respectively; $p=0.13$) and loss of efficacy (48.9% vs 48.3%, respectively; $p=1.0$). Prior to the second biologic, patients in the TNFi cycling cohort spent a numerically longer amount of time on first-line therapy vs the Switch cohort (2.0 [2.2] years vs 1.7 [1.9] years; $p=0.35$), and had a longer disease duration at the time of initiation of second-line non-TNFi (7.3 [6.6] years vs 6.6 [7.8] years; $p=0.15$).

Abstract AB0446 – Table 1. Physician beliefs around tumour necrosis factor inhibitors

	n, %
Do you believe that there is a class effect with the TNFis?	
Yes, with regards to efficacy	81 (26.9)
Yes, with regards to safety	30 (10.0)
Yes, with regards to both efficacy and safety	149 (49.5)
No	41 (13.6)
When do you believe there is a benefit in prescribing another TNFi?	
After primary lack of efficacy (non-response) to a first TNFi	127 (42.2)
After secondary lack of efficacy (response decreasing over time) to a first TNFi	160 (53.2)
After poor tolerability with a first TNFi	127 (42.2)
After primary lack of efficacy (non-response) to a second TNFi	28 (9.3)
After secondary lack of efficacy (response decreasing over time) to a second TNFi	47 (15.6)
After poor tolerability with a second TNFi	31 (10.3)
None of the above	25 (8.3)
How do you believe the practice of TNFi cycling is changing?	
Decreasing	188 (62.5)
Not changing	93 (30.9)
Increasing	20 (6.6)
Assuming no restrictions, which biologics would you prefer to use first for RA?	
Non-TNFi	50 (16.6)
TNFi	251 (83.4)
Assuming no restrictions, which biologics would you prefer to use second for RA?	
Non-TNFi	123 (40.9)
TNFi	178 (59.1)
Assuming no restrictions, which biologics would you prefer to use third for RA?	
Non-TNFi	190 (63.1)
TNFi	111 (36.9)

Conclusions: Despite evidence from literature suggesting that RA patients have a better treatment response switching to a non-TNFi after initial TNFi inadequate response¹ and despite the majority of physicians in our study believing that there is a class effect with TNFis, regarding efficacy and safety, 46.5% of patients still cycled to a second TNFi rather than switched to a non-TNFi as second-line therapy.

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AB0447 AUDIT OF THE CLINICAL EFFICACY AND SAFETY OF ETANERCEPT BIOSIMILAR TO ITS REFERENCE PRODUCT IN PATIENTS WITH INFLAMMATORY ARTHRITIS: EXPERIENCE FROM A DISTRICT GENERAL HOSPITAL IN THE UNITED KINGDOM

J. Ma, S. Petford, L. Jones, K. Douglas, H. John. *Rheumatology, Russells Hall Hospital, Dudley, UK*

Background: Etanercept has been widely used in rheumatology practice since NICE approval in 2000. Biologics have been pivotal treatments for inflammatory arthritis but are associated with a considerable economic burden. The expiry of patent protection has led to the introduction of biosimilar drugs at competitive prices. SB4 was the first biosimilar of etanercept approved by the European Medicine Agency. SB4 was launched in February 2016 in the UK for use in all adult indications for which reference etanercept is approved. The rheumatology team at the Dudley Group of Hospitals (DGH) negotiated with commissioners to share the cost savings of switching the cohort of patients who were on reference etanercept to SB4.

Objectives: This audit aimed to compare the clinical efficacy and safety profile of etanercept biosimilar SB4i (post switch) with its reference etanercept (pre switch).

Methods: The first 50 patients switched were sampled and followed up for 6 months. Data was collected from hospital databases and patient records (demographic; disease activity scores 6 months pre and post switch; adverse events (AE)). Inclusion criteria: all patients established on reference etanercept for more than 12 months. Exclusion criteria: patients attempting to conceive, pregnant or breast feeding women, patients on 25mg of reference etanercept or with JIA.

