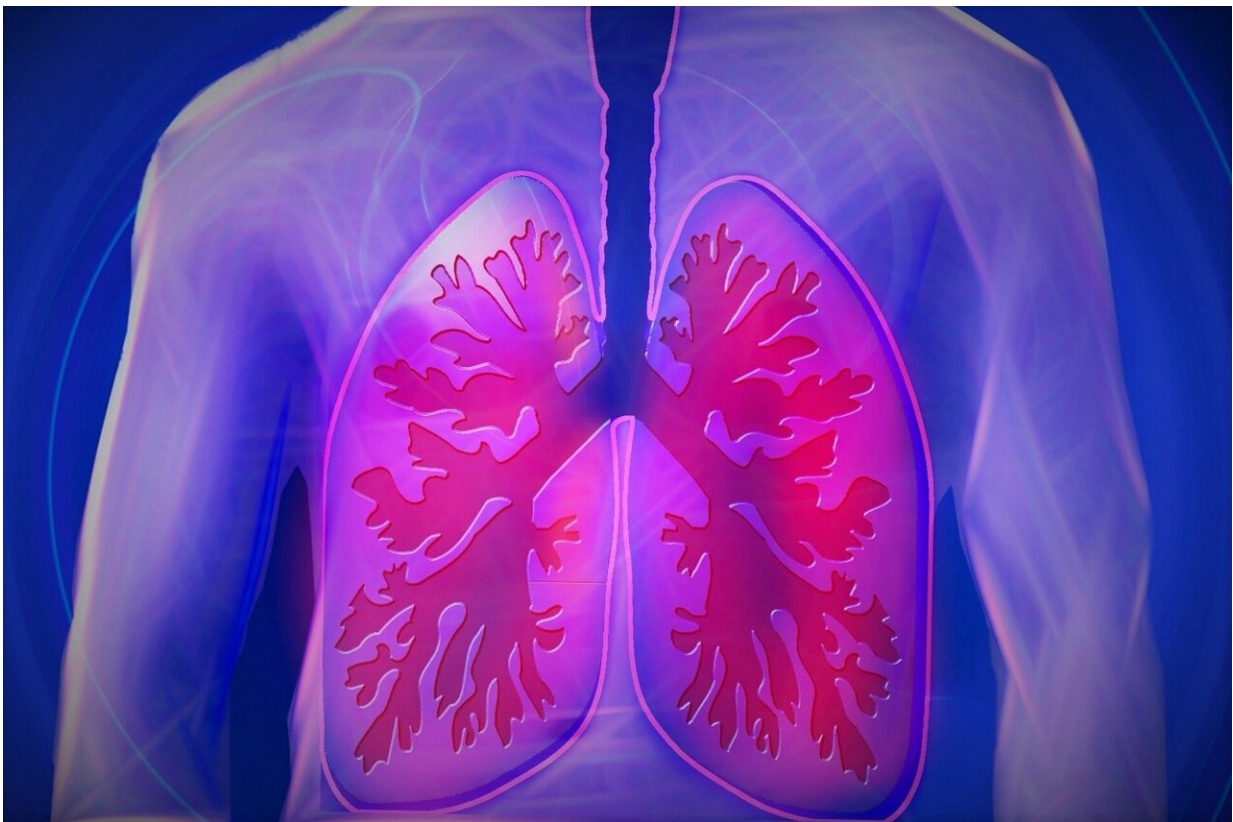


Research: Insufficient evidence to recommend low-dose CT screening in never smokers

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Lung cancer remains the leading cause of cancer-related deaths worldwide. Detecting this disease in its early stages significantly

improves survival rates, making low-dose CT screening an essential component in the fight against lung cancer.

Recent studies, particularly from Asia, have sparked a debate on whether these [screening](#) benefits extend to non-smokers and those with minimal smoking histories.

However, according to an article published in the *Journal of Thoracic Oncology*, there is currently insufficient evidence to support [lung cancer screening](#) for those who never smoked with or without a [family history](#) of lung cancer.

The article "Screening Low-Risk Individuals for Lung Cancer: The Need May Be Present, but the Evidence of Benefit Is Not," is written by a group of lung cancer researchers and public health professionals led by Gerard A. Silvestri, MD, MS, the Hillenbrand Professor of Thoracic Oncology at the Medical University of South Carolina, Charleston, S.C.

Silvestri and his colleagues note that The Early Detection Program for Lung Cancer in Taiwan revealed that the cancer detection rate for those screened with low-radiation dose computed tomography was more than two-fold higher in light- or never-smokers with a family history of lung cancer compared with high-risk persons with more than 30 pack-years exposure and meeting U.S. Preventative Services Task Force criteria.

In addition, more than 90% of the cancers detected in those with a family history were at an early stage. On the basis of those findings, the Taiwan researchers concluded that screening first-degree relatives of those with a family history of lung cancer, irrespective of smoking history, would lead to a decrease in lung cancer mortality.

However, Silvestri writes, "...the findings in this cohort and others like it represent substantial over-diagnosis and that the harms associated with

screening a population that has a low likelihood of developing lethal cancers have not been thoroughly considered."

According to the article, over-diagnosis can lead to unnecessary treatments and procedures, posing risks to individuals who might never have developed life-threatening cancer. False positives are also a significant concern, resulting in anxiety, additional tests, and invasive procedures.

"Ultimately, we believe that there is a need to more discriminately identify those low-risk individuals who may develop a lethal lung cancer as opposed to an indolent one. What cannot currently be advocated for is screening a population where the risk of harm to the many could outweigh the risk of benefit to the few," according to the article.

"We need to carefully weigh the [potential benefits](#) against the risks of harm in these populations," Dr. Silvestri stated. "Extending screening without robust evidence could lead to more harm than good."

Given these complexities, the article's authors advocate for more rigorous research, including randomized controlled trials, which have never been performed in those who have never smoked with or without a family history of lung cancer, to better understand the benefits and harms of screening in this group.

Furthermore, no randomized trials for this population have ever been undertaken in Asia, where it appears that the biology of lung cancer is different than that observed in western societies.

More information: Screening Low-Risk Individuals for Lung Cancer: The Need May Be Present, but the Evidence of Benefit Is Not, *Journal of Thoracic Oncology* (2024).

Provided by International Association for the Study of Lung Cancer

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