Association between \textit{ERCC1} and \textit{ERCC2} gene polymorphisms and susceptibility to pancreatic cancer

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\textbf{ABSTRACT.} We conducted a study to investigate the association between \textit{ERCC1} (rs3212986) and \textit{ERCC2} (rs13181) gene polymorphisms and the risk of pancreatic cancer in a Chinese population. A total of 217 pancreatic cancer patients and 244 control subjects were recruited from the Nuclear Industry 215 Hospital of Shaanxi Province between February 2013 and December 2014. Genomic DNA was extracted from peripheral blood samples using a TIANamp Blood DNA Kit (Tiangen, Beijing, China) according to the manufacturer’s instructions. The \textit{ERCC1} rs3212986 and \textit{ERCC2} rs13181 polymorphisms were genotyped by polymerase chain reaction-restriction fragment length of polymorphism. Unconditional logistic regression analyses showed that subjects with the CC genotype of \textit{ERCC1} rs3212986 were susceptible to the development of pancreatic cancer when compared with subjects with the AA genotype (OR = 2.57, 95%CI = 1.34-5.02). The \textit{ERCC1} rs3212986 gene polymorphism was associated with increased risk of pancreatic cancer in the dominant (OR = 1.54, 95%CI = 1.05-2.28) and recessive (OR = 2.22, 95%CI = 1.20-4.19) models. However, no significant difference was found between the \textit{ERCC2} rs13181 polymorphism and the risk of pancreatic cancer in the
codominant, dominant, and recessive models. We suggest that the \textit{ERCC1} rs3212986 polymorphism increases susceptibility to pancreatic cancer in the codominant, dominant, and recessive models, although further studies are needed to confirm our findings.

\textbf{Key words:} \textit{ERCC1; ERCC2; Polymorphism; Pancreatic cancer}