Number needed to treat and incremental costs per responder for biologics and targeted synthetic drugs in adult patients with active psoriatic arthritis in the Russian Federation

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BACKGROUND

Psoriatic arthritis (PsA) is an autoimmune disease – a rare form of inflammatory arthritis with variety of symptoms, which imposes a considerable economic burden on patients and society. A growing range of new medicines is extremely helpful in controlling condition and improving patients' quality of life*. However, the costs of therapy remain substantial. Number needed to treat (NNT) helps to compare the benefits of various treatments over a baseline risk and to incorporate efficacy results into clinical practice.

OBJECTIVES

To evaluate and compare NNTs for achieving ACR50 and PASI 75 and costs per responder (CpR) for biologics (adalimumab, golimumab, guselkumab, ixekizumab, infliximab, netakimab, secukinumab, ustekinumab, certolizumab pegol, etanercept) and targeted synthetic drugs (apremilast, tofacitinib) approved in Russia to treat adults with active PsA.

METHODS

16-week NNTs were calculated as the inverse of risk difference between active treatment and placebo based on the previously published results of a systematic review and network meta-analysis. CpR values were calculated for 16-weeks and one-year treatment periods. The upper limits of 95% credible intervals for NNT and CpR values were used for interpretation and conclusions.

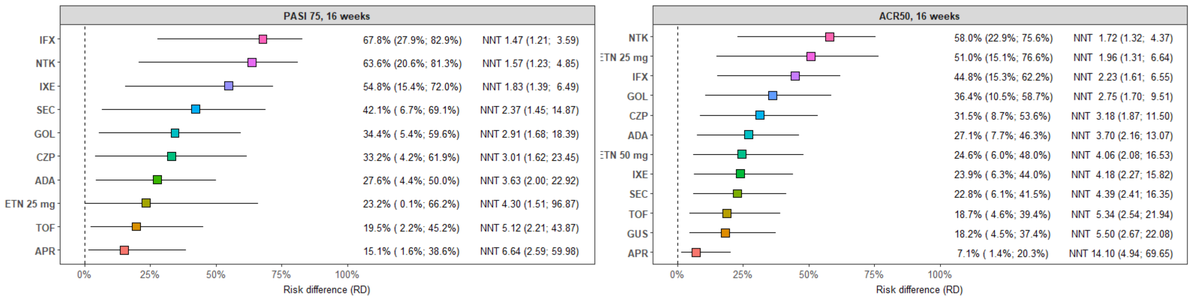
RESULTS

For ACR50, the lowest NNT was demonstrated by netakimab (no more than 5 patients) followed by etanercept 25 mg and infliximab (up to 7 patients), the highest – by guselkumab (more than 23 patients). For PASI 75, infliximab was ranked as the first with NNT no more than 4 patients followed by netakimab (up to 5 patients) while the last rank was assigned to etanercept 25 mg (more than 96 patients). Netakimab showed the lowest CpR for both outcomes followed by etanercept 25 mg in ACR50 and infliximab in PASI 75 respectively. The highest CpR in achieving ACR50 was attributed to guselkumab, PASI 75 – etanercept 25 mg.

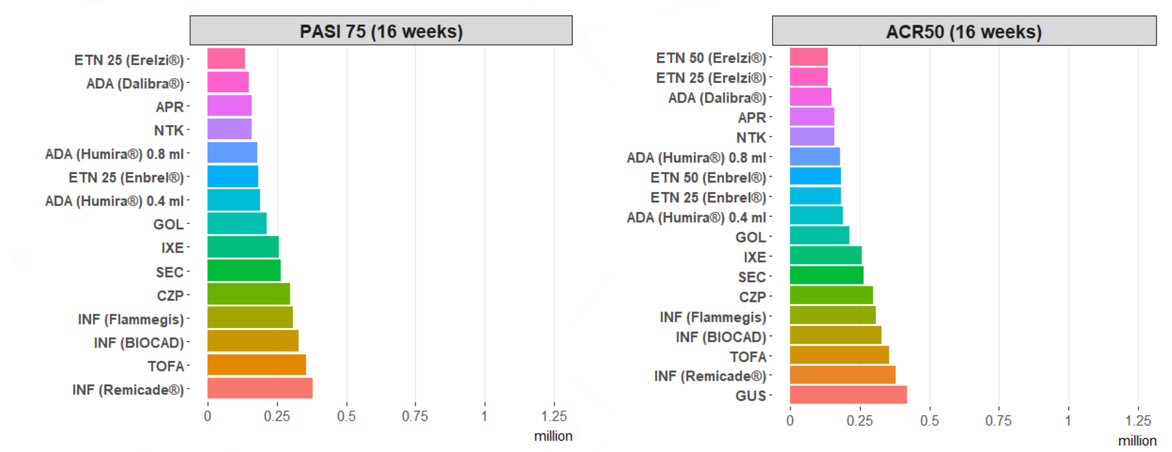
CONCLUSION

The research attributes to relative effectiveness evidence base but an individual approach in choosing treatment strategy based on patient profile and features of certain biologics and targeted synthetic drugs is required.

NUMBER NEEDED TO TREAT



COSTS PER RESPONDER



*Dubinina T.V., Gaydukova I.Z., Sokolova V.D., Mladov V.V., Tolkacheva D.G. Efficacy and safety of biologics for the treatment of ankylosing spondylitis: systematic literature review and network meta-analysis of treatments registered in the Russian Federation. *Rheumatology Science and Practice*. 2020;58(6):646-657.