OPEN PEER REVIEW

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As a new feature for progressing towards transparency, we decided to open a new window for all of our editors as well as authors titled "**Open Peer Review**". We hope by this new facility, our reviewers will be more motivated and authors will be more satisfied with the review process. We believe that publishing our peer review reports could make a transparent and clear environment for all our efforts within a journal, but not all reviewers tend to publish their comments.

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- More transparency, constructiveness and tactful comments of the peer review process: leads to an increase in the quality of reviews
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- Authors' satisfactions from the review process: Increases honesty between authors and reviewers
- Education of both authors and new students
- Prevents reviewers from following their individual agendas and leading to the detection of reviewers' conflicts of interests

You can find out more at:
https://sites.kowsarpub.com/kowsar/knowledgebase/category/tree.html#opr.html

Iranian Journal of Radiology
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Peer Review Report for "CT-Guided Percutaneous Core Needle Biopsy for Lung Lesions: A 14-Year Review of Needle Angle and Lesion Depth"

Author(s): Jee Hyeon Lee, In Jae Lee

Review Timeline:

Submit Date: 10 Jul 2019
Revised Date: 17 Mar 2020
Accepted Date: 21 Mar 2020

Revision (0)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Reviewer | Revision (0) — 27 Jul 2019

Dear AE,
The subject of the study is interesting and also has a sufficient sample size, but the study was not properly analyzed statistically and the method of presenting the results also needs to be corrected. So exactly what is needed:
1. Introduction: It is very brief and must be explained more elaborately.
2. Statistical analysis: This study's statistical analysis and data presentation is incomplete and must be revised. Please, refer to the paper entitled "Predictors of Technical Success and Rate of Complications of Image-Guided Percutaneous Transthoracic Lung Needle Biopsy of Pulmonary Tumors" that published in PLOS ONE journal in 2015.
3. Manuscript file along with detailed comments also annexed.
Thanks.

Ramin Pourghorban: Associate Editor | Revision (0) — 4 Aug 2019

Dear EIC,
The manuscript can be interesting to the readers of IRJ. The authors may kindly answer the following questions:
- The authors mentioned an automated biopsy device being used. Was it a semi-automated

needle with a coaxial cannula or was it automated?
- Did the the authors use CT fluoroscopy or CT?
- I am wondering the high diagnostic yield achieved with only one sampling in each patient? Could the authors elaborate more on that?
- Did the authors include the subpleural lesions as the irritation of the pleura may increase the risk of pneumothorax, especially in small lesions?
Thanks.

REFEREE: Reviewer | **Revision** (0) 23 Sep 2019

Dear AE,
This article has suitable sample size.
The length of study is long and it make study more reliable.
Thanks.

Kavous Firouznia: EIC | **Revision** (0) 25 Nov 2019

Dear authors
Your article needs major revision according to the reviewers comments.
Regards

OPEN PEER REVIEW

Revision (1)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

Reply to Reviewers.

[Reviewer 1]
Q 1: Introduction: It is very brief and must be explained more elaborately.
R 1 :
Thank you for your comment.
I described in more detail why we choose two factors- needle angle and lesion depth- as a study subject among numerous affecting factors on ‘Background’ section.

Q 2:
Statistical analysis: This study statistical analysis and data presentation is incomplete and must be revised. Pleas, refer to the paper entitled "Predictors of Technical Success and Rate of Complications of Image-Guided Percutaneous Transthoracic Lung Needle Biopsy of Pulmonary Tumors" that published in PLOS ONE journal during 2015.
R2:
Based on the date you recommended, post hoc analysis was performed additionally. Statistics were also conducted to examine the effects of other confounding factors. And to highlight the fact that this study was done in a single radiologist, we divided the study period into three equal sections and conducted additional statistics to show that there was no difference between the periods. These additional statistical results are presented at Figure 4, Table 2, Table 4 and 5.
Furthermore, in order to reinforce the statistical analysis, patient selection & exclusion criteria and pathologic analysis have been set more clearly. And these are suggested in Figure 1.

Q3: Manuscript file along with detailed comments also annexed.
R3 :
Reflecting the points indicated, the table has been adjusted.

[Associate Editor 1]

Q1 : The authors mentioned an automated biopsy device being used. Was it a semi-automated needle with a coaxial cannula or was it automated?
R1 : We use automated biopsy device.

Q2 : Did the the authors use CT fluoroscopy or CT?
R2: Thank you for your question. CT was used instead of CT fluoroscopy.

Q3 : I am wondering the high diagnostic yield achieved with only one sampling in each patient? Could the authors elaborate more on that?
R3: After setting the angle, the needle was targeted step by step towards the lesion to increase accuracy.

Q4 : Did the authors include the subpleural lesions as the irritation of the pleura may increase the risk of pneumothorax especially in small lesions?
R4: In case of subpleural lesions, tissue samples were obtained in quick and short movement to minimize pleural irritation.

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Revision (1)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Reviewer | **Revision** (1) 12 Jan 2020

Dear AE,
At present, it can be said that based on suggestions, statistical analysis and results presentation style are well implemented and the manuscript is statistically and methodologically approved.
Thanks.

REFEREE: Associate Editor | **Revision** (1) 3 Feb 2020

Dear EIC,
The manuscript could be considered for publication now.
Thanks.

