Common polymorphisms in ERCC2 (Xeroderma pigmentosum D) are not associated with breast cancer risk.

A substantial proportion of the familial risk of breast cancer may be due to genetic variants, each contributing a small effect. The protein encoded by ERCC2 is a key enzyme involved in nucleotide excision repair, in which gene defects could lead to cancer prone syndromes such as Xeroderma pigmentosum D. We have examined the association between single nucleotide polymorphisms in the ERCC2 gene and the incidence of invasive breast cancer in three case-control series, with a maximum of 3,634 patients and of 3,340 controls. None of the three single nucleotide polymorphisms were significantly associated with the incidence of breast cancer.