

# Impact of anti-rheumatic treatment on the individual components of the ACR composite score in patients with rheumatoid arthritis: real-world data

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## Abstract

### OBJECTIVES:

Standard criteria for measuring treatment efficacy in patients with rheumatoid arthritis (RA) include American College of Rheumatology (ACR) response rates, which require meeting a threshold of  $\geq 20/50/70\%$  improvement in several physician- and patient-reported measures. We aimed to evaluate the impact of csDMARDs, TNF inhibitors (TNFi), and tofacitinib (TOFA) on ACR components in real-life practice.

### METHODS:

Clinical data of RA patients with a CDAI  $>10$  at the time they started a treatment were pooled from two registries: Ontario Best Practices Research Initiative (OBRI) and RHUMADATA. Endpoints included proportions of patients achieving: ACR20/50/70 responses,  $\geq 20/50/70\%$  improvements and mean percentage improvement in individual ACR components at Month 6. We also adjusted for potential confounders to compare impact of these medications on outcomes of interest.

### RESULTS:

A total of 669 patients were included (csDMARD,  $n=157$ , TNFi,  $n=252$ ; TOFA,  $n=260$ ). An overall higher proportion in all three-medication groups achieved  $\geq 20/50/70\%$  improvement in primary ACR components vs. secondary components. Among secondary components,  $\geq 20/50/70\%$  improvement rates were numerically highest for PhGA and lowest for HAQ-DI and pain. Among ACR20/50/70 responders for all medications, the mean percentage improvement was more than 80% for primary components, and ranged from 30% to 80% for secondary components. A significantly lower proportion of patients in TNFi group achieved to at least 50% improvement in pain compared to TOFA after adjusting.

### CONCLUSIONS:

In this real-world practice, physician-reported measures contribute slightly more to overall ACR20/50/70 responses. Pain was the most important factor in achieving an ACR50 TOFA users, possibly reflecting the different effects of JAKi on pain.

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