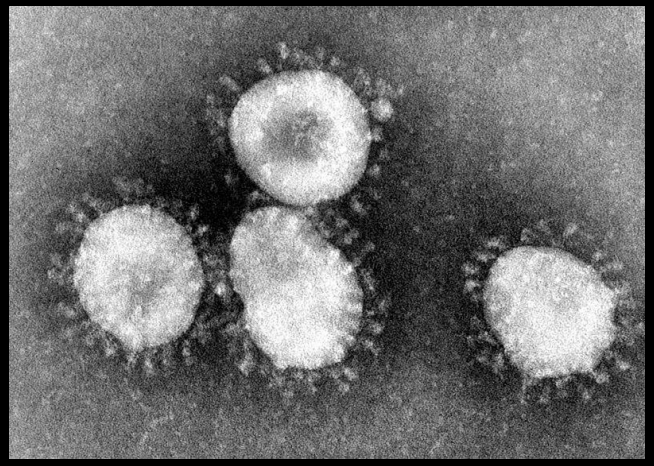
Chest CT for Typical 2019-nCoV Pneumonia: Relationship to Negative RT-PCR Testing



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Radiology

Chest CT for Typical 2019-nCoV Pneumonia: Relationship to Negative RT-PCR Testing

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Abstract

Some patients with positive chest CT findings may present with negative results of real time reverse-transcription–polymerase chain- reaction (RT-PCR) for 2019 novel coronavirus (2019-nCoV). In this report, we present chest CT findings from five patients with 2019-nCoV infection who had initial negative RT-PCR results. All five patients had typical imaging findings, including ground-glass opacity (GGO) (5 patients) and/or mixed GGO and mixed consolidation (2 patients). After isolation for presumed 2019-nCoV pneumonia, all patients were eventually confirmed with 2019-nCoV infection by repeated swab tests. A combination of repeated swab tests and CT scanning may be helpful when for individuals with high clinical suspicion of nCoV infection but negative RT-PCR screening

