

Study shows immunohistochemistry is reliable screening tool for ALK rearrangement

December 15 2012

Favorable results have led to crizotinib gaining approval for the treatment of advanced stage ALK-positive non-small cell lung cancer (NSCLC) in Japan, the United States, Canada, and several other countries in Europe and Asia. Now, the identification of an effective therapy for ALK-positive NSCLC places great emphasis on rapid, accurate, and cost-effective way to find patients with this subtype of lung cancer. A recent study published in the January 2013 issue of the International Association for the Study of Lung Cancer's (IASLC) *Journal of Thoracic Oncology*, concludes immunohistochemistry (IHC) is a reliable screening tool for identification of ALK rearrangement.

Fluorescence in situ hybridization (FISH) is the current standard method to detect ALK rearrangement. However, FISH is not readily available as a routine method of pathology practice in most laboratories because it is time consuming and requires advanced technical and professional expertise. In contrast, IHC is relatively inexpensive, faster, and is perfectly adapted for routine practice by academics and most community hospitals.

Researchers screened 377 stage I or II [NSCLC](#) cases, diagnosed between 1978 and 2002. Tissue microarray results were available on 377 cases by IHC and 273 cases by FISH. Eleven cases were positive or possibly positive by either IHC or FISH, and three cases were positive or possibly positive by both methods.

They found, "that all cases exhibiting ALK rearrangement demonstrated adenocarcinoma histology." Their results report a sensitivity of 100 percent and high specificity with the IHC with no false-negative results. While researchers acknowledge that further study involving a larger cohort is recommended, IHC is a valid screening test.

The lead author of this work is Dr. Chris M.J. Conklin. Co-authors include IASLC members Dr. Janessa Laskin, Dr. Kenneth Craddock, Cherry Have, Dr. Christian Couture and Dr. Diana Ionescu.

Provided by International Association for the Study of Lung Cancer

Citation: Study shows immunohistochemistry is reliable screening tool for ALK rearrangement (2012, December 15) retrieved 5 May 2024 from <https://medicalxpress.com/news/2012-12-immunohistochemistry-reliable-screening-tool-alk.html>

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