**BACKGROUND / PURPOSE**

In the absence of biomarkers predicting response to a specific therapy, the choice of second biologic is based mostly on habit and availability of an alternative agent. Traditionally, a second anti-TNF was the preferred option, but recent registry data point to better responses and retention if a drug with a different mode of action is prescribed.

**OBJECTIVE**

Assess the long-term retention of Rituximab and anti-TNF agents following first biologic (b)DMARD inadequate response in RHUMADATA® registry patients with RA.

**METHODS**

Data from RHUMADATA® patients with RA prescribed either Rituximab or an anti TNF agent as the second bDMARD after January 1, 2006 were analysed. Patients were followed until treatment discontinuation, death, loss to follow-up or January 9, 2017. Patient characteristics were compared using descriptive statistics, bDMARD discontinuation rates using Kaplan-Meier methods, and proportional hazard models were used to identify predictors of treatment discontinuation.

**RESULTS**

Data for 53 and 194 patients prescribed Rituximab or a TNFi, respectively, as second-line treatment were extracted. No clinically significant differences in baseline characteristics were noted between treatment groups (Table 1). Most patients were women (74.9%), average age (SD) was 45.2 (12.9) years at diagnosis and disease duration 10.5 (8.7) years.

**RESULTS (continued)**

Most patients were stopping an anti-TNF agent: 100% of those who were switched to Rituximab and 83% of those who were prescribed a second anti-TNF. Overall, 76.5% of patients stopped their first bDMARD after >6 months of treatment (secondary failure). Significant differences in retention between Rituximab and TNFi groups (log-rank p=0.0001) were observed (Table 2, Figure). Results remained unchanged for pts treated with TNFi only in first line, and primary/secondary failure of the first bDMARD did not affect sustainability of the second agent. Lack of efficacy (54.4%) and AEs (16.5%) were the most commonly cited reasons for treatment discontinuation. Univariate predictors of retention were use of Rituximab, hydrochloroquine or Coxi inhibitors, a longer disease duration and time since diagnosis. Variables associated with increased likelihood of drug cessation include an increased white blood cell count and CDAI.

**CONCLUSION**

Rituximab has better sustainability over a second line TNFi in RA patients having failed one prior bDMARD.