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# The expression of ERCC1, DNA-PKcs protein and the relation to prognosis in non-small cell lung cancer

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## 摘要

Backgroud and Objective The results of many studies have proven that excision repair crosscomplementation
group 1 (ERCC1) and DNA-dependent protein kinase catalytic subunit(DNA-PKcs),as the key genes in the repairment of DNA damage, are related to carcinogenesis and tumor progression. The aim of this study is to investigate the expression and clinical significance of ERCC1 and DNA-PKcs in patients with NSCLC,and analyze the relationship between their expression and the prognosis. Methods Paraffin-embedded operative specimens from 116 patients with non-small cell lung cancer and 12 normal lung tissues adjacent to the cancer tissues were collected, with which tissue microarray was constructed. The expression of ERCC1 and DNA-PKcs protein were detected with immunohistochemsitry. Results The positive rate of ERCC1 and DNA-PKcs expression in NSCLC was 40.5% and 75% ,respectively.There were no significant difference between ERCC1 expresson in cancer tissue and normal tissue (P =0.106).The expression of DNA-PKcs in NSCLC was significantly higher than that in normal lung tissue adjacent to the cancer tissues(?2=17.467, P =0.000). The expression of ERCC1 was closely related to differentiation of the cancer(?2=5.160, P =0.023), tumor size(?2=7.068, P =0.008) and TNM stage(?2=4.033, P =0.045), but not to age and sex of the patients, smoke, lymph node metastasis, tumors histological type. The results showed that the patients with high expression of ERCC1 seemed to have better prognosis. The five-year survival rate of NSCLC patients with ERCC1 positive expression were higher than those with ERCC1 negative expression(P =0.014).The expression of DNA-PKcs was not related to all clinical characteristics and prognosis of NSCLC patients(P >0.05). Multivariate analysis showed that TNM stage rather than ERCC1 and DNA-PKcs was the independent predictor for the prognosis for survival (P =0.000). Conclusion The expression of ERCC1 may be associated with better survival , which may be useful to predict prognosis of NSCLC patients.

## 关键词

Lung neoplasms; Tissue microarray; Prognosis; ERCC1 protein; DNA-PKcs protein

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