IFX originator to CT-P13. This real-life study did not highlight any new safety concerns.

Disclosure of Interests: Bruno Fauriel Speakers bureau: Lilly, SOBI, Roche-Chugui, Consultant of: AbbVie, Boehringer Ingelheim, Celgene, Lilly, Janssen, Medac, MSD France, Nordic Pharma, Novartis, Pfizer, Roche-Chugui, Sanofi Aventis, SOBI and UCB, Grant/research support from: AbbVie, Lilly, MSD, Pfizer, Maryse Assing Employee of: Pfizer, Nadir Mammar Employee of: Pfizer, Hubert MAROTTE Speakers bureau: Sanofi-Aventis, Paid instructor for: Sanofi-Aventis, Consultant of: AbbVie, Biogen, Bristol Myers Squibb, Gilead, Lilly France, MSD, Medac, Nordic Pharma, Novartis, Pfizer, Sanofi-Aventis, UCB, Grant/research support from: Bristol Myers Squibb, Lilly France, MSD, Novartis, Nordic Pharma, Pfizer, Sanofi Aventis

DOI: 10.1136/annrheumdis-2021-eular.477

**POS0593**

THE REDUCTION OF RETINAL MICRAVASCULAR ALTERATIONS AND THE DECREASE OF A POTENTIALLY RELATED T-CELL SUBSET IN PATIENTS WITH ACTIVE RHEUMATOID ARTHRITIS TREATED WITH ABATACEPT

S. Piantoni¹, F. Regola¹, S. Masnèri¹, C. Nalli¹, C. Bazzani¹, C. Rossini², G. Chiarini², C. De Ciuceis², F. Franceschini¹, D. Rizzoni³, P. Airo³.

¹Rheumatology and Clinical Immunology Unit, ASST Spedali Civili and University of Brescia, Department of Clinical and Experimental Sciences, Brescia, Italy; ²Internal Medicine Unit, ASST Spedali Civili and University of Brescia, Department of Clinical and Experimental Sciences, Brescia, Italy

Background: T-cells play a pivotal role in the pathogenesis of rheumatoid arthritis (RA) and in its cardiovascular (CV) comorbidities, acting at microvascular level [1]. Since small artery remodeling is the earliest form of target organ damage in hypertension, the evaluation of microvascular alterations might provide clinically useful information. The evaluation of retinal arterioles is a non-invasive technique to identify a precocious microvascular damage, which is related to an increase of the wall-to-lumen ratio (WLR) [2]. CD3+CD31+CXCR4+ T-cells may be involved in damaged endothelium repair and are increased in patients with morphological microvascular alterations [3]. In addition to its effect on disease activity, abatacept (ABA), a co-stimulator blocker which is approved for the treatment of RA, may have specific CV protective action, modulating the numbers of certain subtypes of lymphocytes [4].

Objectives: To non-invasively investigate morphological characteristics of retinal arterioles and to evaluate CD3+CD31+CXCR4+ T-cells in a cohort of RA patients treated with ABA.

Methods: Eleven RA patients [median (25th-75th percentile) age=58 (50-65) years, baseline C-reactive protein (CRP)-DAS28=4.4 (3.8-4.6), body mass index (BMI)=23.4 (21.6-25.6) kg/m², rheumatoid factor (RF) positive:45%, anti-citrullinated peptide autoantibodies (ACPA) positive:73%] without known CV risk factors, were included. The number and the retinal wall thickness at baseline (R=0.871; p=0.05). After ABA therapy a trend for reduction of CD3+CD31+CXCR4+ T-cells [19.0 (13.8-38.3) vs 12.4 (5.2-18.0) % of CD3+] was observed as well as of significant reduction of retinal wall cross-sectional area [5123.3 (4385.3-5470.3) vs 4852.3 (4118.3-5228.0) mm²; p=0.04].

Conclusion: In a cohort of RA patients without known CV risk factors, a reduction in retinal microvascular alterations arterioles was demonstrated after treatment for 12 months with ABA. CD3+CD31+CXCR4+ T-cell number was inversely related to the possible presence of subclinical CV involvement. These results may suggest the possibility of microvascular abnormalities regression induced by the immune system modulation.

REFERENCES:

Results: Of the 1,224 patients fulfilling the inclusion criteria, 93 (7.6%) switched therapy and 1,131 (92.4%) did not switch therapy after not achieving an adequate response on the initial b/tsDMARD. At BL, 42.5% and 70.0% of patients had no meaningful improvement to their prior therapy based on ≥6 and ≥12-unit change, respectively; mean (SD) age was 53.1 (14.0) years; duration of RA 10.7 (10.4) years; CDAI 22.9 (11.8); 81.7% were female; 64.5% had MDA; 35.5% had HDA; 21.5% reported being disabled, 24.7% were current smokers, and 50% were obese. In terms of prior biologic use 57.0%, 22.6%, and 20.4% had been on 1, 2, and 3+, respectively. From BL to F/U, meaningful worsening occurred in 30.1% and 12.9% using a threshold of 6 and 12, respectively, with the remaining patients experiencing meaningful improvement or no meaningful change (Figure 1).

Conclusion: In our analysis, a large proportion of patients who initiated a biologic/JAKi and experienced some improvement but failed to attain LDA or remission, did not switch therapy within approximately a year. This analysis consisted of many patients who did not have a meaningful response to their prior biologic/JAKi and experienced some improvement but failed to attain LDA or remission. At BL, 42.5% and 70.0% of patients had no meaningful improvement to their prior therapy based on ≥6 and ≥12-unit change, respectively, with the remaining patients experiencing meaningful improvement or no meaningful change.

Acknowledgements: Amy Praestgaard (Sanofi) contributed to the statistical analysis for this abstract. Medical writing support for this abstract was provided by Krishna Kammari (Sanofi).

Disclosure of Interests: Jeffrey Curtis Grant/research support from: and personal fees from AbbVie, Amgen, BMS, CORRONA, Eli Lilly, Janssen, Myriad, Pfizer, Roche, Regeneron, Radius, UCB, outside the submitted work, Stefano Fiore Shareholder of: Sanofi, Employee of: Sanofi. In addition, he has a patent EP 19306553.9; USPTO #s 62/799,698; 62/851,474; 6/935,395 issued, Kerri Ford Shareholder of: Sanofi, Employee of: Sanofi; Judson Janak: None declared.

References: