

Expression of Foxp3 and prognostic significance in colorectal cancer

Yunxuan Wang, Xiuwei Sun, Zhanjun Feng, Yao Qu (Harbin Medical University Cancer Hospital), Yunzu Gai (Guangzhou First People's Hospital)

BACKGROUND: Colorectal cancer is a malignant cancer with high invasion. In 2008 there were more than 1.2 billion new cases that were confirmed diagnosis in the world, and the mortality rate reached up to 8% . In China, the incidence and mortality rate of colorectal cancer was gradually increasing and higher than other cancers in the world . The occurrence and prognosis of colorectal cancer had related to immunoreaction. Therefore, many studies about colorectal cancer focused on the immunologic mechanism.

HYPOTHESIS: This study aimed to investigate the expression of Foxp3 between tumor specimens and normal tissues in patients with colorectal cancer and discuss the relationship between Foxp3 and pathological factors and prognosis.

METHODS: Immunohistochemistry assay was used to detect the expression of Foxp3 in 173 cases with colorectal cancer. The relationship between clinical pathological factors and prognosis of colorectal cancer was analyzed.

RESULTS: The positive rate of Foxp3 expression in tumor cells was 89.7%. There were no significant differences between sex, age, primary cancer sites and distal metastasis of patients with colorectal cancer and the expression of Foxp3. Additionally, the depth of invasion, the expression of Foxp3 was negative correlation to lymph node metastasis and pathological TNM (pTNM) stage in tumor cells ($P < 0.05$), but positive correlation to the degree of differentiation ($P < 0.01$). High expression of Foxp3 was much more in tumor cells than that in tumor surrounding tissue ($P = 0.03$). High expression of Foxp3 could delay the overall survival (OS) and disease free survival (DFS) ($P \leq 0.001$).