

Panel of serum biomarkers may reduce number of lung biopsies needed

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A panel of serum biomarkers could help predict the level of lung cancer risk in high-risk patients, offering doctors an option before proceeding with a biopsy. Research presented in the April 2012 issue of the International Association for the Study of Lung Cancer's (IASLC) *Journal of Thoracic Oncology* shows that a panel of 10 serum protein biomarkers could help in the lung cancer diagnosis. The biomarkers include: prolactin, transthyretin, thrombospondin-1, E-selectin, C-C motif chemokine 5, macrophage migration inhibitory factor, plasminogen activator inhibitor-1, receptor tyrosine-protein kinase erbB-2, Cyfra 21.1 and serum amyloid A. Further work is necessary to validate these exciting results.

In June, the National Lung Screening Trial showed that lung cancer deaths fell by 20 percent and all-cause mortality fell by 7 percent when heavy smokers were screened regularly using low-dose spiral computed tomography (CT) compared with standard chest x-ray. The problem is that often these screenings can present false positive results.

According to the study, "about 20 percent of the 1-2 cm nodules that are concerning enough to be considered for biopsy are actually malignant. Given the substantial risks of invasive diagnostic thoracic procedures, unselective biopsy of every person with a small nodule is clinically unacceptable."

The researchers conclude that these biomarkers have potential to aid in the early detection of lung cancer by adding to the information gathered

by CT screening. The analysis was carried out from patients enrolled in the Pittsburgh Lung Screening Study, which is funded by the [National Cancer Institute](#) Specialized Program of Research Excellence (SPORE) in Lung Cancer.

The lead author of this work is Dr. William Bigbee and IASLC member co-authors include Dr. David Wilson, Dr. Jill Siegfried and Dr. Sanja Dacic.

Provided by International Association for the Study of Lung Cancer

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