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Exit strategies in patients with stable MS: cost-effectiveness of extended interval dosing of ocrelizumab and natalizumab versus de-escalating to cladribine tablets

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Objective

To compare the cost-effectiveness of several **exit strategies** for MS patients who are **stable** on second line **ocrelizumab** or **natalizumab**.

Background

Long-term treatment may expose MS patients to risks such as increased infection rates due to **the decline in patients' immune systems**. Stopping treatment may expose patients to risk of disease progression. Alternatives to stopping disease modifying therapies (DMTs) are 'exit strategies', such as **extended interval dosing** (EID) or **de-escalating infection risks** by switching to other DMTs. The cost and benefits of such strategies are unknown.

Conclusion

Adopting an **exit strategy for patients who are stable on ocrelizumab or natalizumab is a cost-effective** alternative to continuing treatment or extended-interval-dosing. Among exit strategies **de-escalating to cladribine tablets** is the most cost-effective option. These results demonstrate the relevance of clinical studies into extended interval dosing or de-escalation switches which may test the hypothesis of the benefit of exit strategies demonstrated in this simulation study.

Methods

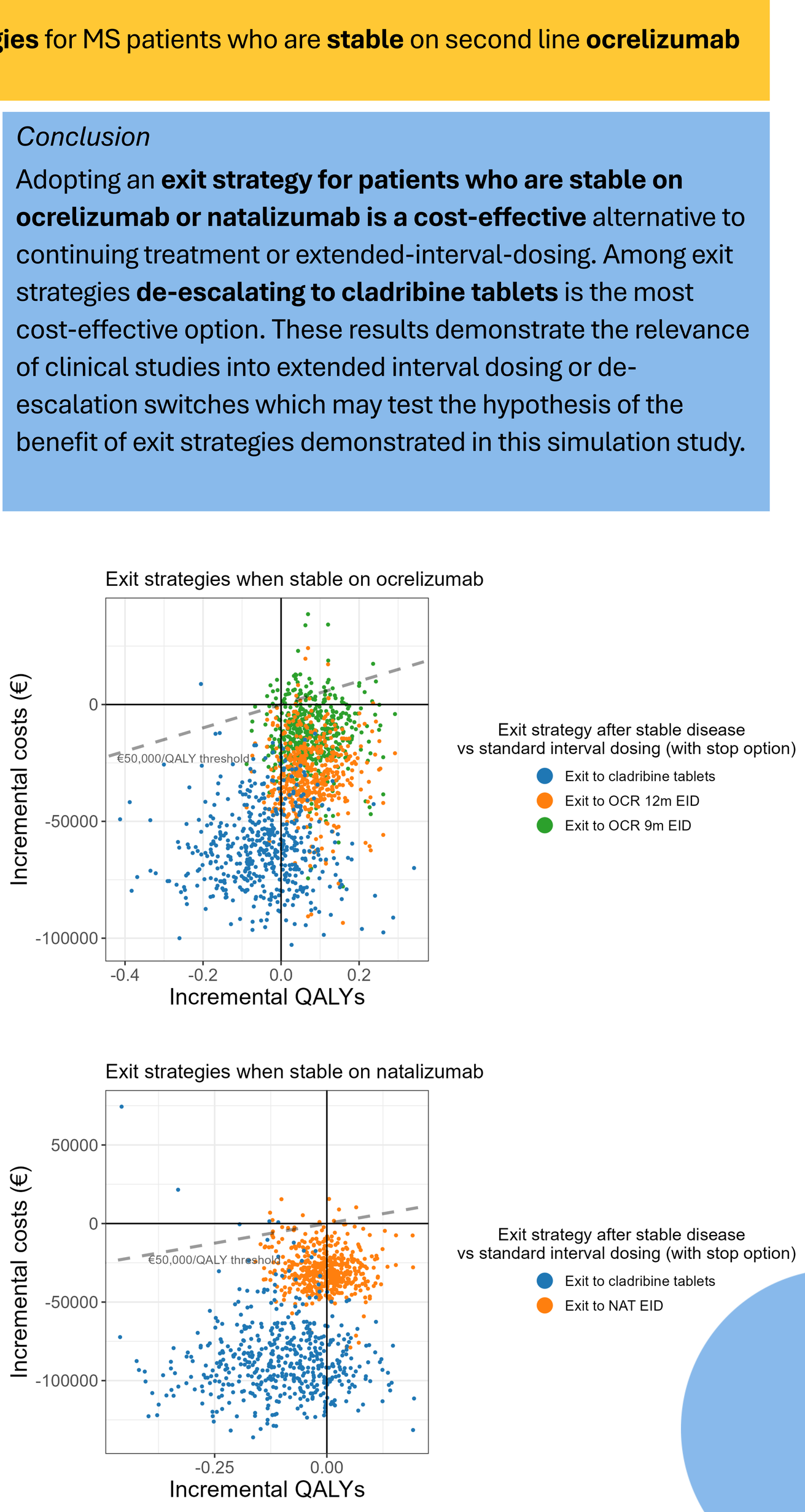
We updated a previously published **treatment sequence model** to include **time-dependent transition probabilities** for EDSS progression. This model identified differences in costs and quality adjusted life years (QALYs) between exit strategies for patients with stable MS:

1. continue as is;
2. increase the dosing interval of ocrelizumab or natalizumab;
3. switch to cladribine tablets.

We analysed uncertainty around these differences using probabilistic sensitivity analyses. We applied a **societal perspective** with a **lifetime time horizon** and discount rates for costs and QALYs of 3.0% and 1.5%, respectively. The threshold for being cost-effective was €50,000 per QALY.

Results

Over **two thirds of patients** who received second line treatment **fulfilled the criteria to enter an exit strategy**. Exit strategies were more than **90%** likely to be cost-effective relative to no exit strategies. Among exit strategies, **de-escalation to cladribine tablets** was more than 90% likely to be **cost-effective relative to EID of ocrelizumab or natalizumab**.



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