



Meta-analysis demonstrates that the NAD(P)H: quinone oxidoreductase 1 (*NQO1*) gene 609 C>T polymorphism is associated with increased gastric cancer risk in Asians

Y. Zhang^{1,2*}, Z.T. Wang^{1*} and J. Zhong¹

¹Department of Gastroenterology, Ruijin Hospital, Shanghai Jiaotong University School of Medicine, Shanghai, China

²Department of Pediatric Gastroenterology, Ruijin Hospital, Shanghai Jiaotong University School of Medicine, Shanghai, China

*These authors contributed equally to this study.

Corresponding author: J. Zhong

E-mail: Jimmyzj64@medmail.com.cn

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ABSTRACT. The association between the NAD(P)H: quinone oxidoreductase 1 (*NQO1*) gene C609T polymorphism and gastric cancer has been widely evaluated, yet with conflicting results. Data were available from seven study populations involving 2600 subjects. Overall, comparison of alleles 609T and 609C indicated a significantly increased risk (46%) for gastric cancer (95% confidence interval (95%CI) for odds ratio (OR) = 1.20-1.79) in individuals with the T allele. The tendency was increased in the homozygous comparison (609TT versus 609CC), with an OR = 2.04 (95%CI = 1.37-3.05). Stratified analysis by study design demonstrated stronger associations in population-based studies than in hospital-based studies,

based on OR. Ethnicity-based analysis demonstrated a significant association in Asians but not in Caucasians. Additionally, in the subgroup analyses by the type of gastric cancer, a significantly increased risk was found with all genetic models in the gastric adenocarcinoma subgroup compared to the others. We conclude that the *NQO1* gene C609T polymorphism increases the risk for gastric cancer, especially in Asian populations.

Key words: Gastric cancer; *NQO1* gene; Polymorphism; Risk; Meta-analysis