Physicians in Egypt and other Arab and developing countries still have to deal on a daily basis with large numbers of patients with advanced stages of breast cancer at presentation. Efforts at measuring the magnitude of the breast cancer issues, epidemiology, and awareness, are now moving further in the right direction. We are now starting to face the challenges of early detection of breast cancer as well as the implementation of proper modern management.

Dorria S. Salem et al. publish in this issue of the Journal of Egyptian NCI an outline and initial results of a very ambitious Women Health Outreach Program (WHOP) designed to be completed in 5 phases 1. She and her co-authors state that those 5 phases include a prior training and demonstration phase that was completed in the Imaging Unit of Kasr El Aini Hospital in Cairo, as well as a one-year pilot phase completed between October 2007 and October 2008. Authors present us with results of screening of 20,098 women over the age of 45 years, between October 30, 2007 and February 9, 2009 in Cairo, Alexandria and Suez Governorates in Egypt. In addition to breast cancer, WHOP included screening for diabetes, hypertension and obesity.

WHOP investigators are to be congratulated for this extraordinary ambitious project and all the efforts put into it. They were well prepared in regards to having a multi-disciplinary working team and they included in their project programs for training of clerks, data managers, radiographers, nurses, radiologists and other physicians who deal with diagnosis and management of breast cancer. They also included engineers and arranged for mobile units to reach women who could not otherwise reach them. WHOP investigators are to be commended also for performing a field plan demonstration project and testing it and for measuring citizens’ response before finalizing their plans and starting the project1. They set a great example for other people working in the field.

Breast cancer is the most common female malignancy in women in almost all Arab countries [2-5]. Randomized trials of mammographic screening of average-risk women above 50 years reduced breast cancer mortality by more than 36%. Analysis of the eight randomized trials, including the Canadian trials on women, ages 40-49 years old, showed a relative reduction of breast cancer deaths by 18% [6]. There is an obvious overlap as women with ages ranging from 40-49 years old reach the age of 50 and above, and enjoy the more clear benefits of mammographic screening beyond the age of 50 years. Many societies, including the American Cancer Society, recommend mammographic screening starting at age 40 years [7,8]. As it would be very difficult in this day and age to do more studies on breast cancer screening, and in view of the observations that almost 50% of cases are below the age of 50 years with a median age of 48-52 years at presentation, we recommend screening be done starting age 40, where resources are available and where setup for breast cancer care is appropriate [4,9].

Salem et al. report an initial very significant and alarming number of 10,215 women out of
20,098 women to be overweight and 2692 women to be obese [1]. Their observation that there is no significant correlation with breast cancer is only a one point in time observation and it cannot be used to confirm or refute any potential relationship between overweight, obesity and breast cancer. Future results, follow-up, and multivariate analysis will be awaited. Correlation of mammographic abnormalities with diabetes and hypertension in WHOP participants are very preliminary and will also need further multivariate analysis.

WHOP investigators report that they invited women aged 45 years and up for screening. Eligibility criteria listed include only two points, women should have no personal history of breast cancer and no recent mammography [1], authors neither describe clinical history nor physical breast examination of selected and invited women. In future reports, authors will be asked about the assessment of those invited women, and what were the results and outcome if referred women were found to have abnormalities in their breasts. In another study from Cairo, Egypt, women were taught how to examine themselves, and authors reported that many were found to have clinical breast cancers for which they were effectively downstaged, and therefore treated for cancers that would have otherwise presented later as more advanced cases [10].

This issue brings me back to re-emphasize the importance of awareness, teaching women self-breast exam, and clinical breast examination once-a-year by a physician, particularly in countries with limited resources. Breast cancer awareness campaigns emphasize the benefits of early detection by promoting breaking of taboos, and teaching scientific facts that early breast cancer can be cured, and that cure can be achieved without the need of mastectomy. Advanced breast cancer is devastating to women and to their husbands and children, and therefore campaigns should be directed towards women as well as husbands who should be asked to encourage their wives to enroll in screening campaigns. Campaigns have begun to reduce the effects of taboos and people started to talk more freely about cancer, in fact, we and many centers in Arab countries have started to see more cases of early breast cancer and even a significant number of cases with microcalcifications [4]. Breast cancer screening in countries with limited resources have been recently reviewed [11,12].

