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# Signs and Symptoms of COVID-19 Infection in 2 Patients With a History of Lung Cancer

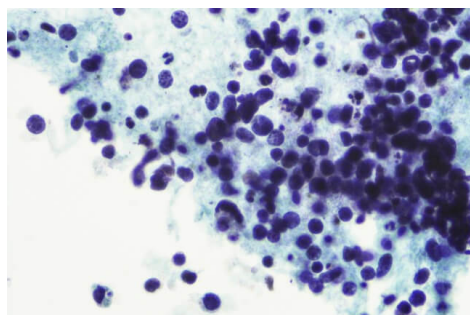


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The impact of COVID-19 infection on 2 patients with a previous diagnosis of lung cancer was described in 2 articles published in the *Journal of Thoracic Oncology*.<sup>1,2</sup>

Although COVID-19 is known to directly affect the lungs,<sup>3</sup> and acute respiratory distress syndrome (ARDS) characterized by the presence of hyperinflammation and a “cytokine storm syndrome” has been described in the setting of COVID-19 infection in previously healthy patients,<sup>4</sup> only limited information is known about specific pathologic changes occurring in lung tissue following infection with the virus, as well as their potential manifestations in patients with lung cancer.



The findings have implications for lung cancer patient management.

Case 1 described a man aged 73 years who was treated 4 years previously with a medium lobe resection for pT2aN0 non-small cell lung cancer (NSCLC) who presented for <sup>18</sup>F-fludeoxyglucose (FDG) positron emission tomography (PET)/computed tomography (CT) imaging following the recent detection of a suspicious lung nodule on a routine CT scan. At the time, the FDG PET/CT scan was performed, the patient did not exhibit any signs or symptoms of COVID-19 infection.<sup>1</sup>

PET/CT imaging findings revealed “the presence of bilateral, diffuse, and intense FDG uptake in the lower lobes and less intense uptake in the remaining lobes,” that “corresponded to peripheral predominant ground-glass opacities observed in low-dose CT without contrast media administration.” While mediastinal lymph nodes also showed drastically increased FDG uptake, the solitary lung nodule did not, and no sign of pleural effusion was present.

A subsequently administered test for COVID-19 was positive for infection.

“To the best of our knowledge this is the first case report in [an] asymptomatic patient, investigated with <sup>18</sup>F-FDG PET/CT. This case highlights the rapid disease progression in [an] asymptomatic patient presenting FDG avid COVID-19 pneumonia. While far from giving definitive evidence, asymptomatic patients presenting typical radiological CT patterns and positive FDG uptake should be promptly tested and strictly monitored, since sudden worsening of patient clinical condition, might be possible,” the authors of this case study noted.

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Case 2 described a man aged 65 years with emphysema diagnosed with metastatic lung cancer in 2012 who presented to the emergency department with fever, shortness of breath, and confusion. The patient had stable lung cancer following achievement of a partial response in 2013 to immunotherapy with a programmed cell death-1 (PD-1) inhibitor, and was still receiving this treatment. A subsequently administered chest CT scan showed “reticular-interstitial addensative findings,” and a test for COVID-19 was positive.<sup>2</sup>

The patient, who was treated with supportive care involving empiric antibiotic therapy and oxygen but did not undergo treatment with corticosteroids or more invasive interventions, experienced rapidly progressive respiratory failure and died less than a week after his initial presentation in the emergency department.

The authors wrote that the case “evidences the importance of [a] multidisciplinary approach, even in the presence of [a] severe outbreak like pandemic COVID-19, because the knowledge of underlying disease and concomitant treatments is important to [make] the best individual therapeutic decision.”

#### References

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