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Gene polymorphism in XPG and breast cancer risk

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Introduction: Xeroderma pigmentosum group G (XPG) plays crucial role in excision repair of UV-induced DNA damage in nucleotide excision repair pathway. Single nucleotide polymorphisms in XPG gene have been reported to associate with different cancers. Therefore, current study was designed to evaluate relationship between XPG (rs1047768 T>C) polymorphism and breast cancer risk in Pakistani population.

Methodology: A total of 175 individuals were screened for this polymorphism including 100 pathologically confirmed breast cancer cases and age matched 75 controls. Genotyping was carried out with Tetra amplification-refractory mutation system (ARMS) PCR and results were confirmed by gel electrophoresis. Data was analyzed using SPSS version 24.

Results: Conditional logistic regression analysis showed significant association between TC genotype (OR: 8.9, CI: 2.0–38.7) and increased breast cancer risk. Although homozygous CC genotype was more frequent in patients as compared to controls but it was statistically non-significant (OR: 3.9, CI: 0.4–35.7).

Conclusion: In conclusion, XPG (rs1047768 T>C) polymorphism may contribute towards increased risk of breast cancer.

Biography

Masood N has completed her PhD from COMSATS Institute of Information Technology, Islamabad, Pakistan. She is currently working as Assistant Professor at Fatima Jinnah Women University, The Mall, Rawalpindi, Pakistan. She has published more than 35 papers in reputed journals and has won many awards for research productivity in her home country. She has been supervising a number of students at BS, MS and PhD levels. She is a member of Quality Enhancement Cell at University.

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