Results: Of the 194 patients on reference etanercept in the Dudley area, 160 (83%) were successfully switched at the time of audit. Of the first 50 patients who switched, 32 (64%) patients had rheumatoid arthritis (RA), 15 (30%) ankylosing spondylitis (AS), and 3 (6%) psoriatic arthritis (PsA). The mean age was 60 years (range 29-83 years) with equal gender distribution. Mean years on reference etanercept was 6 years (range 1-13 years). In the RA cohort: 23(72%) patients were female with mean change of DAS28: +0.1(SD:0.87). In the AS cohort, 14(93%) patients were male with mean change of BASDAI: -0.6 (SD:1.34). PsA: 2 patients' symptoms were unchanged, 1 patient's tender and swollen joint count decreased. At 6 months post switch, 84% patients continued etanercept biosimilar SB4. Reasons for discontinuation included: AE (n=4), inefficacy (n=3) and new contraindication (cancer n=1).

Conclusions: Following switching to etanercept biosimilar SB4, no clinically significant change in DAS28 or BASDAI were observed during the audit period. Switching from reference etanercept to SB4 has resulted in a potential yearly saving of £660,000, from which the rheumatology department has secured funding to employ an additional clinical nurse specialist and secretary. Our audit found SB4 to be as safe and effective as its reference etanercept and has demonstrated a positive experience with biosimilar switching. This is relevant given the expiry of their biologic drugs' patent protections and further biosimilar drugs becoming available.

Disclosure of Interest: None declared

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AB0448

PATIENT-REPORTED OUTCOMES FOLLOWING DISCONTINUATION OF METHOTREXATE IN PATIENTS WITH RHEUMATOID ARTHRITIS TREATED WITH SUBCUTANEOUS TOCILIZUMAB: RESULTS FROM A RANDOMISED CONTROLLED TRIAL

J. Kremer¹, W. Rigby², N. Singer³, C. Birchwood⁴, D. Gilt⁴, W. Reiss⁴, J. Best⁴, J. Pei⁴, M. Michalska⁴. ¹Albany Medical College and The Center for Rheumatology, Albany; ²Geisel School of Medicine, Dartmouth College, Lebanon; ³Case Western Reserve University and the MetroHealth System, Cleveland; ⁴Genentech, Inc., South San Francisco, USA

Background: Patients with rheumatoid arthritis (RA) often receive methotrexate (MTX) in combination with biologics; however, MTX may be discontinued due to intolerance or to reduce the medication burden once disease control is achieved. Whereas previous studies have established the efficacy of tocilizumab (TCZ) initiated as monotherapy (MONO) for the treatment of RA,^{1,2} patient-reported outcomes (PROs) after MTX withdrawal in patients achieving good clinical response to TCZ +MTX have not been evaluated. PROs are important measures when determining response to therapy in patients with RA with respect to health-related quality of life (HRQOL).^{3,4}

Objectives: This study evaluated PROs between patients with RA who achieved low disease activity with TCZ +MTX and then continued or discontinued MTX in the COMP-ACT trial (NCT01855789).

Methods: US patients with RA who were inadequate responders to MTX were enrolled; initial combination therapy included MTX (≥ 15 mg/week orally) plus TCZ 162 mg subcutaneous either weekly (qw) or every 2 weeks (q2w). Patients who achieved DAS28-ESR ≤ 3.2 at Week 24 were randomised 1:1 to receive TCZ-MONO or continue TCZ +MTX until week 52 (double-blind). Changes in PRO scores were measured between Week 24 and Weeks 40 and 52, and included patient global assessment of disease activity (PtGA; visual analogue score [VAS], 0–100 mm), pain (VAS), Health Assessment Questionnaire Disability Index (HAQ-DI, 0–3) and Functional Assessment of Chronic Illness Therapy (FACIT)-Fatigue.

Results: Of the 296 randomised patients (TCZ +MTX, n=148; TCZ-MONO, n=148), 74.8% were women, mean age was 55.5 years, mean RA duration was 6.8 years and mean DAS28-ESR was 6.3 at baseline. At Week 24 (randomization), PRO scores were similar between the randomised treatment groups. The mean changes in PtGA, pain, HAQ-DI and FACIT-fatigue scores from Week 24 to Weeks 40 were similar between the TCZ +MTX and TCZ-MONO groups (table 1). The proportion of patients with HAQ-DI <0.5 was similar between the groups at Week 24 (randomization), and remained similar at Weeks 40 and 52.

