



## PEER-REVIEW REPORT

**Name of journal:** World Journal of Radiology

**Manuscript NO:** 61729

**Title:** Discrepancies in the clinical and radiological profiles of COVID-19: A case-based discussion and review of literature

**Reviewer's code:** 05760726

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Doctor

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** United Kingdom

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**Reviewer chosen by:** Ya-Juan Ma

**Reviewer accepted review:** 2021-02-18 23:34

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<b>Scientific quality</b>	<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 Grade E: Do not publish
<b>Language quality</b>	<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
<b>Conclusion</b>	<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
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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## **SPECIFIC COMMENTS TO AUTHORS**

The manuscript discussed the discrepancies between the clinical and imaging features of COVID-19 through analyzing three clinical case scenarios. In addition, the authors talked about the diagnostic sensitivity, specificity, and the positive and negative predictive values of several imaging modalities for the rational management of patients with this enigmatic disease, including the imaging techniques for pulmonary and extra-pulmonary manifestations of COVID-19, such as chest X-Ray (CXR), Computed Tomography (CT), Lung Ultrasound (LUS), neuroimaging, cardiovascular imaging, and abdominal imaging. The analysis of these imaging modalities is very comprehensive. However, there are still some concerns. (1) The analysis of other imaging tools, such as magnetic resonance imaging (MRI), are not mentioned in this manuscript, which are also widely used for diagnosis of COVID-19? Please add the review of the utility of MRI and or other imaging tools. (2) Please cite references in Core tip and Introduction appropriately, especially the introduction of COVID-19. (3) The authors conducted case studies to prove that there exist discrepancies between the clinical and imaging features of COVID-19. The patients in the case study is middle-aged or elderly people. Please also involve the subjects of youth. In addition, there is no analysis and discussion of possible reasons that cause the discrepancy in each case study. I find that the authors made great efforts in the review of imaging studies in the diagnosis of COVID-19, instead of reporting more evidence or studies of the relationship/ discrepancies between the clinical and imaging features. (4) Artificial intelligence (AI)-based algorithms have been widely used to screen COVID-19 in many studies, like CXR, CT, etc. However, the authors only reviewed the studies regarding CXR only, which is not enough. Please also review the studies of AI-based algorithms on other imaging modalities. (5) In clinical practice, the clinicians generally combine the reverse transcriptase polymerase chain



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reaction (RT-PCR) test and some imaging examinations to diagnose COVID-19. They may encounter the problem of the discrepancies between the clinical and imaging features. Are there any studies that talk about how the clinicians deal with such problem? (6) Most of the studies reviewed in this manuscript are nation-based (the data comes from a small region or one country only). Please also include more studies that focus on analyzing the data from the world, which is very important for more accurate conclusion. (7) Please revise some grammar mistakes or typos in the manuscript. Such as “be aware off” on page 4, “The diagnostic odds of GGO with other features is reported as 20” on page 15, “Unenhanced CT chest may be considered as the as the best imaging modality in patients...” on page 15, and “where RT-PCR is considered as the gold-standard and the other modalities like CXR, CT chest and LUL are compared to RT-PCR...” on page 22. (8) Table 3 reports the sensitivity, specificity, PPV and NPV of various investigations that were used in the diagnosis of COVID-19 infection, including RT-PCR, CXR, CT and LUS. The table simply cited the results from 1-2 papers, which is not convincing enough. Therefore, I suggested that the authors take average of results of several studies for each diagnosis tool. (9) Section “Discussion” should be added in the manuscript.