Author's response to reviews

Title: Epidemiology and Cost Analysis for Patients with Oral Cancer in a University Hospital in China

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Author's response to reviews: see over
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Ms. Roxane Rajabi, Editor
The BioMed Central Editorial Team

Dear Ms. Roxane Rajabi:

Thank you very much for your email of February 3, 2010, with regard to my manuscript (MS: 2143735918304573) together with the comments from the reviewers.

According to the comments, we have revised the relevant part in the original manuscript. We also responded point by point to each reviewer’s comments as listed below, along with a clear indication of the location of the revision. We hope that the revised manuscript is acceptable for publication.

Thank you very much for continued attention.

Cordially,

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Repairs to editor:

1. **Ethics**
   Page 3, line 41, Materials and Methods/Patient: add “This study was approved by the Ethics Committee of the School of Stomatology of the Fourth Military Medical University.”

2. **Competing interests**
   Page 9, line 40: add “Competing interests: The authors declare that they have no competing interests”

3. **Author changed**
   We add author “Qingbo Zhao” for her statistical work at the revised version of our manuscript.
To reviewer Karl Kingsley

Minor essential revisions

1. Page 1, Abstract/Conclusion: change “Male” to “gender”
   R: page2, line 22, Abstract/Conclusion: change “Male” to “Gender”

2. Page 1, Abstract/Conclusion: change “factor” to “factors” and change “clinic” to “clinical”
   R: page2, line 22: Abstract/Conclusion: change “factor” to “factors”
   R: page 2, line 23: change “clinic” to “clinical”

3. Page 1, Abstract/Conclusion: change “economical” to “economic” and replace “oral cancer” with “patient medical cost”
   R: page2, line 23: Abstract/Conclusion: change “economical” to “economic”
   R: page2, line 24: change “oral cancer” to “patient medical cost”

4. Page 2, first line: delete “elder”
   R: page3, line 7, delete “elder”

5. Page 2, line 16: replace “up to date” with “To date” and replace “a paucity of study has” with “few studies have”
   R: Page 3, line 22: change “Up to date, a paucity of study has” to “To date, few studies have”

6. Page 2, Line 21: delete “not only”
   R: Page 3, line 27: delete “not only”

7. Page 2, Line 22: change “but also can help” to “and also help”
   R: Page 3, line 28: change “but also can help” to “and also help”

8. Page 3, Line 1: delete “for us”
   R: Page 4, line 9 delete “for us”

9. Page 3, Line 3: change to “SPSS 17.0 was employed”
   R: Page 4, line 17: change “We employed SPSS 17.0” to “Statistical significance was set at 0.05 and SPSS 17.0 was employed”

10. Page 3, Line 3: change “we reported results” to “results were reported with”
    R: We deleted the original statistical paragraph and have rewritten the whole statistical method with more details.

11. Page 3, Results/Epidemiology, Paragraph 1: add “new” between “456” and “patients”
    R: Page 4, line 23: change “456 patients” to “456 new patients”

12. Page 3, Results/Epidemiology, Paragraph 1: replace “who were new to this hospital and” with “that”
    R: Page 4, line 24: replace “who were new to this hospital and” with “that”

13. Page 3, Results/Epidemiology, Paragraph 1: replace “historically” with “previously”
    R: Page 4, line 24: replace “historically” with “previously”

14. Page 3, Results/Epidemiology, Paragraph 1: change to “diagnosed with oral cancer”
    R: Page 4, line 24: replace “diagnosed oral cancer” to “diagnosed with oral cancer”

