Reviewer's report

Title: Promising treatment outcomes of intensity-modulated radiation therapy for nasopharyngeal carcinoma patients with N0 disease according to the seventh edition of the AJCC staging system

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Reviewer: Frank Wong

Reviewer's report:

I would like to congratulate the authors for writing up a comprehensive article on IMRT for patients with nasopharyngeal carcinoma. The method and discussion are sound and reflect the current status.

I would like to raise some questions to the authors (Minor essential revisions).

1. The 5-year survival rates of the whole group, N0 disease, and T4N0 = 83.4%, 93.8%, and 76.9%, respectively, which are much less than their corresponding LRFS, NRFS, and DMFS. It seems that the cause of death of quite a number of patients (esp T4N0) are not related to NPC. Could the authors further explain this – e.g. any treatment related death, death due to other co-morbidities? It may be difficult to justify the conclusion of poor prognostic factor of T4 for OS, if the major cause of death of T4N0 is not related to NPC.

2. How did the author make a diagnosis of RLN involvement – based on MRI alone? 130 (25.4%) patients also underwent a positron emission tomography-computed tomography (PET-CT) scan. Would the PET findings affect the diagnosis of RLN?

3. 43.6% N0 disease patients only received prophylactic irradiation to the upper neck lymph drainage region. Could the authors tell us how they choose these 43.6% patients for limited neck field (and why they decide to treat full neck for the rest 56.4%)?

4. Page 9 Treatment outcomes. The authors mentioned a total of 38 patients (7.5%) developed disease recurrence, but 74 patients (i.e. >38 patients) developed distant metastases. Do the authors mean that distant metastasis doesn’t belong to disease recurrence?

5. For patients with N0, two patients had T4N0 disease developed local recurrence. Are these in-field (NP) failures or marginal (intra-cranial) failures? Note that T4 disease may also be associated with large GTV (in-field failure), in addition to close proximity to critical structures (marginal failure). For the latter, the authors correctly pointed out in the Discussion part that the strategy for the latter could be IGRT, but the strategy for the former could be dose escalation, e.g. SRT boost. The authors could further elaborate these in their Discussion part.
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