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ABSTRACT

Breast cancer is a disease in which malignant (cancer) cells form in the tissues of the breast. This research investigates the association & the risk factor between BCRP C421A polymorphisms with breast cancer patients in Thailand. From the National Cancer Institute of Thailand, 50 breast case samples and 50 healthy controls from peripheral blood of people who never had a history of cancer cases were collected. The polymorphism in *ABCG2* C421A gene was genotyped by using PCR-RFLP assays. The result showed that there was a significantly increased risk factor for developing breast cancer as the OR for both the case and control sample exceeded 2 (2.550 for CC and CA genotypes, 2.433 for C allele and A allele genotypes). The identification of BCRP C421A polymorphisms as potential risk factors expands our understanding of the underlying mechanisms of breast cancer development.