

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

## Policy goal

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

## Background

Despite comparatively lower incidence rates of colorectal cancer than in industrialized countries, a rising trend in the incidence of colorectal cancer has been observed in some countries of the Eastern Mediterranean Region. It has been estimated that 18 000 cases of colorectal cancer were diagnosed in men and 15 000 in women in 2012 in the Region.<sup>1</sup> Currently most cases of colorectal cancer in countries of the Region are diagnosed in advanced stages. In a recent study in Saudi Arabia, the 5-year survival rate of colorectal cancer patients was 45%, and 28% of patients were diagnosed with distant metastases.<sup>2</sup> Early diagnosis in symptomatic persons is thus an important strategy in improving the outcome of colorectal cancer. Primary prevention approaches, especially reduction in the prevalence of obesity and the promotion of physical activity, are needed to reduce the toll of colorectal cancer in all countries.

It is well recognized that more than 95% of colorectal cancers arise from advanced adenoma, which is the precursor lesion of most colorectal cancer. The criteria for advanced adenoma include a polyp measuring 10 mm or more, a polyp showing severe dysplasia irrespective of size, or a polyp with tubulovillous architecture irrespective of size. There is compelling evidence that removing adenomas from the colon substantially reduces the risk of developing colorectal cancer.<sup>3</sup>

Colorectal cancer may be detected by several early detection tests, such as:

- guaiac-based fecal occult blood test (gFOBT) and fecal immunochemical test (FIT)/ immunochemical-based fecal occult blood test (iFOBT), which detect lesions indirectly by detecting occult blood in the stool;
- sigmoidoscopy, which examines the distal colon; and
- total colonoscopy, which detects lesions directly by colonic inspection.

---

<sup>1</sup> 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.

<sup>2</sup> Alsanea N, Abduljabbar AS, Alhomoud S, Ashari LH, Hibbert D, Bazarbashi S. Colorectal cancer in Saudi Arabia: incidence, survival, demographics and implications for national policies. *Ann Saudi Med.* 2015; 35(3):196–202.

<sup>3</sup> Williams JG, Pullan RD, Hill J, Horgan PG, Salmo E, Buchanan GN et al. Management of the malignant colorectal polyp: ACPGIBI position statement. *Colorectal Dis.* 2013; 15 Suppl 2:1–38.



Colorectal cancer screening reduces colorectal cancer-specific mortality and is cost-effective compared to no screening in middle- and high-income countries with high incidence rates. However, no single screening strategy has been found to be more cost-effective than others. Despite evidence that screening can reduce colorectal cancer incidence and mortality, it is underutilized and offered to only a small proportion of target populations worldwide. Where it is offered, widespread differences exist in its implementation. Programmes are still evolving in high-income countries.<sup>4</sup> A recent review of colorectal cancer screening programmes in 12 countries indicated invitation coverage of 30–100% and participation coverage of 7–68%.<sup>5</sup>

## 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 the burden, the current status of colorectal cancer prevention, early detection and treatment in the context of the situation analysis performed for its national cancer control plan (if available) and its availability and quality of resources including infrastructure, trained human resources and health care financing for early detection, treatment and follow-up care. The situation analysis should include the following steps.

---

<sup>4</sup> Schreuders EH, Ruco A, Rabeneck L, Schoen RE, Sung JJ, Young GP et al. (2015). Colorectal cancer screening: a global overview of existing programmes. *Gut*. 64(10):1637–49.

<sup>5</sup> Klabunde C, Blom J, Bulliard JL, Garcia M, Hagoel L, Mai V et al. (2015). Participation rates for organized colorectal cancer screening programmes: an international comparison. *J Med Screen*. 22(3):119–26.

- 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 and specialists receive appropriate in-service training and reorientation, so that they can promptly recognize those with a high clinical suspicion of colorectal cancer, based on symptoms and signs, and refer them for timely early diagnosis and management. They should also specifically assess whether endoscopic training is received by certified professionals, and evaluate the inclusion of early diagnosis of colorectal 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 colorectal 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 colorectal 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.
2. Consider colorectal cancer screening. Any country intending to introduce a colorectal cancer screening programme should consider using faecal immunochemical testing as the primary screening at 2–3 year intervals targeting 50–69 year-old people and colonoscopy triage of persons with positive faecal immunochemical tests. Before attempting national scale-up in a phased manner, countries should consider implementing a pilot programme through routine health services to assess:
    - feasibility and the health system readiness
    - population acceptability
    - participation rates for screening,
    - triage, diagnosis and treatment
    - performance characteristics and safety of screening and triage tests
    - detection rates of disease.
3. Implement an early detection programme. A national committee should be established, with defined strong leadership, to implement and oversee the country's colorectal cancer early detection programme. As far as possible, all relevant stakeholders should be included. The relevant government departments should ensure that financing is available to support the work of the committee. A colorectal cancer control plan should be developed as part of the country's national cancer control plan (or reviewed and revised as necessary if 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 colorectal cancer control may not yet be available in the country. If screening is considered, it will be necessary to determine the target population and how invitations and screening activities will be delivered to the population group. Priority should be given to men

and women aged 50–69 years. Colorectal cancer care will be facilitated if specialized units are established in second tier health care institutions, bringing together diagnostic and treatment expertise, including colonoscopy services, and mucosal biopsy.

4. **Conduct regular monitoring and evaluation.** Monitoring and evaluation are essential to ensure quality assurance and programme improvement. A prerequisite for an effective colorectal cancer control strategy is the availability and accessibility of good quality medical records. These are the basis of efficient cancer registration. Well run population-based cancer registries are a valuable tool for the evaluation of colorectal cancer screening programmes. If a cancer register is not yet available a special register of the diagnosis and stage (as well as survival) of all colorectal cancer patients should be established. This can later be extended to all cancers when the resources are available. Every country in the Region that has introduced colorectal cancer screening either as a pilot or national programme should evaluate their programme in terms of performance characteristics of the screening test used. Furthermore, participation in screening, triage and diagnostic investigations and treatment as well as the costs involved and eventually the impact of any scaled up national programmes on colorectal cancer incidence and mortality should also be considered.

If a colorectal screening programme is in operation or initiated, it must be monitored and evaluated systematically. To do this, data must be captured on:

- participation (proportion of the target population who have been screened in the last two years)
- false positives
- advanced adenoma and cancer detection (real positives)
- stage of diagnosis
- treatment provided and availability of radiotherapy and essential medicines for the treatment of colorectal cancer
- 5-year survival of ascertained cases
- incidence and mortality from colorectal cancer by 5-year age groups (20–24, 25–29, 30–34, 35–39, etc.)
- the health care workforce (nurses, physicians, surgeons, radiologists, pathologists), specifically numbers of those trained in endoscopy and treatment of colorectal cancer
- cost effectiveness of the screening programme.