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

Policy goal

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

Background

The International Agency for Research on Cancer estimates that 15 000 cases of cervical cancer were diagnosed in the Eastern Mediterranean Region in 2012, with 8000 deaths due to the disease.[1] Population-based cancer registry data from most countries in the Region indicate age-standardized incidence rates of less than 6 cases per 100 000 women, similar to rates in high incidence countries with successful screening programmes. Significantly higher age-standardized rates of 10–15 cases per 100 000 women have been reported in Morocco and Sudan. However, cervical cancer incidence and mortality are generally low in the Region.

Screening is highly effective in the prevention of invasive cervical cancer due to the disease's long natural history, accessibility of the organ, and the availability of suitable screening tests and simple, safe and effective treatments for precancerous lesions. It can take over 2–3 decades from human papillomavirus (HPV) infection (the cause of cervical cancer) to induce cancer, thereby providing a long preclinical detection phase for screening.

Early detection tests for cervical cancer, such as conventional cytology (Pap smear), HPV testing and visual inspection with 5% acetic acid, can detect cervical precancerous lesions in apparently healthy, asymptomatic women, while visual inspection with speculum examination and 5% acetic acid can detect early invasive cancer in symptomatic women.

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.

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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 26 July 2016.

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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 should review the burden, the current status of cervical cancer prevention, early detection and treatment in the context of a situation analysis performed for its national cancer control plan (where available). It must consider available resources including infrastructure, trained human resources and health care financing for early detection, treatment and follow-up care, with an emphasis on quality assurance. 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 in the Region should consider whether primary care practitioners, gynaecologists and specialists receive appropriate in-service training and reorientation, so they can promptly recognize symptoms and signs of cervical cancer, and refer patients for timely diagnosis and management. Assess the inclusion of early diagnosis of cervical cancer within medical school curricula in each country.
   - 1.3 Determine whether investments must 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. All countries should review their cervical cancer treatment policies and facilities to ensure they are accessible, affordable, efficient and effective according to quality assured evidence-based guidelines. Countries should assess the availability of national guidelines for the diagnosis and management of cervical cancer and high grade precancerous lesions. Financial, logistic and sociocultural barriers to patient access should be assessed. Affordable treatment facilities must be available for every cancer patient before implementing any screening programmes.
   - 1.5 Assess availability of a clinical pathway starting from symptoms and signs, to imaging and laboratory diagnosis (i.e. triple diagnosis).

2. Consider cervical cancer screening. Any country intending to introduce a new cervical cancer screening programme, or reorganize existing programmes, should consider using HPV testing

as the primary screening test at age 35–40 years if resources permit. This should be preceded by a pilot programme through its health services to assess feasibility before national scale-up. The assessment should include:

- the health system readiness
- population acceptability
- participation rates for screening
- performance characteristics and safety of screening and triage tests
- efficiency of diagnosis
- detection rates of disease
- effectiveness of treatment.

Screening through maternal and child health services should be avoided where possible, as the attendees are too young to justify screening. However, such attendees can be used to recruit their older female relatives for screening.

3. Implement an early detection programme. A national committee should be established, with defined and strong leadership, to implement and oversee the country's cervical cancer early detection programme. Where possible, all relevant stakeholders (including representatives of concerned nongovernmental organizations) should be included. The relevant government departments should ensure that financing is available to support the work of the committee. A cervical cancer control plan should be developed as part of the country's national cancer control plan (or reviewed and revised as necessary if one is already available). All steps in the plan should be carefully followed. It is strongly advised that pilot or demonstration projects should first be implemented in defined areas to establish that education, diagnosis and treatment can be delivered in an effective and timely manner. This is because several elements required for effective cervical cancer control may not yet be available in the country. If screening is considered, the target population will need to be determined. Priority should be given to women age 35–65 years. The committee must also determine how to ensure the target group receive invitations to screening. Cervical cancer care will be improved if specialized units are established in second tier health care institutions, bringing together diagnostic and treatment expertise, as well as colposcopy and punch biopsy.

4. Conduct regular monitoring and evaluation. Monitoring and evaluation are essential to ensure quality assurance and programme improvement. A prerequisite for an effective cervical cancer control strategy is the availability and accessibility of good quality medical records. These are the basis of efficient cancer registration. If a cancer register is not yet available, a special register of the diagnosis and stage (as well as survival) of all cervical cancer patients should be established, which can later be extended to all cancers when the resources are available.

   Every country in the Region that has introduced cervical cancer screening using Pap smear, HPV testing or visual inspection with 5% acetic acid, either as a pilot or national programme, should evaluate their programme in terms of:

   - participation (proportion of the target population who have been screened in the last five years)
   - false positives
   - CIN III (cervical intraepithelial neoplasia)
   - cervix cancer detection (real positives)
   - stage of diagnosis
   - treatment received and availability of radiotherapy and essential medicines for the treatment of cervix cancer.

- impact of the programme on cervical cancer incidence and mortality; by 5-year age groups (20–24, 25–29, 30–34, 35–39, etc.)
- cervical cancer health care workforce (nurses, gynaecologists, radiologists, pathologists, specifically identifying those trained in cervical cancer).
- costs of the programme.

5. Review use of HPV vaccination for cervical cancer prevention. HPV vaccination of girls aged 9–13 years has emerged as a major strategy for primary prevention of cervical cancer.[2] Although it is not a component of early detection, it represents an important element of cervical cancer control in countries with a high prevalence of cervical cancer. Any country intending to introduce HPV vaccination should carefully review its cervical cancer burden, trends in incidence, possibility of future increases, HPV infection prevalence, and financial resources in the light of current vaccine costs before making a firm decision on its introduction. Any national scale-up should be preceded by a pilot programme to assess coverage and acceptance of the vaccine. Any country that has already introduced HPV vaccination should review its performance for coverage, acceptance and effectiveness.

[2] Comprehensive cervical cancer control: a guide to essential practice. 2d edition. Geneva: World Health Organization; 2014.