Abstract AB0448 – Table 1. Changes in Patient-Reported Outcomes from Week 24 (Randomization) to Week 40 and Week 52

PRO Measure*	TCZ + MTX n = 147	TCZ-MONO n = 147	Difference (95% CI) (TCZ-MONO minus TCZ + MTX)†
Δ PtGA, mean (SEM)			
Week 24 to week 40	1.72 (1.79)	5.95 (1.75)	4.78 (-0.00, 9.56)
Week 24 to week 52	-0.33 (1.77)	3.58 (1.83)	4.14 (-0.56, 8.84)
Δ Pain, mean (SEM)			
Week 24 to week 40	1.64 (1.74)	5.32 (1.61)	4.19 (-0.23, 8.61)
Week 24 to week 52	-0.05 (1.84)	4.26 (1.69)	4.69 (0.14, 9.24)
Δ HAQ-DI, mean (SEM)			
Week 24 to week 40	0.01 (0.030)	0.04 (0.034)	0.03 (-0.05, 0.12)
Week 24 to week 52	0.01 (0.028)	0.02 (0.038)	0.01 (-0.08, 0.10)
Δ FACIT-Fatigue, mean (SEM)			
Week 24 to week 40	1.57 (0.67)	-0.68 (0.64)	-1.68 (-3.39, 0.02)
Week 24 to week 52	1.30 (0.67)	-1.12 (0.75)	-1.82 (-3.69, 0.06)
HAQ-DI < 0.5, n (%)			
Week 24	64 (43.5)	56 (38.1)	-5.4 (-16.7, 5.8)
Week 40	60 (43.8)	54 (40.6)	-3.2 (-15.0, 8.6)
Week 52	60 (46.9)	53 (41.7)	-5.1 (-17.3, 7.0)

FACIT, Functional Assessment of Chronic Illness Therapy; HAQ-DI, Health Assessment Questionnaire Disability Index; MONO, monotherapy; MTX, methotrexate; PtGA, patient global assessment; SEM, standard error of the mean; TCZ, tocilizumab.

* A negative change in score represents an improvement in the respective PRO except for Fatigue.

† Estimated means from ANCOVA model includes Week 24 value as a covariate, treatment group, and the randomization stratification factors: DAS28 remission status at Week 24 (<2.6, ≥2.6 to <3.2), baseline weight-by-dosing group (<80 kg every 2 weeks [q2w], <80 kg weekly [qw], 80 to <100 kg q2w, 80 to <100 kg qw, ≥100 kg qw), patient anti-TNF exposure (Yes or No).

Conclusions: Patients receiving TCZ who discontinue MTX appear to have similar PROs across multiple measures compared with patients continuing TCZ +MTX. Differences observed in clinical parameters between TCZ-MONO and TCZ +MTX did not appear to achieve a threshold that would be considered clinically meaningful. Similarities in PROs on both treatments were consistent with the clinical efficacy measures previously reported from COMP-ACT.

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AB0449 SDAI REDUCTION AT WEEK 2 PREDICT THE SDAI REMISSION AT WEEK 24 WHEN CERTOLIZUMAB PEGOL (CZP) WAS ADMINISTERED TO PATIENTS WITH RHEUMATOID ARTHRITIS

K. Oryoji, S.-I. Mizuki. *Matsuyama Red Cross Hospital, Japan, Matsuyama-Shi, Japan*

Background: Certolizumab pegol (CZP) is approved for treatment of rheumatoid arthritis.

Objectives: To explore the predictor of efficacy of certolizumab pegol (CZP) for MTX-IR patients with rheumatoid arthritis in our retrospective study.

Methods: 50 patients who received CZP for rheumatoid arthritis of MTX-IR after 2013 were examined by logistic regression analysis using Age, sex, duration of disease, HAQ, TJC, SJC, gVAS, eVAS, CRP, SDAI, DAS 28-CRP, previous use of biologics, prednisolone use, ACPA, RF, the reduction rate of SDAI at week 2 to assess the predicting factor for SDAI remission at week 24.

