XRCC3 T241M polymorphism and lung cancer risk in the Han Chinese population: a meta-analysis

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ABSTRACT. Numerous studies have evaluated the association between the X-ray repair cross-complementing group 3 (XRCC3) T241M polymorphism and lung cancer risk; however, the actual association is controversial. We examined whether the T241M polymorphism confers a lung cancer risk in China. We searched the PubMed, Google Scholar, and China National Knowledge Infrastructure databases to identify studies that examined the association between the XRCC3 T241M polymorphism and the risk of lung cancer. We estimated the pooled odds ratio with its 95% confidence interval to assess this association. A total of 3977 patients with lung cancer and 3761 controls from 8 comparative studies were included in this meta-analysis. The meta-analysis results revealed no significant association between the XRCC3 T241M polymorphism and lung cancer risk. In the subgroup analysis, 6 studies with sample sizes over 500 found that the T241M polymorphism had no association with lung cancer. The XRCC3 T241M
polymorphism may not be a risk factor for lung cancer. However, larger studies involving a stratified case-control population and biological characterization are needed to validate this finding.

**Key words:** Lung cancer; Meta-analysis; T241M polymorphism; XRCC3