Vascular endothelial growth factor -634 G/C polymorphism and risk of cancer: an updated meta-analysis

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ABSTRACT. The association between vascular endothelial growth factor (VEGF) gene polymorphisms and risk of cancer has been investigated in several studies published previously; however, the individual results are inconclusive. Therefore, we performed a meta-analysis to establish evidence for an association between the VEGF -634 G/C polymorphism and risk of cancer. We searched PubMed, Medline, and Korean Studies Information Service System databases and identified 29 case-control studies, containing data of 25,324 individuals, for this meta-analysis. The odds ratio (OR) and 95% confidence interval (95%CI) were used to determine the strength of the association. Overall, no significant association was detected in the allele model (G allele vs C allele, OR = 0.98, 95%CI = 0.93-1.03), dominant model (G/G+G/C vs C/C, OR = 1.00, 95%CI = 0.90-
1.11), or recessive model (G/G vs G/C+C/C, OR = 0.96, 95%CI = 0.89-1.03). The meta-analysis results suggest that the VEGF -634 G/C polymorphism may not be related to the development of cancer. However, additional studies with larger sample size are required in order to provide supporting evidence.

**Key words:** Vascular endothelial growth factor; Meta-analysis; Cancer; Polymorphism