

Title: BRCA1/2 mutation in a cohort of young women breast cancer in Mauritania**Selma Mohamed Brahim^{1,2*}, Malak Salame¹, EkhtElbenina Zein¹,
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Introduction: Breast Cancer (BC) is the leading cause of death in African women. The aim of this cross-sectional study was to assess the incidence, clinico-pathological characteristics, risk factors and outcome of breast cancer in Mauritania. BC of women under the age of 40 is a complex disease because more than 90% of young patients with BC are symptomatic. Data on BC in young women breast cancer is limited and the cancer characteristics mutation BRCA1/A2 genes are less well studied.

This study was aimed to provide the first data on young women in BC the incidence, clinico-pathological characteristics, risk factors and related gene mutations in Mauritania.

Materials and methods: Thirty-three percent young women were referred to the Centre National d'Oncologie (CNO) in Mauritania between January 2009 and December 2020. We evaluated clinical characteristic, treatment selection and screening mutation BRCA1/A2 genes.

Results: The Thirty-three percent young women with BC recruited in this study were aged between 21 and 39 years. Infiltrating ductal carcinoma was the predominant histological type in 90% of cases. Multimodal treatment was based on mastectomy followed by adjuvant therapy including chemotherapy, radiation therapy and/or hormonal therapy, depending on tumor stage and its histological features. Metastases mainly occurred in the bones (59%).

We identified five predominant BRCA1/2 variants: (c.815_824insAGCTATGTGG,c.2612C>T,c.813_814insTAGCCATGTG, c.201-18del) and (c.4986+6T>C). We also found one BRCA2 missense variants (c.10247A>G). Interestingly, we identified two novels BRCA DNA variants in of which 1 were predicted as pathogenic.

Conclusion: Further research is needed to address gaps in knowledge pertaining to care of young women breast cancer patients and survivors.

Keywords: Breast Cancer (BC), TNBC, young women, BRCA1/2, Mauritania.

Biography

Selma Mohamed Brahim is a Mauritanian PhD in genetics and molecular biology. She have a research on BRCA1 and BRCA2 genes of the cancer in Mauritania and she had done numerous training programs in Mauritania and abroad, she had developed a strong skill set in biomedical, molecular bioinformatics sciences. She has master in biology and health Sciences at HASSEN II University/Morocco. She also has been the coordinator of the research and education unit at the National Center of Oncology since 2020 in Mauritania.