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The Influence of Survival Analysis on Runx3 Gene Expression in the Primary Tumor of Patients Suffering from Stomach Carcinoma

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ABSTRACT

Background: Runt domain transcription factor 3 (Runx3) is a putative tumor suppressor in human neoplasia. Previous researches suggested that a lack of Runx3 function contributed to human gastric carcinogenesis, however, it is not clear whether Runx3 is closely associated with clinicopathological features of primary stomach tumor and survival rate of patients. Aims: The article is to investigate the influence of survival analysis on Runx3 gene expression in the primary stomach tumor. Methods: Runx3 mRNA expression was detected in 108 primary gastric tumors and non-tumor tissue by semiquantitative reverse transcription-PCR (RT-PCR). All patients were followed up more than five years after radical gastrectomy. Results: There was a loss or substantial decrease of Runx3 mRNA expression in 108 cases of gastric tumors as compared with that in normal gastric mucosa ($p < 0.001$). According to the gray scale median of Runx3 mRNA in primary tumors, the 108 cases were separated into two groups: The lower expressing group ($\leqslant 0.403$) and the over one (>0.403). By comparing analysis of clinical information between two groups, it was found that the lower expression of Runx3 mRNA in the primary tumor was not only associated with the poor clinicopathological factors, but also the inferior survival duration and cumulative survival rate of patients ($p < 0.05$). Conclusions: These results strongly suggest that Runx3 was an independent prognostic factor and a potential therapeutic target for gastric cancer.

KEYWORDS

Stomach Neoplasms; Runx3; Prognosis

Cite this paper

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