Reviewer's report

Title: Cervical lymph node metastases from thyroid cancer: does thyroglobulin and calcitonin measurement in fine needle aspirates improve the diagnostic value of cytology?

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Reviewer: Frederik Verburg

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Baldini et al. provide a report on their experience with the use of Tg and Tg-mRNA measurement in addition to cytology in the analysis of suspicious cervical lymph nodes. The aim of the manuscript is clear. The methodology used is clearly described and appropriate for the aim of the study. The manuscript is easily legible. I have following remarks to make:

1. I am not sure what happened with the data from the patients with extracervical lymph nodes - they are mentioned in the materials and methods but no longer turn up in the results. I think it would be important to know whether these were correctly identified on cytology or not - certainly they will not have been found on Tg-p or Tg-m analysis! In any case they should be included in an analysis of sensitivity, specificity, NPV, PPV, accuracy.

2. As I understand it the analysis here is a per-lesion analysis. As often one positive lymph node metastasis is accompanied by multiple occult ones, providing the indication for at least unilateral neck dissection, it would be interesting to have an additional per-patient analysis of sensitivity, specificity, NPV, PPV, accuracy as well.

3. The discussion appears too short. The weaknesses and potential methodological problems of the present study are not discussed. Part of the conclusion (namely the sentences concerning the additional value of Tg-p and Tg-m analyses) appear to be more suitable for the discussion than for the conclusion. Furthermore, the authors should be somewhat more explicit in their recommendations: do they recommend always performing Tg-p and Tg-m analyses together in undetermined cytology cases or would they mostly recommend performing one of these?

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