Results: As a factor capable of achieving SDAI remission at 24 weeks after CZP administration, SDAI reduction rate of 50% or more (n=28, p<0.001), females (p=0.01), the number of swollen joints (p=0.02) were extracted as significant factors. The odds ratio at which SDAI remission can be obtained at 24 weeks point is 15.4 (95% CI: 3.1–109.6) when the SDAI reduction rate at 2 weeks after the start of administration is 50% or more. SDAI remission rate at week 24 were 67% in

SDAI reduction ≥50% at week 2 group and 22% in another. The continuation rate at week 24 in SDAI reduction ≥50% at week 2 is 93%.

Conclusions: When SDAI decreased by 50% or more at 2 weeks after initiation of CZP administration SDAI remission was easy to obtain after 24 weeks, and continuation rate was also good.

Disclosure of Interest: None declared

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AB0450 IMPACT OF THERAPEUTIC PATIENT EDUCATION ON SAFETY SKILLS AND INFECTIOUS EVENTS OF PATIENTS TREATED BY BIOLOGICAL DMARDS IN RHEUMATOLOGY: A BI-CENTRIC STUDY

L. Frantzen¹, M. Ardizzone¹, L. Sparsa¹, D. Oréfi¹, N. Afif¹, L. Arnaud², J.-E. Gottenberg², J. Sibilia², C. Sordet². ¹Service de Rhumatologie, GHR Mulhouse Sud Alsace, Mulhouse; ²Service de Rhumatologie, Hôpitaux Universitaires de Strasbourg, Strasbourg, France

Background: Patients treated with biologic DMARDs have to be aware of the specific adverse events and have to be able to manage their treatments in case of infectious disease. Therapeutic Patient Education aims to enable patient to acquire these safety skills.

Objectives: To assess the impact of Therapeutic Patient Education on safety skills and management of infectious events in patients treated with biologic DMARDs in rheumatology.

Methods: Bi-centric analytical study comparing safety skills and infectious events between two cohorts of patients (TPE and TPE-naïve). Safety skills were assessed by an auto-assessment called "Biosecure", rated on a scale from 0 to 100. This assessment explores several dimensions of treatment management and was validated for assessment of safety skills in patients treated with biologic DMARDs in rheumatology in a preliminary study. Infectious events and their management were self-reported by patients. A cluster analysis aimed to separate patients into working group based on their shortcomings (on the basis of their answers to the Biosecure Assessment).

Results: 414 patients answered the assessment. The median Biosecure Score was 70.98/100 (Q1/Q3: 60.97–84.63)

47% attended Therapeutic Patient Education. The median Biosecure Score was significantly higher in the TPE group than in the TPE-naïve group (74.88 versus 67.20/100; p<0.05). Regarding the observance to treatment, activity scores, vaccination rates on incidence of infectious events, there were no significant difference between the groups TPE and TPE-naïve. Nevertheless, there were more treatment interruption for infectious events in the TPE group, suggesting that TPE could lead to better management of treatment during infectious events.

Cluster analysis based on Biosecure assessment separated patients into 3 level groups but failed to identify specific patient profiles.

Conclusions: Therapeutic Patient Education could provide better safety skills and better treatment management in patients treated with biologic DMARDs in rheumatology. Prospective studies may confirm the impact of TPE on treatment management during infectious events. Further studies may assess the impact of TPE on incidence of serious infectious events.

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AB0451 INCIDENCE OF OPPORTUNISTIC INFECTIONS DURING RITUXIMAB, ABATACEPT OR TOCILIZUMAB TREATMENTS FOR RHEUMATOID ARTHRITIS IN CLINICAL PRACTICE

L. Leon^{1,2}, M. Peñuelas³, F.J. Candel³, D. Freitas¹, L. Rodríguez¹, J.A. Jover⁴, L. Abasolo¹. ¹Rheumatology and IDISSC, Hospital Clínico San Carlos; ²Health Sciences, Camilo Jose Cela University; ³Microbiology; ⁴Rheumatology, Hospital Clínico San Carlos, Madrid, Spain

Background: With the expanding use of biologic disease-modifying anti-rheumatic drugs (bDMARDs), opportunistic infections (OI) are a major concern in Rheumatology.