

PEER-REVIEW REPORT

Name of journal: *Artificial Intelligence in Medical Imaging*

Manuscript NO: 73702

Title: Artificial Intelligence Applications in Common Pulmonary Diseases

Provenance and peer review: Invited manuscript; externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05775860

Position: Editorial Board

Academic degree: PhD

Professional title: Assistant Professor

Reviewer's Country/Territory: China

Author's Country/Territory: United States

Manuscript submission date: 2021-12-13

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-12-20 02:13

Reviewer performed review: 2021-12-22 01:48

Review time: 1 Day and 23 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



**Baishideng
Publishing
Group**

7041 Koll Center Parkway, Suite
160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: bpgoffice@wjgnet.com
<https://www.wjgnet.com>

statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The manuscript entitled “Artificial Intelligence in Diagnosis of Pulmonary Diseases” reports a mini-review of AI applications in diagnosis of pulmonary diseases, including chronic obstructive pulmonary disease, asthma, interstitial lung disease, tuberculosis, covid-19, and pulmonary nodules and lung malignancy. The language is good and the manuscript covers most of pulmonary diseases. However, I feel that the AI algorithms regarding diagnosis of pulmonary diseases have not been deeply discussed in the manuscript. The algorithm details and data unique to each type of pulmonary diseases are not clearly presented in the manuscript. In addition, comparison of advances in relevant algorithms is lacking. I suggest that the authors may consider to discuss the topic in more details and provide current advances in the field.

PEER-REVIEW REPORT

Name of journal: *Artificial Intelligence in Medical Imaging*

Manuscript NO: 73702

Title: Artificial Intelligence Applications in Common Pulmonary Diseases

Provenance and peer review: Invited manuscript; externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05758135

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: Japan

Author's Country/Territory: United States

Manuscript submission date: 2021-12-13

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-12-20 11:30

Reviewer performed review: 2021-12-23 05:23

Review time: 2 Days and 17 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



**Baishideng
Publishing
Group**

7041 Koll Center Parkway, Suite
160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: bpgoffice@wjgnet.com
<https://www.wjgnet.com>

statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

This manuscript is a "mini" review of the application of AI in Diagnosis of Pulmonary diseases. If this manuscript is to be considered a "review" (even though it is a "mini" review), the authors should include information such as which databases were searched, for what time period, and with what keywords. Also, the purpose of the article is to introduce "common applications of AI," but if there is a criterion for the authors' definition of "common," please provide it. There is nothing wrong with the contents of the article, but the description is insufficient for a "review". Although several papers are introduced for each disease, it is difficult to compare the contents of each paper because they are narrative. If the authors have an intended audience for this manuscript, it should be mentioned. The titles of chapters and sections are distinguished by whether they are underlined or not, but if "chapter titles are underlined," then the introductions and conclusions should also be underlined.

PEER-REVIEW REPORT

Name of journal: *Artificial Intelligence in Medical Imaging*

Manuscript NO: 73702

Title: Artificial Intelligence Applications in Common Pulmonary Diseases

Provenance and peer review: Invited manuscript; externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05758354

Position: Peer Reviewer

Academic degree: PhD

Professional title: Academic Research, Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: United States

Manuscript submission date: 2021-12-13

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-12-20 02:10

Reviewer performed review: 2021-12-24 11:55

Review time: 4 Days and 9 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous

statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The topic is very hot. However, given that the type is a mini review, the discussion in the paper is not enough. I recommend reconsidering after major revisions. And the following suggestions may help improve the quality of the paper. 1. The relationship between machine learning and AI needs to be discussed in detail as a section in the paper. These two concepts seem to be vague in the submitted article. Recommended to re-write it before the discussions about the application of AI. 2. A section to summarize the process of AI used in this diagnosis of pulmonary diseases in detail is required. Related schematic diagrams are also needed 3. Comparing the significance and importance between AI and doctors in prognostication, as well as treatment of pulmonary diseases is required to be written in detail as a section. Recommended to write it after the discussions about the all applications of AI. 4. Are there some reviews in this field published by other researchers? How is your review different from their review? This question needs to be stated in the introduction section 5. An overall framework diagram to show several aspects of the application of AI in this field is required. Also, a table to list these applications and the corresponding advantages is recommended. 6. The cited literature and related discussions seem to be insufficient. If possible, add these parts. 7. Adding the term COVID-19 to the keyword section is recommended to improve the impact of the article.

