Title: Long-term Disease Stability Assessed by the Expanded Disability Status Scale in Patients Treated with Cladribine Tablets in the CLARITY and CLARITY Extension Studies

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Short title to be displayed on app: Cladribine Tablets: Long-term EDSS Stability

Background: Treatment with cladribine tablets 10mg (cumulative dose 3.5mg/kg [CT3.5] over 2 years) in CLARITY and CLARITY Extension reduced relapse rate and slowed disability progression versus placebo in patients with relapsing remitting multiple sclerosis (RRMS). This post hoc analysis evaluated long-term disease stability assessed by the Expanded Disability Status Scale (EDSS) after treatment with CT3.5 in patients with RRMS enrolled in CLARITY and CLARITY Extension.

Methods: Patients randomised to CT3.5 in CLARITY and then to placebo in CLARITY Extension, with ≥1 post-baseline EDSS measurement, were included (CP3.5; n=98). EDSS score over-time (from CLARITY randomisation to end of follow-up in CLARITY Extension, including the bridging interval between studies) was assessed at 6-monthly intervals, and separately time to 3- and 6-month confirmed EDSS score progression from CLARITY baseline. EDSS score worsening/improvement in each year was defined as any increase/decrease in minimum EDSS score at 6-monthly intervals; all other cases were classified as stable. An increase or decrease was defined as an EDSS score change of 1, 1.5 or 0.5 points at baseline EDSS ≤4.5, 0, ≥5.0 respectively.

Results: Five years post-CLARITY baseline, median EDSS remained stable compared with baseline values. Median EDSS score (95% confidence interval [CI]) for patients in the CP3.5 group was 2.5 (2.0-3.5) compared with 3.0 (2.5-3.5) at baseline. In each 12-month period, EDSS score stability was observed in >50% of patients, improvement in 21-30% and worsening in 0-25%. During Year 5 in the CP3.5 group, EDSS stability was observed in 53.9% of patients, improvement in 21.3% and worsening in 24.7%. Less than 30% of patients reach 3- or 6-month confirmed EDSS progression by Year 5.

Conclusions: EDSS score was stable up to 5 years post-CLARITY baseline for the CP3.5 group. Between 20% and 30% of patients demonstrated improvement in EDSS score versus baseline each year.

Disclosures: This study was sponsored by EMD Serono Inc, a business of Merck KGaA, Darmstadt, Germany (in the USA), and Merck Serono SA, Geneva, an affiliate of Merck KGaA Darmstadt, Germany (ROW).

Author disclosures:
GG: has received speaker honoraria and consulting fees from Abbvie, Actelion, Atara Bio, Almirall, Bayer Schering Pharma, Biogen Idec, FivePrime, GlaxoSmithKline, GW Pharma, Merck & Co., Merck KGaA, Pfizer Inc, Protein Discovery Laboratories, Teva Pharmaceutical Industries Ltd, Sanofi-Genzyme, UCB, Vertex Pharmaceuticals, Ironwood, and Novartis; and has received research support unrelated to this study from Biogen Idec, Merck & Co., Novartis, and Ironwood.

GC has received consulting fees from Novartis, Teva Pharmaceutical Industries Ltd., Sanofi-Aventis, Merck, Receptos, Biogen Idec, Genentech-Roche, and Bayer Schering; lecture fees from Novartis, Teva Pharmaceutical Ind. Ltd., Sanofi-Aventis, Merck, Biogen Dompè, Bayer Schering, and Serono Symposia International Foundation; and trial grant support from Novartis, Teva Pharmaceutical Ind. Ltd., Sanofi-Aventis, Receptos, Biogen Idec, Genentech-Roche, Merck, Biogen Dompè, and Bayer Schering.

KR has received honoraria for lectures and steering committee meetings from EMD Serono, Biogen Idec, Sanofi-Aventis, Genzyme, Novartis, Teva Neurosciences, Acorda and Roche/Genentech.

PR has received honoraria for lectures/steering committee meetings from Merck, Biogen Idec, Bayer Schering Pharma, Boehringer-Ingelheim, Sanofi-Aventis, Genzyme, Novartis, Teva Pharmaceutical Industries, and Serono Symposia International Foundation.

PV has received honoraria or consulting fees from Biogen, Sanofi-Genzyme, Bayer, Novartis, Merck KGaA, Celgene, Roche and Almirall; and research support from Biogen, Sanofi-Genzyme, Bayer, and Merck KGaA.

FD is an employee of EMD Serono Research & Development Institute Inc., a business of Merck KGaA, Darmstadt, Germany

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ENCORE, previously presented at ECTRIMS 2019; 11–13 September; Stockholm, Sweden