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Presentation preference: Oral or Poster

Title: Sustained efficacy in relapsing remitting multiple sclerosis (RRMS) following switch to placebo treatment from Cladribine Tablets 3.5 mg/kg (CT3.5) in patients with high disease activity (HDA) at baseline

Short Title: Sustained efficacy during CLARITY Extension

Main author: P. Vermersch[1]

Additional authors: G. Giovannoni[2], P. Soelberg-Sørensen[3], B. Keller[4], H. Salloukh[4]

[1] University de Lille, CHU Lille, LIRIC-INSERM U995, FHU Imminent Lille, France; [2]Queen Mary University of London, Blizard Institute, Barts and The London School of Medicine and Dentistry, London, UK; [3]Danish MS Center, Department of Neurology, University of Copenhagen, Rigshospitalet, Copenhagen, Denmark; [4] Merck KGaA, Darmstadt, Germany.

Introduction: In CLARITY, CT3.5 showed efficacy vs placebo (PBO) over 2 years in patients with RRMS; efficacy was sustained in Years3/4 without further treatment (CLARITY Ext). In CLARITY, patients with HDA had improved/ comparable clinical and magnetic resonance imaging (MRI) responses to CT3.5 than the overall CLARITY population.

Objectives: *Post hoc* analysis to determine if efficacy in patients with HDA, treated with CT3.5 in CLARITY (Years1/2) was sustained long-term in PBO patients in CLARITY Ext (Years3/4).

Methods: Two HDA criteria were used: 1. High relapse activity (HRA):≥2 relapses during year before study entry whether on disease modifying drug (DMD) treatment or not; 2. HRA plus disease activity on treatment (DAT):≥1 relapse during year before study entry while on other DMD treatment AND ≥1 T1 gadolinium-enhancing (Gd+) or ≥9 T2 lesions. Clinical and MRI outcomes were analysed for patients (N=806) randomised to CLARITY Ext who fulfilled HRA and HRA+DAT criteria at CLARITY baseline and received CT3.5 in CLARITY and PBO in CLARITY Ext.

Results: In CLARITY Ext, annualised relapse rate (ARR) of qualifying relapses for patients switched from CT3.5 in CLARITY to PBO in Ext (N=98) was 0.15 (95% confidence interval[CI]; 0.11, 0.21). ARRs for HRA(N=29) and non-HRA(N=69) were 0.15 (95%CI; 0.08, 0.28) and 0.15 (95%CI; 0.10, 0.22). For HRA+DAT(N=31) and non-HRA+DAT(N=67), ARRs were 0.14 (95%CI; 0.08, 0.26) and 0.15 (95%CI; 0.10, 0.22). ARRs were similar to the HDA subgroups in CLARITY. Fewer patients with HDA had

confirmed 3-month Expanded Disability Status Scale (EDSS) progression relative to non-HDA and overall groups (overall:18%; HRA and non-HRA:14% and 20%; HRA+DAT and non-HRA+DAT:13% and 21%). The proportion of patients with confirmed 3- and 6-month EDSS progression was lower in HDA subgroups in CLARITY Ext vs CLARITY.

Conclusions: In CLARITY Ext, the clinical effect in HDA patients treated with CT3.5 in CLARITY was sustained long-term.

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Author disclosures

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BK is an employee of Merck KGaA, Darmstadt, Germany.

HS is an employee of Merck KGaA, Darmstadt, Germany.