In clinical trials, the most common adverse events (AEs) were hair thinning, diarrhea, nausea, and headache. In general, these were mild to moderate, transient, and infrequently led to treatment discontinuation.1–4

In the phase 2 core study, patients with relapsing MS (Expanded Disability Status Scale [EDSS] ≤6.0) were randomized to receive placebo, teriflunomide 7 mg or teriflunomide 14 mg for up to 36 weeks.

In the TEMSO and TOWER studies, patients with relapsing MS (EDSS score <6.0, 2 relapses in the previous 3 years, and 3 relapses during the previous year) were randomized to receive placebo, teriflunomide 7 mg or teriflunomide 14 mg for up to 108 weeks (TENERE) or 24 weeks (TOWER).

In the extension studies, leflunomide-treated patients continued their original dose (phase 2 TEMSO) or received teriflunomide 14 mg regardless of original dose (TOWER). Patients who had been previously treated with teriflunomide 14 mg or 11 mg or placebo (FN) for 44–48 weeks.

In the extension, leflunomide-treated patients received 14 mg regardless of original dose and placebo-treated patients were randomized to teriflunomide 14 mg or 11 mg (placebo) or 14 mg for 12 weeks.

The efficacy and safety of teriflunomide have been established in patients with relapsing MS.5–6 In the post-hoc analysis of the core phase 2 study and the phase 3 TEMSO, TOWER, and TENERE studies, the overall safety profile of teriflunomide was consistent with the clinical trial experience, with no new safety signals identified.

Teriflunomide 14 mg significantly reduced the risk of relapse compared with placebo irrespective of prior treatment status in this pooled analysis of the core phase 2 study and the phase 3 TEMSO, TOWER, and TENERE studies.

CONCLUSIONS

- The probability of disability worsening by Year 4 was similar between treatment groups.

- The overall occurrence of AEs, SAEs, and AEs leading to treatment discontinuation was comparable between the core treatment-naive, recently treated with another DMT, and previously treated with another DMT groups.

- No new or unexpected safety findings were identified.

- In the core + extension period, overall adjusted ARRs were low across all prior treatment groups: 0.210, 0.241, 0.281, and 0.335 in the core treatment-naive, recently treated with teriflunomide 7 mg, recently treated with another DMT, and previously treated with another DMT groups respectively (Figure 2).

- Disability worsening

- The probability of disability worsening continued over 12 weeks at the maximum available time point for each group was: 0.527 (treatment naïve; Year 13), 0.290 (recently treated with teriflunomide 7 mg, Year 4), 0.337 (recently treated with another DMT, Year 12) and 0.512 (previously treated with another DMT, Year 13).

- Probability of disability worsening continued over 12 weeks is shown in Figure 3 for all 4 groups up to Year 4 (for consistency across groups).

- The probability of disability worsening was 0.281 in the treatment-naive group and 0.526 in the recently treated with another DMT group respectively.

- Kaplan-Meier estimates of probability of disability worsening continued over 12 weeks were available up to Year 13, Year 4, Year 12, and Year 13 for the treatment-naive, recently treated with teriflunomide 7 mg, recently treated with another DMT, and previously treated with another DMT, respectively.

- The rate of AEs, serious AEs, and AEs leading to permanent treatment discontinuation was low (0.210 to 0.335) in the core and extension period regardless of prior treatment history.

- The cumulative duration of exposure (patient-years) to teriflunomide 14 mg was 3927, 834, 487, and 585 for the treatment naïve, recently treated with teriflunomide 7 mg, recently treated with another DMT, and previously treated with another DMT groups, respectively.

- The rate of AEs, serious AEs, and AEs leading to permanent treatment discontinuation was low for patients in the recently treated with teriflunomide 7 mg group compared with the other three groups (Table 3).

- The overall occurrence of AEs, SAEs, and AEs leading to treatment discontinuation was lower than that reported in prior clinical trials and phase 3 trials.

- The rate of AEs, serious AEs, and AEs leading to permanent treatment discontinuation was low compared with that reported in the previous trials.

- The rate of AEs, serious AEs, and AEs leading to permanent treatment discontinuation was lower than that reported in prior clinical trials and phase 3 trials.

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