



Lack of association between IL-6 -174G>C polymorphism and lung cancer: a meta-analysis

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ABSTRACT. The results of previous case-control studies examining the relationship between the interleukin (IL)-6 gene -174G>C polymorphism and lung cancer are controversial. In this study, we evaluated the relationship between the IL-6 gene -174G>C polymorphism and lung cancer. We selected 5 case-control studies related to the IL-6 gene -174G>C polymorphism and lung cancer by searching the PubMed, EMBase, Chinese Biomedical Literature Database, and Wanfang database. We utilized the Q-test and I^2 test to determine heterogeneity between each study. To merge the odds ratios (OR) and 95% confidence intervals (CI), we utilized the fixed effects model and random effect model for analyses. The present study included 2801 patients with lung cancer and 3234 cancer-free control subjects. The meta-analysis revealed no association between the IL-6 gene -174G>C polymorphism and lung cancer in either genotype or allele distribution [CC+GC vs GG: OR = 1.04, 95%CI (0.86-1.26), P = 0.70; GG+GC vs CC: OR = 0.93, 95%CI (0.82-1.05), P = 0.23; CC vs GG: OR = 1.08, 95%CI (0.95-1.23), P = 0.23; C allele vs D allele: OR

= 1.03, 95%CI (0.96-1.11), P = 0.44]. We concluded that the IL-6 gene -174G>C polymorphism was not associated with lung cancer.

Key words: Gene polymorphism; Interleukin-6; Lung cancer; Meta-analysis