Objectives: The presence of osteoporosis and osteoporotic fractures in patients with rheumatoid arthritis (RA) is associated with increased risk of disease flare after MTX discontinuation. Therefore, it is important to assess predictors of disease flare after MTX discontinuation. This study aimed to investigate predictors of disease flare after MTX discontinuation in Japanese RA patients with sustained low disease activity undergoing TOCILIZUMAB (TCZ) plus MTX combination therapy.

Methods: This was a multicenter, open-label, uncontrolled, prospective study. RA patients maintaining low disease activity without a flare at week 52 of TCZ plus MTX combination therapy and who had continued TCZ therapy for a minimum of 48 weeks were eligible. MTX was discontinued after 12 weeks of therapy due to disease flare. Disease flare was defined as a clinical disease activity index (CDAI) score >10 or intervention with rescue treatments for a disease flare. The cumulative flare-free rate was 70.0% at week 64 (Fig. 2B). The dosing interval of TCZ was longer than that described on the drug label (i.e., intravenously every 4 weeks, or subcutaneously every 2 weeks) in 27% and 6% of patients receiving TCZ at an extended dosing interval of TCZ (OR: 12.00, 95% CI: 1.72-83.80) were independent predictors of disease flare. Male sex (odds ratio (OR): 18.00, 95% CI: 2.80-115.56) and extended dosing interval of TCZ (OR: 12.00, 95% CI: 1.72-83.80) were independent predictors of disease flare. The impact of baseline characteristics on disease flare at week 64 was assessed with logistic regression models.

Results: Efficacy analyses were performed in 49 patients, of whom 15 had a disease flare by week 64. The proportion [95% confidence interval (CI)] of patients who maintained low disease activity without a flare at week 64 was 69.4% (64.6 – 81.8)% (p = 0.03). According to Kaplan-Meier estimates, the cumulative flare-free rate was 70.0% at week 64 (Fig. 2B). The cumulative flare-free rate was 70.0% at week 64 (Fig. 2B). The dosing interval of TCZ was longer than that described on the drug label (i.e., intravenously every 4 weeks, or subcutaneously every 2 weeks) in 27% and 6% of patients with and without a flare, respectively (Table 1). Multivariate analysis revealed that male sex (odds ratio (OR): 18.00, 95% CI: 2.80-115.56) and extended dosing interval of TCZ (OR: 12.00, 95% CI: 1.72-83.80) were independent predictors of disease flare.

Conclusion: Male patients and those receiving TCZ at an extended dosing interval were at high risk of disease flare after discontinuation of concomitant MTX. This work was supported by Chugai Pharmaceutical Co., Ltd.

References: