however, like most medical tests, it is not perfect. On average, mammography will detect about 80%-90% of breast cancers in women without symptoms. Although the majority of women with an abnormal mammogram do not have cancer, all suspicious lesions should be biopsied for a definitive diagnosis. Annual screening using magnetic resonance imaging (MRI) in addition to mammography is recommended for women at high lifetime risk of breast cancer starting at age 30. (For more information, see Breed Cancer Facts & Figures 2011-2012 at cancer.org/statistics.)

Concerted efforts should be made to improve access to health care and to encourage all women 40 and older to receive regular mammograms. For more information on the American Cancer Society's recommendations for breast cancer screening, see page 64.

**Treatment:** Taking into account tumor size, extent of spread, and other characteristics, as well as patient preference, treatment usually involves lumpectomy (surgical removal of the tumor and surrounding tissue) or mastectomy (surgical removal of the breast). Numerous studies have shown that for women whose cancer has not spread to the skin, chest wall, or distant organs, long-term survival for lumpectomy plus radiation therapy is similar to that for mastectomy. For women undergoing mastectomy, significant advances in reconstruction techniques provide several options for breast reconstruction, including the timing of the procedure (i.e., during mastectomy or in the time period following the procedure).

Removal of some of the underarm lymph nodes during surgery is usually recommended to determine whether the tumor has spread beyond the breast. In women with early stage disease, sentinel lymph node biopsy, a procedure in which only the first lymph nodes to which cancer is likely to spread are removed, is as effective as and less damaging than full axillary node dissection, in which many underarm nodes are removed.

Treatment may also involve radiation therapy, chemotherapy (before or after surgery), hormone therapy (tamoxifen, aromatase inhibitors), or targeted therapy. Postmenopausal women with breast cancer that tests positive for hormone receptors benefit from treatment with an aromatase inhibitor (e.g., letrozole, anastrozole, or exemestane), either after, or instead of, tamoxifen. For women whose cancer tests positive for HER2/neu, approved targeted therapies include trastuzumab (Herceptin) and, for advanced disease, lapatinib (Tykerb). The US Food and Drug Administration (FDA) revoked approval of bevacizumab (Avastin) for the treatment of metastatic breast cancer in 2011 because subsequent studies have shown minimal benefit and some potentially dangerous side effects.