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Burden of BRCA1, BRCA 2, AND PABL2 gene mutations in Caribbean women with breast cancer

Gordon Taylor Moffat[2], Edwin Chiu[1], Bachar Samra[1], Eduardo Fernandez-Hernandez[2] and Iuliana Shapira[1]
[1]Downstate Medical Center College of Medicine, USA
[2]SUNY Downstate Medical Center College of Medicine, USA

Purpose: Identifying mutations in breast cancer genes (BRCA1, BRCA2, PABL2) has important clinical implications on a woman's lifetime susceptibility to breast cancer development. Nearly 10% of immigrants to the United States come from the Caribbean and few studies exist that examine breast cancer gene mutations in African-Caribbean women with existing breast cancer. The purpose is to specifically describe breast cancer epidemiology statistics and review prevalence of BRCA mutations in this cohort.

Methods: Epidemiologic data on select Caribbean countries and USA was abstracted from GLOBOCAN 2012, a database of estimated global cancer statistics produced by the International Agency for Research on Cancer and World Health Organization. Sex-specific age standardized incidence and mortality rates for breast cancer in specific countries are presented. A literature search was also conducted through PubMed database using following terms: Caribbean, familial breast cancer, hereditary breast cancer and BRCA breast cancer that was subsequently narrowed to epidemiologic relevance resulting in five citations and presented.

Conclusions: The GLOBOCAN 2012 data provides an estimate of breast cancer incidence and mortality in Caribbean women. This study summarizes the known prevalence of BRCA1/2 and PALB2 breast cancer gene mutations in select Caribbean cohorts. This is critical as part of a formal genetic risk assessment and counseling of patients with breast cancer, particularly in areas that serve a Caribbean population. Further research and understanding the contributions of inherited gene mutations will guide the optimal health policy in breast cancer screening and risk management.

Gordon.moffat@downstate.edu