P3-348

Patient-Reported Outcomes With Teriflunomide in Patients With No Prior Disease-Modifying Therapy Use Within 2 Years: Results From the Phase 4 Teri-PRO Study

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OBJECTIVE

- **To report patient-reported outcomes (PROs) from the Teri-PRO study for patients with relapsing forms of MS (RMS) with no disease-modifying therapy (DMT) use within 2 years prior to study entry ("treatment-naïve" patients)**

INTRODUCTION

- Teriflunomide is a once-daily oral immunomodulator approved for the treatment of relapsing-remitting MS in 70 countries, and approximately 71,000 patients are currently being treated with teriflunomide worldwide
- Teriflunomide 14 mg is approved globally based on data from 2 phase 3 studies, TEMSO (NCT00134563)[1] and TOWER (NCT00751881)[2]
- The phase 4 Teri-PRO study (NCT01895335) evaluated treatment satisfaction, disability, and quality of life with teriflunomide using PROs, as well as the effectiveness, safety, and tolerability of teriflunomide in routine clinical practice
  - High levels of treatment satisfaction were reported over the course of the 48-week study across the total study population[3]
- Complementary data from the Teri-PRO study, describing clinical and safety outcomes as well as PROs in patients who received another DMT prior to study entry, are being presented at this congress in posters P5-384 (Gold et al)[4] and P3-363 (Coyle et al),[5] respectively

METHODS

Study Design and Patients

- Teri-PRO was a prospective, global, multicenter, single-arm, open-label study
  - Patients were treated with teriflunomide 14 mg or 7 mg (US only) according to local labeling
  - The full study design and eligibility criteria have been presented previously[6]
- In the context of this study, treatment-naïve patients are defined as patients who have not received another DMT in the 2 years prior to study entry

Study Outcomes

- The primary endpoint was Global Satisfaction with teriflunomide treatment, as measured by the Treatment Satisfaction Questionnaire for Medication (TSQM, Version 1.4) at Week 48[7]
- Secondary endpoints included change from baseline to Week 48 or end of treatment (EoT) in:
  - Patient-reported disability, as measured by Multiple Sclerosis Performance Scale (MSPS) score[8,9]
  - Patient-reported quality of life (QoL), as measured by Multiple Sclerosis International Quality of Life (MusiQoL) score[10]

Treatment Satisfaction

- The TSQM consists of 14 questions across 4 domains assessing Global Satisfaction, Effectiveness, Side Effects, and Convenience of medication over the previous 2–3 weeks or since last use of medication. A higher score indicates greater treatment satisfaction
- The TSQM has shown good measurement properties using traditional psychometric methods applied to data from both this study[11] and the TENERE (NCT00883337) phase 3 trial[12]
- TSQM scores in treatment-naïve patients were assessed at Weeks 4 and 48 (or EoT)

Patient-Reported Disability

- The MSPS questionnaire requires patients to indicate the level of disability they have experienced during the past month
- A total MSPS score (ranging from 0 to 41) is calculated as the sum of scores on 8 individual subscales, with a higher score reflecting greater disability[8,9]
  - In addition, patient responses were collected with respect to Pain, Depression, and Tremor and Coordination, but these were not included in the total MSPS score

Quality of Life

- A total MusiQoL score (ranging from 0 to 100) is calculated as the mean of 9 dimension scores,[13] with higher scores reflecting higher QoL

Statistical Analysis

- All patients who received ≥1 dose of teriflunomide were included in the analysis. Post hoc analyses were carried out in treatment-naïve patients
- *P* values for change vs baseline were derived post hoc for MSPS and MusiQoL scores, from an analysis of covariance model adjusted for baseline score and baseline Expanded Disability Status Scale score (categorized as ≤3.5 or >3.5)

