Study: Inexpensive method detects ALK rearrangement in lung cancer patients

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A relatively simple and inexpensive method may be used to determine whether a lung cancer patient is a candidate for crizotinib therapy, according to research published in the August issue of the *Journal of Thoracic Oncology*, the official monthly journal of the International Association for the Study of Lung Cancer (IASLC).

Lung cancer patients with ALK rearrangement have been found to respond well to crizotinib, an ALK inhibitor currently in clinical trials. Fluorescence in situ hybridization (FISH) has been considered the gold standard method for detecting ALK rearrangement.

"However, FISH requires a fluorescence microscope, and the signals are labile and rapidly fade over time," researchers wrote in the study, led by Jin-Haeng Chung, M.D., Ph.D., of Seoul National University Bundang Hospital in South Korea.

Researchers compared ALK rearrangement assessments using FISH and a newly developed method called chromogenic in situ hybridization (CISH). CISH allows detection of gene copy status using a conventional peroxidase-base reaction and standard bright field light microscope.

Out of a total 465 non-small cell lung cancer samples, ALK rearrangement was assessed using CISH in 449 patients (96.6%) and ALK rearrangement was identified in 18 patients (4%). Using FISH, ALK rearrangement was assessed in 453 patients (97.4%); ALK rearrangement was identified in 19 patients (4.2%). Among these cases,

443 cases (95.3%) had results matching the corresponding FISH results: 17 rearranged, 425 wild types, and 1 discordant case.

"There was high concordance in the assessment of ALK gene rearrangement between FISH and CISH techniques," researchers wrote.

Provided by International Association for the Study of Lung Cancer