

Longer-term Efficacy of Ofatumumab in Patients with Relapsing Multiple Sclerosis

Ludwig Kappos¹, Edward Fox², Angela Aungst³, Wendy Su⁴, Ronald Zielman⁵,
Ayan Das Gupta⁶, Jing Xi⁷, Dee Stoneman⁸, Derrick Robertson³,
Jeffrey A. Cohen⁹, Stephen L Hauser¹⁰

¹Research Center for Clinical Neuroimmunology and Neuroscience Basel (RC2NB) and MS Center, Departments of Head, Spine and Neuromedicine, Clinical Research, Biomedicine and Biomedical Engineering, University Hospital and University of Basel, Basel, Switzerland; ²Central Texas Neurology Consultants, University of Texas Dell Medical School/Round Rock, Texas, USA; ³Multiple Sclerosis Division, Department of Neurology, University of South Florida, Tampa, Florida, USA; ⁴Novartis Pharmaceuticals Corporation, East Hanover, New Jersey, USA; ⁵Novartis Pharma B.V., Amsterdam, The Netherlands; ⁶Novartis Healthcare Pvt. Ltd., Hyderabad, India; ⁷China Novartis Institutes For Biomedical Research Co., Ltd., Shanghai, People's Republic of China; ⁸Novartis Pharma AG, Basel, Switzerland; ⁹Department of Neurology, Mellen MS Center, Neurological Institute, Cleveland Clinic, Cleveland, Ohio, USA; ¹⁰UCSF Weill Institute for Neurosciences, University of California, San Francisco, California, USA

INTRODUCTION

The Phase 3 ASCLEPIOS I/II trials demonstrated the superiority of ofatumumab versus teriflunomide in reducing annualised relapse rate (ARR), suppressing MRI lesion activity and delaying disability worsening while maintaining a favourable safety profile in patients with relapsing multiple sclerosis (RMS). Here, we assess the longer-term efficacy of ofatumumab treatment for up to 4 years.

DESIGN/METHODS

Cumulative data from patients randomised to ofatumumab/teriflunomide in the ASCLEPIOS I/II trials (core study) and the ongoing, open-label, ALITHIOS extension study will be analysed (data cut-off: 25-Sep-2021). Patients randomised to ofatumumab in the core and potentially continued in the extension (continuous group) and to teriflunomide in the core with potential switch to ofatumumab in the extension (switch group) will be included. ARR, disability worsening (time-to-3-month/6-month confirmed disability worsening), disability improvement (time-to-6-month confirmed disability improvement), and brain MRI outcomes (number of Gd+T1 lesions and annualised T2 lesion rate) will be reported.

RESULTS

Of the 1882 patients randomised in the ASCLEPIOS I/II trials (ofatumumab/teriflunomide: 946/936), 1367 patients enrolled into ALITHIOS (continuous/switch: 690/677; both groups, 88.8% ongoing). The **Table** shows baseline demographics and disease characteristics of these patients. Updated efficacy results for up to 4 years of ofatumumab treatment will be presented at the congress.

CONCLUSIONS

These analyses will provide further insights on longer-term efficacy of continuous ofatumumab treatment for up to 4 years, and the effects of switching from teriflunomide to ofatumumab and add valuable information for the assessment of Ofatumumab's benefit/risk profile.

Character count: 233/250 words (excluding headings)

TABLES/FIGURES

Table. Baseline Demographics and Disease Characteristics

	Ofatumumab continuous (N=946)	Ofatumumab Switched from Teriflunomide (N=936)	
		Baseline from core study (N=936)	Baseline from extension study (N=677)
Age, years*	38.4±9.04	38.0±9.22	40.1±9.21
Female, n (%)	637 (67.3)	636 (67.9)	456 (67.4)
BMI, kg/m ² *	25.86±6.22	25.93±6.02	25.61±5.85
Mean exposure, years*	2.9±1.31 ^a	1.5±0.5 ^b	1.9±0.50 ^c
Patient-years	2761.4 ^a	1397.8 ^b	1271.1 ^c
Treatment-naive patients [#] , n (%)	386 (40.8)	363 (38.8)	NA
EDSS score at baseline*	2.93±1.35	2.90±1.36	2.81±1.45 ^d
Number of relapses in the last 12 months prior to screening, n (%)	1.2±0.69	1.3±0.71	0.2±0.49 ^d
Number of Gd+ T1 lesions*	1.7±4.51	1.3±3.43	0.8±2.37 ^d
Total volume of T2 lesions, cm ³ *	13.72±13.8	12.55±13.8	NA

* Values are represented as mean±SD

Treatment naive patients are those who have not received a prior multiple sclerosis disease modifying therapy

^a Values presented are for total ofatumumab exposure in the continuous group; ^b Values presented are exposure to teriflunomide in core in the switch group; ^c Values presented are for ofatumumab in extension

^d The baseline from the extension study in the ofatumumab Switch from teriflunomide group reflects the teriflunomide treatment effect during the double-blind treatment phase in the ASCLEPIOS studies.

DISCLOSURES:

The study was supported by Novartis Pharma AG, Switzerland. The detailed author disclosures will be presented in the subsequent presentation.

Presentation format: Choose one from the following

- Platform/oral
- Poster

Note: Final decision on the presentation type will be taken by the abstract committee

Selection of the category: Choose **any one** category from the following:

- Ageing and dementia
- Autonomic nervous system diseases
- Cerebrovascular diseases
- Child neurology/developmental neurology
- Clinical neurophysiology
- Cognitive neurology/neuropsychology
- Coma and chronic disorders of consciousness
- COVID-19
- Education in neurology
- Epilepsy
- Ethics in neurology
- Headache
- Higher cortical functions
- History of neurology
- Infectious diseases
- Motor neurone diseases
- Movement disorders
- **MS and related disorders**
- Muscle and neuromuscular junction disorder
- Neurocritical care
- Neuroepidemiology
- Neurogenetics
- Neuroimaging
- Neuroimmunology

- Neuroinformatics
- Neurological manifestation of systemic diseases
- Neurology and arts
- Neuro-oncology
- Neuro-ophthalmology/ neuro-otology
- Neuropathies
- Neurorehabilitation
- Neurosonology
- Neurotoxicology/occupational neurology
- Neurotraumatology
- Pain
- Palliative care
- Peripheral nerve disorders
- Sleep-wake disorders
- Spinal cord and root disorders