RESULTS

- Of the overall Teri-PRO population (N=1000), 285 (28.5%) patients were treatment-naïve
  - The vast majority of treatment-naïve patients (n=264, 92.6%) received teriflunomide 14 mg
- Demographics and baseline disease characteristics are shown in **Table 1**; the majority of these characteristics were comparable to the full Teri-PRO patient population
  - Time since most recent relapse onset was shorter in treatment-naïve patients compared with the full Teri-PRO cohort
  - For treatment-naïve patients (ie, those with no DMT use in the 2 years prior to study entry), the convenience of oral therapy was by far the most common reason stated by the investigator for treating with teriflunomide

Table 1. Baseline Demographics and Disease Characteristics

Characteristic	All Patients[a] (N=1000)	Treatment-Naïve Patients[b] (n=285)
Age, mean (SD), y	47.1 (11.0)	47.3 (11.0)
Female, n (%)	756 (75.6)	207 (72.6)
Race, n (%)		
Asian/oriental	3 (0.3)	0
Black	50 (5.0)	15 (5.3)
Caucasian/white	938 (93.8)	268 (94.0)
Other	9 (0.9)	2 (0.7)
Time since first symptoms of MS, mean (SD), y	13.2 (9.5)	12.2 (10.5)
Number of relapses in the past 2 years, mean (SD)	1.2 (1.5)[c]	1.4 (1.4)[d]
Time since most recent relapse onset, mean (SD), mo	31.2 (46.5)[e]	19.9 (36.0)[f]
Baseline EDSS score, mean (SD)	3.1 (2.0)[g]	3.0 (2.0)
Reason for treating with teriflunomide, n (%)[h]		
Disease worsening with previous DMT[i]	143 (14.3)	21 (7.4)
Convenience (for oral daily intake)	572 (57.2)	236 (82.8)
Intolerance to administration mode of previous DMT	215 (21.5)	26 (9.1)
Side effects/risk of side effects with previous DMT	271 (27.1)	22 (7.7)
Other	46 (4.6)	18 (6.3)

[a]Includes treatment-naïve patients and those who have previously received a DMT; [b]defined as patients with no DMT use within 2 years prior to study start; [c]n=999; [d]n=284; [e]n=971; [f]n=273; [g]n=996; [h]more than 1 reason for treatment with teriflunomide could be selected by the investigator; [i]worsening as defined by investigator. Percentages are presented as a proportion of each cohort. DMT, disease-modifying therapy; EDSS, Expanded Disability Status Scale; SD, standard deviation.

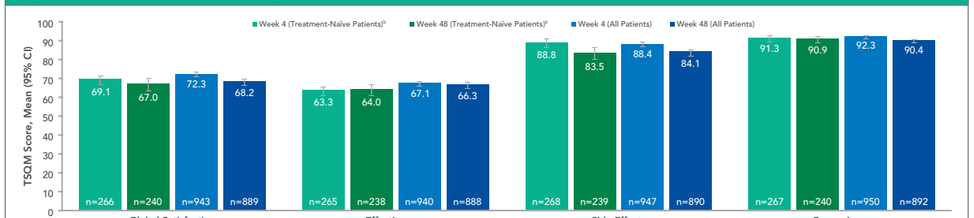
Treatment Satisfaction

- Treatment-naïve patients reported high levels of treatment satisfaction across all 4 TSQM domains at Week 48 (**Figure 1**)
  - High levels of satisfaction were seen at Week 4, the first time point at which TSQM was measured in these patients
- Results for treatment-naïve patients were similar to those for all patients in Teri-PRO (**Figure 1**)

Patient-Reported Disability

- In treatment-naïve patients, total MSPS mean (95% confidence interval) score remained stable from baseline (11.8 [10.9, 12.6]) to Week 48 (11.4 [10.5, 12.4]), as did MSPS scores for the total patient cohort (baseline: 12.2 [11.8, 12.7]; Week 48: 11.9 [11.4, 12.4]). While the change in total MSPS was not significant for the total patient cohort, the change for treatment-naïve patients, while small, was statistically significant (*P*=0.045)

