

OP-0249 WHICH SUBGROUP OF RHEUMATOID ARTHRITIS PATIENTS BENEFIT MOST FROM SWITCHING TO RITUXIMAB VERSUS ALTERNATIVE ANTI-TNF AGENTS AFTER PREVIOUS FAILURE TO ANTI-TNF AGENT?

A. Finckh^{*1}, A. Ciurea², L. Brulhart¹, B. Moeller³, U. A. Walker⁴, D. Courvoisier⁵, D. Kyburz², C. Gabay¹, o. SCQM⁶

¹Rheumatology, Geneva University Hospital, Geneva-14, ²Rheumatology, Zurich University Hospital, Zurich,

³Rheumatology, Clinical Immunology & Allergology, Bern University Hospital, Bern, ⁴Rheumatology, Basel University Hospital, Basel, ⁵Clinical Epidemiology, Geneva University Hospital, Geneva-14, ⁶The SCQM Foundation, Swiss Society of Rheumatology, Zurich, Switzerland

Background: Rheumatoid arthritis (RA) patients who experience a failure on anti-TNF agents (aTNF failure) may respond more favorably to a different class of biologic therapy, such as rituximab (RTX), than to a 2nd or 3rd alternative aTNF agent.⁽¹⁾ However, patients may interrupt aTNF therapy for various motives (i.e. ineffectiveness, adverse events (AE), preferences) and it remains unclear in which clinical setting each therapeutic strategy offers most benefit.

Objectives: To analyze the effectiveness of RTX versus alternative aTNFs on disease activity (DAS28) in RA patients with aTNF failure and examine potential effect modification by the type of prior aTNF failure or the type of aTNF switch.

Methods: This is a prospective cohort study nested within SCQM-RA cohort including all patients with an aTNF failure to at least one aTNF agent, who received subsequently either one cycle of RTX or an alternative aTNF. The primary outcome is the evolution of the DAS28 over the first year, which is analyzed using multivariate regression models for longitudinal data.

Results: 300 RA patients are included; 101 with a first RTX cycle and 199 with alternative aTNFs (adalimumab 56%, etanercept 25%, infliximab 19%). Overall 65% of patients had experienced a prior aTNF failure due to ineffectiveness (28% primary, 72% secondary) and 35% due to an AE. At baseline, there was no significant difference between the two therapeutic groups in age, disease duration, function, rheumatoid factor positivity, concomitant glucocorticoid or DMARD use, but groups differed in baseline DAS28 levels and in number of previous aTNF failures. After adjustment for potential confounders, and in particular for baseline DAS28, the evolution of DAS28 was overall more favorable in the RTX group compared to the aTNF group ($p = 0.01$). However, the relative benefit of RTX varied with the type of prior aTNF failure (effect modification). When the motive for switching was ineffectiveness to a previous aTNF, than the evolution of DAS28 was significantly better for RTX than for alternative aTNF (i.e. at 6 months, -1.55 (95%CI: -1.79 ; -1.31) versus -1.03 (95%CI: -1.32 ; -0.75) respectively). When the motive for switching was another cause (i.e. an AE), than the evolution of DAS28 was similar for RTX and for alternative aTNFs (i.e. at 6 months, -0.86 (95%CI: -1.28 ; -0.44) versus -0.77 (95%CI: -1.06 ; -0.48) respectively). Furthermore, we found no effect modification by prior aTNF AE, primary versus secondary aTNF failure, concomitant DMARD use or type of aTNF agent switch.

Conclusion: This observational study suggests that RTX is more effective than switching to an alternative aTNF in RA patients who have persistent active disease despite of aTNF. These results were not significantly modified by DMARD co-therapy or by the type of aTNF agent. However, when the motive for interrupting aTNF was other than ineffectiveness, unsurprisingly both RTX and alternative aTNF agents appear to offer similar levels of effectiveness.

References: 1. Finckh A et al. Rituximab May Be More Effective than Switching to an Alternative Anti-TNF Agent in RA Patients with Inadequate Response to Anti-Tumor Necrosis Factor Agents. A&R 2007;56(5),1417-23