



Meta-analysis demonstrates lack of a relationship between *XRCC1*-399 gene polymorphisms and susceptibility to hepatocellular carcinoma

X.Y. Zeng^{1*}, J.M. Huang^{2*}, J.W. Xu³, Y. Xu¹, H.P. Yu¹, L. Ji⁴ and X.Q. Qiu^{1,5}

¹Department of Epidemiology and Health Statistics, School of Public Health, Guangxi Medical University, Nanning, Guangxi, China

²Guangxi Zhuang Autonomous Region Center for Disease Prevention and Control, Nanning, Guangxi, China

³Department of Orthopedics, First Affiliated Hospital, Guangxi University of Chinese Medicine, Nanning, Guangxi, China

⁴Department of Epidemiology and Health Statistics, School of Public Health, Taishan Medical College, Tai'an, Shandong, China

⁵Department of Epidemiology and Health Statistics, School of Public Health, Guilin Medical University, Guilin, Guangxi, China

*These authors contributed equally to this study.

Corresponding author: X.Q. Qiu

E-mail: xqiu9999@sina.com

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ABSTRACT. *XRCC1*-399 allele polymorphisms have been reported to be associated with susceptibility to hepatocellular carcinoma (HCC), but the conclusions of the various studies have been inconsistent. We conducted a meta-analysis of available studies to determine whether *XRCC1*-399 alleles influence susceptibility to hepatocellular carcinoma. We searched English-language databases, including PubMed, Medline and Embase, using terms such as “hepatocellular

carcinoma” (or “HCC”), “X-ray repair cross-complementing group 1” (or “*XRCC1*”) and “genetic polymorphism” (or “SNP”), among others; we also searched Chinese-language databases, including CNKI, VIP, Wanfang Data, and CBM, using terms such as “ganai”, “ganxibaoai”, “ganzhongliu”, “duotaixing”, and “X-xian xiufu jiaocha hubu jiyin 1”. Eight independent studies, including 1604 HCC cases and 2185 controls, were included. The pooled odds ratio for *XRCC1*-399 was 0.99 (95% confidence interval = 0.75-1.31). We conclude that *XRCC1*-399 gene polymorphisms are unrelated to risk for HCC.

Key words: *XRCC1*; Gene polymorphism; Hepatocellular carcinoma; Meta-analysis