

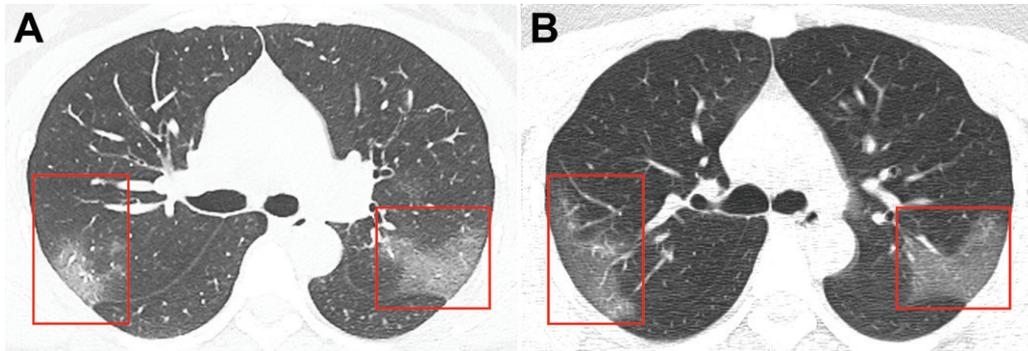
# CT Imaging of the 2019 Novel Coronavirus (2019-nCoV) Pneumonia

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Conflicts of interest are listed at the end of this article.

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Unenhanced CT images in a 33-year-old woman. A, Image shows multiple ground-glass opacities in bilateral lungs. Ground-glass opacities are seen in the posterior segment of right upper lobe and apical posterior segment of left superior lobe. B, Image obtained 3 days after follow-up shows progressive ground-glass opacities in the posterior segment of right upper lobe and apical posterior segment of left superior lobe. The bilateralism of the peripheral lung opacities, without subpleural sparing, are common CT findings of the 2019 novel coronavirus pneumonia.

A 33-year-old woman presented to the hospital with a 5-day history of fever and cough of unknown cause. She indicated that she worked in Wuhan, China (the center of novel coronavirus outbreak) but had traveled to Lanzhou, China, 6 days before presentation to the hospital.

At admission, her body temperature was elevated to 39.0°C (102.2°F) and coarse breath sounds of both lungs were heard at auscultation. Laboratory studies showed leucopenia (white blood cell count:  $2.91 \times 10^9/L$ ). The white blood cell differential count showed 70.0% neutrophils and 0.1% eosinophils. There were elevated blood levels for C-reactive protein (16.16 mg/L; normal range, 0–10 mg/L), erythrocyte sedimentation rate (29 mm/h; normal range, <20 mm/h), and D-dimer (580 ng/mL; normal range, 500 ng/mL). Unenhanced chest CT showed multiple peripheral ground-glass opacities in both lungs (Figure, A) that did not spare the subpleural regions. Real-time fluorescence polymerase chain reaction of the patient's sputum was positive for the 2019 novel coronavirus (2019-nCoV) nucleic acid.

On the basis of epidemiologic characteristics, clinical manifestations, chest images, and laboratory findings, the diagnosis of 2019-nCoV pneumonia was made. After receiving 3 days of treatment, combined with interferon inhalation, the patient was clinically worse with progressive pulmonary opacities found at repeat chest CT (Figure, B).

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## References

1. Zhu N, Zhang D, Wang W, et al. A Novel Coronavirus from Patients with Pneumonia in China, 2019. *N Engl J Med* 2020 Jan 24. doi: 10.1056/NEJMoa2001017. [Epub ahead of print]
2. Munster VJ, Koopmans M, van Doremalen N, van Riel D, de Wit E. A Novel Coronavirus Emerging in China - Key Questions for Impact Assessment. *N Engl J Med* 2020 Jan 24. doi: 10.1056/NEJMp2000929. [Epub ahead of print]