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# Two Lives Intertwined: Pregnancy-Associated Breast Cancer

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The incidence of concurrent breast cancer and pregnancy (also known as pregnancy-associated breast cancer [PABC]) may increase as women delay child bearing. Because of the physiologic changes associated with pregnancy, diagnosis often is delayed, leading to poorer prognostic factors on presentation. Therefore, the clinical challenge in managing PABC involves controlling the cancer while maximizing survival outcomes for the expectant mother without compromising the health and safety of the fetus. Collaboration and communication between multidisciplinary team members are crucial. Education is key in providing a general overview of available diagnostic modalities, endorsing the multidisciplinary approach to care and treatment for the mother and fetus, and identifying the oncology nursing role specific to this patient population. Women with PABC must be kept informed of all aspects of care to ensure active participation in the decision-making process, as they are not only concerned for their own well-being but also that of their unborn child. Anxiety levels often run high and steady communication offers a modicum of control to this already-stressed patient population.

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**P**regnancy-associated breast cancer (PABC) is defined as breast cancer diagnosed during pregnancy and up to one year postpartum (Eedarapalli & Jain, 2006). About 75% of PABC tumors are estrogen receptor- and progesterone receptor-negative, exhibit HER2/neu overexpression, and are biopsy-proven to be poorly differentiated (Aebi & Loibl, 2008). Breast cancer is the second most frequent malignancy occurring during gestation after cervical cancer (Singh, 2009), with an estimated incidence of one in 3,000 and an average age range of 32–38 years at diagnosis (Logue, 2009). In the United States, about 3,500 women are diagnosed with PABC on a yearly basis, and an estimated 30,000 cases are diagnosed per year worldwide (Fajdic, Gotovac, Hrgovic, & Fassbender, 2008). Because increasing age is a known risk factor for the diagnosis of breast cancer, the incidence of concurrent breast cancer and pregnancy has the distinct possibility of increasing as women delay child bearing well into their 30s and 40s (National Cancer Institute [NCI], 2010; Theriault & Hahn, 2007).

Because PABC is relatively rare, no large prospective clinical trials exist from which to gather information; therefore, current knowledge is based primarily on a few retrospective case-controlled studies or review of case series (Rovera et al., 2010). The clinical challenge in managing PABC lies in control-

ling the cancer while maximizing the survival outcome for the expectant mother without compromising the health and safety of the developing fetus (Morris, King, & Kennedy, 2009). Although other cancers do occur during pregnancy, the focus of this article will be on PABC, presenting a general overview of the diagnostic modalities available, the multidisciplinary approach to care and treatment for the mother and fetus, and the oncology nursing role specific to this patient population.

## Presentation

Breast cancer most often presents as a painless mass or density (Logue, 2009). In addition, dimpling of the breast, nipple retraction, or axillary lymphadenopathy may occur (Eedarapalli & Jain, 2006). During pregnancy, breasts undergo significant changes, including edema, hypervascularization, and lobular and glandular hyperplasia, all of which can make tumor detection extremely difficult (Fajdic et al., 2008). Therefore, a comprehensive baseline breast examination is imperative during the early stages of pregnancy, before physiologic variances become evident (Guidroz, Scott-Conner, & Weigel, 2011; Logue, 2009). Because of the increased weight, glandularity, and density of the breast tissue, lumps and bumps may be attributed to benign