

***TP53* Pro47Ser and Arg72Pro polymorphisms and colorectal cancer predisposition in an ethnic Kashmiri population**

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ABSTRACT. Two *TP53* gene polymorphisms at codon 47 (*TP53* Pro47Ser) and at codon 72 (*TP53* Arg72Pro) have been associated with susceptibility to various cancers. We carried out a case-control study and examined the genotype distribution of *TP53* Pro47Ser and Arg72Pro single nucleotide polymorphisms (SNPs), using a PCR-RFLP approach, to determine if these two SNPs are risk factors for colorectal cancer (CRC) development and to look for a possible correlation of these two SNPs with clinicopathological variables of CRC. We investigated the genotype distribution of these SNPs in 86 CRC cases in comparison with 160 healthy subjects in an ethnic Kashmiri population. *TP53* Arg72Pro SNP genotype frequencies differed significantly ($P = 0.000001$) between the groups; the frequency of the Pro/Pro mutant was almost 20% in the general population. We also found significant association of the Pro/Pro mutant with tumor location, nodal status/higher tumor grade and bleeding

per rectum/constipation. We conclude that Arg72Pro SNP is associated with susceptibility to developing CRC in this ethnic Kashmiri population.

Key words: Colorectal cancer; *TP53*; Polymorphism; RFLP; Restriction digestion; Kashmir