

Durable efficacy outcome improvements over 6 years in alemtuzumab-treated RRMS patients who relapsed between courses 1 and 2 (CARE-MS I)

H. Wiendl¹, S. Broadley², O. Fernández³, M. Freedman⁴, G. Izquierdo⁵, J. Lycke⁶, C. Pozzilli⁷, B. Sharrack⁸, B. Singer⁹, B. Steingo¹⁰, P. Vermersch¹¹, S. Wray¹², B-V. Wijmeersch¹³, T. Ziemssen¹⁴, L. Chung¹⁵, N. Daizadeh¹⁵, K. Thangavelu¹⁵, A. Boster¹⁶

¹*Department of Neurology, University of Münster, Germany*

²*School of Medicine, Griffith University School, Gold Coast Campus, Australia*

³*Department of Neurology, Fundación IMABIS Hospital Universitario Carlos Haya, Spain*

⁴*Ottawa Hospital Research Institute, University of Ottawa, Canada*

⁵*Department of Neurology, Virgen Macarena University Hospital, Spain*

⁶*Department of Clinical Neuroscience, University of Gothenburg, Sweden*

⁷*Department of Neurology, University of Rome, Italy*

⁸*Department of Neuroscience, Sheffield Teaching Hospitals NHS Foundation Trust, UK*

⁹*MS Center for Innovations in Care, Missouri Baptist Medical Center, USA*

¹⁰*Department of Neurology, Fort Lauderdale Multiple Sclerosis Center, USA*

¹¹*Service de Neurologie Générale et Pathologie Neuro-Inflammatoire, University of Lille, France*

¹²*Department of Neurology, Hope Neurology, USA*

¹³*Rehabilitation and MS Centre Overpelt BIOMED, Hasselt University, Belgium*

¹⁴*Center of Clinical Neuroscience, University Hospital Carl Gustav Carus, Germany*

¹⁵*Sanofi Genzyme, Sanofi, USA*

¹⁶*Clinical Neuroimmunology, OhioHealth Neurological Physicians, USA*

Background: In CARE-MS I (NCT00530348), 2 alemtuzumab courses (baseline: 5 days; Month 12: 3 days) improved efficacy outcomes vs SC IFNB-1a over 2 years in treatment-naïve RRMS patients. Durable 6-year efficacy in absence of continuous treatment was demonstrated in an extension (NCT00930553). **Goal:** Evaluate the 6-year alemtuzumab efficacy in CARE-MS I patients who relapsed between Courses 1 and 2. **Methods:** Assessments: annualized relapse rate (ARR); 6-month confirmed disability worsening (CDW) and disability improvement (CDI); MRI disease activity (gadolinium [Gd]-enhancing and new/enlarging T2 lesions); new T1 hypointense lesions; brain volume loss (BVL). **Conclusion:** In patients who relapsed between alemtuzumab Courses 1 and 2, clinical and MRI outcomes, including BVL measures, were favorable over 6 years. These data indicate that relapse after Course 1 is not indicative of subsequent limited treatment response and support administering the approved 2 alemtuzumab courses to achieve optimal clinical benefit.