

# Personalized molecular therapy shows promising results for people with advanced lung cancer

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A new study shows that a combination of epigenetic therapy and molecular targeted therapy has promising results at combating advanced lung cancer according to research presented at the 2010 Chicago Multidisciplinary Symposium in Thoracic Oncology. This symposium is co-sponsored by the American Society for Radiation Oncology (ASTRO), the American Society of Clinical Oncology (ASCO), the International Association for the Study of Lung Cancer (ISLAC) and The University of Chicago.

Epigenetics therapy is an approach designed to control the expression of good and bad genes that influence the development of resistance to targeted therapies. This study, called ENCORE 401, was designed to evaluate whether entinostat, a novel epigenetic therapy that is given orally, can be used to delay or overcome the resistance to [erlotinib](#) in patients with advanced [lung cancer](#).

This study was a randomized phase II placebo controlled clinical trial in advanced lung cancer examining whether entinostat in combination with erlotinib is better than erlotinib alone and whether it can be safely tolerated by patients. As part of the clinical trial, patients underwent an analysis of various tissue and blood biomarkers. The results demonstrated that patients with elevated E-cadherin (a [molecular marker](#)) who were administered entinostat in combination with erlotinib had a significantly improved overall survival as compared to patients treated

with erlotinib alone. Approximately 40 percent of non-small cell lung cancer patients have elevated E-cadherin.

These findings highlight the importance of patient selection in defining treatment approaches in lung cancer and, if confirmed, could provide benefit to patients who have or develop resistance to current molecular targeted therapy.

"The results of ENCORE 401 identified a subset of lung cancer patients for whom the combination of epigenetic therapy, entinostat and molecular targeted therapy, erlotinib, achieved promising results," Robert M. Jotte, M.D., Ph.D., principal investigator of the study, director of thoracic oncology at Rocky Mountain Cancer Center Midtown Division in Denver and developmental co-chair of US Oncology Lung Committee, said. "These results support the ongoing drive toward using personalized health care to dictate therapy in an attempt to optimize outcomes. A follow-up study to advance the combination toward registration is planned."

Provided by American Society for Radiation Oncology

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