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Abstract Title: Clinically Defined Conversion to SPMS Approaching Objectively Data-driven Incidence in RWE in the Czech Republic in years 2016-2021

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Preferred Presentation Type: Oral or poster presentation

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Introduction:
Secondary progressive multiple sclerosis (SPMS) leads to progressive neurological disability. With the new therapeutic options for SPMS, Siponimod has received reimbursement in the Czech Republic as of 2021. This makes early and correct diagnosis even more important, but it is often made retrospectively with a delay. (Lorscheider et al., 2016) provides a standardized definition of SPMS based on data with the possibility of earlier diagnosis.

Objectives/Aims:
To determine the number of newly diagnosed SPMS patients in Czechia and describe their characteristics at SPMS diagnoses before Siponimod reimbursement (years 2016-20) and in year 2021. To describe similarity between Clinical (C) and objective Data-driven (D) diagnosis of SPMS patients' cohorts.

Methods:
We used secondary data of all 17864 followed patients from the Czech national MS registry (ReMuS) during the period 2016-2021. We analysed (i) changes in the number of SPMS patients and their characteristics at SPMS onset (demographic, working status, EDSS, prior ARR, and active disease modifying treatment (DMT) class: platform (P-DMT) and high-efficacy DMT (HET) in years 2016-20, 2021, and (ii) convergence of cohort C to D. The reported incidence (I) and prevalence (P) rate is per 100,000 population.

Results:
The number of newly clinically diagnosed SPMS patients (C) in the ReMuS increased from 53 per year in average (I from 0.34 to 0.64) in 2016-2020 to 99 (I 0.94, P 11.05) in 2021. Increasing trend is slowly approaching objectively diagnosed patients (D) (2016-2020: 162 (I from 1.4 to 1.65), 2021: 165 (1.57)). There are no relevant differences in demographics (approx. 65-69 % females, median age 48-51 years); detected change of working patients in D (from 34 % to 50.7 %), but stable in C (44.3 % to 45.7 %); slight change in median EDSS stable for C (5.0 to 5.5), no change in D (6.0); median ARR before SPMS dg decreased in C (0.31 to 0.2) closer to the median for D (0.2); MS duration to SPMS dg extended for D: from 15.2 years to 17.2, but not for C: 16.2 to 15.9.The proportion of DMT at SPMS onset has changed

for C as follows: HET 25.1 % to 30.3 %, PDM-T 30.4 to 38.4, for D: HET 26.0 % to 42.4 %, PDM-T 24.7 to 29.1.

Conclusion:

Data from the Czech national ReMuS registry show an increasing number of patients with newly diagnosed SPMS between 2016 and 2021. This trend is also evident in the clinically assigned diagnosis. Incidence and prevalence rates are consistent with those reported in the EU.

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