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Association between the CYP1A2 polymorphisms and risk of cancer: a meta-analysis.

Sun WX[1], Chen YH, Liu ZZ, Xie JJ, Wang W, Du YP, Chen Y, Shen XL, He XF, Wu LX, Wei W, Zhang L.

Author information

1 Department of Gynecology, Peace Hospital of Changzhi Medical College, Changzhi, Shanxi, 046000, People's Republic of China.

Abstract

The previously published data on the association between CYP1A2*1C (rs2069514) and CYP1A2*1F (rs762551) polymorphisms and cancer risk have remained controversial. Hence, we performed a meta-analysis to investigate the association between CYP1A2*1F and CYP1A2*1C polymorphisms and cancer risk under different inheritance models. Overall, significant association was observed between CYP1A2*1F and cancer risk when all the eligible studies were pooled into the meta-analysis (dominant model: OR 1.08, 95 % CI 1.02-1.15; heterozygous model: OR 1.06, 95 % CI 1.01-1.12; additive model: OR 1.07, 95 % CI 1.02-1.13). In the further stratified and sensitivity analyses, for CYP1A2*1F polymorphism, significantly increased lung cancer risk and significantly decreased bladder cancer risk were observed in Caucasians. For CYP1A2*1C polymorphism, no significant association was found in overall and all subgroup analyses. In summary, this meta-analysis suggests that CYP1A2*1F polymorphism is associated with lung cancer and bladder cancer risk in Caucasians.

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