Methods: Eligible patients, aged ≥18 years, with active moderate-to-severe RA (ACR/EULAR 2010 criteria) who were IV abatacept-naive and initiated SC abatacept 125 mg once weekly, were enrolled into two cohorts: biologic (b) DMARD-naive patients and those with ≥1 prior DMARD treatment failure. This post hoc analysis assessed the mean change in disease activity (CDAI, SDAI) and EULAR response rates at 18 months for patients with negative anti-RITX antibodies by treatment group. In an analysis of risk factors, patients with negative anti-RITX antibodies were stratified by DMARD status (bDMARD naïve vs. ≥1 prior bDMARDs). Among patients naïve of originator RTX, cumulative RTX dose at the time of the first infusion was ≤3.5 g. Among the 151 patients not immunized at the time of the first infusion, the mean RTX dose at the time of the first immunogenicity testing was ≤3.5 g. Among the 2892 eligible patients in ASCORE, 1748 patients with RF/ACPA status available at BL were included in this analysis (1079 +/+ RA, 326 +/- RA and 343 –/- RA). After 6 months, patients with +/- RA on first-line abatacept therapy had better improvements in CDASI and SDAI scores from BL than patients on ± second-line abatacept therapy (mean difference [95% CI]: –3.4 [–5.6, –1.1]; p=0.0032 and –3.9 [–6.5, –1.3]; p=0.0055, respectively). Better improvements in SDAI were also seen after 12 months (mean difference [95% CI]: –3.5 [–6.5, –0.5]; p=0.0027). Changes in CDASI and SDAI scores were comparable after 18 and 24 months, At 6 and 12 months, patients with +/- RA on first-line therapy had better improvements from BL in DAS28 (ESR) than those on ± second-line therapy (mean difference [95% CI]: –0.5 [–0.8, –0.2]; p=0.0002 and –0.4 [–0.7, –0.1]; p=0.0313, respectively); changes were comparable at 18 and 24 months (Figure 1). For patients on ± second-line therapy, at 18 months those with +/- RA had better improvements from BL in DAS28 (ESR) than those with with –/– RA (mean difference [95% CI]: –0.7 [–1.2, –0.1]; p=0.0323). For patients not stratified by line of therapy, changes in DAS28 (ESR) were comparable between the +/- and –/– subgroups over time, with the exception of 6 months where patients with –/– RA had better improvements from BL compared with patients with +/- RA (mean difference [95% CI]: –0.3 [–0.6, –0.0]; p=0.0495).

Conclusion: In this real-world, post hoc analysis, patients with +/- RA who received abatacept as a first-line therapy had greater early improvements in disease activity compared with patients who received abatacept as ± second-line therapy. Improvements in disease activity at 24 months were comparable between patients who were +/- and those who were –/–. Larger studies are needed to further corroborate these findings.

References:

Acknowledgements: Professional medical writing and editorial assistance was provided by Rachel Rankin, PhD, at Caudex and was funded by Bristol Myers Squibb. This study was funded by Bristol Myers Squibb.

Disclosures of Interests: Rieke Alten Speakers bureau: AbbVie, Bristol Myers Squibb, Gilead, Janssen, Lilly, Pfizer, Consultant of: AbbVie, Bristol Myers Squibb, Gilead, Janssen, Lilly, Pfizer, Consultant of: AbbVie, Bristol Myers Squibb, Gilead, Janssen, Lilly, Pfizer, Xavier Mariette Consultant of: Bristol Myers Squibb, Galapagos, Gilead, GlaxoSmithKline, Janssen, Pfizer, UCB, René-Marc Flipo Speakers bureau: AbbVie, Bristol Myers Squibb, Gilead, Janssen, Lilly, Medac, Merck Sharp & Dohme, Novartis, Pfizer, Roche-Chugai, Grant/research support from: Agenas, Janssen, Novartis, Pfizer, Roberto Caporali Speakers bureau: AbbVie, Agenas, Bristol Myers Squibb, Celtrion, Fresenius Kabi, Galapagos, Gilead, Lilly, Merck Sharp & Dohme, Pfizer, Roche, Samsung Bioepis, Sanofi, UCB, Consultant of: Galapagos, Gilead, Janssen, Lilly, Merck Sharp & Dohme, Pfizer, Roche, Samsung, Grant/research support from: AbbVie, Bristol Myers Squibb, Roche, Sanofi, Consultant of: AbbVie, Bristol Myers Squibb, Celgene, Galapagos, Merck Sharp & Dohme, Pfizer, Roche, Sanofi, Grant/research support from: AbbVie, Bristol Myers Squibb, Merck Sharp & Dohme, Pfizer, Roche, Sanofi, UCB, Consent of: AbbVie, Bristol Myers Squibb, Celgene, Galapagos, Merck Sharp & Dohme, Pfizer, Roche, Sanofi, UCB, M.T. Nurmohamed Speakers bureau: AbbVie, Bristol Myers Squibb, Eli Lilly, Roche, Sanofi, Consultant of: AbbVie, Celgene, Celltrion, Eli Lilly, Janssen, Grant/research support from: AbbVie, Bristol Myers Squibb, Celgene, Eli Lilly, Janssen, Merck Sharp & Dohme, Mundipharma, Novartis, Pfizer, Roche, Sanofi, Hedley Griffiths Consultant of: AbbVie, Gilead, Janssen, Novartis, Peter Pecht: None declared, Bettina Bannert: None declared, Adrian Forster: None declared, Melanie Chartier Shareholder of: Bristol Myers Squibb, Employee of: Bristol Myers Squibb, Yedid Elbez Consultant of: Bristol Myers Squibb, Chris- tiane Rauch Shareholder of: Bristol Myers Squibb, Employee of: Bristol Myers Squibb, Karissa Lozenski Shareholder of: Bristol Myers Squibb, Employee of: Bristol Myers Squibb, Vadim Khaychuk Shareholder of: Bristol Myers Squibb, Employee of: Bristol Myers Squibb, DOI: 10.1136/annrheumdis-2021-eular.928

