

## Expression and Significance of bag-1, bcl-2 in Non-small Cell Lung Cancer and the Correlation with Multi-drug Resistance

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
### 摘要

Background and objective bag-1, bcl-2 and bax are all apoptosis-related proteins. They play a role in the diagnosis, progress, metastasis and prognosis of tumor. The aim of the study was to investigate the expression of bag-1, bcl-2 and bax in non-small cell lung cancer, and to study the relationship between their expression levels and the clinical pathological characteristics, furthermore, to evaluate their correlation with multi-drug resistance. Methods The expressions of bag-1, bcl-2 and bax in 140 non-small cell lung cancer tissues (40 of 140 were processed neoadjuvant chemotherapy) and 15 lung benign lesion tissues were examined with SP immuno-histochemical stain. Results The positive expression rates of bag-1 and bcl-2 protein in non-small cell lung cancer were significantly higher than those in pulmonary benign lesion tissues ( $P < 0.05$ ), but the positive expression rate of bax in non-small cell lung cancer was significantly lower than that in pulmonary benign lesion tissues ( $P < 0.05$ ). The expressions of bag-1, bcl-2 and bax protein were not related to the age and sex of patients, histological classification, P-TNM stage and lymph node involvement of the cancer ( $P > 0.05$ ), but bag-1 was related to the differentiation degree of the tumor. The lower the differentiation was, the higher the levels of expression of bag-1 were. bcl-2 protein expression was highly positive correlated with the bag-1 protein expression in non-small cell lung cancer ( $r = 0.371, P < 0.01$ ), and bcl-2 protein was highly negative correlated with bax protein expression ( $r = -0.225, P < 0.01$ ). The positive expression rates of bag-1 and bcl-2 showed increasing trends from the patients without neoadjuvant therapy to those with neoadjuvant therapy, but the difference had no statistic significance ( $P > 0.05$ ). Conclusion The high expression of bag-1, bcl-2 protein and the low expression of bax protein exist in nonsmall cell lung cancer. The expression level of bag-1 protein is closely related to the differentiation degree of non-small cell lung cancer. A highly positive correlation exists between bag-1 and bcl-2 expression, and a highly negative correlation is observed between bcl-2 and bax expression. The study doesn't provide the evidence that there is a close correlation between the expression levels of bag-1, bcl-2, bax and the multi-drug resistance in non-small cell lung cancer.



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