Role of interleukin-6 gene polymorphisms in the development of prostate cancer

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ABSTRACT. We investigated the role of two functional polymorphisms, IL-6-174G>C (rs1800795) and IL-6-572C>G (rs1800796), in the development of prostate cancer. A total of 212 consecutive primary prostate cancer patients and 236 control subjects were recruited between May 2012 and May 2014. The IL-6-174G>C (rs1800795) and IL-6-572C>G (rs1800796) polymorphisms were assessed by polymerase chain reaction-restriction fragment length polymorphism. The genotype distributions of IL-6-174G>C (rs1800795) and IL-6-572C>G (rs1800796) met the Hardy-Weinberg equilibrium in the controls. Unconditional logistic regression analyses showed that the GG genotype of IL-6-572C>G (rs1800796) was associated with an elevated risk of prostate cancer compared with the CC genotype, and the OR (95%CI) for the GG genotype was 2.06 (1.11-3.87). In conclusion, we suggest that the IL-6-572C>G (rs1800796) gene polymorphism influences the development of prostate cancer.

Key words: Interleukin-6; Polymorphism; Prostate cancer