

Virtual lung cancer screening is just as effective as in-person screening

Novel approach preserved access to lung cancer screening during the COVID-19 pandemic, especially for one hospital's largely African American patient population, and could be used to increase future access to screening

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Key takeaways

- Telemedicine screening preserved access to lung cancer screening during the COVID-19 pandemic for a safety net hospital's large African American patient population.
- Despite the opportunity to be screened for lung cancer remotely through telemedicine, lung cancer screenings were down 75 percent during the pandemic.
- Not only should telemedicine lung cancer screening remain a viable alternative even after the pandemic to continue lung cancer screenings, but it may also be effective for other types of cancer screenings too.

CHICAGO: A novel telemedicine lung cancer screening effort during the COVID-19 pandemic shows that virtual single-visit screenings are just as effective as single-visit screenings done in person at the hospital, according to a study presented at the American College of Surgeons (ACS) Virtual Clinical Congress 2021.

The study of virtual lung cancer screenings (LCS) was performed at Temple University Hospital, Philadelphia, which has a large African American patient population. African Americans face disparities in care, especially for lung cancer. They are less likely to be screened and treated for lung cancer and more likely to die from it, compared with the general population, explained Jessica S. Magarinos, MD, a general surgery resident at Temple University Hospital and first author of the study. Although the authors hypothesized that LCS disparities would be exacerbated during COVID-19, this was not the case, she said.

"Our study shows that telemedicine screenings were able to reach the African American population in a safety net hospital," Dr. Magarinos reported.

More people need to be screened for lung cancer

More people die of lung cancer every year than from any other type of cancer. Although lung cancer can be successfully treated if caught early enough, only about 3-to-6 percent of the population eligible for LCS get screened, said Cherie P. Erkmen, MD, FACS, a thoracic surgeon at Temple University Hospital and the principal investigator for the retrospective study.

"Overall, we do a sorrowful job of getting people to undergo lung cancer screening," Dr. Erkmen said. "We can reduce preventable lung cancer death by finding novel ways of getting people screened."

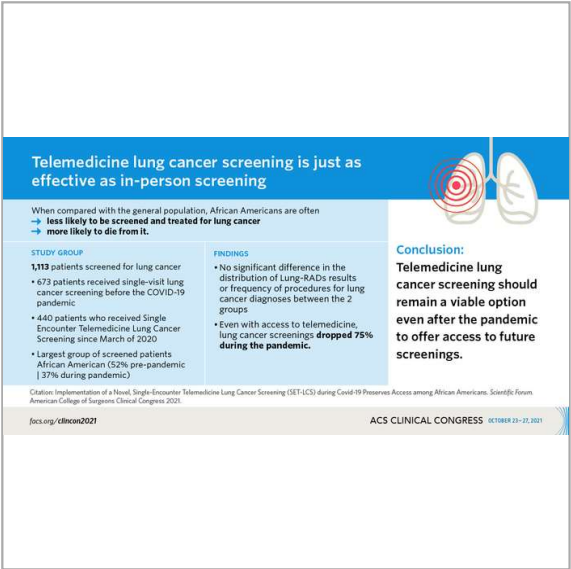


IMAGE: IMPLEMENTATION OF A NOVEL, SINGLE-ENCOUNTER TELEMEDICINE LUNG CANCER SCREENING (SET-LCS) DURING COVID-19 PRESERVES ACCESS AMONG AFRICAN AMERICANS. [view more >](#)

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With the advent of COVID-19 pandemic, many patients—acting on advice from such scientific advisory groups such as the American College of Chest Physicians (CHEST)—decided to defer getting screened for lung cancer. The authors at Temple University in Philadelphia decided to quickly pivot to offer telemedicine lung cancer screenings, which mitigates the risk of exposure to the COVID-19 virus. Earlier this year, the ACS was one of the major health care organizations that issued a call for patients to not miss cancer screenings due to COVID-19.

Study details

The researchers compared 673 patients who received single-visit lung cancer screening (LCS) patients before the COVID-19 pandemic with 440 patients who received Single Encounter Telemedicine Lung Cancer Screening (SET-LCS) since March of 2020, when the pandemic began to prompt shutdowns across the U.S.

For the LCS population, the authors retrospectively analyzed prospectively collected data from February 2021 and earlier; for both groups, they looked at race, smoking history, educational status, Lung-RADS[®]*, cancer diagnosis and stage, and adherence to follow-up using the Chi-square test and Fisher’s exact test.

Study findings

The distribution of patient race before and after COVID-19 was not significantly different; in each case, the largest group of screened patients was African American (52 percent before, 37 percent after), Dr. Magarinos said. Smoking history was significantly different; 65 percent of those undergoing screening before COVID-19 were active smokers compared with 33 percent after COVID-19.

The authors concluded there was no significant difference in the distribution of Lung-RADs results (single visit vs. telemedicine):

- Lung-RADS1, 46.4 percent vs. 37.0 percent
- Lung-RADS2, 44.0 percent vs. 50.8 percent
- Lung-RADS3, 5.3 percent vs. 7.6 percent
- Lung-RADS4, 4.2 percent vs. 4.8 percent
- Lung-RADS0, 0.1 percent vs. 0.2 percent

The authors also concluded there was no significant difference in the frequency of procedures for cancer diagnoses

- CT guided biopsy, 0.4 percent vs. 0.5 percent
- EBUS guided biopsy, 0.3 percent vs. 0.5 percent
- Surgery 2.5 percent vs. 1.1 percent
- Declined diagnostic work up, 0.3 percent vs. 0.2 percent
- Deceased prior to diagnostic work up, 0 percent vs. 0.2 percent

These multiple findings led the researchers to conclude that telemedicine screening was just as effective as in-person screenings.

Although the telemedicine approach allowed many patients to get screened for lung cancer, overall the number of people who were screened for lung cancer during the pandemic declined by 75 percent, according to the authors.

Dr. Erkmén hopes continued telemedicine lung cancer screenings after the pandemic will eliminate some barriers to getting screened and will result in more people getting screened.

The authors believe that telemedicine screening is applicable to other types of cancers, including breast cancer or colorectal cancer screening, said Dr. Magarinos.

Coauthors are Lynde K. Lutzow, MD and Grace X. Ma, PhD.

*The American College of Radiology defines Lung RADS as “a quality assurance tool designed to standardize lung cancer screening CT reporting and management recommendations, reduce confusion in lung cancer screening CT interpretations, and facilitate outcome monitoring.”

“FACS” designates that a surgeon is a Fellow of the American College of Surgeons.

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