

GST Gene Variants in Synchronous Colorectal Cancers and Synchronous Association of Colorectal Cancers with Other Cancers

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Abstract

Background: the present study evaluates genetic polymorphisms of three glutathione S-transferases (GSTM1, GSTT1 and GSTP1) in patients with synchronous malignant colo-rectal tumors and the association of synchronous colorectal cancers with other cancers.

Material and Methods: from 420 patients with a colorectal cancer admitted to our hospital between 2005-2012, we selected for genetic analysis 20 patients with multiple synchronous malignant colorectal tumors and 9 patients with a synchronous association of colorectal cancer with another cancer. We searched for GST genotypes, comparing the results with controls.

Results: the genetic analysis was possible only in 19 patients with colorectal synchronous cancers and 9 patients with a synchronous association of colorectal cancer with another cancer; we found a statistically significant difference for null GSTM1 genotype frequency between these patients and the control group; we found no differences regarding the frequency of null GSTT1 genotype and Ile105Val polymorphism of GSTP1 in patients with synchronous cancers compared with the control group.

Conclusion: in our study we found the null GSTM1 genotype as a risk factor for multiple colorectal synchronous cancers and for an association of synchronous colorectal with other cancers.

Key words: colorectal cancers, synchronous lesions, other cancers, GSTM1, GSTT1, GSTP1

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