

**Title**

**Improvements in employment and cognition in ocrelizumab-treated RRMS patients**

**Short title**

**Employment and cognition in OCR-treated pts**

**Authors**

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## **Background**

Multiple sclerosis (MS) affects mainly adults of working age, impacting employment and quality-of-life.

## **Aims**

To report employment and cognitive improvements over 96-weeks in relapsing-remitting MS patients in the Phase IIIb CASTING trial (NCT02861014).

## **Methods**

Patients (Expanded Disability Status Scale score [EDSS]  $\leq 4.0$ ) with suboptimal response to 1-2 prior disease-modifying therapies received intravenous ocrelizumab 600mg every 24-weeks for 96-weeks. Employment status at baseline, Weeks 24, 48, 96 was determined by Work Productivity and Activity Impairment (WPAI) questionnaire. Symbol Digit Modalities Test (SDMT) scores, measured at baseline, Weeks 48, 96, were translated to z-scores; a cut-off of  $-1$ , defining cognitive changes. Baseline z-scores  $\leq -1$  defined the low- or lower-cognitively functioning group and  $> -1$  the high- or higher-cognitively functioning group.

## **Results**

At baseline, 427 patients were employed vs 230 unemployed. Unemployment (vs employment) was slightly higher in patients aged 40 or younger (78.7% vs 72.6%), females (67.8% vs 61.4%) and associated with higher mean [SD] baseline EDSS (2.38 [1.1] vs 1.95 [1.0]), and cognitive impairment (mean SDMT score: 48.7 [13.4] vs 56.6 [12.1]); MS disease duration was similar (4.9 [2.9] vs 5.0 [2.7] years). At Week-96, 32.2% of baseline unemployed were employed, while 12.9% of employed shifted to unemployment. Overall baseline mean SDMT z-score was  $-1.36$ . Mean SDMT score changed from 53.8 at baseline to 55.2 at Week-96 in the overall population (N=680), and from 46.5 to 49.5, and 65.6 to 64.1 in the lower (n=392) and higher (n=245) cognitively functioning groups, respectively. In the overall population, 29.0% (n=197) had  $\geq 4$  points improvement from baseline to Week 96, 22.6% (n=154) had  $\geq 4$  points worsening and 32.8% (n=223) remained stable; (15.6% [n=106], missing values).

## **Conclusions**

Over 2 years of CASTING study, ocrelizumab-treated patients showed a greater shift towards employment than unemployment. Increased SDMT scores, were evident in ocrelizumab-treated lower-cognitively functioning group.

## **Disclosures**

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