

Biopsy specimen found to be reliable for evaluating DLL3 expression in small cell lung cancer

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Small cell lung cancer (SCLC) biopsy specimen was found to be reliable material for evaluating DLL3 expression; high levels of DLL3 in SCLC are correlated with poor survival trends. Dr. Li-Xu Yan of Guangdong General Hospital and Guangdong Academy of Medical Sciences in China presented her findings from this study today at the International Association for the Study of Lung Cancer (IASLC) 18th World Conference on Lung Cancer (WCLC) in Yokohama, Japan.

Rovalpituzumab tesirine is a promising DLL3-targeted antibody-drug conjugate for the treatment of high-grade pulmonary neuroendocrine carcinomas (HGNEC). Biopsies are used often in clinical practice to determine HGNEC diagnoses before treatment. Dr. Yan and her team set out to determine the reliability of the scoring system used to assess the correlation between paired biopsy and surgical specimens and HGNEC features and prognoses. They viewed this information as crucial to understanding whether DLL3 expression on small specimens could represent its expression level on the whole tumor.

Between 2006 and 2015, the researchers recruited [patients](#) with de novo HGNECs, including 43 large cell neuroendocrine carcinoma (LCNEC) and 335 SCLC patients. One group, containing all of the LCNEC patients and some of the SCLC patients, had paired biopsy and surgical specimens collected. The other group, containing the remainder of the SCLC patients, had only biopsy specimens collected. Using the anti-

DLL3 antibody, the researchers evaluated and determined individuals' DLL3 expression levels using immunohistochemical H score (HS).

The results of the study provided evidence that [biopsy](#) specimen is a reliable material for evaluating DLL3 expression. Additionally, the researchers found that high DLL3 levels in SCLCs were correlated with patients' history of smoking, TTF-1 (neuroendocrine differentiation) and poor survival trends. These results may lead to further evaluation of the scoring system for predicting DLL3-targeted therapeutic efficacy and clinical significance of DLL3 [expression](#) in HGNECs.

"Accurate diagnosis is the premise of accurate treatment," said Dr. Yan. "To study the heterogeneity of molecular biomarkers is conducive to better guiding targeted treatments."

Provided by International Association for the Study of Lung Cancer

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