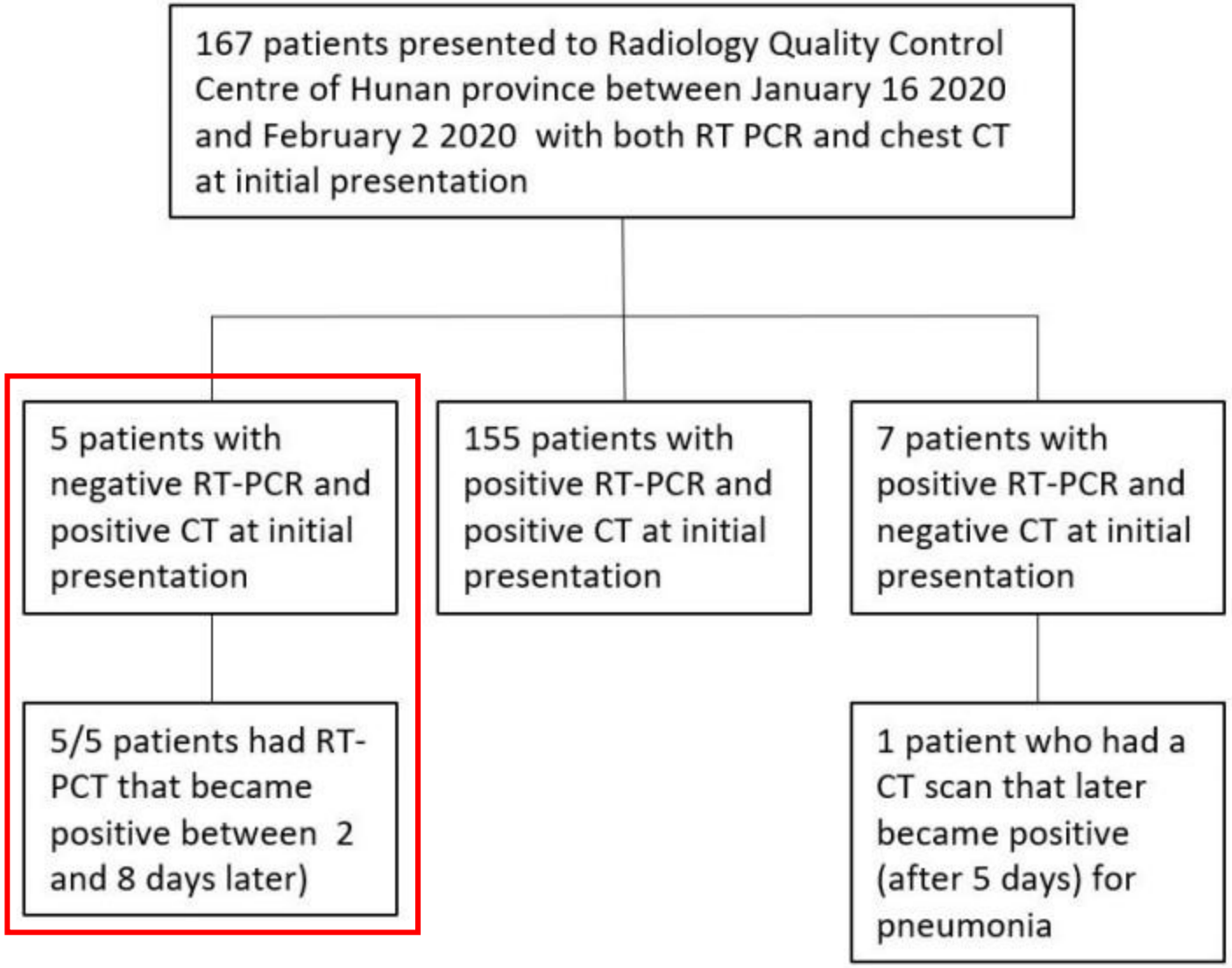

Figure 1: Patient flowchart. Of 167 patients screened, 5 (3%) had negative RT-PCR results and chest CT findings compatible with 2019-nCoV pneumonia.

