

Trial seeks improved lung-cancer screening by combining imaging and biomarkers

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National Jewish Health is seeking to refine and improve lung-cancer screening by combining a blood test with CT imaging to detect disease earlier and more effectively. The trial combines a CT chest scan and the EarlyCDT-Lung blood test to screen for cancer, and seeks to build on recent research demonstrating that CT screening alone can reduce lung-cancer mortality.

"We have learned that [CT screening](#) of high-risk patients can reduce lung-cancer deaths. But we need to enhance screening to detect a greater number of early-stage lung cancers. That is the patient's best chance of a cure," said James Jett, MD, Professor of Medicine at National Jewish Health and principal investigator on the trial. "Combining CT screening with biomarker tests, such as the EarlyCDT-Lung, may help us detect more lung cancers at earlier stage while reducing the number of biopsies or operations performed for non-cancerous abnormalities."

EarlyCDT-Lung, developed by Oncimmune, Inc., detects antibodies that a person's immune system produces in its attempt to fight cancer. It has been shown that some antibodies may be detectable as long as five years before symptoms develop.

The National [Lung Cancer Screening](#) Trial recently demonstrated that screening patients with a high risk of developing cancer can reduce lung-cancer deaths by 20 percent. However, the CT screening also produces many false alarms, or false positives, which can lead to invasive follow-up testing, such as biopsy or surgery, that ends up finding only benign

(non-cancerous) abnormalities. Researchers believe that the combination of the two tests, with their different detection strategies, may work together to make a screening method that is effective both medically and economically.

Lung cancer is the number one cause of cancer deaths in the United States, killing about 160,000 Americans every year; more than breast, colon and [prostate cancer](#) deaths combined. Early detection of lung cancer dramatically improves a patient's curative treatment options. Five-year survival for patients with advanced, stage IV disease is only 1 percent, while those whose cancer is detected early at stage I have a 70 to 80 percent of surviving five years. Five year-survival of all [lung cancer](#) in the United States is only 16 percent, because the disease is usually detected at an advanced stage when it becomes symptomatic.

"Early detection of cancer could dramatically improve survival and reduce the terrible toll it takes on people today," said Debra Dyer, MD, radiologist at National Jewish Health and co-principal investigator on the study. "We believe this study may demonstrate an effective method for doing just that."

The trial will screen 1,600 participants over 4 years. They will receive both the EarlyCDT-Lung [blood test](#) and a low-dose CT scan at no charge. Participants need to be 50-75 years of age, have a smoking history of at least 20 pack-years (equivalent to a pack a day for 20 years), and be a current or former smoker who quit fewer than 10 years ago. Those who have a history of cancer other than skin [cancer](#), serious illness that limits their life expectancy to less than 5 years, or currently use oxygen to breathe are not eligible for the study.

Provided by National Jewish Health

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