Analysis of NQO1, GSTP1, and MnSOD genetic polymorphisms on lung cancer risk in Taiwan

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摘要

Abstract

We assessed the association of three genetic polymorphisms, NAD(P)H quinone oxidoreductase (NQO1), Glutathione-S-transferase P1 (GSTP1), and manganese superoxide dismutase (MnSOD), with lung cancer risk in 198 cases and 332 controls in Taiwan. Overall, NQO1 and MnSOD polymorphisms were not associated with an increased risk of lung cancer. Individuals carrying variant alleles of GSTP1 were at higher risk of squamous cell lung carcinoma (odds ratio, 1.63; 95% confidence interval, 0.96–2.74). When the groups were further stratified by smoking status following gender and histological type, the wild-type NQO1 was associated with lung adenocarcinoma among smokers but not among nonsmokers (odds ratio, 2.49; 95% confidence interval, 1.17–5.32). These results suggest that NQO1 plays a role in the development of cigarette smoking-associated lung adenocarcinoma. In addition, GSTP1 polymorphism was associated with the risk of squamous cell lung carcinoma in Taiwan.

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