15. Page 3, Results/Epidemiology, Paragraph 1, Sentence 3: replace “rare samples” with “rarity”
    R: Page 4, line 27: replace “rare samples” with “rarity”
16. Page 3, Results/Epidemiology, Paragraph 3, Sentence 1: delete “is known that” and “we examined"
R: Page 5, line 1: delete “is known that” and “we examined”
17. Page 3, Results/Epidemiology, Paragraph 3, Sentence 1: add “was examined” following “distribution”
R: Page 5, line 2: add “was examined” following “distribution”
18. Page 3, Results/Epidemiology, Paragraph 3, Sentence 2: replace “over” with “compared with”
R: Page 4, line 4: replace “over” with “compared with”
19. Page 4, Cost Analysis, Gender…..: combine paragraphs 1, 2 and 3
R: Page 5, line 36-42: combined paragraphs 1, 2 and 3
20. Page 4, Cost Analysis, Gender/Medicare/..: delete “as well” and start with “No significant”
R: Page 5, line 38: delete “as well,”
21. Page 4, Cost Analysis, Gender/Medicare…. change to the following
Smoking habit is a crucial factor in the development and prognosis in oral cancer. Therefore, this study sought to ascertain whether or not smoking habit could affect the direct cost for this disease. Table 4 and Figure 4D demonstrate that the MHD and CPP of smokers were significantly higher than those of non-smokers (p<0.05). Considering the higher proportion of smokers in the male than female group, the MHD and CPP of patients in male non-smoker samples were compared with the female group.
R: Page 5, line 43 – page 6, line 4: changed as following. (Because all of the tables have been changed, so the table number changed too.)
“Smoking habit is a crucial factor in the development and prognosis in oral cancer. Therefore, this study sought to ascertain whether or not smoking habit could affect the direct cost for this disease. Table 6 and Figure 4D demonstrate that the MHD and CPP of smokers were significantly higher than those of non-smokers (p=0.018). Considering the higher proportion of smokers in the male than female group, the MHD and CPP of patients in male non-smoker samples were compared with the female group.”
22. Page 4, last paragraph: change the first sentence to: “The total cost for oral cancer treatment is comprised of three parts:…..”
R: Page 6, line 6: change the first sentence to “The total cost for oral cancer treatment is comprised of three parts…”
23. Page 4, last paragraph, second sentence: delete “cost” following “treatment”
R: Page 6, line 7: delete “cost” following “treatment”
24. Page 4, last paragraph, fourth sentence: change “diagnose” to “diagnosis”
R: Page 6, line 9: delete change “diagnose” to “diagnosis”
25. Page 5, Stage and Pathology, Paragraph 2, First sentence: change “diagnose” to “diagnosis”
R: Page 6, line 24: change “diagnose” to “diagnosis”
26. Page 5, Stage and Pathology, Paragraph 3, First sentence: change “diagnose” to “diagnosis”
R: Page 6, line 28: change “diagnose” to “diagnosis”
27. Page 5, Stage and Pathology, Paragraph 3, First sentence: change “difference” to “differences”
   R: Page 6, line 29: change “difference” to “differences”
28. Page 5, Discussion, Paragraph 1: Fifth sentence: change “lead” to “correlates” and “smoker” to “smoking”
   R: Page 6, line 44: change “lead” to “correlates”, change “smoker” to “smoking”
29. Page 5, Discussion, Paragraph 2: There are two periods following the first sentence. Delete one, please.
   R: Page 7, line 5: delete “.” after the first sentence.
30. Page 6, Paragraph 2, Fourth sentence: change “the older patients were….” To “confirming the association with older patients and the higher incidence of SCC.”
   R: Page 7, line 26: change “the older patients were, and the higher the incidence of SCC was” to “confirming the association with older patients and the higher incidence of SCC”
31. Page 6, Paragraph 2, Sixth sentence: change “on the contrary” with “however”
   R: Page 7, line 29: change “on the contrary” to “however”
32. Page 6, Paragraph 2, Last sentence: change to “middle aged patients, and the reason for this remains to be explored in future studies”
   R: Page 7, line 32: delete last sentence, change last sentence to “It seems that adenocarcinoma mainly exists in middle age patients, and the reason for this remains to be explored in future studies.”
33. Page 6, Paragraph 3, First sentence: delete “what is worth noting is that” and begin with “The median”
   R: Page 7, line 33: delete “what is worth noting is that” to “The mean…” (We used mean and standard deviation instead of median in the revised edition)
34. Page 6, Paragraph 3, Second sentence: replace “can” with “may”
   R: Page 7, line 34: change “can” to “may”
35. Page 6, Paragraph 3, Third sentence: change to “For example, a recent study”
   R: Page 7, line 34: change “A latest study …” to “For example, a recent study…”
36. Page 6, Paragraph 3, Fourth sentence” change beginning to “The results of this study support this evidence, but the high oral cancer risk at earlier ages among rural populations is probably related….”
   R: Page 7, line 37: change “The result of our study supports this claim, but our discussion goes further that the high risk of oral cancer at earlier age in rural population is probably be related” to “The results of this study support this evidence, but the high oral cancer risk at earlier ages among rural populations is probably related”
37. Page 6, Paragraph 3, Sentence five: add “clean” before “water” and change “could hardly keep” with “may experience difficulty with”
   R: Page 7, line 40: add “clean” before “water”, change “could hardly keep” with “may experience difficulty with”
38. Page 6, Paragraph 3, Sentence seven: Delete “What is more” and begin with “Lack of knowledge…”
   R: Page 7, line 42: delete “What is more” and the sentence begin with “lack of knowledge”
39. Page 6, Paragraph 3, Sentence 8: delete “not only” and change the end of the sentence to read “and some doctors do not pay enough attention”
R: Page 7, line 44: delete “not only”, change the sentence to “Although oral cancer can easily be found by patients through a personal oral examination, many patients ignore it and some doctors do not pay enough attention”

