

# Genetic polymorphism of p53, but not GSTP1, is association with susceptibility to esophageal cancer risk - A Meta-Analysis

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### Abstract :

A number of studies have evaluated two functional polymorphisms on *p53* Arg72Pro and *GSTP1* Ile105Val, in relation to esophageal cancer susceptibility. However, the results remain conflicting rather than conclusive. This meta-analysis on 2919 cases and 4074 controls for *p53* Arg72Pro and 1885 cases and 2194 controls for *GSTP1* Ile105Val from 13 published case-control studies showed that no significant general main effects for *GSTP1* Ile105Val on esophageal cancer risk. However, we found that the *p53* Arg72Pro was associated with an increased risk of esophageal cancer ((Pro/Arg +Pro/Pro) versus Arg/Arg: OR=1.20, 95%CI=1.06-1.36) without any between-study heterogeneity.

In the stratified analysis by ethnicity, we found that the increased esophageal cancer risk associated with *p53* Arg72Pro polymorphism was more evident in Asian group ((Pro/Arg +Pro/Pro) versus Arg/Arg: OR=1.35, 95%CI=1.14-1.60,  $P=0.09$  for heterogeneity test), although we still failed to find any significant association between *GSTP1* Ile105Val polymorphism and esophageal cancer risk in different ethnicity. These results suggest that *p53* Arg72Pro polymorphism, but not *GSTP1* Ile105Val, may contribute to esophageal cancer development, especially in Asian. Additional well-designed large studies were required for the validation of this association.

### Key Word :

p53, GSTP1, polymorphism, esophageal cancer, meta-analysis

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