



## **National Lung Screening Trial (NLST) Initial Results: Fast Facts**

### ***INITIAL RESULTS:***

**On November 4, 2010, the NLST reported initial trial results, showing 20 percent fewer lung cancer deaths among trial participants screened with low-dose helical CT (also known as spiral CT) compared to those who got screened with chest X-rays.**

- An ancillary finding, which was not the main endpoint of the trial's design, showed that all-cause mortality (deaths due to any factor, including lung cancer) was 7 percent lower in those screened with low-dose helical CT. A substantial portion of this lower rate was attributable to lung cancer.
- NCI's decision to announce the initial findings from the NLST was made after the trial's independent Data and Safety Monitoring Board (DSMB) notified the NCI director that the accumulated data now provide a statistically convincing answer to the study's primary question.

### ***LUNG CANCER AND SMOKING STATISTICS:***

- In 2010 in the U.S., an estimated 222,520 people (116,750 men and 105,770 women) will be diagnosed with, and 157,300 men and women will die of, cancer of the lung and bronchus.
- There are more than 94 million current and former smokers in the U.S. at high risk for lung cancer. In 2008, an estimated 20.6 percent, or 46 million U.S. adults, were current cigarette smokers. Lung cancer is the leading single cancer killer in the U.S.
- Cigarette smoking is by far the most important risk factor in the development of lung cancer. No one should start smoking. Those who smoke should quit, and those who have quit should be congratulated and should not resume. NLST sites provided local smoking cessation information to all participants who were interested in trying to quit.
- Unfortunately, lung cancer strikes some individuals who have never smoked. The results of the NLST do not answer the important questions that remain about what to do to minimize lung cancer and lung cancer deaths in non-smokers.

### ***NLST FACTS:***

- The more than 53,000 NLST participants were current or former heavy smokers, ages 55 to 74.
- People participating in the trial were screened free of charge. Costs for any diagnostic evaluation or treatment for lung cancer or other medical conditions were charged to the participants in the same way as if they were not part of the trial. In some instances, the diagnostic follow-up of participants without adequate insurance coverage was covered by the screening sites.
- Approximately 10,260 participants agreed to provide specimens of blood, urine, and sputum at each of the annual screens to establish a biorepository that will support research on molecular biomarkers of early lung cancer. All NLST participants who underwent lung cancer resection were invited to provide small samples of the resected tumors to supplement the biorepository.

### ***CT SCREENING:***

- Among the possible harms of low-dose helical CT are the cumulative effects of radiation from multiple CT scans; surgical complications in patients who prove not to have lung cancer; and risks from additional diagnostic work-ups for findings unrelated to potential lung cancer, such as liver or kidney lesions.
- Virtually all hospitals and free-standing radiology facilities in the U.S. now have a helical CT machine. These machines are routinely used for determining how advanced a cancer is after diagnosis. Some hospitals perform helical CT scans as a way to find early lung cancer in smokers and former smokers. Reimbursement for screening CT scans (as opposed to diagnostic CT scans which are done due to existing health symptoms or previous disease) is not currently covered by most insurance providers.
- The current estimated Medicare reimbursement rate for a non-contrast helical diagnostic CT of the lung is \$300, but varies by geographic location.