Figure 1. Treatment Satisfaction by TSQM Domain at Week 4 and Week 48[a]



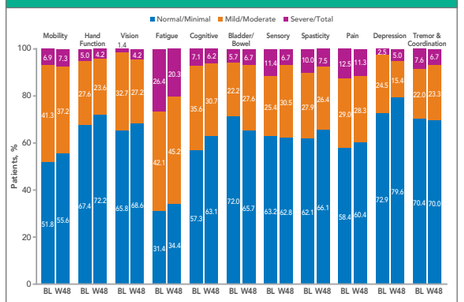
[a]Baseline values were not measured for treatment-naïve patients and the full Teri-PRO cohort; therefore, statistical comparisons vs baseline were not made; [b]defined as patients with no DMT use within 2 years prior to study start. CI, confidence interval; DMT, disease-modifying therapy; TSQM, Treatment Satisfaction Questionnaire for Medication.

- The proportion of treatment-naïve patients reporting no or minimal disability at Week 48 vs baseline was similar or increased in 10 of the 11 MSPS subscales (**Figure 2**)
  - A small decrease was seen in the proportion of patients reporting no or minimal disability in the subscale relating to bladder or bowel symptoms

Quality of Life

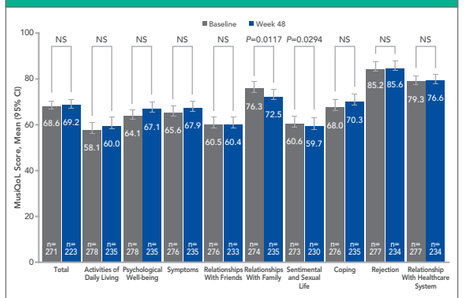
- Total MusiQoL scores remained high and stable over the course of the study in treatment-naïve patients (**Figure 3**)
  - In 7 of the subscales, scores also remained stable; however, small but statistically significant decreases were seen on the remaining 2 subscales, Relationships With Family, and Sentimental and Sexual Life (**Figure 3**)

Figure 2. Distribution of Patients by Degree of Disability, as Measured by MSPS Subscales, at Baseline and Week 48 in Treatment-Naïve Patients



Normal/minimal, mild/moderate, and severe/total categories refer to MSPS scores of 0/1, 2/3, or 4/5, respectively, except for the Mobility subscale, where MSPS scores for each category were 0/1, 2/3/4, and 5/6, respectively. BL, baseline; MSPS, Multiple Sclerosis Performance Scale; W48, Week 48.

Figure 3. MusiQoL Total and Subscale Scores at Baseline and Week 48 in Treatment-Naïve Patients[a]



[a]Defined as patients with no DMT use within 2 years prior to study start. *P* values reflect statistical significance of change in MusiQoL score at Week 48/EoT vs baseline, and were derived from an analysis of covariance model of change from baseline adjusted for baseline score and baseline EDSS score categorized as ≤3.5 or >3.5. CI, confidence interval; DMT, disease-modifying therapy; EDSS, Expanded Disability Status Scale; EoT, end of treatment; MusiQoL, Multiple Sclerosis International Quality of Life; NS, not significant.

CONCLUSIONS

- **In treatment-naïve patients, high levels of satisfaction with teriflunomide treatment were reported early in the study and sustained up to Week 48, in line with that observed for the total Teri-PRO patient cohort**
- **Patient-reported disability showed a small, statistically significant improvement and QoL remained high over the course of the study in treatment-naïve patients**
- **In combination with other Teri-PRO outcomes, these results support the use of teriflunomide as an effective treatment in both treatment-naïve patients and patients switching from other DMTs**

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Teriflunomide is approved in many countries, including the US and the European Union, for the treatment of relapsing multiple sclerosis or relapsing-remitting multiple sclerosis. This material may contain information that is outside of the approved labeling in some countries.

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