Reviewer’s report

**Title:** Diagnostic accuracy of 18F-FDG PET/CT and MR imaging in patients with adenoid cystic carcinoma

**Version:** 0  **Date:** 22 Jun 2017

**Reviewer:** Gerhard Huber

**Reviewer's report:**

Ruhlmann et al. Performed an interesting retrospective study on the diagnostic value of PET-CT in addition to routine MRI (sometimes CT) regarding diagnosis and follow up of patients with adenoid cystic carcinoma. The study is scientifically sound, the English satisfactory, the conclusions comprehensible.

However, there are some points of criticism:

Although mentioned in the discussion section that there are different subtypes of ACC as well mucoepidermoid Carcinoma, they didn't discriminate between the three different subgroups of ACC(cribriform, tubular, solid). It would be of interest whether there are differences in the FDG uptake (SUV) in the three subtypes.

It would also be of interest whether the additional PET-CT (or in the future PET-MRI) would be cost-effective, since despite best treatments of local, regional and distant disease, survival and quality of life seem not the be much affected by earlier diagnosis. I would expect a comment on that.

Last but not least, the relevant literature is included, however seems almost too extensive.

Line 6. With the risk of incomplete resection and (late) local recurrences (2-4). Here I would add also (late) distant recurrences.

**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.

Unable to assess
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.

I am able to assess the statistics

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

Acceptable

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