Reviewer's report

Title: Outcome of MS relapses in the era of disease-modifying therapy

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Reviewer: Nancy Monson

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BMC Neurology review
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Outcome of MS relapses in the era of DMT

This is a manuscript by Stoppe et al that summarizes their findings regarding relapse treatment in MS. While this was looked at previously, it has not been done in the context of current DMTs, and raises important questions about whether patients and their treating physicians should expect better outcomes from IVMP treatment for relapse. Essentially, the authors report that less than one-third of patients achieve full recovery from a relapse, even with current DMTs on board. I was really excited to get to read this manuscript and while this is an important report, there are some deficits that should be addressed as outlined below.

1. Figure 2: The figure legend and figure layout require some extra attention. For example, I did not understand the "treatment" bars for each section. In primary relapse treatment, does the "treatment" bar mean that most of them had already reached partial remission at the time of their first visit before IVMP? I'm sure the authors wish to convey something else there than what it looks like. I am interpreting the "outcome" bar to mean the evaluation after the patients had received IVMP. Also, the gray cone of 23.7% that leads into the escalating relapse treatment bar… I have no idea what that is there for. The most informative part of the figure was the "outcome" bar for each patient classification area, but the percentage values are not included in the figure which would be helpful.

2. The SPMS patients should be removed as there are not sufficient numbers for comparison. The authors could mention in the discussion the outcome for these patients since the "n" is small.
3. Discussion Page 11 Lines 259-262. This paragraph is comparing the current data to historical findings. It should be expanded with MUCH more detail so that it is clear how this project is similar and distinct from the historical findings. Also, there is confusion regarding references 19 and 20, since the authors first post that response rates were 50-80% (line 260), and then 40% in the next sentence (line 262) while referencing the same papers. This needs to be fixed.

4. Finally, since most DMTs impact the immune response, a paragraph regarding the known effects of MP on the immune system should be included in the Introduction and discussed in the context of why relapse response may have been so small in the follow-up.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable
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