Reviewer's report

Title: Prognostic factors for disease-specific survival in 108 patients with Hurthle cell thyroid carcinoma: a single-institution experience

Version: 1  Date: 8 July 2014

Reviewer: Peter Dziegielewski

Reviewer's report:

Major Compulsory Revisions:

1. Needs English language editing - spelling, grammar and sentence structure mainly.

BACKGROUND:

2. "More than 70% of our patients..." - this sentence does not belong in the introduction, but rather the results.

3. The aim needs to be more specific. For example "The aim of the study was to determine which factors are predictive of loco-regional recurrence and disease-specific survival in HCTC.

MATERIALS AND METHODS

4. Line 73: Observation time should be "follow-up time"

5. Line 90&91: This sentence is awkwardly worded. I would suggest: Patients were categorized into two groups: less 45 years of age and 45 years of age and older.

6. Line 103-104: The criteria for disease free survival are reasonable. Please include any reference to support this or state how these criteria were determined.

7. HCTC can often present with locally advanced disease invading nearby structures in the neck. Did the authors look at locally advanced disease (i.e. invading airway or esophagus) as a variable in the analysis? Also, how were such patients treated and what was their survival?

8. Lines 114-117: please clarify if all patients were treated at the same center, how many had inadequate surgery + completion surgery?

9. Did any patients require total laryngectomy or more radical procedures?

10. Table 1: Please define all abbreviations

11. Please clarify what type of neck dissections patients received and which levels of the neck were addressed.
12. Did all patients have neck imaging pre-op? Or just thyroid imaging?

13. Table 1: Please separate N1a vs N1b neck disease

14. Table 1: What is mean by disease present permanently? Please clarify.

15. Line 149: Cause specific survival should be disease specific survival (keep terms consistent throughout the paper)

16. Please clarify how survival was defined. i.e. what was day 1? Day of surgery or first day of EBRT?

Also please clearly define overall, disease specific, and disease-free survival.

17. Line 157-159: Please include statistical software used, if Kaplan-Meier Analysis was used, how survival curves were compared, what p value was considered significant and why this was chosen.

RESULTS:

18. Line 163: The gender information is in table I and does not need to be repeated.

19. Delete the mean values and keep median. No need to have both.

20. Line 167: which levels of the neck had mets?

21. Line 177-179: This sentence is confusing an unnecessary - delete please.

22. Line 180-181: Why does your statistical significance chance from p<0.05 to 0.1? Please clarify.


24. Line 185-191: The wording using "risk" is confusing. Please re-word. Possibly saying "2.97 times as likely" would be easier to understand.

25. Table 1 and 2 repeat the same information. Please combine into 1 Table.

DISCUSSION:

26. A paragraph discussing the limitations of the study is needed.

27. Line 225-227: "It is difficult to find patients..." this sentence is not needed. Please delete.

28. Line 229-230: The difference in treatment type is important when comparing this study to the SEER data base. Please expand on this sentence and why treatment modality (especially adjuvant treatment) is particularly important in the survival of HCTC.

29. Line 232-246: This is a long summary of all of the factors previously shown to
be predictors of survival in HCTC. Please summarize this list and discuss how your paper differs from previous work. Emphasize that previous papers had low numbers and that you paper provides more robust data.

30. Line 248: Please clarify how "residual tumor after surgery" was determined. This should be defined in the Methods section.

31. Line 249-257: This can be shortened to 2-3 sentences describing the importance of the 45 year age cut off .

32. Line 258-259: This wording is confusing. Please clarify.

33. Line 260: "This relative risk..." Relative risk of what? Please clarify

34. Line 267-273: This is a summary of previous survival studies and does not discuss your results. Please change this paragraph to compare your survival results AND WHY they may differ from other studies.

35. Line 274-286: This is a summary of previous factors predictive of survival. This does not add new information. Please change this paragraph to discuss the importance of the factors you determined to predict survival, why these are important and how they may differ from current knowledge.

36. Line 287-293: This just repeats the results. Please discuss your findings in more detail. See #35.

37. Line 297-310: The is a summary of the treatment of other papers. Please change this paragraph to discuss how treatment impacts survival, what your study showed and what the optimal treatment may be for HCTC based on available data.

38. Line 311-314: Delete this as you have a separate conclusion section

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

None.