Reviewer's report

Title: Safety of infusing rituximab at a more rapid rate in patients with rheumatoid arthritis: Results from the RATE-RA study

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Reviewer: Alper van Sijl

Reviewer's report:

The authors present an extensive manuscript describing a multi-centre open-label clinical study in patients with rheumatoid arthritis treated with rituximab focussed at the safety of shortened infusion duration of rituximab and the occurrence of infusion related reactions. The manuscript is very interesting and answers an important question in the fields of rheumatology however there are some considerations that limit the current interpretability of the results. The manuscript is written in a comprehensible manner and presents the data very clearly.

Major comments

1. Although the results of this study do point out that a faster infusion rate for rituximab is as safe as a regular infusion rate, the investigated population consisting in part of patients who were not rituximab naïve and have thus had one or more rituximab infusions prior to entry in the study. Thus, this group already has built up some tolerance to the drug, which makes the data more difficult to interpret. To make the results as clear as possible, these patients should be excluded, as they would stand out too much from a theoretical point of view. However, from a practical point of view, this reviewer does not believe that the results in this manuscript will change much if excluded from analyses. This reviewer would still recommend exclusion of this patient group from further analyses, to make this manuscript as clean as possible.

2. Could the authors allude to the comparability of the historical controls to the experimental group. Authors only present data on the frequency of IRRs in the historical group, but is this group similar in demographic and RA related factors? Please elaborate.

3. Is there any data on regular AE’s reported? (other than IRRs) Is the rate of regular AEs similar in both the historical control group as well as the experimental group?

Minor comments

1. This reviewer believes the presentation of tables could be more sleek and comprehensible. Table 1 and 2 can be combined in one table, table 3 seems redundant with respect to table 4, and figure 1 seems unnessecary as it presents data already explained in the text.

2. In addition to the multitude of tables and figures, there seems to be a
discrepancy in the presentation of results between table 3 and 4 with regard to the IRRs in the historical control group.

3. Literature references 12, 14 and 15 are all references to conference abstracts. Reference 17 is the eventually published article. Thus, this reviewer would suggest authors allude to only this paper and not the conference abstracts.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests