

# Spectrum of Chest CT Findings in a Familial Cluster of COVID-19 Infection

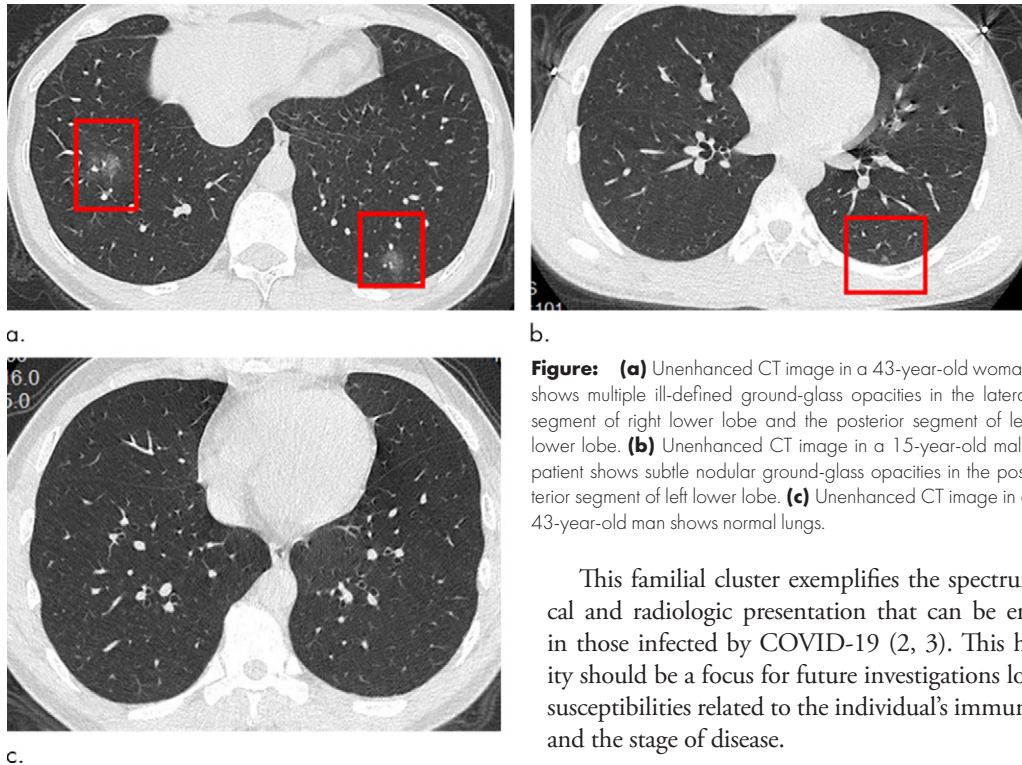
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Conflicts of interest are listed at the end of this article.

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**Figure:** (a) Unenhanced CT image in a 43-year-old woman shows multiple ill-defined ground-glass opacities in the lateral segment of right lower lobe and the posterior segment of left lower lobe. (b) Unenhanced CT image in a 15-year-old male patient shows subtle nodular ground-glass opacities in the posterior segment of left lower lobe. (c) Unenhanced CT image in a 43-year-old man shows normal lungs.

This familial cluster exemplifies the spectrum of clinical and radiologic presentation that can be encountered in those infected by COVID-19 (2, 3). This heterogeneity should be a focus for future investigations looking into susceptibilities related to the individual's immune response and the stage of disease.

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**O**n January 29, 2020, a 43-year-old woman presented with a 4-day history of fever, cough, sputum production, and dyspnea. She had a recent history of travel to Wuhan (the center of the COVID-19 outbreak [formerly known as 2019 novel coronavirus]) with her 15-year-old son. Her temperature was 38°C (100.4°F) and she had coarse breath sounds on auscultation. Chest CT showed peripheral multifocal ground-glass opacities (Fig 1a). Her son also presented with prolonged fever (11 days), but without respiratory symptoms. On examination, his temperature was 39°C (102.2°F), and lungs were clear on auscultation. Chest CT showed centrilobular ground-glass nodules in the left lung (Fig 1b). The patient's 43-year-old husband, who met the definition for a contact person (1), was asymptomatic on screening, but tested positive for COVID-19 on sputum real-time polymerase chain reaction test, as did the son and the wife. His chest CT was unremarkable (Fig 1c), and he eventually developed fever on the following day.