Correlation between expression and significance of δ-catenin, CD31, and VEGF of non-small cell lung cancer

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ABSTRACT. We analyzed the expression and clinical significance of δ-catenin in non-small cell lung cancer (NSCLC) and investigated prognosis using human lung cancer samples. Eighty-nine NSCLC patients underwent operation between January and March 2009. There were 53 cases of squamous cell carcinoma, 31 adenocarcinoma, and 5 large cell carcinoma. δ-Catenin in NSCLC patients was detected by immunohistochemistry and analyzed in combination with the clinicopathological characteristics of lung cancer. The relationship between δ-catenin and CD31, D2-40, and vascular endothelial growth factor (VEGF) was compared by immunohistochemistry and the χ² test. δ-Catenin appeared in the cytoplasm of adjacent bronchial epithelial cells, indicating negative expression. Positive δ-catenin expression in the cytoplasm of lung cancer tissues was 66.67% (52/78), which was significantly higher than in normal lung tissues. Kaplan-Meier survival analysis suggested that the mean survival time of patients with δ-catenin-positive expression was significantly shorter than in those
with negative expression, indicating that positive expression was closely related to poor prognosis of NSCLC. δ-Catenin was highly expressed in NSCLC mainly in the cytoplasm of lung cancer tissues. δ-Catenin-positive expression may be related to poor prognosis of NSCLC. High δ-catenin expression in NSCLC was positively correlated with high CD31 and VEGF expression, but not correlated with D2-40, suggesting that δ-catenin may be related to angiogenesis and not lymphangiogenesis.

**Key words:** Angiogenesis; CD31; δ-Catenin; D2-40; Non-small cell lung cancer; Vascular endothelial growth factor