



## **High resolution melting analysis of genotype BRCA 1/2 -associated with Iraqi breast cancer patients**

**HayderAialMuttar**

**College of Science/ University of Al-Qadisyia, Iraq**

**Abstract:Background:** The association of BRCA1 and BRCA2 genotype with breast carcinomas (BCs) is still in controversial. **Objective:** the present study was aimed to clarify the association of BRCA1 and BRCA2 genotype and BC in Iraqi females and to assess its role as potential contributor to the development and behavioral alteration of BC. **Subjects & methods:** BRCA1 and BRCA2 was detected using PCR-HRM analysis on breast tissue from 40 female patients with 27 female breast cancer; 5 close related to breast cancer patients and 8 ages matched females as control. **Results:** BRCA1 and BRCA2 was detected in 2/32 (3.5%) BC specimens carrying c.211 dupA in exon 5 and BRCA2 was detected also in one out of 32 patients carrying c.26G> A mutation. PCR-HRM was able to detect of BRCA1 and BRCA2 variants by melting curve of wild type and mutant DNA sequence present in all patients samples .on the other hand all control specimens were negative as regards prognostic factors, no association was observed between BRCA1 and BRCA2 and patients' age. **Conclusions:** our results demonstrated the presence of the BRCA1 and BRCA2 genome in a considerable subset of BC in Iraqi patients. The mutation was more frequently associated with bad prognostic factors. This indicates that mutation may pass be passing through family generation and BRCA1 and BRCA2 play a role in the development and behavioral alteration of some aggressive BC.

**Key words:** BRCA1 and BRCA2, breast cancer.

**HayderAialMuttar** /International Journal of ChemTech Research, 2017,10(3): 480-484.

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