

Medico- economics of therapy decisions in Multiple Sclerosis: switching to ocrelizumab as compared to extending natalizumab intervals

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Background:

Multiple Sclerosis (MS) therapies are costly. Medico-economic aspects should be considered in decision making.

In 2006, Natalizumab has been licensed first for highly active multiple sclerosis.

The risk of progressive multifocal leukencephalopathy (PML) limits the long term use of natalizumab every 4 weeks. Two strategies are frequently followed to reduce PML risk: (i) the extension of natalizumab dosing intervals, and (ii) switching to ocrelizumab therapy. We compare the real world economic burden of those therapeutic strategies in a German MS outpatient facility.

Methods

In a retrospective analysis, we analyzed real world total costs.

The cost-minimization method was the best method to compare different treatments.

Total costs comprised:

- cost of medication (“drug”)
- Treatment-associated costs, e.g. cost of infusion consumables, MRI scans, regular lab analysis (“other costs”)
- Costs of time spent by medical personnel (physician, nurse, administrative personnel) for treatment application and surveillance (“personal”)
- We did not apply an overhead for infrastructure since the lack of precise data

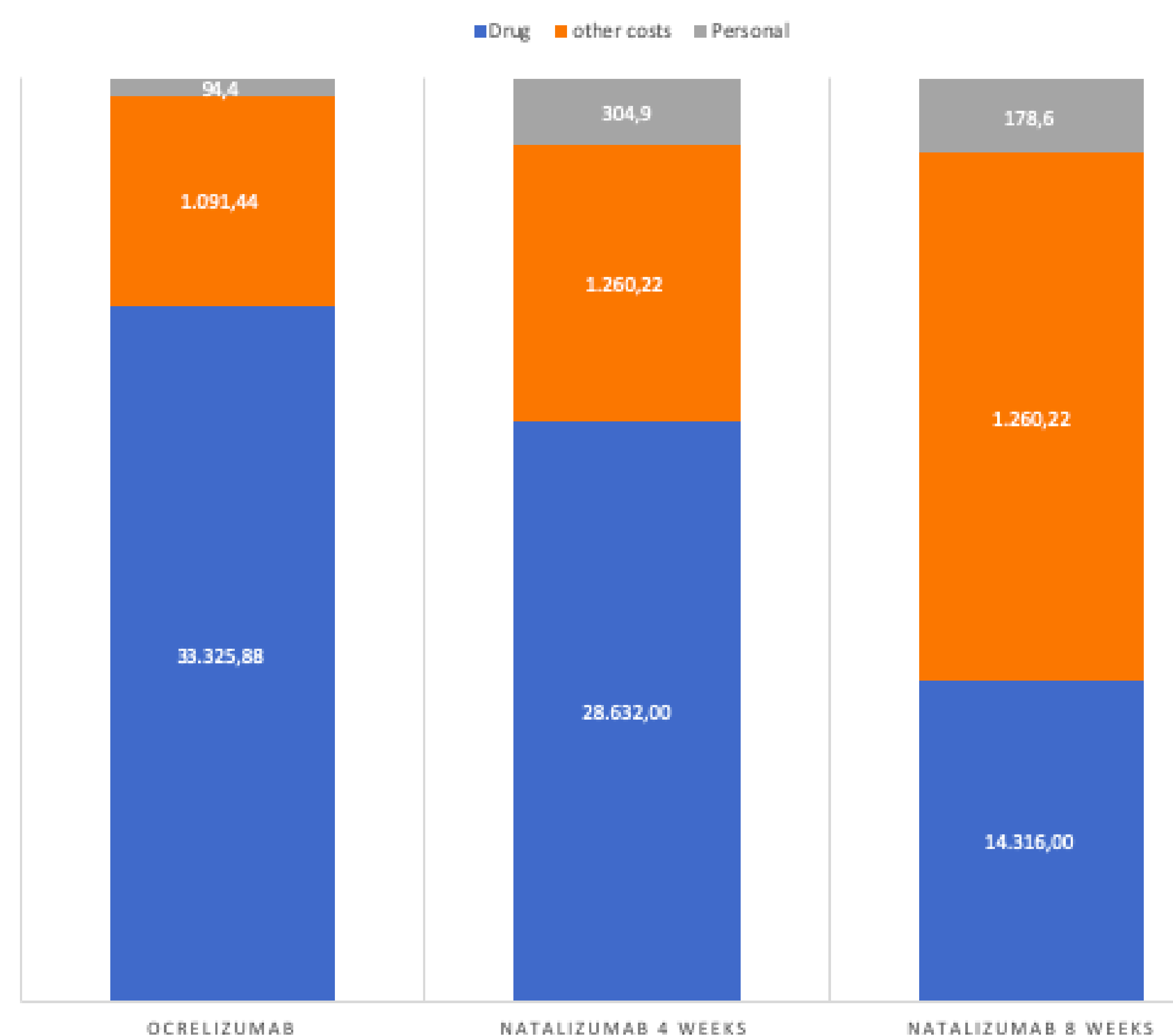
Absolute and relative cost of those three categories were compared.

Results

Drug costs dominated the total cost of treatment by far either in ocrelizumab or natalizumab therapy in regular, or extended treatment intervals.

The cost of ocrelizumab therapy summed up 34.509,40 € per years.

Natalizumab every 8 weeks costs 15.754,82€, with a difference about 18.754,58€ less than half of the ocrelizumab therapy.



Right:

Illustration of the relative contribution of the three categories of costs in ocrelizumab therapy, natalizumab every 4 weeks and every 8 weeks, respectively.

Conclusion:

In order to reduce PML risk after long term natalizumab therapy, switching to ocrelizumab is costly. Extension of natalizumab intervals is an alternative with substantial economic advantages.

The effort to capture total cost did not add substantial information relevant for clinical decision making. Drug costs dominated total costs by far and may be a good estimate for total treatment costs.

