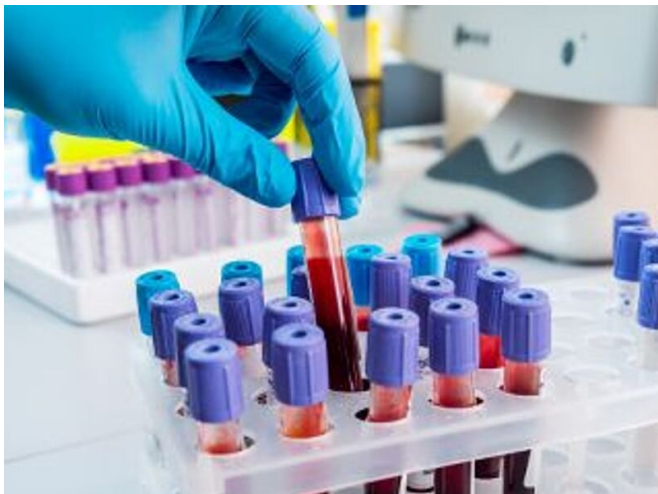


Aberrant lipid metabolism identified in early-stage lung cancer

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achieved 100 percent specificity. The assay yielded more than 90 percent sensitivity and 92 percent specificity in a hospital-based lung cancer screening cohort of 1,036 participants examined by low-dose computed tomography and in a prospective clinical cohort of 109 participants. The differential expression of selected lipids in early-stage lung cancer tissues in situ was confirmed by matrix-assisted [laser desorption/ionization MS](#) imaging.

"This study demonstrates the potential application of Lung Cancer Artificial Intelligence Detector v2.0 for lipidomics-based large-scale population screening, in particular for populations with high risk of [lung cancer](#)," the authors write.

More information: [Abstract/Full Text](#) ([subscription or payment may be required](#))

(HealthDay)—A plasma assay that detects dysregulated lipids has potential as a screening method for early-stage lung cancer, according to a study published in the Feb. 2 issue of *Science Translational Medicine*.

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Guangxi Wang, from the Peking University Health Science Center in Beijing, and colleagues performed single-cell RNA sequencing of different early-stage lung cancers in an effort to improve early detection. Noting that [lipid metabolism](#) was broadly dysregulated in different cell types in early-stage lung cancers, with glycerophospholipid metabolism the most altered lipid metabolism-related pathway, lipidomics was conducted in an exploratory cohort of 311 participants.

The researchers identified nine lipids as the features most important for early-stage cancer detection. A liquid chromatography-mass spectrometry (MS)-based targeted assay was developed using these nine features. On an independent validation cohort, this target assay

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