

Low-dose CT practical for lung cancer screening

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By: Reuters Health

NEW YORK (Reuters Health), Apr 30 - Low-dose helical CT imaging can provide an early diagnosis of lung cancer and reduce the impact of false-positive findings, researchers report in the April issue of *Chest*. Clinicians can manage patients in a way that further distinguishes between benign and malignant noncalcified lung nodules.

"A prominent part of the debate about the use of CT scanning for lung cancer has been concern about false-positive tests," lead researcher Dr. Steven B. Markowitz told Reuters Health. "We now provide real data on this point and show that participants can be reassured that very few of the indeterminate nodules are, in fact, cancer." From 2000 to 2004, Dr. Markowitz of the City University of New York, Flushing, and colleagues used low-dose helical CT scanning to screen more than 4,400 former and current nuclear weapons workers who were at least 45 years of age.

They underwent an initial full chest low-dose CT scan and then CT scans at three, six, and 12 months if indeterminate lung nodules were found, nodules that did not immediately arouse suspicion of lung cancer. These scans were followed at 18 months by a full chest low-dose CT incidence scan.

More than 95% of the subjects were followed for at least 18 months. Included were 764 participants with at least one indeterminate nodule and 43 with at least one suspicious lung nodule on the initial scan. Only three indeterminate nodules were identified as malignant during subsequent follow-up.

Designation of a nodule as suspicious had a sensitivity of 84.2% and a specificity of 96.6%. Based on a prior probability of lung cancer of 2.4%, the positive predictive value was 37.2% and the negative predictive value was 99.6%.

Overall, the researchers detected 33 primary lung cancers, of which 19 were stage I.

"Chest radiologists are excellent at identifying likely cancers on the low-dose helical CT scan," continued Dr. Markowitz. "In addition, they identify nodules that are unlikely to be cancer, but still need to be watched."

"Simple CT follow-up at six months," he concluded, "will identify the few indeterminate nodules that really are cancerous."