



# Male Breast Cancer

Victoria Wochna Loerzel, MSN, RN, OCN®, and Karen Hassey Dow, PhD, RN, FAAN

## Case Study

S.U., a 71-year-old man who lives alone, presented to the emergency department complaining of chest pain. He received a complete cardiac workup, and his chest pain was attributed to heartburn and indigestion. When the nurse practitioner examined him, she discovered a large ulcerated left breast mass (see Figure 1) with no palpable axillary lymphadenopathy. S.U. admitted that he'd known about the mass for a few years and that it had ulcerated a few months ago. He did not tell anyone about it because he was embarrassed to be "growing" a breast.

A core biopsy of the breast mass revealed that the patient had infiltrating ductal carcinoma. He underwent a sentinel lymph node biopsy, which showed two positive sentinel lymph nodes. He subsequently underwent a modified radical mastectomy, and the tumor was found to be estrogen-receptor (ER) and progesterone-receptor (PR) positive.

## Incidence and Risk Factors

Jemal et al. (2004) estimated that 217,440 new cases of breast cancer will be diagnosed in 2004. About 1,450 of these new cases are expected to be diagnosed in men. Male breast cancer (MBC) comprises less than 1% of all breast cancers and less than 1% of all cancer deaths in males, but its incidence and mortality are rising (Levi, Lucchini, & LaVecchia, 2002).

MBC is extremely rare, and literature about this topic is scarce. Lay people often are surprised to learn that men are at risk for developing breast cancer and that men actually have breast tissue. Furthermore, they typically are unaware that many of the risk factors for MBC are similar to risk factors for women.

Risk factors for MBC include advancing age, benign breast disease (i.e., nipple discharge, breast cysts, and breast trauma), testicular disease, radiation exposure, estrogen exposure, and diseases associated with hyperestrogenism, such as cirrhosis or Klinefelter's syndrome (i.e., XXY chromosomal ab-



FIGURE 1. MALE WITH LARGE ULCERATED BREAST MASS

normality) (Giordano, Buzdar, & Hortobagyi, 2002; National Cancer Institute, 2003). Johnson, Pan, and Mao (2002) also noted that increased weight and high body mass index may increase the risk of MBC. Family history of breast cancer in first-degree relatives and males with female and male relatives who have *BRCA2* mutations carry an increased risk (Bernard-Gallon et al., 2003). Men with a personal history of prostate cancer are at increased risk for developing a second primary breast tumor (Thellenberg, Malmer, Tavelin, & Gronberg, 2003), and men diagnosed with breast cancer are at high risk of contralateral breast cancer, especially if their initial breast cancer was diagnosed before they were 50 years of age (Auvinen, Curtis, & Ron, 2002). Gynecomastia is not considered a risk factor for MBC (Olsson, Bladstrom, & Alm, 2002).

## Prognosis

MBC tends to be diagnosed at a later stage than breast cancer in females, largely because of the public's lack of awareness about the disease in men (El Omari-Alaoui et al., 2002; Giordano et al., 2002). Similar to female breast cancer, the most important prognostic indicators for MBC are tumor size, axillary node status, ER and PR status, and histologic grade

(El Omari-Alaoui et al.; Giordano et al.). O'Malley, Prehn, Shema, and Glaser (2002) compared MBC survival rates for different ethnic and racial groups and found the following five-year breast cancer survival rates: 83% for whites, 72% for blacks, and 89% for men of other racial or ethnic backgrounds. The researchers also discovered significant differences in survival based on race alone even when prognostic indicators were similar.

## Clinical Presentation and Diagnosis

The public is generally unaware of MBC. When men discover a breast lump, they often do not have it evaluated. Thus, the diagnosis of MBC typically is delayed (El Omari-Alaoui et al., 2002; Giordano et al., 2002). Approximately 85% of men with breast cancer present with a subareolar mass. Other presenting signs and symptoms include nipple retraction, discharge, or bleeding. Patients also may present with nipple or breast ulceration. Mammography usually is performed to distinguish between gynecomastia and possible carcinoma. However, because MBC is so rare, routine screening mammograms are not recommended for men.

A biopsy of the suspicious lesions is performed for pathologic examination. ER and PR status and HER2-neu tests also are completed to adequately stage the patient and determine the best treatment plan. In addition, p53 and MiB1 (Ki67) may be analyzed in those at higher risk for MBC (Wang-Rodriguez et al., 2002).

*Victoria Wochna Loerzel, MSN, RN, OCN®, is a visiting instructor and project director of the Breast Cancer Quality-of-Life Study, and Karen Hassey Dow, PhD, RN, FAAN, is a professor, both in the School of Nursing at the University of Central Florida in Orlando.*

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