87. COMPARATIVE EFFICACY OF NOVEL DISEASE-MODIFYING ANTIRHEUMATIC DRUGS AS MONOTHERAPY AND IN COMBINATION WITH METHOTREXATE IN RHEUMATOID ARTHRITIS PATIENTS WITH AN INADEQUATE RESPONSE TO TRADITIONAL DMARDS: A NETWORK META-ANALYSIS

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Background: There is a need to compare ACR responses of novel DMARDs, as monotherapy or in combination with MTX, in RA patients with an inadequate response to conventional DMARDs (DMARD-IR patients).
Methods: A systematic literature review identified 30 randomized clinical trials (RCTs) that evaluated abatacept (i.v. and s.c.), anakinra, adalimumab, certolizumab pegol, etanercept, golimumab, infliximab, tofacitinib, and tocilizumab (TCZ) (i.v. and s.c.). Reported treatment effects in terms of ACR responses at 24 weeks were synthesized by means of Bayesian network meta-analyses to allow comparisons of the different treatments as monotherapy and combination therapy. Based on previous reviews an assumption was made that the effects of anti-tumour necrosis factor (aTNF) therapy were exchangeable. Given this, and the limited data identified for these therapies in monotherapy, aTNF data were pooled.
Results: aTNFs + MTX, tofacitinib + MTX, abatacept i.v./s.c. + MTX, and TCZ i.v./s.c. + MTX demonstrated comparable ACR responses while anakinra + MTX was less efficacious. Among biologic monotherapies, greater ACR20/50/70 responses were observed with TCZ than with aTNFs and tofacitinib. When comparing biologics + MTX with biologic monotherapies, ACR20, ACR50, and ACR70 responses with TCZ + MTX were similar to TCZ as monotherapy (OR 1.04, 95% CI 0.39, 2.80; OR = 1.28, 95% CI 0.46, 3.51; OR 0.97, 95% CI 0.38, 2.49, respectively), whereas with aTNF + MTX greater ACR20/50/70 responses were observed than with aTNF monotherapy (OR 2.22; 95% CI 0.46, 10.83, probability better 84%; OR 3.12, 95% CI 0.60, 16.32, probability better 92%; OR 1.39, 95% CI 0.26, 6.78, probability better 68%, respectively). For tofacitinib, sensitivity analyses showed conflicting results for the indirect comparison of tofacitinib + MTX *vs* tofacitinib.
Conclusion: Results of this meta-analysis suggest that most available novel DMARDs, in combination with MTX, have similar levels of efficacy in DMARD-IR patients. As monotherapy, TCZ is likely to have

a greater response than aTNFs and tofacitinib. TCZ monotherapy also shows comparable efficacy compared with TCZ + MTX, whereas aTNFs in combination with MTX showed greater ACR responses compared with aTNF monotherapy at 24 weeks.

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