Chapter 4

SCREENING AND EARLY DETECTION OF BREAST CANCER IN WOMEN IN AFRICA AND THE MIDDLE EAST

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1. OBJECTIVE

Historically, breast cancer has been diagnosed when a woman seeks medical attention for a breast symptom, such as a palpable mass or soreness. Breast cancer is usually diagnosed by pathologic review of a fixed specimen of breast tissue. The biopsy can be obtained by surgically removing part of a palpable mass, or by surgically excising an abnormal area identified by mammogram, with surgical needle localization under x-ray guidance. Alternatively, a core needle biopsy of a mammographically suspicious area can be obtained with use of stereotactic x-ray or ultrasound.

Reduction of breast mortality is the primary and fundamental objective of breast screening. Breast screening should also have the potential to reduce breast cancer morbidity by allowing less extensive surgical procedures, with less need for postoperative radiotherapy and adjuvant chemotherapy, all of which may result in an increased quality of life for breast cancer patients (1).

2. INCIDENCE AND MORTALITY

An important paradox is the difference in breast cancer incidence and mortality rates between white and black women. Incidence rates are 20% higher in white than in black women, yet among women diagnosed in the USA between 1983 and 1989, the 5-year relative survival rate is 16% lower
for black than for white women. Among breast cancer diagnosed between 1992 and 1998, 64% of white women but only 53% of black women had localised disease. The 5-year survival for localised disease was 97.4% for white women and 88.9% for black women; for regional disease it was 80.2% and 65.4%; and for distant metastasis, it was 24% and 14.7% respectively. This higher mortality in black women has primarily been attributed to inadequate screening practices in this population, which lead to delayed diagnosis and later stage at diagnosis. However, even when black and white women are compared stage for stage, the mortality in black women is higher. The reasons for this are unknown. (2-5).

Only three countries in sub-Saharan Africa (Benin, Botswana and Mauritius) provided mortality data of adequate quality to the WHO in 1996. Thus, no data on cancer exist in most countries in Africa. To address this gap the South African National Cancer Registry was established in 1986. Between 1993 and 1995, an annual average of 3785 new cases of breast cancer was diagnosed in South Africa. The crude incidence was 18.5/100 000 and the Age Standardized Incidence Rates 25.1/100 000. The lifetime risk was 1 in 36 overall, but varied from 1 in 81 in black to 1 in 13 in white females, a 6-fold difference. The age standardized rates (ASR) of 11.3 in black South African women compare well with rates from central Africa (Harare ASR = 20.4/100 000, Kampala 16.4/100 000). Breast cancer is even rarer in Gambia (3.4/100 000) (6).

Table 1 summarizes the breast cancer incidence and prevalence in the different regions of Africa and some African Countries.