

Blood test may aid in lung cancer diagnosis and reduce unnecessary invasive procedures

January 13 2010

Of the nearly 150,000 abnormal chest X-rays performed each year in the United States, 25 percent of patients will display only benign lung pathologies on further surgical examination.

This false-positive rate has important clinical implications in cost and side effects. A recent report in the [Annals of Internal Medicine](#) showed that CT scans, often used as a follow-up to X-rays, were linked to cancer because of their high doses of radiation.

Steven Dubinett, M.D., professor of medicine and pathology, and director of the Lung Cancer Research Program at the Jonsson Comprehensive Cancer Center at the David Geffen School of Medicine, University of California, Los Angeles, said that while findings regarding the detrimental effects of imaging studies like CT scanning are still somewhat controversial, the need for more accurate testing is not.

In a study presented at the AACR-IASLC Joint Conference on Molecular Origins of Lung Cancer, Dubinett and colleagues assembled a 40-marker panel of potential lung cancer biomarkers based on previous investigations from 90 patients with lung cancer as well as 56 control patients thought to be at high risk due to their smoking histories.

"The diagnosis of an indeterminate pulmonary lesion can be difficult, and current methods for confirming an abnormal imaging study include invasive procedures for biopsies," said Dubinett. "We anticipate that in the future, blood tests will be clinically relevant and lead to reduced use

of more invasive diagnostic measures."

Based on statistical analysis, the researchers identified a 40-biomarker panel that correctly identified patients with lung cancer 88 percent of the time, which scientists call sensitivity. Furthermore, the test correctly identified patients who did not have lung cancer 79 percent of the time, what researchers call specificity.

Dubinett stressed that these findings are preliminary and would not reach the clinic for several years, but the fact that 21 of these biomarkers in the 40-biomarker panel were significantly different between patients with stage I non-small cell [lung cancer](#) and controls suggests promise for this type of test.

Provided by American Association for Cancer Research

Citation: Blood test may aid in lung cancer diagnosis and reduce unnecessary invasive procedures (2010, January 13) retrieved 1 May 2024 from <https://medicalxpress.com/news/2010-01-blood-aid-lung-cancer-diagnosis.html>

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