# New strategy to treat aggressive lung cancer

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Research conducted by a team of Norton Thoracic Institute scientists on a novel therapeutic avenue for an aggressive and difficult to treat subgroup of lung cancer was published in the August 15, 2017 issue of *Cancer Research*. The research was led by assistant professors at Norton Thoracic Institute, Timothy Whitsett, PhD, and Landon Inge, PhD.

The featured research discovers that lung cancer patients whose tumors harbor specific genomic mutations are more likely to benefit from a novel drug currently in clinical trials.

Tumors harboring mutations in KRAS and/or LKB1 are common among lung adenocarcinomas—the most common histotype of lung cancer which remains the leading cause of cancer-related mortality. These mutations are associated with aggressive disease progression and poor patient prognosis, and have been historically difficult to treat.

"In this study, we highlight a therapeutic strategy that may be effective in a group of lung cancer patients without rational therapeutic options," explains Dr. Whitsett.

Headquartered at Dignity Health St. Joseph's Hospital and Medical Center in downtown Phoenix and known for having the busiest lung transplant program in the United States, Norton Thoracic Institute also specializes in the evaluation, diagnosis and treatment of diseases of the lungs, chest or esophagus. A national leader in the prevention, early diagnosis, and treatment of thoracic cancers, including lung, esophageal, and gastric cancer, the Institute is dedicated to making translational

discoveries through scientific research that lead to the eradication of lung and esophageal diseases.

Dr. Inge adds, "We hope these finding spur new explorations for targeting this molecular subgroup, leading to better clinical trial design in the near future."

The Norton research labs of Drs. Whitsett and Inge came to their results by exploring the use of AZD1775, a WEE1 kinase inhibitor employing in vivo models that faithfully recapitulate patient-relevant subgroups of lung cancer. The research was funded in part by generous gifts from philanthropists John and Doris Norton and the St. Joseph's Foundation.

The eventual goal for this research is to continue to identify those patients who will most likely benefit from the use of this type of therapy, and to inform future clinical trial design by selecting lung cancer patients with difficult to treat molecular alterations.

Provided by St. Joseph's Hospital and Medical Center