New target identified for squamous cell lung cancer

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Scientists at the Dana Farber Cancer Institute have identified a mutation in the DDR2 gene that may indicate which patients with squamous cell lung cancer will respond to dasatinib.

The findings are published in Cancer Discovery, the newest journal of the American Association for Cancer Research, debuting here at the AACR 102nd Annual Meeting 2011, from April 2-6.

According to lead researcher Matthew Meyerson, M.D., Ph.D., professor of pathology at the Dana Farber Cancer Institute, there are currently no targeted therapies for squamous cell lung cancer, which affects approximately 50,000 people annually in the United States. Meyerson estimates that DDR2 mutations would be present in lung cancers from about one to two thousand people a year in the United States.

"As a percentage of the millions of people who get cancer each year it is small, but cancer therapy is going more in the direction of personalized medicine as we learn more and more about the complicated biology of each tumor," he said.

Using standard genetic sequencing techniques, Meyerson and colleagues identified mutations in the DDR2 kinase gene in about 3 percent of squamous cell lung cancers and cell lines. Furthermore, they found that tumor cells with these DDR2 mutations responded to treatment with dasatinib. A patient whose cancer carried a DDR2 mutation also showed a clinical response to dasatinib.

"Dasatinib is an existing therapy for chronic myelogenous leukemia with a long history and a strong safety profile," said Meyerson. "The results of this study clearly encourage a clinical trial to test dasatinib in the setting of squamous cell lung cancer."

Provided by American Association for Cancer Research