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# TP53 codon 72 polymorphism in adult soft tissue sarcomas

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**ABSTRACT.** Soft tissue sarcomas (STS) are tumors of mesodermal origin, comprising about 1% of all adult neoplasms. Management of such tumors is an important medical challenge. TP53 codon 72 polymorphism results in either the arginine or proline form of the p53 protein; several studies have investigated whether codon 72 polymorphisms are risk and prognostic factors for cancer. We investigated p53 codon 72 polymorphism (Arg72Pro) frequencies with respect to the susceptibility and the clinical outcome of patients with STS. A series of 100 STS were genotyped for the p53 Arg72Pro polymorphism using polymerase chain reaction. Genotype frequencies were compared to a group of 85 healthy donors (controls). Possible associations between polymorphic genotypes, clinicopathological factors and survival of STS patients were also investigated. Genotypic frequencies obtained for STS patients did

 

not significantly differ from that obtained for controls. In the STS group, p53 codon 72 polymorphic variants were not significantly associated with gender, age, tumor size, clinical stage, tumor grade, histology, or nodal or distant metastasis. The five-year overall survival rate for the STS group was 48%; it was significantly affected by tumor grade, clinical stage, and nodal and distant metastasis. Soft tissue sarcoma patients with the Pro/Pro variant had a reduced survival rate (30%), when compared to the p53 Arg/Arg (45%) and the p53 Arg/Pro groups (55%). However, the differences between these groups were not significant (P = 0.44).

**Key words:** Soft tissue sarcomas; p53 Arg/Pro polymorphism; Prognostic factors; Single nucleotide polymorphism

 