Low-Dose CT Screening for Lung Cancer Potentially Leading to Overdiagnosis

According to a recent study published by JAMA Internal Medicine, it appears that more than 18% of all lung cancers discovered by low-dose computed tomography (LDCT) seemed to correspond to an overdiagnosis.

In recent clinical trials LDCT has proven to be an effective screening tool in some patients, however several of the tumors it detects may be slow growing (indolent) or clinically insignificant. Overdiagnosis is defined as the detection of a cancer via a screening test that alternatively would not have become clinically apparent. The study background describes the potential harm of screening due to the added cost, complications and anxiety associated with the subsequent unnecessary treatment.

In order to estimate overdiagnosis Edward F. Patz Jr., M.D., of Duke University Medical Center, Durham, N.C., and his colleagues assessed data from the National Lung Screening Trial, which compared LDCT screening vs. chest radiography (CXR) among close to 54,000 people at high risk for lung cancer.

The study authors estimated that 18.5% of the over 1,000 lung cancers reported in the LDCT group during follow-up represented an overdiagnosis. Furthermore, they calculated that approximately 22.5% of non-small cell lung cancer and 78.9% of bronchioalveolar (air sacs) lung cancers detected via this method also represented an overdiagnosis.

In conclusion the authors believe that in future treatment options can be optimised, when improved biomarkers and imaging techniques will be able to predict which individuals with a diagnosis of lung cancer will have more or less aggressive degree of the disease, making a mass screening program more valuable.

Source: JAMA

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