

This lay summary was provided by Myriam Riek.

Study on the risk of serious infections with tofacitinib compared to biologics in patients with rheumatoid arthritis

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Recently, serious infections associated with the use of tofacitinib for the treatment of rheumatoid arthritis (RA) have attracted considerable interest. The aim of the present study was also to investigate the risk of serious infections in RA patients treated with tofacitinib compared to biologic disease-modifying antirheumatic drugs (bDMARDs). As the results of a preliminary analysis of a randomised clinical trial (1, published in the meantime) provided initial indications of an age-dependent risk difference, the present study focused on an investigation dependent on age at the start of treatment. The authors found indications that the risk of serious infections could be increased under tofacitinib treatment from the age of 69 compared to treatment with bDMARDs. In patients aged 65 to 68 years, the authors found no evidence of a coercively increased risk, but possible decreased risks were clinically insignificant. In even younger patients, the data were insufficient to allow conclusions to be drawn about the risk of infection associated with tofacitinib treatment compared to treatment with bDMARDs. The study results therefore suggest that an increased risk of serious infections must be expected in older patients who are treated with tofacitinib instead of bDMARDs. This speaks in favour of cautious use of tofacitinib in these patients and thus supports the current recommendations of various health authorities, which urge caution in the use of tofacitinib in patients aged 65 and over.

1. Balanescu, A. R. *et al.* Infections in patients with rheumatoid arthritis receiving tofacitinib versus tumour necrosis factor inhibitors: results from the open-label, randomized controlled ORAL Surveillance trial. *Ann Rheum Dis.* **81**, 1491-1503 (2022).