[CI]) of the following birth outcomes was described for IFNβ-exposed and unexposed women: low birth weight for live births (<2500g), low head circumference for infants with full-term live birth (≥37 gestational weeks) and small or large for gestational age (SGA and LGA respectively). For SGA, LGA, and head circumference, national gestational age and sex-specific national references were used. No adjustments for potential confounding factors were performed.

Among 666 IFNβ-exposed and 1330 unexposed live births, the prevalence of birth outcomes was similar between IFNβ-exposed vs unexposed. Prevalence of low birth weight (95%CI) was 3.9%(2.6-5.7) among IFNβ-exposed and 4.8%(3.7-6.1) among unexposed live births. Among 619 IFNβ-exposed and 1219 unexposed full-term live births, prevalence of low head circumference (95%CI) was 1.9%(1.0-3.4) vs 1.1%(0.6-1.8) respectively. Comparing the IFNβ-exposed vs unexposed, SGA (95%CI) was 2.1%(1.2-3.5) vs 2.0%(1.3-2.9), and LGA (95%CI) was 0.8%(0.2-1.7) vs 0.8%(0.4-1.5).

Data from Finnish and Swedish health registers showed no evidence that IFNβ exposure before and during pregnancy affected infant birth weight and head circumference.

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Efficacy and Safety of Satralizumab for Relapse Prevention in Neuromyelitis Optica Spectrum Disorder: A Pooled Analysis from Two Phase 3 Clinical Trials

Jerome De Seze [1], Brian G. Weinshenker [2], Yusuke Terada [3], Yuichi Kawata [3], Athos Gianella-Borradori [4], Christian Von Büdingen [5], Gaelle Klingelschmitt [5], Anthony Traboulsee [6], Takashi Yamamura [7]

[1] *Department of Neurology, Hôpital de Hautepierre, Strasbourg, France*
[2] *Mayo Clinic, Rochester, United States*
[3] *Chugai Pharmaceutical Co., Ltd, Tokyo, Japan*
[4] *Chugai Pharma USA LLC, Berkeley Heights, United States*
[5] *F. Hoffmann-La Roche Ltd, Basel, Switzerland*
[6] *University of British Columbia, Vancouver, Canada*
[7] *National Institute of Neuroscience, National Center of Neurology and Psychiatry, Tokyo, Japan*

Satralizumab is a humanised recycling monoclonal antibody that binds to the interleukin-6 (IL-6) receptor; IL-6 has been implicated in the pathophysiology of neuromyelitis optica spectrum disorder (NMOSD). Satralizumab significantly reduced the risk of NMOSD relapse in two Phase 3 studies: SAkuraSky (SA-307JG; NCT02028884) and SAkuraStar (SA-309JG; NCT02073279). Hazard ratios (HR) for the risk reduction were 0.38 (95% confidence interval [CI] 0.16–0.88) in SA-307JG and 0.45 (95% CI 0.23–0.89) in SA-309JG (both p=0.018). Satralizumab was particularly effective in AQP4-IgG-seropositive patients (HR 0.21 [95% CI 0.06–0.75] in SA-307JG and HR 0.26 [95% CI 0.11–0.63] in SA-309JG).

Patients were randomized 1:1 (SA-307JG) or 2:1 (SA-309JG) to satralizumab (120 mg) or placebo, with treatment at Weeks 0, 2, 4, and Q4W thereafter. Satralizumab or placebo were administered as monotherapy (SA-309JG) or add-on to baseline immunosuppressants (SA-307JG). The primary endpoint of both studies and the pooled analysis was time to first protocol-defined relapse (PDR). Efficacy analyses were performed on the pooled intention-to-treat population. Between-group HRs for time to PDR were calculated based on Cox proportional hazards models, stratified by study. To assess the validity of pooling data across the two studies, individual study treatment effects within the pooled analysis and study by treatment interaction effect were calculated.

