Policy statement and recommended actions for early detection of breast cancer in the Eastern Mediterranean Region

Policy goal

Implement an early detection programme to detect breast cancer and precancerous lesions at an early stage when they are small and localized, thus reducing mortality from breast cancer.

Background

Breast cancer is the most common cancer among women in all countries of the WHO Eastern Mediterranean Region, and its impact is growing. The International Agency for Research on Cancer (IARC) estimates that 61 000 cases of breast cancer were diagnosed in the Region in 2008, rising to 99 000 in 2012, with 31 000 deaths from the disease in 2008 and 42 000 in 2012.[1] The rates continue to rise. IARC has projected that by 2030 the annual number of breast cancer cases and deaths in the Region will be around 169 100 and 74 200, respectively.

The risk of breast cancer is higher in women who delay childbirth, especially beyond the age of 30 years. Breast cancer risk decreases with the number of children and duration of breastfeeding. Breast cancer risk is higher in women who are physically inactive, and in postmenopausal obese women. Breast cancer risk is also increased by alcohol consumption and cigarette smoking. Most breast cancers in the Region are diagnosed at an advanced stage, making early detection of breast cancer a priority.

The only breast screening test for which there is sufficient evidence of reduction in breast cancer mortality in population-based programmes is mammography. However, mammography screening has had little impact in countries of the Region where it has been introduced. This is largely because of lack of awareness of facts about breast cancer, including its curability, and failure to reach sufficient numbers of the target population. In contrast, IARC (2015) concluded that there is sufficient evidence that screening with clinical breast examination alone can shift the stage distribution of tumours detected towards lower stage, a preliminary step to mortality reduction.[2]

The question remains as to what early detection strategy should be implemented in countries of the Region, which have vastly different economic and health care resources. A sensible decision requires careful consideration of the evidence for different breast cancer early detection interventions, the resources required for implementing these interventions, and the availability of these resources in different countries of the Region.

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[1] Ferlay J, Soerjomataram I, Ervik M, Dikshit R, Eser S, Mathers C et al. GLOBOCAN 2012 v1.0, Cancer incidence and mortality worldwide: IARC CancerBase no. 11 [internet]. Lyon, France: International Agency for Research on Cancer. Available from http://globocan.iarc.fr, accessed on 26 July 2016.

[2] Breast cancer screening. IARC handbook on cancer prevention, volume 15. Lyon, France: International Agency for Research on Cancer; 2016.

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Key definitions

Early diagnosis aims to detect cancer in its early stages in people with symptoms, when treatment is simple and affordable, resulting in higher cure rates. Early diagnosis is based on improved public and professional awareness of signs and symptoms of cancer. It entails recognizing possible warning signs and taking prompt action, and requires education of the public to improve cancer awareness, training of health care professionals to improve their professional awareness and skills in recognizing early signs and symptoms of common cancers, availability, affordability and good access to diagnostic and staging investigations, treatment services and follow-up care in public health services.

Screening is the process of identifying apparently healthy, asymptomatic people who are at high risk of having clinically undetectable early disease. It involves routine application of a screening test at specified intervals and referring those with "abnormal" (positive) screening tests for further diagnostic investigation and treatment. A screening test may be offered to a large number of asymptomatic people in the population, when it is called population-based screening, or it may be offered by a provider to asymptomatic individuals during routine health care interactions, when it is called opportunistic or spontaneous screening.

Population-based screening programmes are characterized by centralized screening invitations to a well-defined target population; systematic call and recall for screening; timely delivery of test results, diagnostic investigations, treatment and follow-up care; centralized quality assurance; and a programme database with linkages to other information systems (such as cancer and death registration systems) for monitoring and evaluation of the programme.

Opportunistic screening programmes provide unsystematic screening to subjects on request or coincidentally during routine health care interactions. There is no predetermined eligible population or protocol, and no systematic invitation at predefined intervals.

Recommended actions

1. Conduct a situation analysis for planning. Each country in the Region should review its current status of breast cancer control. This requires reviewing the national approach to the early detection of breast cancer (in light of the situation analysis performed for the national cancer control plan, where applicable) and the available resources including infrastructure, trained human resources and health care financing. The situation analysis should include the following steps.

    1.1 Assess the current situation. Consider demographic data, available cancer data, data on other diseases potentially competing for resources, data on health care facilities and personnel.

