**Reviewer’s report**

**Title:** Lesion Based Diagnostic performance of Dual Phase 99mTc-MIBI SPECT/CT imaging and ultrasonography in patients with secondary hyperparathyroidism

**Version:** 1  **Date:** 19 Jul 2017

**Reviewer:** Jianping Dai

**Reviewer's report:**

In patients with secondary hyperparathyroidism, an accurate localization of all hyperfunctioning parathyroid glands is critical before surgery. In patients with primary hyperparathyroidism, a minimally invasive surgery focused on the hyperfunctioning parathyroid gland is commonly performed. In contrast, secondary hyperparathyroidism, in a dialyzed patient or persisting after renal transplantation, requires the surgeon to localize preoperatively all parathyroid glands, to remove most of the hyperplastic parathyroid tissue. Preoperative ultrasonography (US) and scintigraphy using 99mTc-MIBI are documented imaging modalities in both situations, as they bring complementary anatomical and functional information.

This study showed that the diagnostic performance of 99mTc-MIBI SPECT/CT and ultrasonography in patients with secondary hyperparathyroidism (SHPT), and it explored the factors that affect the diagnostic performance. It is a good study for comparing diagnostic performance of the two important tools. However, as far as I am concerned, there are so many errors that cannot be accepted.

Page 4 line 38,39 . Page 5 line 22, 23,51,57. Page 6 line 50,51 Page 7 line 17, 18. Page 9 line 45 and 46. All of these sentences were not well elucidated, in my opinion, rewrite. Thank you.

Page 6 line 1,2 I cannot understand the purpose of both sentences wrote here.

Page 8 line 40,41 line 60. Please put these sentences into the Method section. And Could you please show us the criteria of the uptake strength grade.

Page 10, line 32 and 33 several factors refer to?

No tables and no figures in the last of this manuscript.

**Are the methods appropriate and well described?**

If not, please specify what is required in your comments to the authors.

No
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.

I am able to assess the statistics

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

Not suitable for publication unless extensively edited

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