

Lung Cancer Detected by Screening Has a High Survival Rate

People whose cancer was detected via regular CT scans had an 81% lung cancer-specific survival rate at 20 years.

January 4, 2024 By [Sukanya Charuchandra](#)

More than 80% of people whose lung tumors were detected early through annual computed tomography (CT) screening did not die of lung cancer over the course of two decades, according to study results published in [Radiology](#).

“While screening doesn’t prevent cancers from occurring, it is an important tool in identifying lung cancers in their early stage when they can be surgically removed,” Claudia Henschke, MD, of the Icahn School of Medicine at Mount Sinai in New York City, said in a [Radiologic Society of North America press release](#). “Ultimately, anyone interested in being screened needs to know that if they are unfortunate enough to develop lung cancer, that it can be cured if found early.”

[Lung cancer](#) incidence has declined in recent years, largely due to a reduction in smoking, and mortality has fallen thanks to advances in early detection and treatment. Early-stage lung cancer often does not cause symptoms, but it can be detected with regular screening. The [current screening recommendation from the U.S. Preventive Services Task Force \(USPSTF\)](#) calls for annual low-dose CT screening for people ages 50 to 80 who have at least a 20 pack-year smoking history and either currently smoke or quit within the past 15 years. [Recently updated guidelines from the American Cancer Society](#) dropped the 15-year limit and now recommend screening for former smokers regardless of when they quit.

Henschke and her colleagues conducted a study to evaluate the likelihood of a lung cancer cure. They looked at the 20-year lung cancer-specific survival rate for people diagnosed with a first primary lung cancer through annual CT screening. Primary lung cancer originates in the lungs rather than spreading from elsewhere in the body.

The study population consisted of people in the [International Early Lung Cancer Action Program \(I-ELCAP\)](#) cohort who received annual CT scans in a lung cancer screening program. In 2006, Henschke’s team reported that screening resulted in 85% of lung cancer cases being diagnosed at Stage I, and the 10-year lung cancer-specific survival rate was 80%.

For the new analysis, the researchers included data from I-ELCAP participants enrolled between

1992 and 2022. They assessed lung cancer-specific survival at 10 and 20 years after a primary lung cancer diagnosis via annual screening.

Among 89,404 participants, 1,257 (1.4%) were diagnosed with a first primary small-cell or non-small-cell lung cancer. About 54% were men, most were white, the median age was 66 and the median smoking history was 43 pack-years. Most (81%) were diagnosed with Stage I cancer. More than three quarters (79%) underwent resection surgery, usually within a month after diagnosis. Through the end of 2022, 16.9% had died of lung cancer.

The overall 10-year lung cancer-specific survival rate was 81%, and this remained the same for those who were followed for 20 years. For those diagnosed with Stage I cancer, the 20-year lung cancer-specific survival rate reached 87%. The survival rate was lower for those with a history of heavier smoking.

“The 10-year lung cancer-specific survival of 80% reported in 2006 for I-ELCAP participants enrolled in annual low-dose CT screening and diagnosed with a first primary lung cancer has persisted, as shown by the updated 20-year lung cancer-specific survival for the expanded I-ELCAP cohort,” wrote the researchers.

“The primary outcome reported in this study was that for all these categories of lung cancers, the lung cancer-specific survival reached a plateau after 10 years of follow-up,” Philippe Grenier, MD, of Hôpital Foch in Suresnes, France, wrote in an [accompanying editorial](#). “They also confirm with real data the estimates provided by empirical demonstrations published in the literature, that is, 8 to 10 years of follow-up after diagnosis is sufficient to estimate cure rates for lung cancer.”

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