PROJECT INFORMATION**August 2018**

How Often Should Patients with Lung Cancer Have Imaging Tests after Surgery?

Principal investigator

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Organization

The Alliance for Clinical Trials in Oncology Foundation

What was the research about?

Lung cancer is the second most common cancer in the United States. Among lung cancers, 80 to 85 percent are of the type called non-small cell lung cancer, or NSCLC. When doctors find NSCLC early, they can treat it by removing all or part of the lung. Imaging tests then look for signs of the cancer coming back or a new lung cancer forming. These tests include chest CT scan or X-ray. Guidelines vary in their advice to doctors about how often patients should get these imaging tests. Guidelines may recommend imaging tests every 3, 6, or 12 months after surgery.

The research team wanted to learn if getting imaging tests every 3, 6, or 12 months after surgery helps patients live longer. The team also wanted to see if more frequent testing helps doctors detect returning or new cancers earlier. The team compared medical records of patients who received imaging tests on different schedules.

What were the results?

Compared with getting an imaging test for NSCLC every 12 months, getting an imaging test more often—every 3 or 6 months—didn't make it more likely that patients would live longer after their surgery. More frequent imaging tests also didn't improve how early doctors detected returning or new cancers.

Who was in the study?

The research team looked at medical records for 6,350 patients with NSCLC who had lung surgery and follow-up imaging tests. Of these, 66 percent had an early stage of NSCLC. The average patient age was 66, and 52 percent were men. In addition, 89 percent

were white, 8 percent were black, and 3 percent were other races.

What did the research team do?

The research team looked at patients' medical records from 2006 to 2007 and for up to five years after patients' surgeries.

The team grouped patients' records according to when they had their first imaging test: 3, 6, or 12 months after surgery. The research team used that timing as an indicator of how often the patients would get later imaging tests. Across these three groups, the team compared how many patients were alive five years after their surgery and if doctors detected returning or new cancers.

During the study, the research team worked with other cancer researchers and a group of patients who had lung or other types of cancer. This group helped the research team design the study and analyze the results.

What were the limits of the study?

The research team grouped patients by when they received the first imaging test. But patients may have had imaging tests more or less often after the first test. When looking at how long patients lived, the team included patients who died of any cause, not only lung cancer.

The information from this study is from patients treated in 2006 to 2007. Future research could look at more recent patient records with current treatment patterns.

How can people use the results?

Patients with lung cancer and their doctors could use these results when discussing how often to get imaging tests after surgery.

To learn more about this project, visit www.pcori.org/Kozower137.