

***XRCC1* Gene Polymorphisms and Risk of Lung Cancer in Turkish Patients**

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ABSTRACT Polymorphisms in the X-ray repair cross complementing 1 (*XRCC1*) gene have been found to be associated with susceptibility to various types of cancers. We investigated the association between the *XRCC1* gene Arg399Gln polymorphism and the susceptibility to lung cancer in Turkish patients. To determine the association of this polymorphism with the risk of lung cancer in Turkish patients, a hospital-based case-control study was designed, involving 67 patients with lung cancer and 60 control subjects with no cancer history who were matched for age and gender. *XRCC1* genotypes (Arg/Arg, Arg/Gln, and Gln/Gln) were determined using polymerase chain reaction–restriction fragment length polymorphism (PCR-RFLP) analysis on genomic DNA. No statistically significant relationship was determined between the lung cancer and control groups ($p>0.05$). Among the patients, 61% were Arg/Arg, 28% were Arg/Gln, and 11% were Gln/Gln. Among the controls, 50% were Arg/Arg, 38% were Arg/Gln, and 12% were Gln/Gln. There was no difference in the distribution of *XRCC1* genotypes or the frequencies of the Arg (75% versus 69%) and Gln (25% versus 31%) alleles between the lung cancer patients and controls. Our results suggest that the *XRCC1* gene Arg399Gln polymorphism is not associated with an increased risk for the development of lung cancer in Turkish patients.