Address for correspondence: Rieke Alten, Department of Rheumatology, University Hospital, Leiden, The Netherlands.

Ann Rheum Dis; First Published as 10.1136/annrheumdis-2021-eular.1507 on 19 May 2021. Downloaded from http://ard.bmj.com/ on September 14, 2023 by guest. Protected by copyright.
Background: Biosimilar products of biological disease-modifying antirheumatic drugs (bDMARDs) entered the Swedish market in 2015, with regulatory approvals based on head-to-head trials of limited duration. Longer-term comparative drug survival, in clinical practice, remains less well documented.

Objectives: To compare survival on drug between biosimilars and their originator products among first starters of etanercept, infliximab, adalimumab and rituximab.

Methods: Data from the Swedish Rheumatology Quality register (SRQ) was used to identify and follow patients who started a first ever treatment with etanercept since March 2014 (originator=ETA,biosimilar= CT-P13), adalimumab since January 2015 (originator=ETA,biosimilar=SB4), infliximab since January 2018 (originator=ADA,biosimilars=SB5,ABP501), or rituximab since January 2018 (originator=RIT,biosimilar=GP2013), through December 31st, 2019, date of first discontinuation of the drug, or death. Discontinuation was defined as lack of effectiveness or adverse events, while other reasons for interruption of the drug (including non-medical switch) were considered censoring events. Descriptive characteristics were collected from the SRQ and tabulated. Hazard ratios (HR) of discontinuation were estimated using Cox regression, with each drug analyzed separately, adjusted for age, sex, indication, line of treatment, disease duration, year of treatment start, region and concomitant use of csDMARD.

Results: 9274 patients started etanercept(49% SB4), 3609 started infliximab(64% CT-P13), 3117 started adalimumab(27% SB5, 14% ABP 501), and 763 started rituximab(39% GP2013). Table 1. Patients starting CT-P13 and GP2013 were less likely to be biologics-naïve compared to those starting the originator product. Initiators of SB5,ABP501 and GP2013 were more likely, and those starting CT-P13 were less likely, to be on concomitant csDMARDs compared to those starting the originator products. Patients characteristics of ETA and SB4 were similar. The introduction of a biosimilar was typically followed by a decrease in the uptake of the originator, but for ETA a change in pricing in 2018 later led to a reversal of this pattern (Figure 1).

For IFX,ADA, and RIT, survival on drug was similar for the originator and its biosimilar(s). For ETA, risk of discontinuation was somewhat lower for the biosimilar, but for ETA a change in pricing in 2018 later led to a reversal of this pattern (Figure 1).

The hazard ratios of discontinuation and descriptive characteristics of biosimilar vs. originator among first starters of each molecule, until 31st December 2019.

<table>
<thead>
<tr>
<th></th>
<th>Etanercept</th>
<th>Infliximab</th>
<th>Adalimumab</th>
<th>Rituximab</th>
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<tr>
<td>N</td>
<td>4721</td>
<td>4553</td>
<td>1308</td>
<td>2301</td>
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<td>1236</td>
<td>582</td>
<td>878</td>
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<td>RA, %</td>
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<td>48%</td>
<td>61%</td>
<td>65%</td>
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<td>Bionalve, %</td>
<td>72%</td>
<td>72%</td>
<td>76%</td>
<td>69%</td>
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<tr>
<td>Disease duration (mean, std)</td>
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<td>11 (11)</td>
<td>11 (11)</td>
<td>11 (11)</td>
</tr>
<tr>
<td>DAS28, mean</td>
<td>4.0 (1.3)</td>
<td>4.0 (1.4)</td>
<td>4.1 (1.4)</td>
<td>4.1 (1.4)</td>
</tr>
</tbody>
</table>

Table 1. Hazard ratios of discontinuation and descriptive characteristics of biosimilar vs. originator among first starters of each molecule, until 31st December 2019.

Table: Differences in drug survival between Originator and Biosimilar Products among First Users of Each Molecule

Figure 1. Number of starts of biosimilars compared to the originator during the follow-up time, by molecule

Conclusion: Despite their identical indications and therapeutic positioning, there are some differences in the baseline characteristics between patients who start ADA, IFX and RIT and their biosimilars. There are no differences in drug survival between originator and biosimilar with the possible exception of etanercept although the observed difference should be interpreted in light of possible unmeasured or residual channeling.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.977