Dynamics of progression to wheelchair in SPMS and impact of siponimod: Subgroup analyses from the EXPAND study

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INTRODUCTION

Worsening ambulation is a hallmark of secondary progressive multiple sclerosis (SPMS) leading to wheelchair dependence (EDSS score of ≥7.0), which is associated with poorer quality of life and increased healthcare costs.

DESIGN/METHODS

The EXPAND core part (CP) was an event-driven, placebo-controlled study assessing the safety/efficacy of siponimod in patients with SPMS. Patients with 6-month confirmed disability progression during the CP were offered switch to open-label siponimod. This post-hoc analysis assessed time-to-sustained (until the end of the CP) progression to EDSS ≥7.0 using Cox proportional hazards models and Kaplan-Meier estimates in a modified full analysis set (mFAS) that excluded EDSS data following any switch to open-label siponimod during the CP. Extrapolation of observed data beyond the CP in the overall mFAS population and in pre-defined active/non-active SPMS (a/naSPMS) subgroups was performed based on multi-state Markov model estimates.

RESULTS

In the EXPAND CP, siponimod reduced the risk of reaching sustained EDSS ≥7.0 by; 40% (HR [95% CI]:0.60 [0.41; 0.88] *p*=0.009) in the overall mFAS, 51% (0.49 [0.29; 0.81], *p*=0.005) in aSPMS and numerically by 22% (0.78 [0.42; 1.45], *p*=0.437) in naSPMS, versus placebo.

This study was funded by Novartis Pharma AG, Basel, Switzerland

Extrapolating beyond the CP, siponimod delayed the median time to wheelchair by; 5.8 years (15.3 versus 9.4 years, *p*=0.0134) in the overall mFAS, 7.9 years (15.5 versus 7.6 years, *p*=0.015) in aSPMS, and numerically by 3.0 years (15.5 versus 12.6 years, *p*=0.398) in naSPMS, versus placebo.

CONCLUSIONS

These results indicate that siponimod reduces risk of reaching wheelchair dependence in SPMS patients.

Character count:243/250 words

DISCLOSURES:

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

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