Conclusions: In routine care across 10 European countries, the retention and proportion of RA patients in LUNDEX corrected CDAI LDA and remission at 1 year were similar if treated with TCZ mono or TNFi combo.

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THU0203

COMPARISON OF THE RETENTION RATE OF BIOLOGICAL DMARDS ~ THE DATA FROM PATIENTS WITH RA WHO WERE FOLLOWED UP FOR OVER 10 YEARS

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Background: The use of biological disease modifying anti-rheumatic drugs (bDMARDs) or synthetic DMARDs for the treatment of rheumatoid arthritis (RA) has improved the management of RA and prevented patients with RA from joint destruction. However, there are some cases in which it is difficult to continue the treatment with these medicines due to insufficient therapeutic effect or complications. In Japan, 8 of bDMARDs and 2 of synthetic DMARDs can be used for the treatment of RA. Among them, infliximab (INF) and etanercept (ETN) were applied for RA treatment in 2003 and 2005, respectively, and have been utilised for more than 10 years. Although adalimumab (ADA) and tocilizumab (TCZ) were applied in 2008, RA treatment by ADA and TCZ had been conducted by clinical trials since 2003, and they have also been utilised for more than 10 years.

Objectives: In this study, we evaluated the retention rate of these 4 bDMARDs (INF, ETN, ADA, and TCZ) for over 10 years.

Methods: RA patients who started the treatment with INF, ETN, ADA, or TCZ before 2007 in Matsubara mayflower hospital and were observed for over 10 years were included in this study. INF was used in the treatment for 111 patients with RA, and 95 out of them were observed for over 10 years (INF group). 95 out of 119 RA patients treated with ETN (ETN group), 24 out of 27 RA patients treated with ADA (ADA group), and 21 out of 25 RA patients treated with TCZ (TCZ group) were included in this study. Kaplan-Meier analysis was applied to determine the differences in the retention rate of these bDMARDs.

Results: Kaplan-Meier analysis showed no statistically significant difference in the retention rate of these bDMARDs. The retention rate of INF group and TCZ group decreased with time and was 10.5% and 33.3% at the final survey in November 2017, respectively. That of ETN group and ADA group plateaued at 9 years after the start of treatment and was 22.1% and 8.33% at the final survey, respectively.

Conclusions: In this study, there was no statistically significant difference in the retention rate of these bDMARDs. The retention rate of over 10 years was the highest in TCZ group and the lowest in ADA group. The rate of INF group and TCZ group continued to decrease, and that of ETN group and ADA group was almost constant after 9 years from the start of treatment.

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THU0204

REAL WORLD EXPERIENCE OF BIOSIMILAR SWITCHING AT THE NORFOLK & NORWICH UNIVERSITY HOSPITAL, UNITED KINGDOM

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Background: Tumour Necrosis Factor (TNF) inhibitors are routinely used in managing rheumatoid arthritis (RA), psoriatic arthritis (PsA) and spondyloarthritis (SpA). In 2012 and 2015, the patents for the Etanercept (ETN) and Infliximab (IFX) originator molecules expired in Europe respectively and the use of biosimilar ETN and IFX was approved for use in England.

Objectives: To determine the proportion of rheumatology patients who experienced a flare of their disease following a switch from originator to biosimilar IFX or ETN and in those who flared, to determine whether disease control can be re-captured following reverting to the originator product.

Methods: This was a retrospective study of all patients switched from their originator IFX or ETN to their corresponding biosimilar product between July 2016 and July 2017 at a UK tertiary rheumatology centre. A total of 475 patients were identified by our Biologics team. Seventeen patients experienced a flare defined by: an increase in Disease Activity Score (DAS)28 > 1.2 points in RA, worsening of any of the Psoriatic Arthritis Response Criteria (PsARC) in PsA, an increase in Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) of at least 1 unit in SpA, and worsening of swollen and tender joint count in our patient with adulthood juvenile idiopathic arthritis (JIA). Follow-up at 3 months determined disease re-capture, defined by an improvement in DAS28 score > 1.2 units, improvement in at least two of the PsARC, one to be tender or swollen joint score, an improvement of BASDAI score and improved swollen and tender joint count in our patient with adulthood JIA.

Results:

	Diagnosis	Flare	Re-capture of disease control following switch back to originator	Side effects
INFLIXIMAB				
	RA	4/63 (6.3%)	1/4 (25.0%)	1/63 (1.6%)
	PsA	2/15 (13.3%)	0/2	0
	SpA	2/19 (10.5%)	1/2 (50.0%)	1/19 (5.3%)
	JIA	1/1 (100%)	1/1 (100%)	0
ETANERCEPT				
	RA	4/238 (1.7%)	4/4 (100%)	6/238 (2.5%)
	PsA	1/55 (1.8%)	1/1 (100%)	2/55 (3.6%)
	SpA	3/84 (3.6%)	2/3 (66.7%)	2/84 (2.4%)

Nine patients (9.2%) who switched to biosimilar IFX flared: four with RA, two with PsA, two with SpA and one with JIA. Of those, three patients (33.3%) were able to re-capture disease control on switching back to originator IFX. Two patients (2.0%) experienced side effects on switching to biosimilar IFX.

Eight patients (2.1%) experienced a flare on switching to biosimilar ETN: four with RA, one with PsA and three with SpA. Of those, seven patients (87.5%) re-captured disease control on switching back to originator ETN. Ten patients (2.7%) experienced side effects on switching to biosimilar ETN.

Conclusions: The majority of our patients did well following the switch to biosimilar IFX and ETN.

Patients who did flare on biosimilar ETN are more likely to re-capture their disease control than those who flared on biosimilar IFX.

This adds to real-world evidence to support the European League Against Rheumatism recommendations to utilise biosimilar therapy in rheumatology practice, which is likely to include patients who differ from those enrolled in clinical trials; important when considering health economy implications.

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