

**Triple negative breast cancer (TNBC):
The paradigm and burden of black women as an unequal research priority**

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Addressing healthcare disparities requires a multifaceted approach that includes discussion beyond the traditional views of what constitutes disparities within a community. Ethnic minorities have historically been the subjects of disparate access to care. A primary public health concern is that the extreme spectrum of healthcare disparities means more susceptibility to longitudinal impacts of inadequate healthcare at any level. There is a need to identify the major contributors of disparities within the African American community and to design tailored initiatives to address the etiologies of disease. Without exploring the causative relationship between genetic susceptibility to certain disease sites and the implications, which drive research issues related to healthcare disparities, eradicating persistent inequity cannot be adequately assessed. Advances in our current understanding of disease susceptibility and treatment strategies are largely credited to monumental research discoveries in molecular biology. These significant landmark studies and a fundamental need for progress in the scientific arena also advance our understanding of minority-related disease sites and should have a more substantial impact on shaping the discussion of contributors to healthcare disparities at large.

The American Cancer Society reports that an estimated 232,342 new cases of invasive breast cancer will be reported in 2013, and of that number 39,620 women will die from this disease (American Cancer Society [ACS], 2013). Triple negative breast cancer (TNBC), is a subtype of breast cancer that accounts for 10%-20% of all invasive types of breast cancer (Boyle, 2012). Triple negative breast cancer does not benefit from current treatment regimens in adjuvant therapy, common enhances to effective medical treatment, because this subtype is devoid of overexpression of HER-2, estrogen, or progesterone receptors. Clinically, women who suffer from TNBC are predominantly African American who are premenopausal (under the age of 50), present with higher grade tumors, have a family history of breast cancer and present with BRCA1 mutations (Boyle, 2012). Even when normalizing for factors such as socioeconomic status and income, women of African descent are three times more likely to develop TNBC than women of European descent (Stead et al., 2009). A similar disproportionate ratio is also evident in native Africans. A recent study showed that among palpable, grade 3 cancers, Ghanaians have the highest prevalence of triple-negative tumors (82%), followed by African Americans (33%) and Caucasian Americans (10%) (Stark et al., 2010). Regardless of the tumor stage at diagnosis, non-Hispanic black women have a five-year relative survival of only 14%. (Bauer, Brown, Cress, Parise, & Caggiano, 2007). The scientific discoveries made in treatment advances in breast cancer have resulted in lowering the incidence of hormone dependent breast cancer by 7%. (ACS, 2013). The discrepancy between the higher incidence of TNBC among ethnic minorities and the evolving complexity of this subtype within this population have not seen as much advance or scientific understanding as the other more commonly researched subtypes of breast cancer.

Until recently, previous documented discussions of healthcare disparities did not largely consider the multi-billion dollar budget appropriated to the Department of Health and Human Services (HHS) as an overt hindrance to improving minority health. In fact, the mission of the Office of Minority Health (OMH), which falls under the protective reach of HHS, is commissioned with improving the health of racial and ethnic minorities through the design and collective development of programs and policies that would help to eliminate disparities. In 2013, OMH experienced a \$14,682,000 budget reduction, which resulted in non-renewal of such

programs as the Minority Community HIV/AIDS Partnership grant programs and minority-based programs sponsored by The Delta Institute. Additionally, the Office of Women's Health experienced a \$4,562,000 budget reduction for the 2013 fiscal year (U. S. Department of Health and Human Services, 2013).

Presently, with an estimated \$5 billion budget, the National Cancer Institute (NCI) symbolizes the arbiter of hope that the cancer community has for funding research dedicated to improving the cancer burden. It has only been since 2001 that the Center to Reduce Cancer Health Disparities was established to address ethnic minority disease sites. Incidentally, when performing a public search of research awards granted by NCI to independent investigators with proposals dedicated to breast cancer research, an award amount of \$602,728,719 was returned. The same search criteria for Triple negative breast cancer and healthcare disparities-related proposals returned an award amount of only \$2,230,044 (U. S. National Institutes of Health, n.d.). Many arguments can be presented to justify this discrepancy in research funding, such as the lack of a single NCI-dedicated cancer center at a minority college/university, or the disproportionately low number of African Americans in science, technology, engineering and mathematics (STEM) fields, to name a few. However, even when accounting for lack of funding opportunities in TNBC, the stark reality is that the level of interest in research-related fields most significant to minority health remains disproportionately low compared to other more common disease sites.

The healthcare disparity debate must evolve and consider a broader and somewhat more intuitive set of factors that include what appear to be disparities in scientific research priority. The conversation necessitates that elements which address not just the influence of race and ethnicity, but also socioeconomic status, social determinants, and social policy be included in public health research. This will equip the clinician and researcher with better tools to guide their assessments of ethnic minorities. If researchers continue to give an unequal priority to ethnic minority women, then the health needs of African Americans will remain ambiguous and inadequately addressed. While conversations regarding health disparities are productive, those conversations must include a sense of urgency to further understand the molecular basis of disease sites that disproportionately impact African American women for there to be any substantial progress in reshaping the current paradigm of an unequal research burden.

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