Reviewer's report

Title: Merkel cell polyomavirus and trichodysplasia spinulosa-associated polyomavirus DNAs and antibodies in blood among the elderly

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Reviewer: Els van der Meijden

Reviewer's report:

Although the authors addressed each of the points raised, I am not satisfied with all of their answers. Especially the issues of points 2 and 3 regarding data handling need further improvement.

1. The research question and aim of the study posed for TSPyV is still insufficient defined in the Background section. The authors did add an additional aim of the study for both MCPyV and TSPyV; the importance of testing a large population of serum samples in order to study possible viremia in elderly. But the population at elevated risk for MCC is not as important for TSPyV as it is for MCPyV.

2. For a number of patients (227/394 patients for DNA detection, 155/326 patients for IgG detection), follow up serum samples were analyzed for both the detection of DNA and IgG antibodies. The collection time period between the two serum samples is only two weeks. The reason for testing 2 serum samples per patient is still not well described and requested data on MCPyV DNA persistency are still missing. When conformation of the data is the main/only reason for double testing, results should be shown only for the total number of patients and not for the total number of serum samples. The way the data are presented now, both in the text and Table 2, is a mixture of both which makes it very confusing for the reader. For example in Table 2, the total number of serum samples is given in the first column, whereas the DNA prevalence is presented as percentage of number of patients being MCPyV DNA positive, at least that is how I understand it. Furthermore, the percentages in the revised Table 2 seem not changed correctly, because for the different age groups they are identical to the original Table 2 while calculating % positive patients instead of % positive serum samples. The percentages of the total population (last row of the table), on the other hand are different in revised Table 2.

3. Additional information was given about the reference group used for odds ratio calculations in Table 3. The odds ratios are, however, calculated on the total amount of serum samples and not on the total number of patients, the way it should be done.

Furthermore, the authors gave extra information on the seroprevalence of MCPyV DNA positive patients, but statistical calculation (for instance Chi-squared test), important for the interpretation of the data, are still missing.
Level of interest: An article whose findings are important to those with closely related research interests

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