



HIF1A gene Pro582Ser polymorphism and susceptibility to digestive tract cancers: a meta-analysis of case-control studies

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ABSTRACT. Many existing studies have demonstrated that common polymorphisms in the hypoxia inducible factor-1 α (*HIF-1A*) may contribute to the development of digestive tract cancers, but individually published studies showed inconclusive results. This meta-analysis aimed to derive a precise estimation of the relationships between *HIF1A* Pro582Ser polymorphism and the risk of digestive tract cancers. We searched CISCOP, CINAHL, Web of Science, PubMed, Google Scholar, EBSCO, Cochrane Library, and CBM databases from inception through May 1, 2013. Meta-analysis was performed using the STATA 12.0 software. We assessed 6 case-control studies that included a total of 911 digestive tract cancer patients and 2774 healthy controls. Our meta-analysis indicated that *HIF1A* Pro582Ser polymorphism was associated with an increased risk of digestive tract cancer. Subgroup analysis by ethnicity suggested that *HIF1A* Pro582Ser polymorphism might

increase an individual's susceptibility to digestive tract cancer in Asian populations. However, similar association was not observed in Caucasian populations. In conclusion, our findings suggest that *HIF1A* Pro582Ser polymorphism may contribute to the risk of digestive tract cancers, especially in Asian populations.

Key words: Digestive tract cancer; Hypoxia inducible factor-1 α ; Polymorphism; Meta-analysis