

# Novel prediagnostic biomarker ID'd for non-small-cell lung CA

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(HealthDay)—Diacetylspermine is a novel prediagnostic serum biomarker for non-small-cell lung cancer (NSCLC), according to a study published online Aug. 17 in the *Journal of Clinical Oncology*.

William R. Wikoff, Ph.D., from the University of California in Davis, and colleagues used an untargeted metabolomics approach to identify biomarker candidates using prediagnostic [serum](#) samples from the Beta-Carotene and Retinol Efficacy Trial (CARET) study. A liquid chromatography/mass spectrometry hydrophilic interaction method designed to profile a wide range metabolites was applied to CARET samples from 100 patients who subsequently developed NSCLC and 199 matched controls. Based on the results from the discovery set, a metabolite identified as  $N^1, N^{12}$ -diacetylspermine (DAS) and the previously established protein biomarker, pro-surfactant protein B (pro-SFTPB), were validated in a set of sera from 108 patients with NSCLC

and 216 matched controls.

The researchers found that in the discovery set, serum DAS was elevated 1.9-fold, demonstrating significant specificity and sensitivity for samples collected up to six months before NSCLC diagnosis. In both the discovery and validation sets, DAS significantly complemented [performance](#) of pro-SFTPb, with a combined area under the curve in the validation set of 0.808 (P

"DAS is a novel serum metabolite with significant performance in prediagnostic NSCLC and has additive performance with pro-SFTPb," the authors write.

**More information:** [Abstract](#)  
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