

P364

## Achieving No Evidence of Disease Activity-3 (NEDA-3) in cladribine and monoclonal antibodies treated multiple sclerosis patients

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**Background:** Cladribine and monoclonal antibodies (mab; natalizumab, alemtuzumab, ocrelizumab and rituximab) are high efficacy therapies (HETs) used mainly in patients with highly active multiple sclerosis (HAMS).

**Objective:** We aimed to determine the proportion of HAMS patients under HETs failing to meet NEDA-3 at 1 and 2 years, and to identify factors associated to failing to meet NEDA-3 at 2 years.

**Methods:** This retrospective cohort study based on Argentina Multiple Sclerosis patient registry, RelevEM (NCT 03375177), includes all HAMS patients patients who received HETs. Logistic regression model was used to predict factors related to NEDA-3 at two years,  $p < 0.05$  was considered significant.

**Results:** Three hundred and twenty three HAMS patients were included, 22% and 32% of patients failing to meet NEDA-3 at 1 year and 2 years, respectively. Patients who achieved NEDA at 2 years had shorter duration of MS ( $p < 0.01$ ) and shorter time between first treatment and current treatment ( $p = 0.01$ ). On the other hand, naïve patients had reached NEDA more frequently ( $p < 0.01$ ). In a multivariable logistic regression model, being a naïve patient (Odds Ratio (OR) 3.78, 95% confidence interval (CI) 1.50-9.86,  $p < 0.01$ ) was an independent risk factor to reach NEDA-3 at 2 years. No association was found between HETs and NEDA-3 at 2 years when adjusted for potential confounders (mab adjusted OR 1.73; 95% CI 0.51- 6.06,  $p 0.57$ ).

**Conclusion:** We found a high proportion of patients who achieved NEDA-3 at 1 and 2 years. Treatment-naïve patients had a higher risk of achieving NEDA-3 at 2 years

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Burgos Marcos: nothing to disclose

Vrech Carlos: nothing to disclose

Piedrabuena Raul: nothing to disclose

Pablo Lopez: nothing to disclose

Deri Norma: nothing to disclose

Luetic Geraldine: nothing to disclose

Miguez Jimena: nothing to disclose

Cabrera Mariela: nothing to disclose

Martinez Alejandra: nothing to disclose

Zanga Gisela: nothing to disclose

Tkachuk Verónica: nothing to disclose

Tizio Santiago: nothing to disclose

Carnero Edgar: nothing to disclose

Knorre Eduardo: nothing to disclose

Felisa Leguizamon: nothing to disclose

Mainella Carolina: nothing to disclose

Nofal Pedro: nothing to disclose

Liwacki Susana: nothing to disclose

Hryb Javier: nothing to disclose

Edson Chiganer: nothing to disclose

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