biologic, demographic, and social factors affecting triple negative breast cancer outcomes

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Background: Triple negative breast cancer (TNBC) is an aggressive breast cancer subtype that disproportionately affects women who are African American, younger, or carriers of the BRCA1 gene. No targeted treatments exist for the disease, which has distinct features and presents unique challenges to patients who have been diagnosed with it.

Objectives: TNBC is reviewed in this article according to incidence, tumor grade, stage of diagnosis, biologic and social risk factors, mortality, and treatment.

Methods: Published articles pertaining to TNBC and located through online database searches were reviewed. Articles were selected either because they offered the most current information about TNBC or contributed to the understanding of TNBC.

Findings: Biologic, demographic, and social factors present unique challenges in the treatment of women with TNBC. Knowing about the characteristics of TNBC and the populations who are most at risk for the disease might help healthcare providers better respond to their patients. It may also facilitate responsiveness to patients’ needs and enhance their quality of life.

Triple Negative Breast Cancer Characteristics

Although many subtypes of breast cancer exist, TNBC is defined by the lack of estrogen, progesterone, and human epidermal growth factor receptors. The absence of these three receptors limits treatment options because TNBC does not respond to targeted therapies, such as the use of tamoxifen to treat estrogen receptor–positive tumors (Hugh et al., 2009). Other characteristics of TNBC include high histologic grade, which is indicative of aggressive disease, poor prognosis, increased risk of recurrence within the first three years after diagnosis, and high five-year mortality rates (Arslan, Dizdar, & Altundag, 2009; Chacón & Costanzo, 2010; Ihemelandu et al., 2008; Lara-Medina et al., 2011; Ray & Polite, 2010). The pattern of recurrence for TNBC differs somewhat from that of other breast cancers; the risk of TNBC recurrence is most likely within one to three years