Younger age at therapy initiation, greater number of swollen joints and joints with limited range of motion, and history of using fewer biologicals are the factors associated with reaching inactive disease and remission. However, multi-factorial analysis showed that only earlier age at initiation of TOC therapy was a statistically significant factor associated with reaching the best response to therapy in all the models.

Conclusions: Earlier initiation of TOC therapy is associated with higher chances for reaching ACR90 and pharmacological remission in patients with RF-negative polyarticular JIA. Further studies in larger cohorts are needed to identify the optimal age at therapy initiation.

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AB0432 BIOLOGIC DMARDS TREATMENT RETENTION IN PATIENTS WITH RHEUMATOID ARTHRITIS ACCORDING TO THE MOSCOW ARTHRITIS REGISTRY (MERA)

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Background: Retention on treatment is a good index of efficacy and safety of treatment used in the real clinical practice. These data may be useful to planning the treatment among some years.^{1,2}

Objectives: To compare the drug survival of biological therapies.

Methods: We followed rheumatoid arthritis patients treated with biologics DMARD and registered in MERA 2012–January 2018. All patients had more than one visit in the registry.

Results: We analysed 799 patients (mean age 57.3±13, mean diseases duration 15.6±10.3 years). The average time until a change of treatment for infliximab was 399 days – the shortest treatment duration. Abatacept (median survival – 2922 days) demonstrated significant superiority over adalimumab (1339 days) ($p<0.001$), infliximab (399 days) ($p<0.001$), rituximab (2557 days) ($p=0.004$) and etanercept (1492 days) ($p=0.035$) when they was used as the first biologic drug. Among second-line therapy, the longest treatment survival has etanercept (3435 days), the shortest – infliximab (212 days).

Abstract AB0432 – Figure 1

Conclusions: The results of the trial show the differences in treatment survival of some biologics. It can be reasonable to take these significant differences into consideration by the long-term planning of the biologic treatment of rheumatoid arthritis patients.

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AB0433 TNF-INHIBITORS AND ANTI-B- CELL TREATMENT IN PATIENTS WITH RHEUMATOID ARTHRITIS. REAL-WORLD DATA FROM THE RUSSIAN NORTH-WESTERN BIOLOGICAL TREATMENT COHORT

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Background: Biologics are drugs that improved the status of rheumatoid arthritis (RA). At the same time real-world data (RWD) from large cohorts can give some additional information about efficacy and safety of the biological agents.

Objectives: The aim of the study was to analyse the efficacy and safety of biological treatment in large prospective cohort during 102 weeks of treatment.

Methods: The data from 1 400 patients on biological treatment from North-Western State Medical University Biological Treatment Cohort Study (St. Petersburg, Russia) were analysed. In final analysis data from 758 patients with RA/EULAR 2010 criteria, were included. Following drugs were used: adalimumab (n=22), certolizumab pegol (n=62), etanercept (n=64), golimumab (n=21) and infliximab (n=69), rituximab (n=520)). The disease activity index (DAS28) and high-sensitive C-reactive protein (C-RP) were evaluated as markers of RA activity. Side effects were registered during the study.

Results: RA activity, demographic characteristics, and concomitant treatment (including methotrexate, glucocorticoids, NSAIDs, analgesics) at baseline were similar in all the treatment groups ($p\geq 0.05$ for all the parameters). The faster response was found in golimumab and certolizumab pegol patients (p and It ; 0.01 for difference of DAS28 in golimumab, certolizumab pegol treatment and other treatment groups at week 6), figure 1. After week 12 the similar efficacy of all the TNF α -blockers (figure 1).

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The most frequent side-effects were opportunistic infections, OR=1.8 [95% CI 1.4–2.1]. Risk of infections was higher in patients, receiving monoclonal antibodies to TNF α , as compared to other TNF α inhibitors ($p<0.01$ for differences between infliximab/adalimumab/golimumab and etanercept, and $p<0.05$ for differences between infliximab/adalimumab/golimumab and certolizumab pegol).

