

SPECIAL ISSUES IN BREAST CANCER
GUIDELINES FOR BREAST CANCER SCREENING IN LEBANON
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ABSTRACT • The accumulation of national epidemiological data since the late 1990s has led to the adoption of evidence-based guidelines for breast cancer screening in Lebanon (2006). Almost 50% of breast cancer patients in Lebanon are below the age of 50 years and the age-adjusted incidence rate is estimated at 69 new cases per 100,000 per year (2004). This official notification calls for breast self-examination (BSE) every month starting age 20, and a clinical breast examination (CBE) performed by a physician every three years between the ages of 20 and 40 years. Starting age 40, and for as long as a woman is in good health, an annual CBE and mammography are recommended. Women with known genetic family history of breast cancer should start screening 10 years earlier than the first young patient in the family, or earlier depending on medical advice. The Breast Cancer National Task Force (BCNTF) recommends certification of mammography centers and continued training of personnel to assure high quality mammograms, and to minimize unnecessary investigations and surgeries. It recommends that a national program should record call-backs of women for annual screening and follow-up data on abnormal mammograms. BCNTF encourages the adoption of these guidelines and monitoring of their results, as well as follow-up of breast cancer epidemiology and registry in Lebanon, and scientific progress in early breast cancer detection to determine needs for modifications in the future.

INTRODUCTION

Breast cancer remains the most frequent type of cancers among women in Lebanon since the 1960s [1]. There is a universal consensus that breast cancer screening using annual mammography is a cost-effective tool to detect asymptomatic cancers, and that early detection improves the prognosis and reduces mortality [2-3]. In 1997, two of the co-authors participated in a review paper which highlighted the controversies preventing the adoption of

clear guidelines for breast cancer screening in Lebanon. The review called for additional epidemiological evidence on which to build the decision for the recommended age to start mammography screening in women with no family history of cancer [4]. Since then, advancements in epidemiological knowledge concerning breast cancer occurred which allowed national guidelines to be adopted at a consensus meeting in Broumana in February 2006. The meeting had been convened by the minister of Public Health (MOPH) Dr. Mohammad Khalifeh to debate a national policy for prevention and control in Lebanon. A Breast Cancer National Task Force (BCNTF) was set up to follow-up on issues of prevention and control. Since then, national political turmoil has delayed the finalization and official publication of the guidelines. In this article, we present the evidence leading to these first national guidelines and we propose an official version which has received MOPH approval. These guidelines are subject to modifications through the same consensual process, should more cost-effective screening technologies and/or epidemiological data emerge which suggest the need for doing so.

EVIDENCE LEADING TO THE NATIONAL GUIDELINES

Three streams of epidemiological data have contributed to the adoption of the current guidelines.

1. The importance of intervening without further delays

A first national report [5] and subsequent ones from the National Cancer Registry (NCR) for year 2003-2004 [6] confirmed that breast continues to be the most common cancer site in women, and constitutes about 1/3 of all female cancer cases in Lebanon. In 2004, its age-adjusted incidence rate (ASR) was estimated at 69 new cases per 100,000 persons (Table I), which is a remarkable increase from the estimated 20 cases/100,000 reported in the mid-1960s [7]. Lebanon can thus be classified nearer to the developed nations than to the less developed ones in terms of the magnitude of the breast cancer problem. The consistent aggravation of this public health concern indicates that a clear and effective action to promote breast cancer screening among Lebanese women should be implemented without further delays.

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TABLE I
INCIDENCE RATE OF BREAST CANCER
IN LEBANON IN 2004

Age-Groups	N	Incidence (per 100,000)
0-14	2	0.2
15-24	5	1.3
25-34	37	11.1
35-44	214	96.9
45-54	332	194.2
55-64	266	183.3
65-74	174	16.9
≥ 75	78	19.3
Unknown	275	NA
Total	1383	69.5
ASR		69.1

ASR: Age-adjusted incidence rate
Source: National Cancer Registry 2004.

2. Age at which an intervention should be recommended

Table I shows that breast cancer incidence rates unexpectedly decrease from age 65, after a peak of higher incidence in women around ages 45-54. This unexpected drop is largely attributable to the smaller numbers of cases and of women in the older age-groups. These incidence data confirm earlier findings from a large series of 2673 female breast cancer cases diagnosed at AUBMC between 1983 and 2000. This series showed that half of all cases had been diagnosed before the age of 50. The age-specific case-load was highest in the age-group 40-49 (28.3%), followed by 50-59 (26.3%) and 60-69 (16.9%). The large percentage of women with breast cancer in pre-menopausal age-groups highlighted the importance of implementing detection programs starting at the age of 40 in order to have a positive impact on survival [8].

3. The nature of the intervention

Early detection of breast cancer relies essentially on the performance of periodic mammograms in asymptomatic women. Early diagnostic mammography has already been identified as a major factor in reducing the severity of breast cancer presentation in Lebanon down to early stages I and II [8]. Screening mammography on the other hand remains at unacceptably low rates among women in Lebanon. Four consecutive national surveys of 1200 women conducted in connection with the National Breast Cancer Awareness campaigns (2002-2005) showed that "proper" utilization of mammography within the past 12 months had increased only slightly from 11% to 18%. In the 2005 survey, utilization was almost twice higher (25%) in urban and suburban Greater Beirut than in mostly rural areas (14%), and among women 40-59 (21%) compared to younger (12%) or older (11%) ones [9].

