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AB0386 **RESPONSE TO BIOLOGIC THERAPY IS INFLUENCED BY THE BODY MASS INDEX IN PATIENTS WITH RHEUMATOID ARTHRITIS**

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Background: Biologic therapies have been bringing huge advantage in the treatment of rheumatoid arthritis, but response to the therapy is heterogeneous. The influence of the body mass index to the treatment is still controversial.
Objectives: To identify the factors influencing in the response to biologic therapy (bio naïve).
Methods: The analysis of the patients with rheumatoid arthritis who were initiated biologics therapy (bio naïve) between January 2011 to December 2016 in the rheumatology department of a hospital in Japan, was conducted. The effects were evaluated by EULAR response criteria after 6 months of biologic therapy, and factors influencing the response were analyzed in terms of the baseline characteristics (sex, age, disease duration, body mass index, tender joint count, swollen joint count, Patient's visual analog scale, Doctor's visual analog scale, erythrocyte sedimentation rate, C-reactive protein, Disease Activity Score in 28 joints, Modified Health Assessment Questionnaire, Methotrexate use, Prednisolone use).

Table 1.
Table 1. Difference of the baseline characteristics of RA patients between "Good or Moderate response" and "No response" of EULAR response criteria after 6 months of biologic therapy.

	Good or Moderate response (n=82)	No response (n=63)	p-value
Female sex, no. (%)	69 (84.1%)	53 (84.1%)	0.9975
Age, years	55.4 ± 15.6	59.2 ± 12.9	0.1115
Disease duration, years	6.6 ± 3.6	7.8 ± 3.9	0.0477
BMI, kg/m ²	22.0 ± 3.4	24.4 ± 5.2	0.0008
≥ 25, no. (%)	12 (14.6%)	22 (35%)	0.0043
TJC	5.6 ± 6.1	4.0 ± 5.4	0.0972
SJC	3.4 ± 4.8	1.5 ± 2.4	0.0018
Patient's VAS (range 0-100)	46.6 ± 24.6	34.4 ± 27.4	0.0052
Doctor's VAS (range 0-100)	44.6 ± 25.8	34.3 ± 28.0	0.0223
ESR mm/hour	62.8 ± 34.2	59.0 ± 31.8	0.5702
CRP mg/dL	1.7 ± 2.1	0.9 ± 1.7	0.0094
DAS28-ESR	4.9 ± 1.2	4.2 ± 1.3	0.0015
DAS28-CRP	3.9 ± 1.2	3.1 ± 1.3	<0.0001
mHAQ	0.5 ± 0.5	0.5 ± 0.6	0.3829
Concomitant therapy			
MTX, no. (%)	62 (75.6%)	47 (74.6%)	0.8894
MTX dose, mg/week	7.4 ± 4.6	7.8 ± 5.0	0.7134
Steroid, no. (%)	46 (56.1%)	48 (76.2%)	0.0120
Prednisolone dose, mg/day	1.6 ± 2.3	3.9 ± 8.8	0.5156

* Values are the mean ± SD unless otherwise indicated. RA = rheumatoid arthritis; BMI = body mass index; TJC = tender joint count; SJC = swollen joint count; VAS = visual analog scale; ESR = erythrocyte sedimentation rate; CRP = C-reactive protein; DAS28 = Disease Activity Score in 28 joints; mHAQ = Modified Health Assessment Questionnaire; MTX = Methotrexate; PSL = Prednisolone.

Table 2.
Table 2. Logistic regression analysis of "Good or Moderate response" of EULAR response criteria after 6 months of biologic therapy by baseline body mass index among Tumor Necrosis Factor users, IL-6 receptor inhibitor users and CTLA4-Ig users.

Biologics	Odds Ratio	95% confidence interval	p-value
TNF inhibitor	0.88	0.78-0.99	0.0428
IL-6 receptor inhibitor	0.75	0.61-0.93	0.0093
CTLA4-Ig	0.95	0.79-1.13	0.5757

Results: There were differences of baseline characteristics in disease duration and body mass index between the patients who achieved "Good or Moderate response" and "No response" of EULAR response criteria after 6 months of biologic therapy (table 1). The latter was more significant, and the difference was found among biologics (table 2).
Conclusion: Body mass index influence in the response to first biologic therapy in patients with rheumatoid arthritis.
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AB0387 **SATISFACTION OF PATIENTS AND PHYSICIANS WITH TREATMENTS FOR RHEUMATOID ARTHRITIS: A NATIONWIDE SURVEY IN CHINA**

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Background: Treatment satisfaction is important for adherence to therapy both for patients and physicians. There is no full understanding of the treatment satisfaction for rheumatoid arthritis (RA) in China.
Objectives: The aim is to explore the treatment satisfaction between rheumatologists and RA patients across China and the factors associated with patients' satisfaction.

Table 1.
Table 1. TSQM-II summary scores of patients' and physicians' satisfaction.

Treatment		Patients	Physicians	P
All medications for patients/ csDMARDs for physicians	N	1237	146	
Effectiveness	Median (range)	83.3 (0-100)	66.7 (33.3-100)	
Side effects	Median (range)	100 (16.7-100)	75 (16.7-100)	
Convenience	Median (range)	81.3 (18.6-100)	68.8 (31.3-100)	
Global satisfaction	Median (range)	83.3 (100)	66.7 (16.7-100)	
bDMARDs	N	335	146	
Effectiveness	Median (range)	83.3 (0-100)	75 (33.3-100)*	0.302
Side effects	Median (range)	100 (8.3-100)	87.5 (100)*	<0.001
Convenience	Median (range)	75 (0-100)	68.8 (12.5-100)	0.001
Global satisfaction	Median (range)	75 (0-100)	75 (16.7-100)*	0.889

*p < 0.05, bDMARDs vs.csDMARDs in physicians.