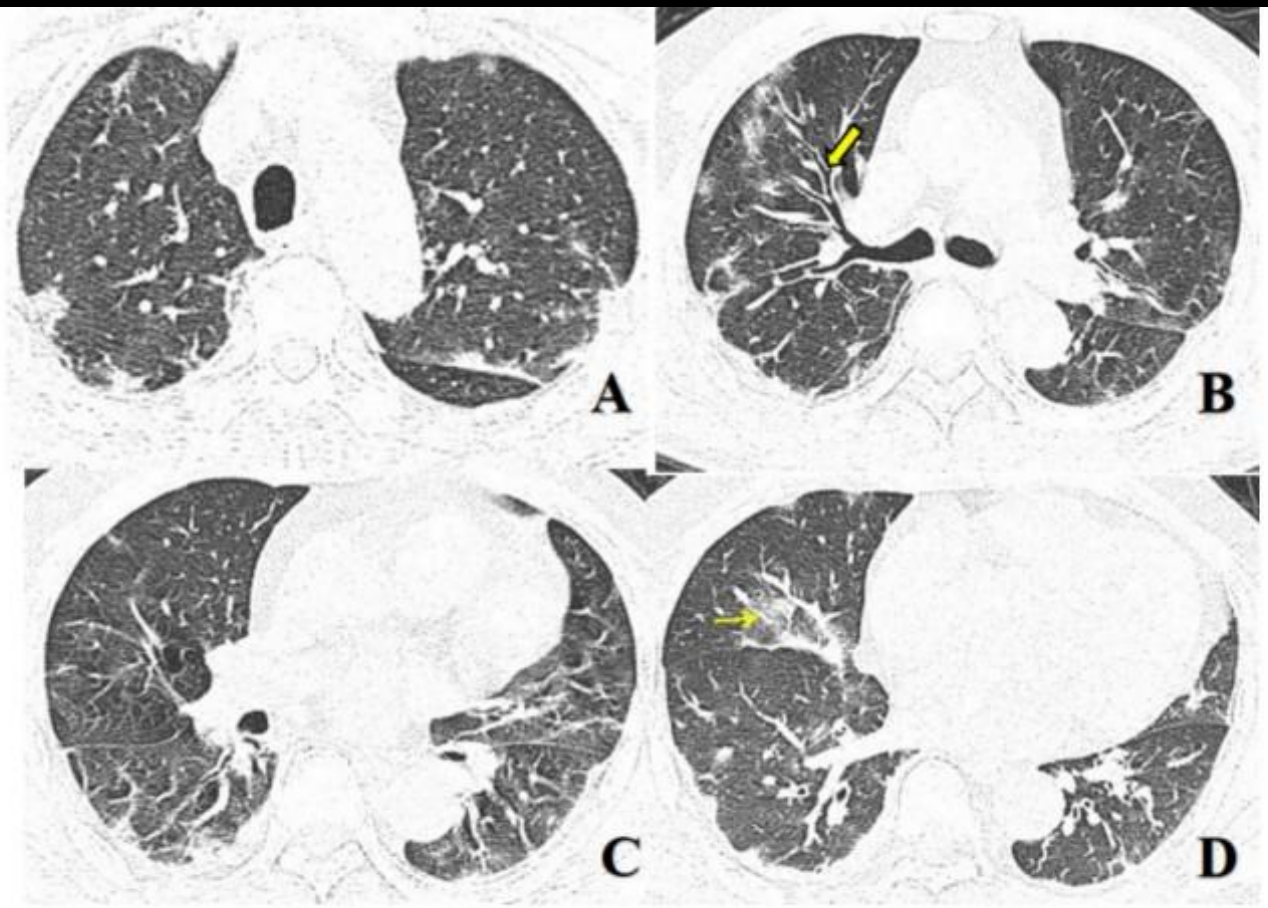

Figure 2: Chest CT imaging of patient1.A-D, CT images show bilateral multifocal GGOs and mixed GGO and consolidation lesions. Traction bronchiectasis(fat arrow) and vascular enlargement are also presented (thin arrow).

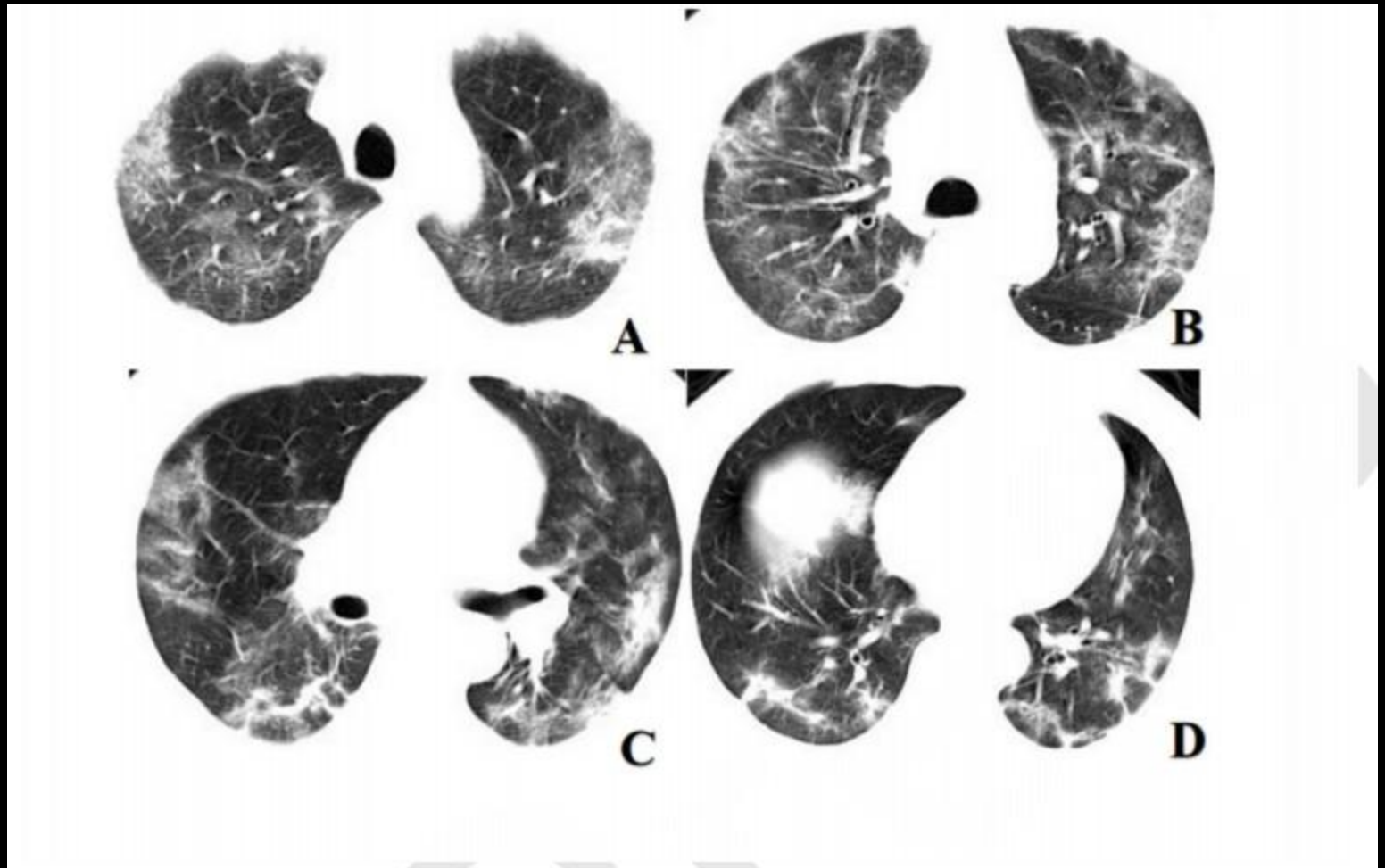

Figure 3: Chest CT imaging of patient 2. A-D, CT images showed multi-focal GGO and mixed consolidation that most appeared at peripheral area of both lungs. The CT involvement score was 11.

