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Title: Investigation of survivin gene polymorphism in non-small cell lung cancer patients (NSCLC)

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Body: INTRODUCTION - AIM Survivin gene is one of the first reported inhibitors of apoptosis proteins (IAPs), which is an important family of proteins that regulate apoptosis. A common polymorphism at the survivin gene promoter (-31 G/C) has been shown to influence survivin expression and the risk for cancer development. Purpose of this study reports, relation between Turkish population who have survivin polymorphism and NSCLC also; its relevant with diseases's development and prognosis. METHODS 146 NSCLC cases and 98 healthy control cases who were diagnosed at Yedikule Chest Diseases and Chest Surgery, Training and Research Hospital third clinic were included in this study. Pulmonary function test and routine biochemical analysis were done for all voluntaries. PCR-RFLP technique was used for genotyping. RESULT Genotype distrubition of Survivin gene's -31G/C region were detected (n=146) %77.4 GG (n=113), %.18.5 GC (n=27), %4.1 CC (n=6); at patient group and (n=98) % 6.1 GG (n=56), %47.5 GC (n=34), % 46.4 CC (n=8) (*p=0,003), at control group; -644T/C region were detected (n=146) %40.4 TT (n=59), %.48.6 TC (n=71), %11.0 CC (n=16); at patient group and (n=98) % 55.1 TT (n=54), %40.8 TC (n=40), % 4.1 CC (n=4) (*p=0,031), at control group; -625G/C region were detected (n=146) %49.3 GG (n=72), %.39.1 GC (n=57), %11.6 CC (n=17); at patient group and (n=98) % 57.1 GG (n=56), %32.7 GC (n=32), % 10.2 CC (n=10) (p=0,484) at control group. CONCLUSION These results show that Survivin gene -31 G/C polymorphism causes predisposition to lung cancer development in Turkish population.