(S137) EARLY ONSET OF EFFECT WITH CLADRIBINE TABLETS IN THE CLARITY STUDY

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Objectives: Cladribine is activated preferentially in lymphocyte subtypes resulting in targeted and sustained immunomodulation, which provides the rationale for use of cladribine tablets as a short-course annual multiple sclerosis (MS) treatment. We investigated the time of onset of treatment effect with cladribine tablets relative to placebo in the CLARITY (CLAdRIbine tablets Treating multiple sclerosis orallY) study in patients with relapsing-remitting MS (RRMS).

Methods: Patients with RRMS (McDonald criteria; Expanded Disability Status Scale [EDSS] score, 0–5.5) were randomized 1:1:1 to receive cladribine tablets (cumulative dose of 5.25 or 3.5 mg/kg) or matching placebo. Cladribine tablets were given in short courses (once daily for 4–5 days) in 2 or 4 consecutive months (28-day periods) in the first 48 weeks, then two short courses at weeks 48 and 52 (for both groups). Qualifying relapses were evaluated serially throughout the study, and magnetic resonance imaging (MRI) parameters (T1-Gd+, active T2, and combined unique [CU] lesions per patient per scan) were evaluated at 24, 48, and 96 weeks post-randomization. Results were previously presented at the Congress of the European Committee for Treatment and Research in Multiple Sclerosis in 2009.

Results: The intention-to-treat (ITT) population included 456, 433, and 437 patients randomized to the 5.25 mg/kg, 3.5 mg/kg, and placebo groups, respectively. Differences in qualifying relapse rate between active treatment groups versus placebo were apparent as early as 4 weeks after the first treatment course (5.25 and 3.5 mg/kg vs. placebo: 0.27 and 0.23 vs. 0.42, respectively). Statistically significant differences for all three MRI parameters were also evident at the first assessment (mean number of lesions per patient per scan in the 5.25 and 3.5 mg/kg vs. placebo groups at week 24: 0.07 and 0.07 vs. 0.97 for T1 Gd+ lesions, 0.33 and 0.45 vs. 1.59 for active T2 lesions, and 0.38 and 0.49 vs. 1.91 for CU lesions, respectively).

Conclusions: Treatment with cladribine tablets resulted in early onset of effect in clinical and MRI outcomes. These results support the potential role of cladribine tablets in the treatment of MS.

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