

## Long-Term Trial Concludes: Low-dose CT Scans Reduce Lung Cancer Deaths



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Initial results of the National Lung Screening Trial (NLST) show that former and heavy smokers screened for lung cancer with low-dose "spiral" computed tomography (CT) scans are 20 percent less likely to die of lung cancer, compared to those screened with standard chest X-rays.

The long-term study, sponsored by the National Cancer Institute (NCI), compared the effects of lung cancer screening with CT and X-ray on lung cancer mortality. The trial, started in 2002, was the largest randomised study of lung cancer screening in a high-risk population to date and was concluded last week, after the trial's independent oversight committee decided that the data had provided a statistically convincing affirmative answer to the study's primary question: Can CT screening reduce mortality associated with smoking.

The trial revealed 20 percent fewer lung cancer deaths among trial participants screened with low-dose helical CT, which gives a more complete picture of the lung, apparently catch tumors early, before they have spread. Caught early, lung cancer can be cured surgically, but it causes vague symptoms and usually is not diagnosed until it has spread. Only 15 per cent of lung cancer patients live 5 years or more.

The trial entailed the enrollment, by the American College of Radiology Imaging Network (ACRIN) and the Lung Screening Study group, of 53,456 current and former heavy smokers ages 55 to 74 into the National Lung Screening Trial (NLST) at 33 sites across the United States. The subjects remained in the trial for a 20-month period and were randomly assigned to receive three annual screens with either low-dose helical CT or a standard chest X-ray. All CT scanners were certified for use in the trial, meeting NLST protocol requirements and ACR guidelines. Participants submitted to screening tests at enrollment as well as at the end of their first and second years on the trial and were subsequently followed for up to another five years.

According to the researchers, the conclusive results of the trials could save thousand of lives. Lung cancer is the No. 1 cancer killer worldwide, killing 1.2 million people a year globally and it will kill 157,000 people in the United States alone this year, according to the American Cancer Society.

A fuller analysis of the data, with more detailed results, will be prepared for publication in a peer-reviewed journal within the next few months.

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