As for the management of abnormal findings, Dorria S. Salem et al. [1] report performing FNAB as first line management in suspicious cases and reserving core biopsies for inconclusive cases. I fully agree with the authors’ efforts to ensure accurate diagnosis and the importance of having an experienced cytopathologist. However, FNA is useful and recommended when there is a palpable tumor or a highly suspicious tumor with irregular borders and infiltrative characteristics on mammography and ultrasound. Core biopsy is indicated when FNA is inconclusive as the authors state, and also if mammography shows micro-calcifications where FNA cannot distinguish between in-situ and infiltrative carcinoma. A core biopsy is important for better assessment of pathology and determination of receptors (estrogen, progesterone, and HER2 receptors) especially in patients with large tumors who require pre-operative (neoadjuvant) therapy, particularly when targeted anti-HER2 therapy is indicated [13].

In the present report, WHOP investigators [1] report that 31 patients, out of 86 true positive cancers, underwent modified radical mastectomy while 21 had breast-conserving surgery. Eleven patients required only excisional biopsy and had benign tumors, 25 had surgery at private institutions and no data is available on them. Further WHOP reports will be awaited to report to us on the stages and follow-up information on all patients. Availability of experienced surgeons and radiation oncology are also important issues when referring patients for partial or total mastectomy. After screening of over 20000 women, authors report that abnormal mammographies with BiRADS 4 and 5 were found in 433 cases (reported as 2.1%). Additional work-up with ultrasound and FNA/biopsy showed 2 false negatives, 110 false positives, and confirmed 86 true positive cases (0.4% of total 20,098 women screened). In the US, the likelihood of a woman being called back for additional testing after first round of screening is an average of 11% (range 3-57%) [14]. In women for whom a biopsy is then indicated, the likelihood of finding an invasive and/or in-situ cancer is 25-47% [15]. This is what we call positive predictive value (PPV) and it varies...
with expertise and patients own risk factors for breast cancer. What is of concern in this present WHOP article, although not unexpected, is that more than half of the recalled women did not show up or no feedback is available on them. This should generate yet another important experience on how to deal with missing information and how to assure follow-up of patients in Egypt and other Arab countries, as well as in all limited resource countries.

WHOP investigators will be asked to report in the future on screening intervals and data collection. Screening started at age 45 years, and data were analyzed by 10-year age groups starting age 50, which makes comparisons somehow difficult. In view of the high incidence of women with breast cancer with young age at presentation, it would be more helpful if WHOP investigators revise the starting age for screening mammography and make it 40 years and analyze data according to 10-year age groups starting age 40 years. On the other hand, it is important to note that increasing the time interval of periodic mammography diminished the mortality reduction by allowing undetected growth of interval cancers. Increasing the screening interval of women in their forties from annual to every 2 years or to every 3 years would diminish mortality reduction rates from 36% to 18% and to 4%, respectively [16]. Once a screening strategy is adopted, women aged 40 years and up should be screened at yearly intervals because data from Egypt and other Arab countries indicate that 50% of breast cancers are seen in women below age 50 years, and because young women have more aggressive tumors [17,18] and may be missed by two-year intervals.

Finally, WHOP investigators, staff, and their sponsors are to be commended for this excellent, well planned and executed project that sets a great example for devotion for science and public health. In addition to regional and national cancer registries, they provide many new innovative approaches to characterize, diagnose and treat breast cancer in Egypt and other Arab countries. Future WHOP reports will hopefully strengthen the case for and implementation of high quality standards for breast cancer awareness, early detection and treatment.

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