REFEREE: Associate Editor | **Revision** (1) 15 Mar 2020

Dear EIC,
Please authors respond to all comments one by one. Then, highlight any changes they make in the manuscript.
1- What does CIRSE stand for? Please clarify.
2- “However, there was a statistically significant difference in lesion depth between complications group ($P < 0.01$). Moreover, the lesion depth was significantly greater in the cases involving complications, and tended to increase with severity.”
This sentence is wrong. Do you mean:
“Presence and severity of complications showed a direct relationship with lesion depth ($P<0.01$). In fact, more severe complications happened in deeper located lesions.”
Please clarify
3- In the discussion, “The overall success rate of PCNB was 93.1%, which is consistent with the findings reported by Lee et al., Gang et al. and Hwang al. (5, 8, 9). As in the study by Gang et al., our study showed that neither needle angle nor lesion depth significantly influenced procedural success. Conversely, Ohno et al. (6)”
Lee et al. is not reference 5 and Gang et al. is not reference number 6. Please correct and clarify.
4- “Ohno et al. suggested that a longer needle pathway might increase the chance of tearing the pleura and normal lung tissue, as the patient breathes during the PCNB procedure.”
Please add a reference number.

5- “However, unlike Saji et al., more than one needle pass during a single biopsy attempt was excluded from our study and there is no possibility that the angle would be affected by the number of needle passes.” Please add the reference number.
6- As mentioned above, Otto et al. found a significant difference of the outcomes of PCNB between different radiologists. Please add the reference number.
7-There is no reference number 7 in the text. Please make sure all references are mentioned in correct order.
8- In the discussion, “We did not observe any progression to major complications other than pneumothorax.” Do you mean, “Only pneumothorax led to major complications.”?
Please clarify.
Thank you.

REFEREE: EIC | **Revision (1)** 16 Mar 2020

Dear authors,
Your article needs Minor Revision.
Regards

OPEN PEER REVIEW

Revision (2)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

Responses to the editor's comments

Editor 2:

1. What does CIRSE stand for? Please clarify.

⇨ Thank you for your comment. As per your suggestion, we clarify meaning of CIRSE as follows, “The CIRSE guideline is standardized grading system of complications based on combining outcome, therapy, and severity of sequelae” in the Data anaylsis section.

2. “However, there was a statistically significant difference in lesion depth between complications group ($P < 0.01$). Moreover, the lesion depth was significantly greater in the cases involving complications, and tended to increase with severity.”

This sentence is wrong. Do you mean:

“Presence and severity of complications showed a direct relationship with lesion depth ($P<0.01$). In fact, more severe complications happened in deeper located lesions.”

Please clarify

⇨ Thank you for your insightful comment. As you pointed out we supposed to show that the lesion depth is associated with both presence and severity of complications. As per your comment, we changed the sentence as follows, "Presence and severity of complications showed a direct relationship with lesion depth ($P<0.01$). In fact, more severe complications happened in deeper located lesions” in the Abstract.

3. In the discussion, “The overall success rate of PCNB was 93.1%, which is consistent with the findings reported by Lee et al., Gang et al. and Hwang al. (5, 8, 9). As in the study by Gang et al., our study showed that neither needle angle nor lesion depth significantly influenced procedural success. Conversely, Ohno et al. (6)”

Lee et al. is not reference 5 and Gang et al. is not reference number 6. Please correct and clarify.

⇨ Thank you for your comment. We changed the reference as per your comment.

4. “Ohno et al. suggested that a longer needle pathway might increase the chance of tearing the pleura and normal lung tissue, as the patient breathes during the PCNB procedure.” Please add reference number.

⇨ Thank you for your comment. We add reference number as per your comment.

5. However, unlike Saji et al., more than one needle pass during a single biopsy attempt was excluded from our study and there is no possibility that the angle would be affected by the number of needle

passes.” Please add the reference number.

⇨ Thank you for your comment. We add reference number as per your comment.

6. As mentioned above, Otto et al. found a significant difference of the outcomes of PCNB between different radiologists. Please add the reference number.

⇨ Thank you for your comment. We add reference number as per your comment.

7. There is no reference number 7 in the text. Please make sure all references are mentioned in correct order.

⇨ Thank you for your very insightful comment. The wrong reference number 5 was changed to 7 as follows, The CIRSE guideline is standardized grading system of complications based on combining outcome, therapy, and severity of sequelae (7).

8. In the discussion, “We did not observe any progression to major complications other than pneumothorax.” Do you mean, “Only pneumothorax led to major complications.”? Please clarify.

⇨ Thank you for your very insightful comment. As you pointed out it means only pneumothorax show major complications. As per your comment, we changed the sentence as follows, " Among various complications, only pneumothorax led to major complications.” in the discussion section.

OPEN PEER REVIEW

Revision (2)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

Mehranoosh Dolatshahi: Associate Editor | **Revision** (2) 21 Mar 2020

Dear EIC
Based on the authors' answers to the reviewers' comments, the reviewer(s) have recommended publication.
Kind regards.

Kavous Firouznia: EIC | **Revision** (2) 21 Mar 2020

Dear authors,
Your article is acceptable for the publication.
Regards