

Taiwan's lung cancer early detection program detects 85% of lung cancer cases at early phase

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The Taiwan National Lung Cancer Early Detection Program detected 85% of lung cancer cases at either a phase 0 or phase 1 level, demonstrating that lung cancer screening can detect lung cancer at an early enough phase to allow doctors to intervene more effectively.

The results of the program were presented by Pan-Chyr Yang, MD, Ph.D. from the National Taiwan University Hospital, at the [International Association for the Study of Lung Cancer 2023 World Conference on Lung Cancer](#) in Singapore.

Lung cancer continues to be the leading cause of cancer-related deaths both globally and in Taiwan. To combat lung cancer and improve [survival rates](#), Taiwan has taken a groundbreaking step by introducing the "Taiwan National Lung Cancer Early Detection Program." This program aims to detect lung cancer early through low-dose computed tomography (LDCT) lung cancer screening, targeting individuals with a family history of lung cancer and those with a history of heavy smoking.

Timely detection is crucial to improving lung cancer outcomes, and LDCT lung cancer screening has been proven effective in reducing [mortality rates](#), particularly among heavy smokers. However, the existing screening criteria in the United States and South Korea limit eligibility to heavy smokers only, leaving a substantial portion of the population at risk.

The Taiwan Lung Cancer Screening for Never-Smoker Trial (TALENT) provided critical insights that family history of lung cancer is a significant risk factor for developing lung cancer in Taiwan. Building on this knowledge, Taiwan launched its national [lung cancer screening](#) program in July 2022, targeting two specific eligible populations:

1. Individuals with a family history of lung cancer: Specifically, men aged between 50 and 74 years and women aged between 45 and 74 years, whose parents, children, or siblings have been diagnosed with lung cancer.
2. Individuals with a history of heavy smoking: Specifically, individuals aged between 50 and 74 years with a smoking history of 30 or more pack-years, who are willing to quit smoking or

have quit within the past 15 years.

The program utilizes a modified Lung-RADS guideline of the American College of Radiology (ACR) as the nodule management guideline and established a case management system to ensure appropriate follow-up for positive screening results. The collected data includes [risk factors](#), image interpretation results, and evaluation outcomes, which are used to facilitate timely diagnosis and treatment.

Preliminary results from July 2022 to June 2023, have been promising according to Director General, Chao-Chun Wu, from the Health Promotion Administration of Taiwan.

A total of 49,508 individuals were screened, with 28,617 (58%) having a family history of lung cancer and 18,970 (38%) being heavy smokers. Of those screened, 4,406 individuals received a positive screening result, and 531 [individuals](#) were ultimately diagnosed with lung cancer. The positive rate was 9.2%, and the lung cancer detection rate was 1.1%, with an impressive 85% of [lung cancer](#) cases diagnosed at an early stage (stage zero and one).

"The Taiwan National Lung Cancer Early Detection Program is a significant step forward in the fight against [lung cancer](#), offering hope for saving lives through early detection and improved treatment outcomes," Dr. Yang said.

Provided by International Association for the Study of Lung Cancer

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