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PON1 L55M polymorphism might contribute to the risk of cancer.

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Abstract

INTRODUCTION: The results involved in correlation of PON1 L55M polymorphism and cancer risk are still inconsistent and controversial. Therefore, we performed this comprehensive meta-analysis for the effects of PON1 L55M polymorphism and cancer risk.

EVIDENCE ACQUISITION: We carried out a database search in PubMed (Medline) and EMBASE covering all published articles. The strength of association between PON1 L55M polymorphism and cancer risk was estimated by pooled ORs with corresponding 95% confidence intervals (CI).

EVIDENCE SYNTHESIS: Twenty-one independent case-control studies concerned with association between PON1 L55M polymorphism and cancer risk were finally included in this meta-analysis. We found that there was a statistical significance between PON1 L55M polymorphism and cancer risk (OR=1.21, 95% CI: 1.04-1.40). In stratified analyses by site of cancer, statistically significant increased breast cancer risk was found (OR=2.04, 95% CI: 1.29-3.21). In stratified analyses by ethnicity, statistically significant increased cancer risk was found in Caucasian populations (OR=1.25, 95% CI: 1.03-1.51). In stratified analyses by source of control, significant increased cancer risk was found in hospital-based studies (OR=1.26, 95% CI: 1.10-1.44).

CONCLUSIONS: This meta-analysis suggested that PON1 L55M polymorphism might increase the risk of cancer.

Comment in

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