The risk of cancer in RA patients on biological treatment and in total Russian population (including lymphomas and skin cancer) was comparable: for all the tumours OR=0.98 [95% CI 0.76–1.26], for lymphomas OR=1.23 [95% CI 0.92–1.41], for skin cancer OR=1.11 [0.88–0.36].

Abstract AB0433 – Figure 1. The dynamics of the disease activity index DAS28 in patients with RA receiving different TNF α -blockers

Conclusions: According to the RWD from the North-Western Biological Treatment Cohort, the efficacy of all the TNF α -inhibitors and rituximab in RA treatment

after week 12 is the same. Infections, but not tumours, are the most frequent side-effects of biological treatment in RA patients.

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AB0434

THE INFLUENCE OF BODY MASS INDEX ON THE EFFICACY OF TUMOUR NECROSIS FACTOR BLOCKING THERAPY AND DISEASE ACTIVITY IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: The impact of Body Mass Index (BMI) on efficacy of TNF blocking therapy in Rheumatoid Arthritis (RA) patients and therefore on control of the disease is an important question.

Objectives: The aim of this study is to determine the influence of BMI on the efficacy of TNF blocking therapy in terms of disease activity in patients with RA.

Methods: A retrospective, observational study of 168 consecutive RA patients who received subcutaneously (SC) TNF blocking treatment (adalimumab, etanercept, golimumab and certolizumab pegol). Their follow-up data, for at least 26 weeks, and their baseline BMIs were available. The WHO definition for normal weight, overweight and obesity was applied, whereas clinical response was compared by BMI subgroups.

Results: The average BMI was 26.83±4.34 kg/m² and the baseline Disease Activity Score in 28 joints (DAS28 [ESR]) was high at 5.72±0.84. Mean age was 63.47±12.58 years and 135 (80.36%) were female. The median disease duration was 13.01±8.57 years. Overall, patients with normal weight responded better to treatment regimen, followed by overweight and obese subgroups. After a follow-up period of 26 weeks, the obese group had significantly higher DAS28 (ESR) and Health Assessment Questionnaire (HAQ) than either normal or overweight subgroups (3.26±0.84 vs 2.72±0.78 vs 2.81±0.82, p<0.001, 0.423±0.002 vs 0.076±0.01 vs 0.178±0.01, p<0.001 respectively). Furthermore, obesity was significantly associated with a decreased tendency of achieving week 26 remission, based on DAS28 (<2.6) p:0.002 and normal HAQ (≤0.5) p: 0.003.

Abstract AB0434 – Table 1. Summary of responses to TNF-blocking therapy (SC) by BMI category at week 26 in subjects with RA

Variable		% (n/N)			p value [95% CI]
		BMI <25 kg/m ²	BMI 25–30 kg/m ²	BMI >30 kg/m ²	
DAS28 HAQ	Remission (<2.6)	58.18 (22/55)	35.8 (29/81)	0 (0/32)	0.002 [15–16.5]
	LDA (>2.6 – <3.2)	9.09 (5/55)	40.74 (33/81)	37.5 (12/32)	0.001 [16.6–16.7]
	MDA (>3.2 – <5.1)	30.91 (17/55)	23.46 (19/81)	62.5 (20/32)	0.001 [15.2–16.9]
	HDA (>5.1)	1.82 (1/55)	0 (0/81)	0 (0/32)	ns
	<0.5	61.81 (34/55)	58.02 (47/81)	46.88 (15/32)	0.003 [8.9–16.6]

LDA: low disease activity, MDA: moderate disease activity, HDA: high disease activity

Conclusions: Patients with RA and higher BMIs demonstrated a diminished clinical response after 26 weeks of SC-administered TNF-blocking treatment compared with their counterparts with lower BMIs.

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AB0435

THE TREATMENT PATTERN OF TOCILIZUMAB IN PATIENTS WITH RHEUMATOID ARTHRITIS IN CHINA: A MULTICENTER OBSERVATIONAL STUDY

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Background: Tocilizumab (TCZ) is a humanised monoclonal antibody targeting interleukin-6 receptor. Since TCZ Label for RA has been issued in many countries, administration patterns and dose modifications for managing adverse events (AEs) seems differ depending on clinical opinion. Few data are available from real world practice in China.

