



# Study of Covid-19 Pneumonia 12 Weeks Follow-up Chest Radiograph and Clinical Resolution: Observation from a Clinical Audit in District Hospital in UK

**\*Corresponding Author(s): Shamnad Shakeer**

Internal Medicine Resident, Mid Cheshire NHS trust, UK.  
Email: shamnads@live.com

## Abstract

Chest radiographs are routinely performed in hospitals during covid pandemic era to investigate lung changes, which will aid in clinical decision-making. As per the guidelines, COVID patients who had radiological changes in their initial Chest X- ray should have a follow-up Chest radiograph in 12 weeks. We conducted a study in our District-level NHS hospital to evaluate how many patients had their 12 weeks follow-up radiograph done and compared it with their initial chest radiograph. During the study, we found that most patients did not have a 12-week follow-up chest X-ray. Majority of those patients who had a follow-up chest X-ray showed resolution of lung changes. These findings were presented as a part of an audit we held at our hospital. For further improvement of clinical practice, the below recommendations can be followed, among which the main would be to education of Healthcare professionals about the BTS guidelines.

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## Background

As per the guidelines issued by the British Thoracic Society [BTS], all patients who had COVID-19 Pneumonitis should have a repeat follow-up chest radiograph in 12 weeks in order to see its resolution. This study aimed to see how many percentages of patients who had been radiologically reported Covid Pneumonitis on their initial chest radiograph and had a follow-up chest radiograph in 12 weeks. In addition, the study also looked into the radiological changes in 12 weeks Chest Radiograph. The study was done in a district-level NHS hospital in UK.

## Material and methods

Collected Chest radiography of 200 Covid positive patients which showed covid changes were viewed retrospectively using Carestream PACS. In addition, we also investigated to see how many patients had their 12 weeks chest

radiograph had requested and had been done. Moreover, we also looked into see whether patients had any prior imaging (Chest X-ray/CT Chest / CTPA ) before the 12 week follow-up period.

## Recommendations

Education of health care professionals regarding the BTS guidelines and importance of having follow-up chest radiograph. Also educating the patient to attend for the follow-up chest radiograph.

## Limitation

During our study it was noted only a small number of patients had a 12-week follow-up chest radiograph. In addition, also noted that around 28 patients passed way before the follow-up period.



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## Results

The mean age was 45.6 and men outnumbered females. The total number of chest radiographs collected was 200. The study excluded the number of patients who passed away before the 12 weeks follow-up period; thus the number comes to 172. It has been noted that out of 172 patients, 45.3% (78) had their follow-up chest radiograph requested and 44.7% (77) patients had it done. In addition, out of 172, 40.7% (70) had prior imaging before 12 weeks [Chest radiograph -46.7% (46); CT Chest -15.7% (11); CTPA -18.7% (13)]

Analysed the Chest radiograph of those patients who had their follow-up Chest radiograph done 44.7%. It has been noted that 98.7% (76) patients had complete resolution of covid pneumonitis compared to their initial Chest Radiograph, and the remaining 1.3% (1) patients did not have complete resolution of pneumonitis changes.

## Conclusion

Chest Radiograph is a cost-effective and essential tool to investigate the lung changes during Covid pneumonia. A 12-week follow-up chest radiograph will help to diagnose any potentially serious complication such as pulmonary fibrosis and pulmonary vascular disease. Educating about the BTS guidelines for active follow-up is essential to establish complete resolution of lung changes or to pick-up any serious post Covid complications.

## References

1. British Thoracic Society, BTS Guidance on Respiratory follow-up of patient with a clinic-radiological diagnosis of COVID-19. <http://www.brit-thoracic.org.uk/covid-19/covid-19-information-for-the-respiratory-community/>
2. NICE, COVID-19 rapid guidelines. <https://www.nice.org.uk/guidance/ng191>
3. World Health Organization. WHO Coronavirus Dashboard. <https://covid19.who.int>
4. Hopkins Medicine, Long COVID. <https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus/covid-long-haulers-long-term-effects-of-covid19>