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Early Recall Rates Fall After Repeat Lung Cancer Screenings

With multiple lung cancer screening trials happening around the world, there is growing concern about the high number of early repeat scans for findings which turn out to be non-cancerous. Results from a European trail of lung cancer screening reveals that recall rates fall after the first annual screening, and highlights the importance of having a coordinated screening program that makes baseline scans available for future comparisons.

The German Lung Cancer Screening Intervention Trial (LUSI) compared no intervention to five annual screens in a population of high-risk individuals between the ages of 50 and 69 who had a history of heavy tobacco smoking. All participants were followed for at least three years, with many followed for five years, with researchers comparing recall rate, detection rate and interval cancer rate from the first screening to subsequent rounds. The control group was tracked with yearly questionnaires and cancer registry queries.

Drop in Recall Rates At Repeat Annual Screenings

Results of the LUSI trial showed that the early repeat scan rate for suspicious findings fell by more than 80 percent with the second and subsequent annual screenings using low-dose computed tomography (LDCT). In the first round of screening, the early recall rate was around 20 percent, compared to rates of 3 to 4 percent in rounds two through four, a highly significant result. In terms of lung cancer detection, the rate was 1.1 percent in the first round, declining to an average of 0.5 percent in subsequent rounds.

“Our data indicate that the most prominent side effect ‘false positive alarm’ cannot be controlled if the choice of doctor is at the screenee's discretion at every annual screening visit. The early recall rates of rounds 2-4 would have been around 30 percent, instead of 3-4 percent, if the prior scans were not available,” the authors conclude. “Thus, a potential lung cancer screening program must be organised such that all previous images and results are available.”

Repeat Screening Improves Mortality

False positives in lung cancer screening has several problematic consequences: patient anxiety, invasive follow-up procedures and skyrocketing costs. Together, they can make widespread screening impractical. In the LUSI trial, the control and intervention groups had almost identical numbers of advanced lung cancers for the first two years. However, by the third year the number of advanced cancer cases declined in the screened group. A similar trend was observed for overall mortality.

The European results are comparable to an American trail of lung cancer screening, the National Lung Cancer Screening Trial (NLST), which found that LDCT reduced lung cancer mortality by 20 percent and overall mortality by 7 percent for high-risk individuals who undergo annual screening.

The study appears in the *Journal of Thoracic Oncology*, the official journal of the International Association for the Study of Lung Cancer. The association organises the European Lung Cancer Conference, which will be held this year in Geneva, Switzerland between 15 and 18 April.

Source and Image Credit: International Association for the Study of Lung Cancer

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