

# Lung Cancer Screening

Lung cancer is the international leading cause of cancer deaths. Tobacco use is the principal risk factor for lung cancer and accounts for at least 85% of all lung cancers. Until recently, no screening test had been shown to be effective in reducing deaths associated with this disease.

## SCREENING TESTS FOR LUNG CANCER

Screening tests detect cancer before symptoms develop, with the goal of decreasing the risk of dying of cancer. Detecting cancers earlier may provide a better chance of a cure. **Low-dose computed tomography (CT)** scans of the chest are used for lung cancer screening. Low-dose means that lower radiation doses are used compared with a regular diagnostic CT scan.

## DOES SCREENING FOR LUNG CANCER WORK?

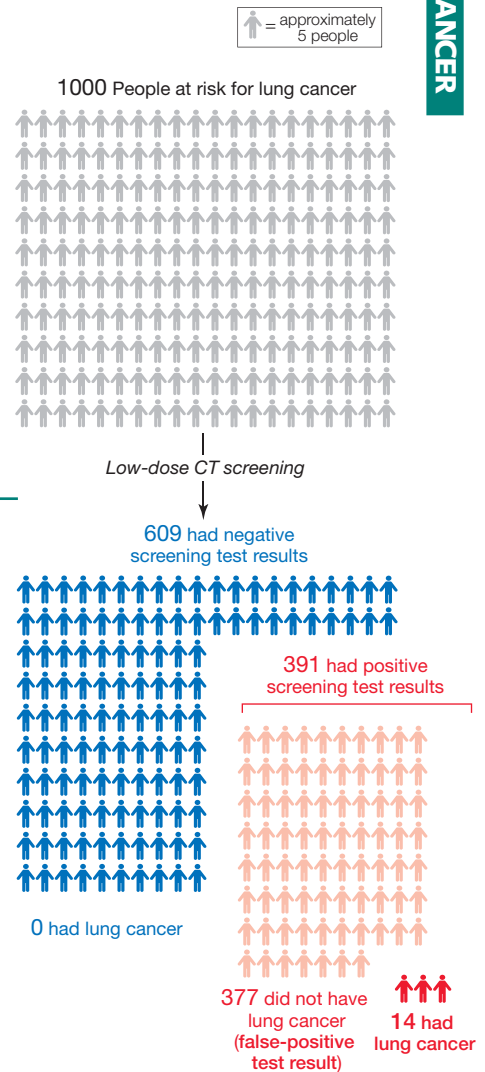
- A large study of patients at high risk of lung cancer (the National Lung Screening Trial [NLST]) showed that CT screening reduced lung cancer deaths by 20% (1.33% in those screened compared with 1.67% in those not screened).
- People at high risk of lung cancer are aged 55 years to 74 years, have at least a 30-pack-year smoking history, and are currently smokers or have quit within the past 15 years.
- In the NLST, CT screening had a high false-positive rate and used ionizing radiation. A false-positive result means that a positive screening result is later found to not represent lung cancer. In the NLST, false-positive results occurred in about 1 of every 4 baseline and first-year annual CT screening examinations.
- The NLST found that 320 people at high risk of lung cancer needed to be screened to prevent 1 death from lung cancer.
- False-positive results may cause unnecessary testing and follow-up. Most false-positive test results are resolved by performing a regular CT scan. Others lead to more invasive testing, such as biopsies or surgical intervention.
- Potential harms of CT screening include radiation exposure and the need for additional tests, some of which require invasive procedures and can create anxiety.
- The most effective frequency and duration of lung cancer screening is unknown.

## WHERE TO START

If you believe that you meet the criteria for a high risk of lung cancer, make an appointment to visit your primary care physician. She or he can conduct an evaluation and assist in helping you decide whether lung cancer screening with low-dose CT is appropriate for you.

Sources: National Cancer Institute, American Cancer Society

**Conflict of Interest Disclosures:** The author has completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none were reported.



## FOR MORE INFORMATION

- National Cancer Institute [www.cancer.gov](http://www.cancer.gov)
- American Cancer Society [www.cancer.org](http://www.cancer.org)

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