

GSTP1 Ile105Val polymorphism in astrocytomas and glioblastomas

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ABSTRACT. Glutathione S-transferases (GSTs) constitute a superfamily of ubiquitous multifunctional enzymes that are involved in the cellular detoxification of a large number of endogenous and exogenous chemical agents that have electrophilic functional groups. People who have deficiencies in this family of genes are at increased risk of developing some types of tumors. We examined GSTP1 Ile105Val polymorphism using PCR-RFLP in 80 astrocytoma and glioblastoma samples. Patients who had the Val allele of the GSTP1 Ile105Val polymorphism had an increased risk of tumor development (odds ratio = 8.60; 95% confidence interval = 4.74-17.87; $P < 0.001$). Overall survival of patients did not differ significantly. We suggest that GSTP1 Ile105Val polymorphisms are involved in susceptibility to developing astrocytomas and glioblastomas.

Key words: Polymorphism; GSTP1; Astrocytoma; Glioblastoma