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Breast Cancer

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EPIDEMIOLOGY

Breast cancer is the most common cancer in women other than skin cancer, and it represents the second leading cause of cancer death after lung cancer among women in the United States. An estimated 232,340 women will be diagnosed with invasive breast cancer, and almost 40,000 will die of the disease in 2013. Although breast cancer is far less common in males, more than 2000 men are diagnosed with breast cancer annually in the United States. Whereas reported breast cancer incidence rates have continued to rise, breast cancer mortality has declined by more than 2% annually since 1990 (Figs. 59-1 and 59-2).

Breast cancer is a disease of aging with an increasing incidence throughout most of adult life. Other risk factors for breast cancer include a family history of breast cancer, early menarche, late menopause, nulliparity or initial pregnancy after 25 years of age, prolonged use of exogenous estrogen, exposure to ionizing radiation, and obesity. Women with a history of breast cancer are also at increased risk for breast cancer in the contralateral breast. Although only 5% of patients with breast cancer have the breast cancer susceptibility genes, *BRCA1* and *BRCA2*, genetic counseling and possible testing for *BRCA1* and *BRCA2* should be offered, especially to patients with multiple affected family members and those with a personal or family history of male breast cancer, bilateral breast cancer, breast cancer at a young age (before age 45 to 50 years), ovarian cancer, or certain high-risk ethnicities (e.g., Ashkenazi Jewish).

SCREENING, INITIAL PRESENTATION, AND STAGING

Breast cancer is most often diagnosed through screening mammography or after a patient or her physician notices a palpable mass. Mammographic screening has been shown to reduce breast cancer mortality in both average- and high-risk populations. Although there is some variability among the major breast cancer screening guidelines, most recommend annual screening by mammography with or without physical examination between the ages of 50 to 74 years. Younger women might consider annual or biannual mammographic screening beginning at age 40. Screening with magnetic resonance imaging (MRI) of the breast is recommended in addition to mammography for women with a substantially increased predisposition, especially a strong family history or other genetic predisposition. A palpable breast mass warrants full evaluation even in the absence of diagnostic changes on mammography or breast MRI.

Breast cancer staging requires removal of the primary tumor and assessment of the ipsilateral axillary lymph nodes. Increasingly, lymphatic mapping with sentinel lymph node assessment is being used to evaluate the axilla, with complete lymph node dissection performed only for those with a positive sentinel node biopsy. A subset of women with a good prognosis and only a few positive lymph nodes may be able to forgo lymph node dissection altogether. Women with tumors larger than 5 cm and those with positive axillary lymph node involvement require additional staging imaging: a bone scan

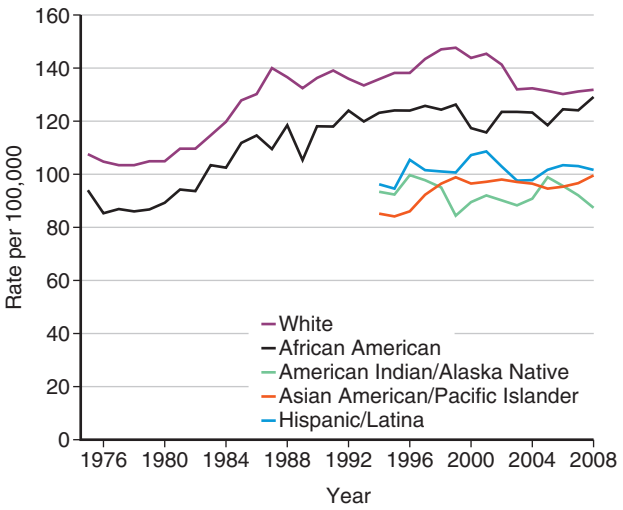

FIGURE 59-1 Breast cancer incidence rates by race and ethnicity. (Modified from DeSantis C, Siegel R, Bandi P, et al: Breast cancer statistics, 2011, CA Cancer J Clin 61:409–418, 2011.)

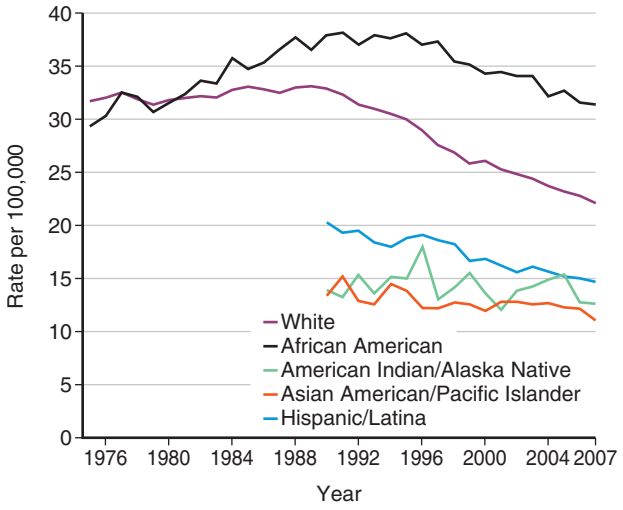

FIGURE 59-2 Breast cancer mortality rates by race and ethnicity. (Modified from DeSantis C, Siegel R, Bandi P, et al: Breast cancer statistics, 2011, CA Cancer J Clin 61:409–418, 2011.)