

A novel marker of colorectal carcinoma

May 22 2009

The colorectal cancer is thought to be resulted from a combination of environmental factors, diet, lifestyle, chronic inflammation and accumulation of specific genetic alterations. The pathogenesis and development of colorectal cancer involve multi-genes and multi-steps. TSPAN1 (GenBank Accession No. AF065388) is a new member of TM4SF located at chromosome 1 p34.1. It encodes a 241 amino acid protein. TSPAN1 was reported as a tumor-related gene recently.

A research team led by Dr Jian-Wei Zhu from Nantong University, China, investigated the association between TSPAN1 and human colorectal adenocarcinoma. Their study will be published on May 14, 2009 in the [World Journal of Gastroenterology](#)

In this study, total RNA was extracted in 20 human adenocarcinoma tissues for TSPAN1 mRNA assay by RT-PCR. Eighty-eight specimens of human colorectal adenocarcinoma were surgically removed. TSPAN1 protein levels in cancer tissues were determined by immunohistochemistry using a polyclonal antibody against self-prepared TSPAN1. The correlation between TSPAN1 expression and the clinicopathological factors and the overall survival rate was analyzed by univariate and multivariate assay.

By RT-PCR assay, it was shown that TSPAN1 mRNA was detected in 90.0% (18/20) of cancerous tissue. The light density of TSPAN1 mRNA expression levels was 0.89 ± 0.30 in adenocarcinoma by gel-image system. TSPAN1 protein expression was detected in 78.41 % (69/88) and weakly expressed in 40% normal colorectal tissues by

immunohistochemistry. There were significant differences between colorectal adenocarcinoma and normal control epithelium ($P < 0.05$). tspan1 protein expression in colorectal cancerous tissue was significantly correlated with the histological grade, cell expression pcna, lymph nodal metastasis and tnm staging of the disease. patients with tspan1 protein over expression had a significantly shorter survival period than that in patients with tspan1 protein negative or weak expression, respectively (p

Citation: A novel marker of colorectal carcinoma (2009, May 22) retrieved 23 April 2024 from <https://medicalxpress.com/news/2009-05-marker-colorectal-carcinoma.html>

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