40. Page 6, Paragraph 3, last sentence: begin with “Based upon this information, it is necessary…”
R: Page 8, line 2, last sentence: begin with “Based upon this information, it is …”

41. Page 6, paragraph 3, last sentence: ends with two periods. Delete one, please.
R: Page 8, line 3: last sentence, delete last “.”

42. Page 6, Economic characteristics and related factors, third sentence: change “their study” to “these studies” since you referenced two in the previous sentence.
R: Page 8, line 11: change “their study” to “these studies”

43. Page 6, Economic characteristics and related factors, last sentence: change to “Findings from this study support and further enhance previous findings on the cost of treating oral cancer”
R: Page 8, line 14: last sentence, change the sentence to “Findings from this study support and further enhance previous findings on the cost of treating oral cancer.”

44. Page 7, First paragraph, third sentence: delete “In our study, considering that” and being with “The cost differences…” and change “diagnose” to “diagnosis” and end the sentence there. Delete “We observed that” and begin with “There was no difference…”
R: Page 8, line 19: change the third sentence to “The cost differences mainly existed in treatment and hospitalization but not in diagnosis.” and the next sentence begin with “There was no difference…”

45. Page 7, Second paragraph, first sentence: Delete “We also observed that” and begin with “The treatment….”
R: Page 8, line 24: delete “We also observed that” and begin with “The treatment…”

46. Page 7, Second paragraph, Second sentence: change to “This may have two explanations”.
R: Page 8, line 25: change “This can be explained with two reasons” to “This may have two explanations”

47. Page 7, Second paragraph, third sentence: change to “One explanation is that female patients were diagnosed more frequently in early clinical stages than male patients”. The findings of two…..supports this observation that the average cost….”
R: Page 8, line 25: delete “One reason is …” and change the sentence to “One explanation is that female patients were diagnosed more frequently in early clinical stages than male patients”. The next sentence was changed to “The findings of two studies respectively conducted in Greece and the United States support this observation that…”
R: Page 8, line 34: change the first sentence to “The other explanation ….”

48. Page 7, Second paragraph, fourth sentence: change to “In the current study”
R: Page 8, line 29: delete “our” and change to “In the current study”

49. Page 7, Second paragraph, last sentence: change “would” to may in both instances
R: Page 8, line 32: last sentence, change “would” to “may” in the sentence.

50. Page 7, last paragraph: there are two periods following “urban”, please delete one of these.
R: Page 9, line 2: delete “.” after “urban”

51. Page 8, first sentence: delete “not probed into” and replace with “not explored”
Page 8, first sentence: delete “the authors could still draw” and change to “the following conclusions may be drawn”
R: Page 9, line 21: change “probed into” to “explored”.
R: Page 9, line 22: change “the authors could still draw the following conclusions” to “the following conclusion may be drawn”

52. Page 8, last sentence: change “besides” to “In addition” and change “lesion” to “lesions”
R: Page 9, line 36: change “besides” to “In addition” and change “lesion” to “lesions”

To reviewer Rejane Figueiredo
Discretionary Revisions

1) Table 4 – Why the comparisons are about smoker’s male and female?
R: We found the mean CPP and MHD of patients with smoking habit were significantly higher than patient without the habit. Because almost all of the smokers were male in our sample, so we want to know if there were difference between male non-smoker and female. We also used multiple regression analysis to find the independent factor associated with the cost of OC patient in table 10. (In the reversed version, the original tables were changed. “table 4” was replaced with “table 6”)

Minor Essencial Revisions

1) The authors must indicate which statistical tests are used in all manuscript;
R: We added a paragraph to describe our statistical method with more detail at the end of the material and method (page 4, line 10). We redesigned all tables and indicated the statistical tests (methods) in each table.

