



## Lack of an association between -308G>A polymorphism of the TNF- $\alpha$ gene and liver cirrhosis risk based on a meta-analysis

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**ABSTRACT.** TNF- $\alpha$  is a potential proinflammatory cytokine that plays an important role in the pathogenesis of liver cirrhosis. We investigated a possible association between TNF- $\alpha$  -308G>A polymorphism and liver cirrhosis risk by conducting a meta-analysis. Publications addressing the association between TNF- $\alpha$  -308G>A and liver cirrhosis risk were selected from the Pubmed and Embase databases. Data were extracted from the studies by two independent reviewers; odds ratio (OR) with a 95% confidence interval (CI) was calculated from these data. The meta-analysis was performed by Review Manager Version 5.0.24 and STATA Version 9.2. Eleven studies were retrieved, reporting a total of 1796 liver cirrhosis cases and 2113 healthy controls. A meta-analysis of these 11 studies identified no significant association between TNF- $\alpha$  -308G>A polymorphism and liver cirrhosis risk in all comparisons of G vs A allele; GG vs GA + AA; GG + GA vs AA; GG vs AA; GG vs GA

(OR = 1.14, 95%CI = 0.85-1.55, P = 0.38; OR = 1.24, 95%CI = 0.87-1.77, P = 0.24; OR = 0.90, 95%CI = 0.62-1.30, P = 0.57; OR = 1.03, 95%CI = 0.56-1.89, P = 0.92; OR = 1.30, 95%CI = 0.90-1.88, P = 0.17; respectively). In conclusion, we found no association between TNF- $\alpha$ -308G>A polymorphism and liver cirrhosis risk, both in Caucasian and Asian populations.

**Key words:** Tumor necrosis factor; Liver cirrhosis; Meta-analysis; Gene polymorphism; Risk