Overexpression of CAS8 Enhances Necroptosis and Metastasis in Iranian Sporadic Colorectal Cancer

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Abstract: Context: Colorectal cancer is the second type of cancer-related mortality globally. Expression of cas8 (caspase 8) is closely connected to growth and metastasis of colorectal cancer.Cas8/Rip1 plays a vital role in the apoptosis pathway and resistance to chemotherapy. The aim of the present study is to investigate the pattern of gene expression in colorectal cancer and compare the differences using Real-Time PCR to find a potential biomarker candidate for colorectal cancer. Methodology: This study conducted real-time PCR to evaluate gene expression of Cas8 in colorectal cancer patients. The gene-specific primer sequences exon-exon junction was designed by OLIGO7 software for the expression of the gene under investigation. Forty-six patient samples without any chemotherapy were selected, including tumoral tissue and adjacent normal tissue samples. The age of the patients was 50 and the size of the tumors was 5.5 cm. The categories were before and after age 50. Findings: Here, we found that Caspase 8 was overexpressed in CRC tissues compared to corresponding adjacent colon tissues (Cas8: 5.2 vs. 1 ratio); high expression of Cas8 was associated with poor overall survival and independent risk factors for the prognosis of CRC patients. Conclusion: In conclusion, our study pioneered the reporting of high Casp8 expression as a predictor of poor prognosis and chemical resistance in CRC patients.Cas8 overexpression suppressed Cas 8 / Rip1-dependent apoptosis and activated the proliferation of tumor cells by activating necroptosis. The necroptosis pathway has also emerged as a new approach to anti-tumor in cancer treatment.

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