    1.2 Assess the need to build capacity. Countries should consider whether health care workers in primary care receive appropriate training in clinical breast examination so they recognize the symptoms and signs of early breast cancer. Assess availability and adequate access to diagnostic investigations, treatment and follow-up care in a timely manner. In regards tertiary care, consider whether there is a multidisciplinary approach with specific standards on breast imaging, and the availability of cytopathologists. Assess the inclusion of early diagnosis relevant to breast cancer as part of medical school curricula in each country.

    1.3 Determine whether investments need to be made in health service infrastructure for diagnostic and treatment services. Consider whether appropriate health care financing mechanisms are in place to ensure availability and adequate access to diagnostic investigations and management in a timely and effective manner.

1.4 Determine availability and access to affordable diagnostic and treatment facilities. Countries should review their diagnostic and treatment facilities to ensure they are accessible, affordable, efficient and effective, according to quality assured evidence-based guidelines. Financial, logistic and socio-cultural barriers to patient access should be assessed. Affordable treatment facilities must be available for every cancer patient before implementing any screening.

1.5 Assess availability of a clinical pathway starting from symptoms and signs, to imaging and laboratory diagnosis (i.e. triple diagnosis).

2. Promote early diagnosis. The underlying foundation of every breast cancer early detection programme should be the promotion of early diagnosis of breast cancer through both public awareness and professional education. Health education for early diagnosis of breast cancer must incorporate a number of factors.

- Health promotion, including education and counselling of women and in many cultures also of men, should be an integral part of all breast cancer control programmes.
- Health education for the public should aim to ensure that women, their families and the community at large understand that, if detected early, breast cancer is potentially curable.
- Health education messages about breast cancer should be culturally appropriate and consistent at all levels of the health care system.
- Health education for professionals is essential at the primary care level. Training is needed for physicians, nurses and social workers, in order to change misperceptions.
- Education campaigns must be intense and sustained, especially those for professionals.

Mammography is essential for early diagnosis as it is the preferred imaging tool. However, mammography results may be negative in the case of some early breast cancers detected by the individual or by a health care professional on clinical examination, especially in young patients. Therefore, a negative mammogram should not preclude further tests, particularly fine needle biopsy, where breast cancer is suspected.

3. Consider mammography screening The underlying foundation of every breast cancer early detection programme should be the promotion of early diagnosis of breast cancer through both public awareness and professional education. Health education for early diagnosis of breast cancer must incorporate a number of factors.

3.1 WHO recommends[3] considering a population-based mammography screening programme for women aged 50–69 years if the infrastructure, information system and human resource requirements are met.

3.2 High-income countries intending to introduce organized a mammography screening programme targeting women aged 45–70 or 50–70 years with mammography repeated every two years (as in most high-income countries) or every three years (as in the United Kingdom) should carefully consider the infrastructure, information system and human resource requirements. Considerable organization and inputs are required to run efficient mammography screening programmes.

3.3 In view of the limited resource settings and capacity of the health systems existing in low-income and middle-income countries, implementation of a mammography screening programme is not recommended for low-income and middle-income countries in the Region.

[3] WHO position paper on mammography screening. Geneva: World Health Organization; 2014.

4. Implement a national breast cancer control programme. A national committee should be established, with defined strong leadership, to implement and oversee the country's breast cancer early detection strategy. The relevant government departments should ensure that financing is available to support the work of the committee. A breast cancer control plan should be developed and followed as part of the country's national cancer control plan. Early detection pilot or demonstration projects should first be established in defined areas to establish that education, diagnosis and treatment can be delivered in an effective and timely manner. Breast cancer care will be facilitated if specialized breast units are established in second tier health care institutions, bringing together diagnostic and treatment expertise, as well as a mammography unit, breast ultrasound and fine needle biopsy. If screening is contemplated, a necessary prerequisite will be determining the target population (priority should be given to women aged 50-–69 years) and other required infrastructure for screening. The referral path followed by cancer patients should be reviewed and the role of each level of care clearly defined.

5. Conduct regular monitoring and evaluation.

- Monitoring and evaluation are essential to ensure quality assurance and programme improvement. A prerequisite for an effective breast cancer control strategy is the availability and accessibility of good quality medical records.
- If a mammography screening programme is in operation or initiated, special provision will have to be made to capture data on participation (proportion of the target population who have been screened in the last two years), false positives, as well as cancer detection (real positives), diagnosis and treatment and eventually the impact of the programme on breast cancer mortality.
- General indicators that will have to be monitored include stage at diagnosis of breast cancer cases, 5-year survival of ascertained cases, the incidence of and mortality from breast cancer by 5-year age groups (20–24, 25–29, 30–34, 35–39, etc.), as well as the health care workforce.

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