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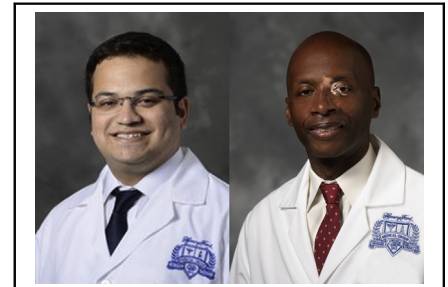
Commentary: Lung cancer resections during the pandemic

Rohit Shenoy, MD, and Ikenna Okereke, MD

The COVID-19 pandemic had a significant effect on health care delivery systems across the country. Because of the need to allocate resources adequately, only selected elective surgeries were performed during parts of the pandemic. The time-sensitive nature of pulmonary resections for lung cancer meant that many of these cases were given priority. This study by Villena-Vargas and colleagues¹ aims to highlight the safety of lung cancer surgery at a New York hospital during the worst period of the pandemic. The location of this study is important because New York was one of the earliest and most affected regions of the country during this pandemic.²

The authors compared 2 groups—the first group representing patients in the 3 months immediately preceding the pandemic and the second group representing patients receiving operations between March 2020 and June 2020. Most of the patients in both groups underwent minimally invasive surgery with comparable oncologic parameters on final pathologic review. There was a relatively low rate of 90-day COVID-19 infection, with only 3 of 41 patients who received their operation during the pandemic period developing disease. Two of these 3 patients ultimately died of COVID-19.

This study highlights the fact that surgery can be performed safely during a pandemic, but there are many additional factors that need to be known. First, this study was very small. Second, the rate at which operations were done was much lower than in the prepandemic period. Although it seems that surgery can be performed safely, there are still questions about which patients should be deferred. Third, since this study was performed the vaccine was developed and distributed. Decision-making about



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Patients who underwent resection for lung cancer were not at increased risk for contracting COVID-19 during the pandemic. Postoperative COVID infection has a 40% mortality warranting close follow-up.

eligibility for surgery has changed dramatically since 2020 with the availability of the vaccine.

The decision to delay an operation is not trivial. Some high-risk patients requiring surgery for lung cancer might occasionally require intensive care unit admission and need for mechanical ventilation.³ In the setting of an ongoing pandemic, prolonged ventilation is not ideal for multiple reasons. However, delays in operation for lung cancer might be associated with upstaging of disease and decreased median survival.⁴ Going forward, our specialty will need to determine which patients can receive operations safely during a major public health crisis. We have learned some lessons from the past 20 months, but ongoing studies are needed for more detailed recommendations.

I applaud the authors for continuing the essential service of cancer surgery during the worst pandemic of our lifetimes...so far. As climate change continues to occur, we should expect that we will face future infectious disease catastrophes.⁵ The authors do acknowledge that their study was limited by a small sample size. In addition, this study was performed before development of the vaccine. Nevertheless, we can learn some lessons from their article. It does appear that with appropriate patient selection, cancer surgery can be performed during a pandemic with a low transmission rate.

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Commentary: Coronavirus disease 2019 (COVID-19): Adaptive realignment makes me want to work eight days a week

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In this month's issue of the *Journal*, Villena-Vargas and colleagues¹ report on the "safety of lung cancer surgery during COVID-19 in a pandemic epicenter." The authors retrospectively reviewed a prospective database and identified 57 patients who underwent lung cancer resection before the pandemic (January 1, 2020, to March 10, 2020), and 41 patients during the initial phase of the pandemic (March 11, 2020, to June 10, 2020) who underwent lung cancer resection, with a primary end point of acquisition of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection during the first 90 days after surgery. Both 90-day perioperative morbidity and mortality were recorded as secondary end points. Acquisition of SARS-CoV-2 infection during the first 90 days after surgery was not significantly different between the 2 groups but tended to be more frequently acquired during the pandemic; 3.5% (2/57) of patients operated on before the pandemic and



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Adaptive realignment allows hospitals and health systems to adapt to the system strains encountered by future pandemics and maintain surgical volume for better patient care and hospital fiscal health.

7.3% (3/41) of patients during the initial phase of the pandemic acquired SARS-CoV-2 infection. Consistent with previous reports, acquisition of SARS-CoV-2 infection is associated with high mortality.¹

The pandemic has affected all of us. A surgeon often reflects about quality, volume, academics, and mentoring. Experience leads to good judgment. We had no experience with SARS-CoV-2 before the pandemic and witnessed health systems and hospitals adapt immediately to an unknown foe. Intensive care units filled quickly to capacity, personal protective equipment was scarce, and resources to deliver patient care required limitations to elective surgery. "Shortage of ICU beds during the peaks → cancelling scheduled surgeries due to the lack of beds → hospital financial losses → staff furloughs → exacerbated shortage of staffed hospital beds coupled with ED overcrowding → delays in resuming elective surgeries and intensified financial strain."²

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