Peer Review File

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Reviewer A

1. Comment. *First of all, my major concern regarding this study is the unclear focus of this study, the mortality and its associated risk factors, the predictive accuracy of the mortality prediction model, or both? In somewhere of this paper, the authors described risk factors and in elsewhere the authors described prediction model. The authors must decide which focus they intended to report and revise the paper accordingly and substantially.*

Response: According to your question, the reply is as follows. First of all, the focus of our paper includes retrospective study on the mortality of laryngeal cancer patients, and we also want to show that the competitive risk model can better predict the mortality. Secondly, we added the advantages of our study over the previous retrospective study of laryngeal cancer mortality in the text, both in terms of data and models (see Page 1-2, line 28-36; Page 11-12, line 318-328).

2. Comment. *Second, the title is not accurate and not clear. The authors need to specify "short-term" and indicate the focus of this study, risk factors associated with mortality. The clinical research design is also warranted in the title such as a retrospective cohort study.*

Response: According to your comments, we have revised the title here, and the title is updated to Predicting specific mortality from laryngeal cancer based on competing risk model: a retrospective analysis based on the SEER database.

3. Comment. *Third, the abstract needs some revisions. The background did not describe the clinical needs for and what the knowledge gap is on this research focus. The methods need to describe the inclusion of subjects, the assessment of potential factors, follow up procedures, and data collection of the "short-term" mortality, which needs to be clearly defined. The results need to report the clinical characteristics of the study sample and the mortality in the whole sample. The conclusion should not repeat the main findings, and please have detailed comments for the clinical implication of the findings.*

Response: According to your revision comments, we have added the defects of the current retrospective study on the mortality of laryngeal cancer patients in the abstract and background, added our exclusion criteria in the methodology, and revised the results and conclusions (see Page 1-2, line 28-55; Page 3, line 62-64; Page 5, line 133-139; Page 6, line 160-168; Page 7, line 180-182; Page 12, line 348-352).

4. Comment. *Fourth, the introduction of the main text needs to review what has been known on the mortality rate and its associated factors in laryngeal cancer and have comments on the limitations and knowledge gaps of these prior studies. No consideration of competing risks should only one of the limitations of prior studies. Please also define what the short-term mortality is.*

Response: According to your revision comments, the limitations of previous retrospective studies have been added to the background, and the advantages of our retrospective study over previous retrospective studies are discussed in the following body. It also increases the advantages of our competitive risk model compared with other models (see Page 4, line 97-102).

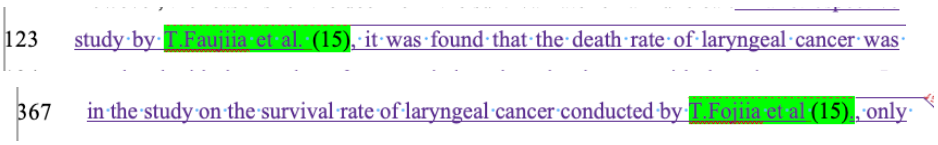
5. Comment. *Fifth, in the methodology of the main text, the authors need to indicate the clinical research design, follow up procedures, and measurement of short-term mortality. In statistics, please first test whether the current data fit competitive risk model well. If the authors focused on the predictive accuracy of the model, please split the whole sample to generate training and validation samples, and provide the threshold AUC values for a good predictive model.*

Response: According to your suggestions, we have modified the methodology in the text to explain our research methods in more detail (see Page 5, line 133-139; Page 6, line 160-168).

Reviewer B

1. References/Citations

a) Please check if the author's name matches with the reference.



15. Fujii T, Miyabe J, Yoshii T, et al. Metabolic tumor volume of metastatic lymph nodes and survival after total laryngectomy in laryngeal and hypopharyngeal cancer. Oral Oncol 2019;93:107-13.

Response: Thank you so much for your careful check, and we have modified our text based on the comments (see Page 4, line 89; Page 11, line 311).

b) Please add the two studies to the reference list, and cite them in the sentence.

*Please note that it should be cited in numerically (in round brackets) and consecutively in the order of appearance.

319 non-keratinized SCC, and less common SCC types. Kasperbauer et al., suggested that
320 verrucous SCC might be associated with HPV, and Crissman et al., suggested that papillary

Response: Thanks a lot for your comment. These two studies have been added to the reference list as requested.

c) Please double-check if citations should be added as you mentioned "studies".

*Please note that the references should be cited in order of their appearance in the text. If the studies are not included in the reference list, please also update the current version.

261 highest risk of exposure (HR =1.86, CI: 1.28–2.7). As many previous studies have reported,
262 as age increases, the risk of exposure increases. Compared to non-keratinized SCC (HR
263 =0.92, CI: 0.4–2.16), keratinized SCC (HR=1.8, CI: 0.98–3.3) had a higher risk of
264 exposure in terms of laryngeal cancer histological types. Patients with a primary tumor site

Response: Thanks a lot for your comment. In this case, we have removed this content. (see Page 7, line 200).

d) Please double-check if more studies should be cited as you mentioned "studies". OR use "study" rather than "studies".

336 dysphagia. Previous studies have reported that the recurrence rate of glottic type in
337 laryngeal cancer after 2 years is 4%, the Supraglottic recurrence rate is 16%, and the
338 subglottic recurrence rate is 11% (34). The first symptoms from the above and the chance
339 of recurrence

Response: Thank you very much for your comment, we have double checked this part and there is no need to add references here. The text has been modified (see Page10, line 273).