Author’s response to reviews

Title: Clinical manifestations and multi-slice computed tomography characteristics of solid pseudopapillary neoplasms of the pancreas between males and females

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Author’s response to reviews:

Dear Editor,

Thank you for carefully reviewing our manuscript previously titled “Clinical manifestations and multi-slice computed tomography characteristics of solid pseudopapillary neoplasms of the pancreas between males and females” for possible publication in the BMC Medical Imaging. We are grateful to you and your reviewers for their constructive critique. We have revised the manuscript, highlighting our revisions in red, and have attached point-by-point responses detailing how we have revised the manuscript in response to the reviewers' comments below.

Thank you for your consideration and further review of our manuscript. Please do not hesitate to contact us with any further questions or recommendations.

Yours Sincerely,

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Reviewer Comments:

Reviewer #1: Major issues:

#1 Poor image quality

Figure 1 to 4 showed representative images of SPNP. However, the quality of the images is not suitable for publication. High-quality images should be made from the original DICOM images.

1) The resolution is not high enough.

2) Crop the images to emphasize the key points of the images.

3) Adjust the display conditions of the images: "window width (WW)" and "window level (WL)". The most images tended to be wide WW and high WW.

Response: We re-select the original DICOM image of related cases, and save in bmp format to ensure that the resolution is sufficient, and then crop the images to emphasize the key points of the images and also adjust the display conditions of the images. The new images are as follows:

Figure 1:

Figure 2:

Figure 3:

#2 Representative images of three types of SPNP

As the authors described in Table 2, SPNP can be divided into three types: solid, solid and cystic, and cystic, depending on dominant components. If possible, please add representative images of each subtype.

Response: As the Figure 1-3 contains solid, solid and cystic types, it needs to add the cystic type as follow:

Figure 4:

We add the "Completely cystic lesions exist only in three female patients (Figure 4 A-D). " in line 191-192, page 8 and add the figure legends in line 432-440, page 18.

Figure 4. A 12-year-old female patient with vomiting and upper abdominal pain
Plain CT scanning + enhanced scanning showed pseudo-papillary neoplasm of pancreas (SPNP). (A) Plain scanning showed a huge oval cystic mass at the pancreatic head, and the boundaries were clear. Small patchy bleeding focuses were found in the mass (white arrow). (B) Low enhancement of the lesion was found in the arterial phase, which was lower than the normal pancreas. (C) A little enhancement of the cystic components was found in the portal venous phase, which showed “floating cloud” sign. (D) Reconstructed coronal image showed compressing and circuitry of the superior mesenteric vein (white arrow).

Minor issues:

#1 Abstract on online submission system
Before Methods, Results and Conclusion, insert line feeds.
Response: We insert line feeds in line 29, 36, 46, page 2 before Methods, Results and Conclusion.

Abstract, in conclusion, ...from that of female patients. &gt; from those of female patients.
Response: We change "that" into "those" in line 47, page 2

p3L70, ...males and females. &lt; Add references.
Response: We add the reference [3]

Table 2, maximum tumor diameter: What do these values indicate, (2.0,6.4) and (4.6,14.6)? Range?
Response: It means the range of Maximum diameter for SPNP lesions, and we add the [cm(cm, cm)] after Maximum tumor diameter in Table 2.
Reviewer 2:
- Add references to the introduction

Response:
We add references in line 68-69, page 3:

It has been reported that tumor stroma and gene mutations exist gender difference[14].


- Please change the term "calcification level" as it is confusing given that calcification were just subjectively evaluated
Response: We change the "calcification level" into "calcification rate" in line 41, page 2 and line 165, page 7.

- Add a 2x2 contingency table to describe diagnostic accuracy results.
Response: We add the 2x2 contingency table as follow:

<table>
<thead>
<tr>
<th>Preoperative Diagnosis</th>
<th>Diagnostic Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male (n=7) 4</td>
<td>57.1%</td>
</tr>
<tr>
<td>Female(n=22) 17</td>
<td>77.3%</td>
</tr>
</tbody>
</table>

And we add "As shown in Table 3" in line 194-195, page 8.

- Images should be zoomed to make the findings described in the captions more evident
Response: We have zoomed the image so that the findings become more evident, which have showed above in Figure 1-4 (page 2-4).

- The discussion should be modified to describe more thoroughly the potential clinical implication, rather than repeat the results
Response:
We add "These observations indicated that men seem to have a later occurrence of SPNP and suggested that there is a difference in the developmental stage between men and women." in line 232-234, page 10.
We add "Zou et al. [14] found that collagen tend to be the main component of tumor stroma in SPNP males, while hyaluronan (HA) composed a considerable proportion in females, which was consistent with the conventional characteristics of SPNP[16]. McCarthy et al. [17] reported that HA in stroma could promote tumor cell proliferation, which may explain the growth pattern and the degenerative changes in females in our study."

We add "Researchers has reported that a much stronger expression of androgen receptor (AR) was found in males [14], and he also found mutations of CTNNB1 exon 3 was observed in all 30 cases, which distributed at codon 32, 33 and 37 in both genders and 34, 31 and 62 in females, and this might be a clue to the underlying mechanism of the gender difference."

Additional modification:

We add the "First" in line 287, page 12 and "Second, there is no genetic and molecular level of auxiliary experiments, and so it is not possible to clarify the causal relationship between genetic mutations and MSCT characteristics. Therefore, it is necessary to expand the statistical samples, and improve the study on gene and molecular level." in line 289-293, page 12.

Reference label modification:

Change [14] into [15], line 71, page 3
Change [1, 15] into [1, 18], line 246, page 10
Change [16] into [19], line 255, page 11
Change [17, 18] into [20, 21], line 260, page 11
Change [5, 18, 19] into [5, 21, 22], line 271, page 11
Change [20] into [23], line 284, page 12
Change 14 into 15, line 377, page 16
Change 15 into 18, line 386, page 16
Change 16 into 19, line 389, page 16
Change 17 into 20, line 392, page 16
Change 18 into 21, line 394, page 16
Change 19 into 22, line 396, page 16
Change 20 into 23, line 400, page 16
Add reference:


In line 374-376, page 15-16.


In line 380-385, page 16.