

EQ-5D Utility Trends in NMOSD_ Impact of Time and Disability

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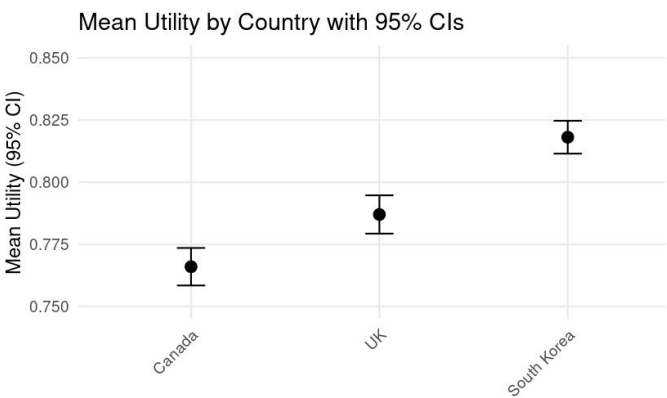
Objective:

- Neuromyelitis Optica Spectrum Disorder (NMOSD) is a rare autoimmune disease associated with severe relapses and long-term disability¹.
- Long-term health-related quality of life (HRQoL) data, particularly EQ-5D utility values, remain limited²⁻³.
- The study aims to evaluate utility values over time with Satralizumab treatment using data from the SAKuraMoon trial⁴.

Methodology

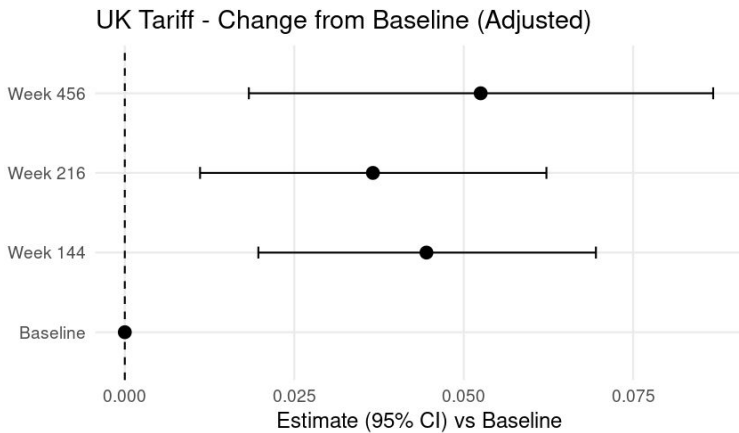
- Pooled patient data from SAKuraMoon trial were mapped to three EQ-5D-3L value sets: UK 2023⁵, Canada 2012⁶, and Korea 2009⁷.
- Two linear mixed-effects models were used to estimate utility (1) Visit-based model: Utility was modeled as a function of study visit, with baseline utility included as a covariate to evaluate its impact on follow-up scores. (2) Expanded Disability Status Scale (EDSS) utility model: A repeated measures model was used, adjusting for time-varying EDSS scores categorized into (≤2.0, 2.5-3.5, 4.0-4.5, 5.0-6.0, >6.0), based on study eligibility criteria and the limited data available on higher EDSS scores.

Results



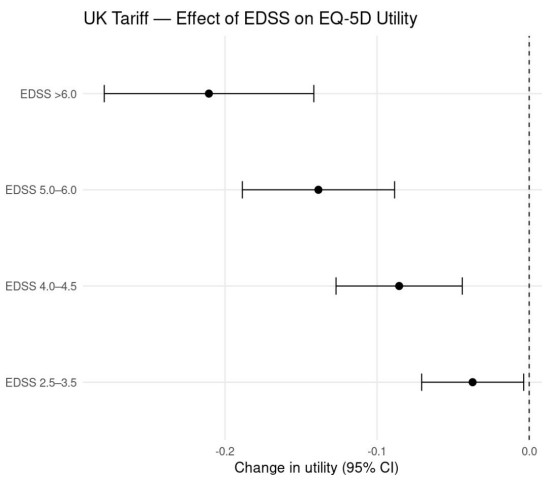
Mean descriptive utility scores at the end of the study were: Canada 0.77 (95% CI: 0.76-0.77), Korea 0.82 (95% CI: 0.81-0.86), and UK 0.79 (95% CI: 0.78-0.80).

Visit Based Model (UK tariff):



In the visit-based model all post-baseline visits demonstrated significant utility improvements. Baseline utility was a significant predictor of follow-up utility, with an estimate of 0.65 (95% CI: 0.52-0.77).

Expanded Disability Status Scale (EDSS) utility model (UK tariff):



In the EDSS-adjusted model, utility decreased as disability increased, with the greatest decrement seen in EDSS >6.0 (-0.21, 95% CI: -0.28 to -0.14).

At the same visit and same baseline utility,

Conclusion



EQ-5D utilities have increased significantly during long-term Satralizumab treatment.



Patients who had higher baseline utility sustained better HRQoL outcomes, while disease progression, measured by EDSS, was associated with reduced utility.



These findings underscore the importance of early intervention in preserving HRQoL in NMOSD.

References:
[1] Huda S, Whitten D, Bhosik M, Chamberlain J, Noonan C, Jacob A. Neuromyelitis optica spectrum disorders. Clin Med (Lond). 2019;19(2):169–76.
[2] Edgar Carnero Contentti, Maria Barbara Eizaguirre, Pablo A. López, Juan I. Rojas, Verónica Tkachuk, Ricardo Alonso, Health-related quality of life in neuromyelitis optica spectrum disorder patients in an Argentinean cohort, Multiple Sclerosis and Related Disorders, 2023, 103717.