PEER-REVIEW REPORT

Name of journal: Artificial Intelligence in Medical Imaging

Manuscript NO: 66972

Title: The implementation of Lung Ultrasound in the triage of pregnant women during the SARS-CoV-2 pandemics

Reviewer's code: 02951945

Position: Editorial Board

Academic degree: MD

Professional title: Assistant Professor, Doctor

Reviewer's Country/Territory: United States

Author's Country/Territory: Turkey

Manuscript submission date: 2021-04-10

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-04-13 16:38

Reviewer performed review: 2021-04-19 17:51

Review time: 6 Days and 1 Hour

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [ ] Grade C: Good [Y] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [ ] Grade B: Minor language polishing [Y] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [ ] Minor revision [Y] Major revision [ ] Rejection
Re-review	[ ] Yes [Y] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Dear authors   I have read this article with interest. COVID-19 pandemic raises significant challenges in the management of patients. This article has described the role of lung ultrasound in the triage of pregnant women during this pandemic. It needs a wider literature review and mention about similar studies and its success rate. A brief paragraph about the use of lung ultrasound in other lung infections will also be helpful. Overall, the concept is innovative and lung US will be very helpful in pregnant patients who should avoid CT scans. Tables are helpful in these kinds of reviews. CT scan-based severity scoring systems are well established and followed as standard of care – and we will need larger multicenter studies before we can make strong recommendations. English language needs revision- I quote a line that needs revision- Pregnant women are a vulnerable, special population in medically and socially thinking.

PEER-REVIEW REPORT

Name of journal: Artificial Intelligence in Medical Imaging

Manuscript NO: 66972

Title: The implementation of Lung Ultrasound in the triage of pregnant women during the SARS-CoV-2 pandemics

Reviewer's code: 05915429

Position: Peer Reviewer

Academic degree: BSc, MSc

Professional title: Research Assistant Professor

Reviewer's Country/Territory: India

Author's Country/Territory: Turkey

Manuscript submission date: 2021-04-10

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-04-11 12:31

Reviewer performed review: 2021-04-24 13:48

Review time: 13 Days and 1 Hour

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

First, This manuscript mainly highlights the importance of lung ultrasound as important diagnostic tool for pediatric and pregnant women admitted to hospital with/without respiratory symptoms. Asymptomatic patients are more prone to spread COVID-19 disease easily.   Second, There are minor quality issues on which the author needs to work upon. The quality of English is good. I believe the authors will have to redraw the conclusion on the suggestions given to them. The key problem this study suggested that pregnant women are at high risk of acquiring birth defects to CT-scan. The authors further suggested in order to avoid the exposure of pregnant women toward ionising radiation, ultrasound could be a good option instead of CT-scan to undergo diagnosis and to identify any association of lung complications caused by COVID-19. The process of diagnosing the lung using ultrasound is discussed which would be quite helpful for the readers.   Third, The authors completely underestimated the limitations of ultrasound which need to be discussed within a separate paragraph.This article discussed an important diagnostic technique for pregnant women usually admitted with or without COVID-19 before undergoing normal or caesarean deliveries. This method of diagnosis will also be useful for patients 1. In the subheading "The advantages of LUS" the sentence "Owing to these facts, CT is not an optimal screening tool and not feasible in monitoring the patient clinical situation" it should be "the patent's clinical situation" please change. 2. Please add page numbers. 3. Last paragraph of "Monitoring with LUS and other areas of use" 3rd sentence, the word "Decisiozn" please correct this word. 4. Second last point of LUS score=1 "Weekly phone calls to check for new onset symptoms to reduce unnecessary admission to the hospital" this sentence has syntactical errors please take necessary step. In the last point please mention the types of new symptoms, please specify. 5. "It is reasonable to offer LUS for the triage and monitoring the clinical

progress of patients with leaving the indication of chest CT scan as reserved only for the more complex cases" Please mention the complex cases in brief. 6. Please mention the disadvantages or limitations of using LUS in a separate paragraph kindly include the procedural limitation if found. 7. Please discuss in brief how LUS can be useful to distinguish between pneumonia, COVID-19, and other viral pneumonia. 8. In the advantages of LUS subheading section, the sentence "Our study investigating the universal testing strategy for SARS-CoV-2 infection with RT-PCR in pregnant women who were admitted to the hospital showed an overall and asymptomatic infection diagnosis rate of 7.77% and 4%, respectively" Please be specific it is not 4%, please mention it accurately. 9. Refer the citation 25 and please explain in another sentence with reasoning and your understanding about LUS positivec and LUS negativec patients, mainly the intensity of the lungs complications beside the cause of such complication. Please add while explaining why in Negative COVID-19 group, 3 patients were LUS positivec. Please add it in suitable section. Please mention which patients had only pneumonia and which patients were suffering from COVID-19 or other viral pneumonia as per LUS and RT-PCR result. How LUS score could be helpful to determine and distinguish that? The reference [25] cited in this article lacks reasoning in the discussion section of the original article. No doubt the cohort study factually provided a wise technique to identify and distinguish different levels of lung complication. Hence, please provide with more rationales and reasons in this existing opinion review. Please classify the patients as per asymptomatic or symptomatic covid-19 positive or negative respectively. For example LUS score 3 is considered severe lung complication in a patient, he/she also has covid-19 along with LUS 3. So, How would you name the complication as per (Severe, mild and moderate pneumonia with/without Covid-19 positive or Covid-19 negative)? 10. I believe that ultrasound could be useful to distinguishing pneumonia and viral pneumonia as well as it can determine and

distinguish the complicated or severe viral pneumonia in patients, only when the probe of ultrasound is in correct hand. But the ultrasound will give confusing output for a patient with historic severe lung disease, this is a disadvantage. Please refer for more limitations and please add. 11. Please conclude on the basis of changes to be made as per the above suggested points. 14. Since, the scoring procedures are discussed. If possible please provide the snapshots (at least 4 symptomatic and asymptomatic patients) of different ultrasound reports as per LUS score 0-3.