No Evidence of Disease Activity for 4 Years Following 2 Courses of Alemtuzumab and No Further Treatment: Long-term Responders From CARE-MS II

Edward J. Fox, 1 Hans-Peter Hartung, 2 Eva Havrdova, 3 Brian Steingo, 4 David H. Margolin, 5 Karthinathan Thangavelu, 5 Gavin Giovannoni, 6 on behalf of the CARE-MS II Investigators

1Central Texas Neurology Consultants, Round Rock, TX, USA; 2Heinrich-Heine University, Düsseldorf, Germany; 3First Medical Faculty, Charles University in Prague, Czech Republic; 4Fort Lauderdale Multiple Sclerosis Center, Sunrise, FL, USA; 5Sanofi Genzyme, Cambridge, MA, USA; 6Queen Mary University of London, Barts and The London School of Medicine, London, UK

INTRODUCTION

- Alemtuzumab is a humanized anti-CD52 monoclonal antibody approved for the treatment of RRMS in >50 countries
- Patients with active RRMS who were either treatment-naïve (CARE-MS I, NCT00530348) or who had an inadequate response (≥1 relapse) to prior therapy at baseline (CARE-MS II, NCT00144085), demonstrated greater improvements in clinical and MRI outcomes, and were more likely to achieve NEDA, with alemtuzumab than with SC IFNB-1a

OBJECTIVE

- To evaluate patients who had no evidence of disease activity (NEDA) beginning in Year 2 of the core CARE-MS II study and had no further treatment following the initial 2 courses

METODS

- CARE-MS II was a randomized, rater-blinded,controlled, head-to-head, phase III trial of alemtuzumab versus SC IFNB-1a (44 μg 3 times per week) in patients with active RRMS who had an inadequate response (≥1 relapse) to prior therapy at baseline:
  - Patients randomized to alemtuzumab 12 mg/day IV received 2 annual courses (in 0 consecutive days at baseline and on 3 consecutive days 12 months later)
  - In the ongoing extension study, patients could receive alemtuzumab retreatment (12 mg on 3 consecutive days ≥1 year after the most recent course)

- MRI scans were obtained at baseline and annually thereafter, and analyzed centrally at neuroradiology (Montreal, Canada) by experts related to treatment group assignment

RESULTS

- MRI scans were obtained at baseline and annually thereafter, and analyzed centrally at NeuroRxResearch (Montreal, Canada) by experts related to treatment group assignment
- Brain volume loss (BVL) was derived from brain parenchymal fraction (BPF) change, and scans were read at 3 levels (Kitchener, Cleveland, OH, USA)

- Statistical Analysis
  - This analysis included patients who achieved NEDA in Year 2 and received no alemtuzumab retreatment since Month 12 or other DMT (Figure 1)
  - Interim analyses were based on all available data through Year 3 of the ongoing extension study (5-year total follow-up)

- Among alemtuzumab-treated CARE-MS II patients who achieved NEDA in Year 2 and received no further treatment following the initial courses of alemtuzumab at Month 0 and Month 12, most had NEDA in each year of the extension study and nearly half attained sustained NEDA through Year 5

- MRI activity were analyzed descriptively with percentages
- Median percentage change in BPF from baseline and annual change in BPF are reported, with 95% CIs

- This analysis included patients who achieved NEDA in Year 2 and received no alemtuzumab retreatment since Month 12 or another DMT (Figure 1)

- Most patients had no evidence of MRI disease activity in individual Years 3, 4, and 5 of the extension study, and 78% had no evidence of disease activity sustained over Years 2–5 (Figure 2)

- Most patients had NEDA in individual Years 3, 4, and 5 of the extension study

- Most patients had no evidence of MRI disease activity in individual Years 3, 4, and 5 of the extension study, and 78% had no evidence of disease activity sustained over Years 2–5 (Figure 3)

CONCLUSIONS

- Based on these findings, alemtuzumab may provide a unique treatment approach with durable efficacy in the absence of continuous treatment for RRMS patients

- MRI disease activity were analyzed descriptively with percentages
- Median percentage change in BPF from baseline and annual change in BPF are reported, with 95% CIs

ACKNOWLEDGMENTS AND DISCLOSURES

- The results presented are derived from the expanded Disability Status Scale (EDSS) point (or ≤1 points if baseline EDSS=0)
- NEDA was defined as ≤0 evidence of clinical disease activity (relapse* and 6-month confirmed disability worsening) and MRI disease activity (new Gd-enhancing T1 lesions and new/enlarging T2 hyperintense lesions)

REMARKS

- The American Association of Clinical Neurology (AAN) has developed a set of transparent, evidence-based guidelines for the care of patients with MS
- The CARE-MS II study is sponsored by Sanofi Genzyme and Bayer HealthCare Pharmaceuticals. The CARE-MS II Steering Committee and all other contributors have a Conflict of Interest statement that is available online

REFERENCES