



# Association between *GSTM1* polymorphisms and lung cancer: an updated meta-analysis

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**ABSTRACT.** The relationship between glutathione *S*-transferase M1 (*GSTM1*) genetic polymorphisms and lung cancer has been reported previously. However, the results are not consistent. Therefore, to clarify the association between *GSTM1* polymorphisms and lung cancer, we performed a meta-analysis based on published studies. We used the Revman 5.0 software to perform literature retrieval, article selection, data collection, and statistical analysis. We utilized a random-effect model to pool the odds ratios (ORs) and 95% confidence intervals (CIs). A total of 38 eligible studies including 5737 lung cancer patients and 6843 cancer-free control subjects were analyzed. We found no association between *GSTM1* genetic polymorphisms and lung cancer risk (OR = 1.15, 95%CI = 0.98-1.36, P = 0.08). Including only Chinese individuals, we found no association between *GSTM1* genetic polymorphisms and lung cancer risk (OR = 1.13, 95%CI = 0.97-1.32, P = 0.13). In conclusion, we found that *GSTM1* polymorphisms are not associated with lung cancer risk.

**Key words:** *GSTM1*; Lung cancer; Meta-analysis; Polymorphism