



## ***CYP2E1 PstI* polymorphism increases cervical neoplasia risk: a meta-analysis**

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**ABSTRACT.** Cytochrome P450E1 (*CYP2E1*) is a key enzyme in the metabolic activation of many carcinogens, but the roles of *CYP2E1* polymorphisms in cervical neoplasia (CN) are inconclusive. Published case-control cohort studies from the Pubmed, Embase, and China National Knowledge Infrastructure databases were retrieved. Data were extracted and pooled odds ratios with 95% confidence intervals were calculated. Seven studies examining 1097 cases and 1117 controls were included in this meta-analysis. The pooled effect size showed no association between *CYP2E1 RsaI* and *DraI* polymorphisms and CN risk in a codominant model. However, using a recessive model, an association between the *PstI* polymorphism and CN risk was observed (odds ratio: 2.10, 95% confidence interval: 0.96-4.62,  $P = 0.06$ ), indicating that individuals with the homozygous rare genotype have a higher risk of developing CN compared to those with homozygous wild-type and heterozygous genotypes. When stratified by ethnicity, the *PstI* polymorphism was significantly correlated with CN susceptibility in non-Asians (odds ratio: 3.74, 95% confidence interval: 1.13-12.43,  $P =$

0.03). This meta-analysis suggests that the *CYP2E1* PstI polymorphism increases the risk of CN in non-Asians.

**Key words:** Cervical neoplasia; Cytochrome P450; Polymorphism