Breast Cancer Risk Factors: A Big Data Analysis of Black and White Women in the USA

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Abstract : With breast cancer becoming a global pandemic, it is very important to assess a woman's risk profile accurately in a timely manner. Providing an estimate of the risk of developing breast cancer to a woman gives her an opportunity to consider options to decrease this risk. Women at low risk may be suggested yearly screenings whereas women with a high risk of developing breast cancer would be candidates for aggressive surveillance. Fortunately, there is a set of risk factors that are used to predict the probability of a woman being diagnosed with breast cancer in the future. Studying risk factors and understanding how they correlate to cancer is important for early diagnosis, prevention and reducing mortality rates. The effect of crucial risk factors among black and white women was compared in this study. The various risk factors analyzed include breast density, age, cancer in a first-degree relative, menopausal status, body mass index (BMI) and prior breast cancer diagnosis, etc. Breast density, age at first full-term birth and BMI were utilized in this study as important risk factors for the comparison of incidence rates between women of black and white races in the USA. Understanding the differences could lead to the development of solutions to reduce disparity in mortality rates among black women by improving overall access to care.