PEER-REVIEW REPORT

Name of journal: *Artificial Intelligence in Medical Imaging*

Manuscript NO: 73702

Title: Artificial Intelligence Applications in Common Pulmonary Diseases

Provenance and peer review: Invited manuscript; externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05759722

Position: Peer Reviewer

Academic degree: PhD

Professional title: Research Scientist, Teaching Assistant

Reviewer's Country/Territory: Malaysia

Author's Country/Territory: United States

Manuscript submission date: 2021-12-13

Reviewer chosen by: Jin-Lei Wang

Reviewer accepted review: 2021-12-27 13:57

Reviewer performed review: 2021-12-27 14:32

Review time: 1 Hour

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous

statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Choudhury et al have proposed an interesting mini review of Artificial Intelligence methods used for pulmonary diseases diagnosis. However, the introduction is very general. The authors must state why such a review is needed and what their contributions? Also, at the end of the abstract, the authors should state what the current implementation of AI for pulmonary diseases diagnosis, AI method limitations or their findings based on the review conducted. Stating the goal or the purpose of the review not sufficient enough. In the obstructive lung diseases section, please correct the spelling error > 1430 historial patient cases. Historial should be historical. Please add a table before the conclusion to summarize or list down few methods or approaches of AI that has been implemented for pulmonary diseases diagnosis and prove to provide an excellent result. This will help you to put previous research and findings in context and present current developments in a critical and focused manner. The conclusion is very short. Please consider extending the conclusion Mini review should contain about 30 references at least. 21 references is not sufficient for the current study.

PEER-REVIEW REPORT

Name of journal: *Artificial Intelligence in Medical Imaging*

Manuscript NO: 73702

Title: Artificial Intelligence Applications in Common Pulmonary Diseases

Provenance and peer review: Invited manuscript; externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03863132

Position: Editorial Board

Academic degree: PhD

Professional title: Assistant Professor, Senior Research Fellow

Reviewer's Country/Territory: France

Author's Country/Territory: United States

Manuscript submission date: 2021-12-13

Reviewer chosen by: Jin-Lei Wang

Reviewer accepted review: 2021-12-22 15:51

Reviewer performed review: 2021-12-29 11:55

Review time: 6 Days and 20 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous

statementsConflicts-of-Interest: [] Yes [**Y**] No**SPECIFIC COMMENTS TO AUTHORS**

In this work, Choudhury et al. present a nice compendium of the most common applications of artificial intelligence (AI) in pulmonary diseases. They briefly expose the pros and cons of applying AI to an assorted list of major pulmonary complications/diseases such as obstructive lung disease, pulmonary infections, fibrotic lung disease, and malignancy. In opinion of this reviewer, this mini-review accomplished the task assigned to it. Complementary, it is easy to read and wellpresented manuscript that would be of very interest to the potential reader of the journal and community in general.

PEER-REVIEW REPORT

Name of journal: *Artificial Intelligence in Medical Imaging*

Manuscript NO: 73702

Title: Artificial Intelligence Applications in Common Pulmonary Diseases

Provenance and peer review: Invited manuscript; externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05571761

Position: Peer Reviewer

Academic degree: PhD

Professional title: Academic Research, Reader (Associate Professor), Research Fellow

Reviewer's Country/Territory: China

Author's Country/Territory: United States

Manuscript submission date: 2021-12-13

Reviewer chosen by: Jin-Lei Wang

Reviewer accepted review: 2021-12-24 00:00

Reviewer performed review: 2022-01-02 09:08

Review time: 9 Days and 9 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



**Baishideng
Publishing
Group**

7041 Koll Center Parkway, Suite
160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: bpgoffice@wjgnet.com
<https://www.wjgnet.com>

statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

1. In my opinion, the potential discussion scope of the title of this paper does not seem to match the specific lung diseases discussed, so I suggest the author revise the title to supplement the ai-related lung research hotspots. 2. In this paper, the introduction of specific AI technologies applied to lung research is relatively limited and vague to some extent. It is suggested that the author reorganize and elaborate this part to improve the accuracy. 3. It is suggested to supplement the discussion on the limitations and challenges of further integration of ARTIFICIAL intelligence into clinical lung practice.