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# Status of GSTP1 homozygous variant allele (Val/Val) genotype and susceptibility to colorectal cancer in Saudi Arabia

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The key role of glutathione S-transferase isoenzymes family (GSTs) is detoxifying chemicals which have poisoning and carcinogenic hazardous properties. Expression changes or structure modifications in GSTs lead to insufficient detoxification of carcinogenic chemicals and subsequently contributes to development of cancer. GSTP1, a member of this enzyme family, is a nominee for participation in susceptibility to the malignant tumor of the colon and rectum. GSTP1 gene polymorphism causes modification in the catalytic efficacy of the enzyme variants. Our study tested the potential influence of GSTP1 polymorphism (Ile105Val) on liability to develop colorectal malignant tumors.

Eighty three tissue samples of formerly diagnosed colorectal carcinoma were examined, in addition to 35 non-malignant colon tissues. DNA was isolated and amplified. GSTP1 polymorphism was determined by DNA sequencing using 3500 Genetic Analyzer, Applied Biosystems.

GSTP1 polymorphism was not linked with the risk of developing colorectal malignant tumor cases stratified by sex, age, grade and site of tumor. No statistical differences between colorectal cancer cases and control group were found for the GSTP1 genotypes. GSTP1 homozygous mutant allele (Val/Val) genotype incidence was three times greater in cases of colorectal cancer than control cases. Although this difference is not significant statistically, it may be of clinical importance that it is possible to enhance the hazard of developing colorectal cancer in Saudi Arabia.

## Biography

Marwan A. Bakarman has completed his MBBS at the age of 26 years from King Abdulaziz University and postdoctoral studies from King Fisal University School of Medicine. He is the Chairman of Family & Community medicine dep., Rabigh College of Medicine. He has published more than 10 papers in reputed journals and has been serving as an editorial board member of repute.

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