



Expression of EpCAM and Wnt/ β -catenin in human colon cancer

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ABSTRACT. The aims of this study were to explore the correlation between the expression of EpCAM and the Wnt/ β -catenin pathway in human colon cancer and its clinical significance for the evaluation of cancer prognosis. Samples from colon cancer, para-carcinoma, or benign intestinal tissue from individual patients (50) and from normal intestinal mucosal tissues (20) were obtained from the Pathology Department of the Shandong Province Binzhou People's Hospital (Shandong, China). Immunohistochemistry was used to detect the expression levels of EpCAM and β -catenin proteins in these tissues, and the prognoses of the patients from whom the samples were derived were determined on follow-up examination. The corresponding *in vitro* mechanistic siRNA experiments were subsequently performed in the human colon cancer cell line HCT116 to observe the regulatory effects of silencing EpCAM expression on the Wnt/ β -catenin pathway. From these analyses, we determined that the expression levels of EpCAM and β -catenin were higher in cancer tissues compared with other tissues

from the same patient, and that the expression of EpCAM and Wnt/ β -catenin in colon cancers were positively correlated. The prognostic analysis showed an inverse correlation between EpCAM and Wnt/ β -catenin expression and patient prognosis. A further examination of cellular mechanisms confirmed that the silencing of EpCAM led to decreased expression of Wnt/ β -catenin, and thus reduced proliferation and increased the apoptosis ratio in the cells. These results suggest that suppression of EpCAM might be a new approach for treating colon cancer.

Key words: EpCAM; Wnt/ β -catenin; Colon cancer