Figure 1 Radar charts with each item for the satisfaction between patients and physicians.

Methods: We conducted a prospective, multicenter, observational study of physicians and patients in 12 centers from 11 provinces across China between March and April 2018 (NCT03483597). The Treatment Satisfaction Questionnaire for Medication version II (TSQM-II) was used to assess the treatment satisfaction of patients and physicians regarding to csDMARDs and bDMARDs therapy. Multiple linear regression analysis was used to determine the factors independently associated with patients' satisfaction.

Results: 1237 patients (82.5% female) with a mean age (SD) of 48.9 (13.4) years and 146 rheumatologists (72.6% working >5 years) were included in this survey. The patients' satisfaction (n=335) with bDMARDs was higher than physicians' satisfaction (n=146) regarding the side effects (95.0 ± 14.3 vs. 84.6 ± 15.7 , $p < 0.001$) and convenience (74.6 ± 21.2 vs. 69.1 ± 16.5 , $p = 0.002$) (Table1). Among physicians, global satisfaction with bDMARDs was higher than that with csDMARDs (75.0 vs. 66.7 , $p < 0.05$) (Table1). Satisfaction of each questionnaire item toward therapy in patients and rheumatologists were also shown in radar charts (Figure 1). The multivariable regression analysis showed that age and quality of communication with physician was positively associated with patients' satisfaction, while level of education (bachelor or above), self-assessment of disease severity and treatment costs were inversely associated with satisfaction.

Conclusion: For bDMARDs, the treatment satisfaction of patients with RA is generally better than that of physicians. Physicians' satisfaction with bDMARDs is higher than that with csDMARDs. The independently factors associated with the treatment satisfaction of patients with RA are age, education, disease severity, the patient-physician communication, and treatment costs, which could be targeted in routine clinical care.

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AB0388

COMPARATIVE EFFECTIVENESS OF RITUXIMAB, TOCILIZUMAB AND TNFI BIOLOGICS IN RHEUMATOID ARTHRITIS PATIENTS. INFLUENCE OF CLINICAL AND INFLAMMATORY PROFILES

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Objectives: 1) To compare the real-world effectiveness among RA patients starting 3 biologic DMARDs (bDMARDs). 2) To evaluate whether

patients' clinical characteristics influence the response to specific bDMARDs. 3) To analyze the impact of bDMARDs on inflammatory profiles.

Methods: Eighty RA patients initiating TNFi, 22 patients treated with TCZ and 28 treated with RTX, the last ones after switching from TNFi and given as second bDMARDs, were included in the study. Effectiveness was assessed before and after 3 and 6 months of treatment by the European League Against Rheumatism (EULAR) criteria. Adjusted differences were estimated with multivariable linear regression. Differences in treatment outcomes were calculated as a function of patients' characteristics, through regression modelling. Extensive analysis of the inflammatory profile using a multiplex were also performed.

Results: A high proportion of patients starting TNFi showed early EULAR Good Response (65,8% responders at 3 months). After 6 months of therapy this percentage even increased (70,6%), so that tender joints' counts, swollen joints count, SDAI and HAQ improved significantly.

After switching from a first TNFi, RTX treatment promoted better early response (81,8% responders after 3 months) than TCZ (67% responders). Differences remained significant after adjusting for potential confounders. Yet, after 6 months, efficacy was similar among both non-TNFi DMARDs, even improving the effectiveness in TCZ-treated RA patients based on EULAR response rate (DAS28 change: 5.09 ± 1.4 to 2.7 ± 1.17) vs RTX-treated patients (DAS28 change: 4.8 ± 1.3 to 3.1 ± 1.3).

Patients older, and those suffering arterial hypertension (AH) or hyperlipidemia showed less effectiveness for both, TNFi and non-TNFi DMARDs, most remarkable for RTX and after 6 months of treatment.

Analysis of the inflammatory profile, by evaluating 27 key biomarkers of inflammation, showed, in patients' responders to therapy, specific profiles depending on the biologic DMARD administered. Thus, after 6 months of RTX, a generalized reduction in the expression levels of 22/27 proteins evaluated was observed, while TCZ mainly inhibited proteins involved in cell maturation, proliferation and leukocytes recruitment (IL6, GCSF, IP-10, IFN γ , RANTES). On the other hand, TNFi mainly reduced molecules related to leukocytes' recruitment (IL-2, IL-8, MIP1 β , RANTES).

Conclusion: 1) Treatment outcomes among RA patients treated with non-TNFi bDMARDs in standard clinical practice, are in line with a superior early effectiveness of RTX compared with TCZ. However, effectiveness in TCZ-treated RA patients increases after 6 months of treatment vs RTX. 2) Patients characteristics influence the response to bDMARDs, suggesting the need of evaluating the benefit risk/ratio based on a personalized clinical evaluation. 3) Anti-inflammatory benefits associated with bDMARDs treatments can differ despite similar drug efficacy against RA, indicating that drug-specific mechanisms are involved in regulating these processes.

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AB0389

BIOSIMILAR ETANERCEPT VERSUS ORIGINATOR: RESULTS FROM A LONGITUDINAL PROSPECTIVE MONOCENTRIC STUDY

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Background: The introduction of TNF inhibitors have revolutionized the outcome of patients affected by Rheumatoid Arthritis (RA). In the last years, pharmaco-economic implications determined the introduction of biosimilar as alternative to originator biological drugs. Phase I and head-to-head phase III clinical studies demonstrated pharmacokinetic equivalence and comparability in terms of efficacy, safety, immunogenicity and tolerability. However, biosimilar drugs demonstrated some differences related to charge and glycosylation, not influencing the function and the ability to