



Relationship between multidrug resistance 1 polymorphisms and the risk of prostate cancer in Chinese populations

F.R. Shen^{1,2}, C.Y. Yan¹, M. Liu², Y.H. Feng² and Y.G. Chen³

¹Department of Urology, First Affiliated Hospital of Soochow University, Suzhou, Jiangsu, China

²Department of Obstetrics and Gynecology, Suzhou Kowloon Hospital, Suzhou, Jiangsu, China

³Department of Obstetrics and Gynecology, First Affiliated Hospital of Soochow University, Suzhou, Jiangsu, China

Corresponding author: Y.G. Chen

E-mail: youguochen@sina.cn

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ABSTRACT. Prostate cancer is one of the most common malignancies in men. The multidrug resistance 1 gene (*MDR1*) is an important candidate gene for prostate cancer. The aim of this study was to evaluate the association between *MDR1* gene polymorphisms and the risk of prostate cancer. *MDR1* gene polymorphism and its association with the risk of prostate cancer were investigated in 357 Chinese men. A novel c.1465C>T polymorphism was detected with created restriction site-polymerase chain reaction and DNA sequencing. We found a significantly increased risk of prostate cancer in the homozygote comparison [TT vs CC: odds ratio (OR) = 2.300, 95% confidence interval (95%CI) = 1.261-4.196, chi-square = 7.53, P = 0.007], heterozygote comparison (TC vs CC: OR = 1.667, 95%CI = 1.049-2.648, chi-square = 4.71, P = 0.030), dominant model (TT/

TC vs CC: OR = 1.835, 95%CI = 1.197-2.815, chi-square = 7.81, P = 0.005), recessive model (TT vs TC/CC: OR = 1.776, 95%CI = 1.023-3.085, chi-square = 4.23, P = 0.041), and allele contrast (T vs C: OR = 1.625, 95%CI = 1.199-2.202, chi-square = 9.87, P = 0.002). These findings suggested that the c.1465C>T polymorphism of *MDR1* may be risk factors for prostate cancer in Chinese men.

Key words: Association analysis; Prostate cancer; Risk factors; Multidrug resistance 1 gene; Single-nucleotide polymorphism;