

Blood protein in lung cancer could improve diagnosis and treatment

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Scientists are reporting discovery of a protein in the blood of lung cancer patients that could be used in a test for the disease — difficult to diagnose in its earliest and most treatable stages — and to develop drugs that stop lung cancer from spreading. Their study appears in ACS's *Journal of Proteome Research*.

In the report, Je-Yoel Cho and colleagues note that [lung cancer](#) is the leading cause of cancer deaths worldwide. Lung cancer is so deadly because of its tendency to spread — or metastasize — to distant sites in the body, such as the liver or the brain. Early detection could improve survival rates, but it is very difficult to detect lung cancer at early stages with today's technology. To find a better diagnostic tool, the researchers studied the proteins in the blood of lung cancer patients in search of red flags that could signal the disease's presence. They focused on adenocarcinoma, which accounts for 1 in 3 cases and is the most rapidly increasing form of lung cancer in women.

Cho and colleagues found elevated levels of a [protein](#) called serum amyloid A (SAA) in the blood and lung tissue of lung adenocarcinoma patients, compared to healthy people. Their work showed that high amounts of SAA were unique to lung cancers (compared with other lung diseases or other cancers) and that the protein was involved in metastasis of cancer cells from the original tumor site. The researchers say that the protein could be used as a diagnostic marker for lung cancer and as a target for developing drugs that stop metastasis.

More information: "Identification and Validation of SAA as a Potential Lung Cancer Biomarker and its Involvement in Metastatic Pathogenesis of Lung Cancer" *Journal of Proteome Research*.

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