



Role of *TGFBI* polymorphism in the development of metastatic brain tumors in non-small cell lung cancer patients

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ABSTRACT. We conducted a case-control study to investigate the role of 3 single-nucleotide polymorphisms of the gene encoding transforming growth factor- β 1 (*TGFBI*) in the development of metastatic brain tumors in non-small cell lung cancer patients. The polymorphisms in *TGFBI* rs4803455, rs1800469, and rs1800470 were evaluated by polymerase chain reaction-restriction fragment length polymorphism. Odds ratios and their corresponding 95% confidence intervals were used to assess the influence of *TGFBI* rs4803455, rs1800469, and rs1800470 on metastatic brain tumors. We found that cases were more likely to have a later disease stage when compared with control subjects, without brain metastasis. Individuals carrying the *TGFBI* rs1800469 TT and CT+TT genotypes had an increased risk of developing brain metastasis compared with the rs1800469 CC genotype. Moreover, a significant interaction was observed between the rs1800469 polymorphism and disease stage. However, no significant association between polymorphisms rs4803455 and rs1800470 and the risk of developing brain metastasis were observed. We found that the *TGFBI* rs1800469 polymorphism may be predictive biomarker for the risk of developing brain metastasis in non-small cell

lung cancer patients.

Key words: Brain metastasis; Non-small cell lung cancer; Polymorphism;
TGFBI