After a hiatus resulting from the Israeli war on Lebanon in July-August 2006, a survey in 2007 con-

firmed the disappointingly low levels of utilization with significant urban-rural differences (Table II). Furthermore, any specific campaign, the largest proportion of women who had had a mammography in the previous 12 months had done so for the first time in their life. This suggests that the message for the necessity of yearly repeating the mammography was not being disseminated clearly enough.

Unsatisfactory utilization data have forced the public health policy-maker in Lebanon to consider setting a clear age to start screening without complicating the message with an age to end it. International studies recommend mammography between ages 40 and 69. New recommendations raised the upper age limit to 75 in women with normal performance status and life expectancy of more than 10 years. The American Cancer Society currently recommends screening mammography starting at age 40 and continuing for as long as a woman is in good health [10]. This is the articulation which was also decided for the Lebanese recommendations.

CONCLUSIONS & RECOMMENDATIONS

The publication of guidelines for breast cancer screening in Lebanon officially corrects a gap in public health regulations which has existed for several years. They are based on local epidemiological evidence which have been gathering over several years. Stakeholders are invited to adopt and adhere completely to these guidelines, to avoid confused contradictory messages which may discourage potential users. Only unconditional adherence will make it possible to run a valid monitoring of mid-term impact on the burden of breast cancer

TABLE II
MAMMOGRAPHY UTILIZATION in the PREVIOUS 12 MONTHS
AMONG WOMEN AGED 40 or MORE by REGION

	2005	2007
N	1200	1350
Mean age (SD)	50.5 (11.2)	47.5 (11.5)
OUTSIDE GREATER BEIRUT (%)		
Akkar	6.3 (2.5-10.0)	11.3 (6.3-16.4)
Baalbeck	NA	4.0 (0.0-7.1)
Batroun	20.0 (13.8-26.2)	12.0 (6.8-17.2)
Chouf	11.9 (6.9-16.9)	8.0 (3.7-12.4)
Nabatieh	NA	9.3 (4.7-14.0)
Sour	16.4 (10.6-22.1)	2.7 (0.0-5.2)
Zahleh	16.3 (10.5-22.0)	13.3 (7.9-18.8)
Subtotal	14.1 (11.7-16.5)	8.7 (7.0-10.4)
INSIDE GREATER BEIRUT (%)		
Beirut city	25.5 (19.5-31.5)	26.7 (19.6-33.7)
Beirut suburbs	24.5 (18.5-30.5)	21.3 (14.8-27.9)
Subtotal	25.0 (20.8-29.2)	24.0 (19.2-28.8)
National	17.8 (15.6-19.9)*	12.1 (11.7-12.5)*

*p < 0.01 comparing areas inside and outside Greater Beirut
Sources: Annual surveys following the annual National Breast Cancer Awareness Month; Ministry of Public Health, unpublished data.

GUIDELINES FOR CANCER SCREENING IN LEBANON

1. All women with no personal or family history of breast cancer should obtain a mammography every year starting at 40 and for as long as the woman is in good health, to detect breast cancer at its earliest possible stages.
2. The mammography should be repeated every year even if it shows no suspicious signs.
3. Women with personal or family history of genetic breast cancer should start their annual screening 10 years earlier than the age of onset of the first case in the family, or even earlier if their physician recommends it.
4. All women should have a clinical breast examination (CBE) in conjunction with their annual mammography. CBE is encouraged every three years between the ages of 20 and 40, and yearly afterwards.
5. All women are encouraged to perform proper breast self-examination (BSE) on a monthly basis starting age 20. BSE is usually recommended 7-10 days after the beginning of menstruation. BSE does not replace mammography as an effective tool for early detection.
6. Two routine views are required for a valid screening mammography: craniocaudal and lateral oblique.
7. Breast ultrasound is not recommended in the screening of asymptomatic women. Ultrasounds can be complimentary to mammography in case of dense breasts. They may be indicated in the workup of abnormal mammograms.

among Lebanese women. Based on monitoring data and new scientific advances, modifications may have to be introduced at a later date.

Particular attention should be devoted in the next revision to addressing the optimal management of the high-risk subgroup of asymptomatic young women with BRCA mutations. BCNTF is committed to the implementation and evaluation of these screening guidelines. BCNTF will work with MOPH to coordinate with screening mammography centers a national database of periodic physical examination and mammography screening including records of results, recalls following abnormal findings, follow-up procedures and treatment outcomes.

BCNTF recommends that MOPH enforces measures of quality control which consist of technical guidelines, training, yearly inspection and reaccreditation of all centers that perform screening mammography. The inspection should assess the control of radiation exposure from mammography machines, training and licensing of technicians, adequacy of film development, accuracy and experienced interpretation of mammograms, and feedback and follow-up on mammography results.

Finally, guidelines for best-practice, ethical and cost-effective guidelines for the management of diagnosed cases of breast cancer in Lebanon should also be established in parallel with screening guidelines.

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