2) In the table 1, the authors must use the percents for all results and they must explain that the sum in this table is about smokers;
R: We redesigned table 1 and used the percents for all results. More details about smoking patients were replaced in table 2, a new designed table in the revised version.

Some changes were made as following:
(1) Page 4, line 31-32: “29.82% (136/456) patient had smoking habit while 132 were male and 4 were female (table 1).” replaced the original “Table1 also shows the distribution of smoking patients (29.82%,136/456) in different pathology”.
(2) Page 5, line 6: add “table 2 showed
(3) Page 5, line 7-8: add “and the proportion of male smoker with SCC was evidently higher than that with adenocarcinoma.”

3) In Figure C, the author must include the percents;
R: We modified Fig1C and indicated percents in it.

4) In page 3, the author said that “The proportion of smokers in late stage (III and IV) was evidently higher than that at stages I and II”, but the author couldn’t do this affirmation without a statistical test;
R: We designed a chi-square test to support the result (table 2) in the revised version. There were 136 smokers in the sample and only 4 were female. So the female patients were not calculated in the test for their rarity of smokers.

5) The authors must include the tests results with absolute frequency (n) and percents in the same table. This can enable and make easier the understanding;
R: We arranged the table and used frequency (n) and percents (%) in the same table (table 2).

6) Why the authors used only median? Why mean and standard deviation are not used?
R: We changed the median to mean and standard deviation in whole text and tables.

Some changes were made as following:
(1) Page 5, line 9: replace “media” with “mean” and replace “56” to “54.63±16.73”
(2) Page 5, line 9: delete “Of whom, the median age of male patients was 57 and that of female patients was 56.”
(3) Page 5, line 10: add “about mean age”
(4) Page 5, line 12: replace “media” with “mean” and change “51 and 57” to “48.56±16.79 and 55.94±16.54”
(5) Page 5, line 13,14: delete the last two sentences of the paragraph and add “The mean age of early and late clinical stages showed no significant difference”

(6) Page 7, line 33: change “media” to “mean”

(7) The mean and standard deviation were used in Table 3, Table 6, Table 7, Table 8 and Table 9.

7) In page 3 (Conclusion), the author mentioned “risk factor”, but any analysis was realized to allow this conclusion. The authors must use any multivariate analysis, for example, multiple regression.

R: We designed logistic analysis for the “risk factor” for SCC (table 5) and multiple regression for “risk factor” for the costs of OC patients (table 10) in the revised version. Two new paragraphs were added in results to stage them.

Some changes were made as following:

(1) Page 5, line 22-26: add a new paragraph for logistic regression result for the risk factors associated with SCC.

(2) Page 6, line 32-36: add a new paragraph for multiple regression result for the risk factors associated with the cost of OC patients.

(3) Page 8, line 4-7: add a new paragraph for logistic regression discussion for the risk factors associated with SCC.

(4) Page 9, line 14-18: add a new paragraph for multiple regression discussion for the risk factors associated with the cost of OC patients.

Major Essential Revisions

1) In manuscript the authors didn’t cite the statistical tests they used. The authors must include the test and what suppositions are done.

R: We added a new paragraph about the detailed statistical tests we used at the end of the material and method. We redesigned all tables and explained in the note of tables.

The following changes were made:

(1) Page 4, line 10-19: a new paragraph about statistical analysis was added

(2) We used more statistical methods to calculate our data, including logistical regression, multiple regression and ANOVA and chi-square test.

(3) We redesigned all tables and described the statistical method in them.

2) The tables was not clear. There are many numbers with few explanations. The tables are not self-explanatory, then the interpretation and understanding are so difficult.

R: We redesigned the entire tables and some explanations were added in tables. We wish the new table could be understood easier and clearer.