



Association between XPD Lys751Gln polymorphism and risk of head and neck cancer: a meta-analysis

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Genet. Mol. Res. 10 (4): 3356-3364 (2011)
Received March 29, 2011
Accepted August 15, 2011
Published November 22, 2011
DOI <http://dx.doi.org/10.4238/2011.November.22.6>

ABSTRACT. Several studies have investigated the association between Lys751Gln polymorphism in the xeroderma pigmentosum group D (*XPD*) gene and risk of head and neck cancer; however, the published results are conflicting. We conducted a meta-analysis that comprised 15 published case-control studies examining the association of head and neck cancer risk with *XPD* Lys751Gln polymorphism in different populations, based on the data identified in Medline up to November 2010. Odds ratios (ORs) with 95% confidence intervals (CI) were used to assess the strength of the association. Overall, significantly elevated head and neck cancer risk was associated with *XPD* Lys751Gln polymorphism when all studies were pooled into the meta-analysis [(Gln/Gln + Lys/Gln) vs Lys/Lys: OR = 1.12, 95%CI = 1.03-1.22, $P < 0.01$, heterogeneity $P = 0.11$]. In the subgroup analysis by ethnicity, borderline significantly increased risk was found for Europeans [(Gln/Gln + Lys/Gln) vs Lys/Lys: OR = 1.11, 95%CI = 1.00-1.23, $P < 0.05$]. In conclusion, our meta-analysis demonstrated that *XPD* Lys751Gln polymorphism could be a prediction marker for risk of head and neck cancer.

Key words: Polymorphism; Head and neck cancer; Meta-analysis; XPD