Objectives: To observe in routine clinical practice the treatment patterns of TCZ in RA patients with regard to persistence on drug and adherence to the licensed label recommendations.

Methods: This a 6 month non-interventional, multi-centre study enrolled patients with moderate to severe RA diagnosed per revised 1987 ACR criteria (age ≥18 years) and being treated with TCZ. Data was recorded during routine visit. The primary variable was the proportion of patients on TCZ treatment after 6 months.

Results: Of 407 patients from 23 centres in China, 396 were eligible, including 330 (83.3%) women. The mean age was 49.1±13.44 years. The mean RA diagnosis course was 5.4±6.24 years. Among 396 patients, 250 (63.1%) were RF positive, 235 (59.3%) were anti-CCP positive and 123 (31.1%) had anaemia (Hb <90 g/L). Of eligible patients, 293 (74.0%) completed the study. The primary reason of premature termination was treatment costs (n=49, 12.4%). There were 37 (9.3%) patients received anti-TNF biologics previously and 330 (83.3%) received concomitant DMARDs, of which 84 (21.2%), 149 (37.7%) and 97 (24.5%) received single, 2 or ≥3 types of DMARDs, respectively. Methotrexate (n=255, 64.4%) and Leflunomide (n=184, 46.5%) were the most commonly used DMARDs. A total of 126 and 197 patients received corticosteroids or nonsteroidal anti-inflammatory drugs (NSAIDs), respectively. During 6 months observation, 21.0% and 67.7% had TCZ dose modification or discontinuation, respectively. At month 3 and month 6, 161 (40.7%) and 102 (25.8%) kept TCZ treatment, respectively. The mean frequency of TCZ usage was 3.7±1.62. Effectiveness of TCZ was analysed in patients who were still using TCZ at month 6. The mean score of total TJC (28-joint count) at baseline and at month 6 was 11.2±8.0 (n=63) and 2.3±4.12 (n=77), respectively; mean change from baseline was -9.5±8.02 (n=53). The mean score of total SJC (28-joint count) at baseline and at month 6 was 8.0±6.81 (n=63) and 1.7±2.35 (n=77), respectively; mean change from baseline was -6.5±7.2 (n=53). The mean score of DAS28 at baseline and at month 6 was 6.13±1.33 (n=56) and 2.79±1.39 (n=66); mean change from baseline was -3.45±1.48 (n=46). Patients in low disease activity (DAS28 <3.2) or remission (DAS28 <2.6) in those who still using TCZ at month 6 was 63.6% and 51.5%. The mean change from baseline in SDAI and CDAI was -28.03±16.75 (n=41) and -24.25±16.94 (n=51), respectively. Of 396 patients, 90 (22.7%) and 8 (2.0%) experienced at least one treatment-emergent AE and SAE, respectively. One patient died of severe pneumonia.

Conclusions: This was the first real-world study in RA patients treated with TCZ in China. The results show that Chinese RA patients have long disease history. TCZ was frequently used in combination with DMARDs, especially with ≥2 types of DMARDs. Compared with the dose recommendations, shorter treatment duration and longer dose interval of TCZ were found in China. TCZ demonstrated effectiveness in treatment of Chinese RA patients in real-life clinical practice with manageable safety profile.

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AB0436

CONSOLIDATED LONG-TERM SAFETY OF INFLIXIMAB IN INFLAMMATORY ARTHRITIS FROM A PROSPECTIVE, OBSERVATIONAL REGISTRY

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Background: The Biologic Trial Registry Across Canada (BioTRAC) was a multi-centre, prospective, longitudinal, observational program that gathered and analysed data on inflammatory arthritis patients treated with infliximab (IFX), golimumab and ustekinumab. Patients specifically treated with IFX were recruited from July 2002 to June 2015 and followed up to June 2017.

Objectives: The objective of this abstract is to document the final consolidated safety data from the BioTRAC IFX cohort.