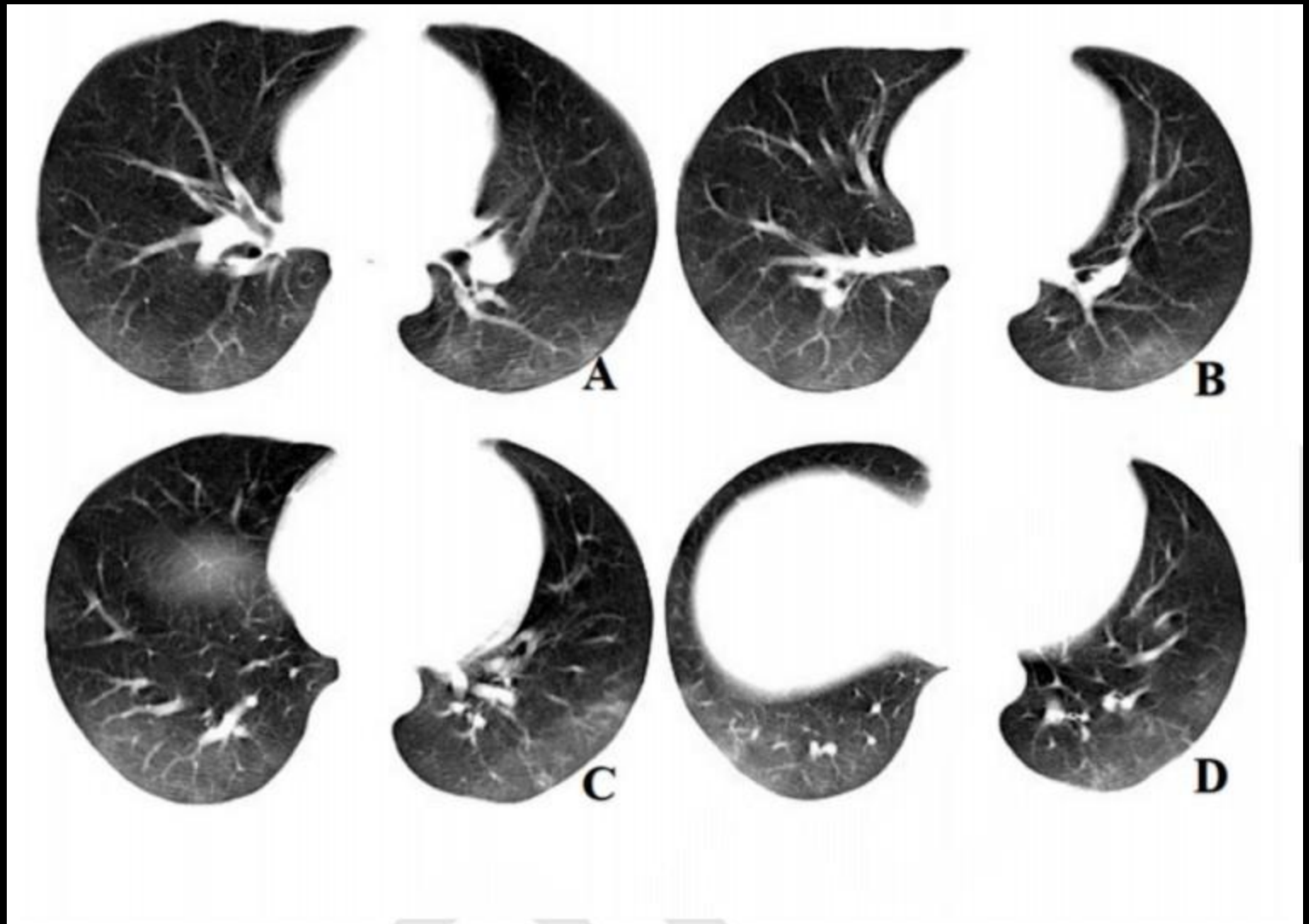

Figure 4: Chest CT imaging of patient 3. A-D, CT images showed bilateral subpleural bandlike areas of GGO compatible with viral pneumonia.

Negative RT-PCR screening

– High clinical suspicion of nCoV infection

Combination of repeated swab tests and CT!