The pooled analysis included 104 patients who received satralizumab and 74 who received placebo. HR for time to first PDR was 0.42 (95% CI 0.25–0.71; 58% risk reduction vs placebo). For AQP4-IgG seropositive patients, the HR was 0.25 (95% CI 0.12–0.50; 75% risk reduction); in the seronegative group, the HR was 0.97 (95% CI 0.41–2.23). The validity of pooling the data was confirmed, as no interaction between study and treatment effect was observed. Incidence of adverse events was similar in satralizumab and placebo groups; there were no deaths or anaphylactic reactions.

This pooled analysis of data from two Phase 3 studies demonstrated the efficacy of satralizumab in reducing relapse risk in patients with NMOSD. Satralizumab had a favourable safety profile as monotherapy or alongside immunosuppressants.

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Long-Term Reduction of Relapse Rate and Confirmed Disability Progression After 6 Years of Ocrelizumab Treatment in Patients with Relapsing Multiple Sclerosis

Riadh Gouider [1], Gavin Giovannoni [2], Ludwig Kappos [3], Stephen L. Hauser [4], Xavier Montalban [5], Harold Koendgen [7], Kalpesh Prajapati [8], Marianna Manfrini [7], Jerry S. Wolinsky [6,9]

[1] *Department of Neurology, Université de Tunis El Manar, Faculté de Médecine de Tunis, Tunis, Tunisia*
[2] *Queen Mary University of London, London, United Kingdom*
[3] *University Hospital Basel, University of Basel, Basel, Switzerland*
[4] *University of California, San Francisco, San Francisco, United States*
[5] *Division of Neurology, University of Toronto, Toronto, Canada*
[6] *Vall d'Hebron University Hospital, Barcelona, Spain*
[7] *F. Hoffmann-La Roche Ltd, Basel, Switzerland*
[8] *GCE Solutions Inc, Amsterdam, Netherlands*
[9] *McGovern Medical School, The University of Texas Health Science Center at Houston (UTHealth), Houston, United States*

The efficacy and safety of ocrelizumab (OCR) in relapsing multiple sclerosis (RMS) were demonstrated in the 96-week controlled double-blind period (DBP) of the Phase III trials OPERA I and OPERA II (NCT01247324; NCT01412333). Results for the 3-year follow-up of the pooled OPERA open-label extension (OLE) period have previously been reported (Hauser SL, et al. ECTRIMS 2018;Abstract P590).

At the start of the OLE period, patients who completed the DBP either continued OCR (OCR-OCR) or were switched from interferon (IFN) β-1a to OCR (IFN-OCR). Adjusted annualised relapse rate (ARR), time to onset of 24-week confirmed disability progression (CDP24) and change in adjusted mean Expanded Disability Status Scale (EDSS) score from the DBP baseline were analysed.

Overall, 82.3% of patients who entered the OLE completed OLE study Year 4. Among IFN-OCR patients, ARR decreased from 0.20 in the year pre-switch to 0.10, 0.08, 0.07 and 0.04 at Years 1, 2, 3 and 4 post-switch (Year 1 vs pre-switch, p<0.001; Year 1 vs Year 2, p=0.31; Year 2 vs Year 3, p=0.56; Year 3 vs Year 4, p=0.05). OCR-OCR continuers maintained the low ARR through the year pre-OLE and the 4 years of the OLE period (0.13, 0.10, 0.08, 0.07 and 0.05). OCR-OCR continuers vs IFN-OCR switchers had lower proportions of patients with CDP24 in the year pre-switch (7.7% vs 12.0%), and at OLE Year 1 (10.1% vs 15.6%), OLE Year 2 (13.9% vs 18.1%), OLE Year 3 (16.2% vs 21.3%), and OLE Year 4 (19.2% vs 23.7%); p<0.05, all difference comparisons. The safety profile observed in the OLE was generally consistent with that observed during the DBP.

After 6 years of follow-up, the proportion of patients with CDP24 remained lower in patients who initiated ocrelizumab treatment earlier (OCR-OCR), compared with patients who received initial IFN treatment (IFN-OCR), demonstrating that the benefits of earlier initiation of ocrelizumab were maintained compared with patients switching from IFN. Switching from IFN to ocrelizumab after 2 years at the start of the OLE period was associated with a reduction in ARR. Both OCR-OCR