Video abstract transcript

Impact of Tofacitinib on Components of the ACR Response Criteria: Post Hoc Analysis of Phase III and Phase IIIb/IV Trials

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Slide 1

Hi, my name is Dr Louis Bessette, and on behalf of my co-authors, I will be talking you through an overview of our recent publication entitled, "Impact of Tofacitinib on Components of the ACR Response Criteria: Post Hoc Analysis of Phase III and Phase IIIb/IV Trials".

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The American College of Rheumatology, or ACR, response criteria are a common composite measure of treatment response, and are frequently used as outcome measures in clinical trials of rheumatoid arthritis. However, they are not widely calculated in real-world practice.

This analysis was performed to provide relevant information from clinical trial data for clinicians by assessing the effect of tofacitinib on each ACR component in RA patients, and informing on the attainment of disease state based on clinical trial outcomes (meaning the ACR20, 50, and 70).

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To go over the study design briefly, this was a post hoc analysis of tofacitinib randomized controlled trials, or RCTs, which included two cohorts.

The placebo-controlled cohort included pooled data from phase III RCTs, ORAL Scan, ORAL Standard, and ORAL Sync. These studies assessed tofacitinib 5 and 10 mg twice daily, adalimumab, or placebo, taken with conventional synthetic DMARDs, in patients with active RA.

The head-to-head cohort included data from a phase IIIb/IV RCT, ORAL Strategy, which assessed tofacitinib versus adalimumab.

Key outcomes from the post hoc analysis are listed here. All outcomes were summarized descriptively and no formal statistical comparisons between treatments were performed.

I'll share a few highlights of these results on the following slides, focusing mainly on the placebo-controlled cohort.

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This slide shows the ACR response rate and improvement rates for each ACR component up to month 6. In the placebo-controlled cohort, we saw that the ACR20, 50, and 70 response rates and improvement rates in ACR components at month 3 were similar with tofacitinib and adalimumab, and higher with active treatment, versus placebo. The plots here show the results for ACR50.

Another trend observed across treatment groups in both cohorts was that ≥ 20, 50, and 70% improvement rates were numerically higher for most physician- versus patient-reported measures through month 6. In these plots, it can be observed that the physician-reported measures of swollen joint count, tender joint count, and Physician Global Assessment are generally higher than the patient-reported measures of Patient Global Assessment, Pain, and HAQ-DI.

However, we did observe that rates of at least 50 and 70% improvement in Patient Global Assessment and Pain were similar to the Physician Global Assessment at earlier time points in the placebo-controlled cohort, as shown here for rates of at least 50% improvements, but not in the head-to-head cohort.

Slide 5

This slide shows the subgroup analyses in the ACR responders. Here, we show the results for mean percent improvements in ACR20 responders in the placebo-controlled cohort. It can be observed that mean percent improvement from baseline in ACR components typically exceeds 20% across treatments. Similar trends were observed for ACR50 and ACR70 responders, with mean percent improvements typically exceeding 50 and 70%, respectively.

Also, we saw that greater mean percent improvements were observed for tender joint count and swollen joint count, versus other components. Notably, for ACR20 responders receiving tofacitinib, mean percent improvement from baseline in tender joint count and swollen joint count exceeded 70%.

Similar findings were observed in the head-to-head cohort.

Slide 6

Here, we look at the proportion of ACR responders achieving low disease activity or remission. In the placebo-controlled cohort, we saw that the proportions of ACR20/50/70 responders achieving SDAI- or CDAI-defined low disease activity or remission at month 3 were higher with active treatment versus placebo, with the largest differences observed in ACR70 responders. Those results are shown here.

While many physicians consider the ACR70 response rate to correspond with a state of remission, CDAI and SDAI remission were achieved by only 27–45% of ACR70 responders receiving tofacitinib across both cohorts.

Slide 7

Some limitations of these analyses should be noted. These analyses were post hoc, and no formal statistical testing was performed. Also, the interpretation of these data is limited by the study duration of 6 months and the clinical trial setting.

In conclusion, this post hoc analysis provided several insights into patient responses to tofacitinib or adalimumab, in terms of composite measures and their individual components.

Divergences between physician- and patient-reported measures highlight the importance of identifying appropriate patient-reported outcome targets to manage RA symptoms in clinical practice.

Overall, these findings may help clinicians to interpret clinical study results, and to define expected responses to advanced therapies, to assist in setting treatment goals for patients during routine clinical practice.

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Thank you for your attention.