

# European initiatives in colorectal cancer screening

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The United European Gastroenterology Federation (UEGF) has four committees that report to its council and assembly, namely, the scientific, education, future trends and public affairs committees. The public affairs committee's mission is to highlight the importance of gastroenterology at a lay and political level. This committee has emphasized the importance of colorectal cancer (CRC) screening as a public health issue since its formation. There are approximately 436 000 newly detected cases of CRC in Europe and more than 212 000 deaths due to the disease each year [1]. The committee has been engaged in a variety of initiatives to highlight the importance of CRC screening. In 2002, it commissioned a survey of 1000 citizens older than 50 years of age in 22 European countries to evaluate their knowledge of CRC. The survey results showed an alarming lack of knowledge of CRC screening but an encouraging willingness to participate in the future CRC screening programmes [2].

It was shown in 2002 that organized CRC screening is one of the most cost-effective types of cancer screening programme that is available [3]. Despite this, population-based CRC screening programmes are not yet established or even planned in approximately one-third of the European member states. The Council of Europe supports their implementation, and in 2000, it was recommended that every citizen of the European Union (EU) between the ages of 50 and 74 years should have access to CRC screening [4]. The UEGF Public Affairs Committee has been active in three key areas in promoting CRC screening: (i) a 'written declaration' by the members of the European parliament in the fight against CRC; (ii) the Barcelona Declaration regarding the familial risk of CRC; and (iii) developing European guidelines for quality assurance in CRC screening and diagnosis.

## Written declaration of colorectal cancer screening

The written declaration is a joint initiative with European Parliamentarians, Pavel Poc, Alojz Peterle, Cristian Silviu

Busoi, Frieda Brepoels and Jo Leinen, and was coordinated by the UEGF public relations associates in Brussels, EACON. It was an enormous success with more than 50% of all European Parliamentarians signing the declaration. The advantage of CRC screening is that it can detect cancer at an early stage before the disease becomes symptomatic. This generally results in a better prognosis with less expensive surgery and/or chemotherapy and ultimately lowers mortality rates. CRC screening compares favourably with other cancer screening methods in terms of gained quality-adjusted life years [3].

In the action against CRC, emphasis should be placed on the lifestyle factors such as obesity, lack of exercise, alcohol and smoking [5]. These risk factors also apply to other malignancies (oesophageal, gastric, pancreatic, liver, uterine cancer) and nonmalignant conditions. Promoting exercise, that is, a 30-min walk daily, can reduce CRC by 30%, which is almost as great as the reduction achieved through screening [6]. The UEGF Public Affairs Committee organizes a 'Fun Run' at its annual UEGF week to promote a healthier lifestyle.

Screening and prevention are both very important for cancer control, but other essential factors include optimum patient management, accurate diagnosis and staging through imaging and surgery, oncology and palliative care. An important indicator of the effectiveness of screening is that in countries with established CRC screening programmes, mortality has decreased but in countries with no programme the mortality rate continues to rise. It is not surprising that CRC mortality is significantly lower in those European countries that spend proportionally more on health care. The economic argument in favour of CRC screening is shown by a recent study showing that a saving of €121 to €635 can be expected for each screening colonoscopy performed in the next 10 years [7].

To date, only the faecal occult blood test (FOBT) for men and women aged 50–74 years has been recommended by the EU for CRC screening. Any screening policy for CRC should take into account the available

evidence and the numerous other principles and standards of best practice laid down in the Council Recommendation. Although the use of endoscopic screening methods is increasing, the majority of CRC screening examinations performed in the EU use the evidence-based test recommended by the council of the EU.

Screening using the FOBT has been shown to reduce CRC mortality by 20–30% [8]. A recent study showed that screening using flexible sigmoidoscopy can result in a reduction of cancer mortality by 40% for more than a period of 11 years [9]. However, as with all invasive tests, the intervention is not risk free. A considerable advance in terms of test accuracy and acceptability is the faecal immunological test that detects the globin moiety of haemoglobin. The test is automated and is specific for colonic human blood loss. It is likely to replace the nonspecific guaiac FOBT in the future [10–12].

Population-based screening programmes that reach all sectors of society should be the common aim for politicians and the UEGF. This will encourage a multidisciplinary approach from public health, from primary care to specialists in cancer detection and delivery of treatment. This call by the written declaration is directed at the European Commission and the member states in the European Council to support a European awareness campaign on the lifestyle factors causing CRC, to implement high-quality population-based CRC screening in all EU countries and to report on progress at 2-yearly intervals. Last but not least, it is important to prioritize research in CRC screening in the present Framework Programme 7 and in all future European programmes concerned with the health research.

### **Barcelona declaration on the familial risk of colorectal cancer**

The second initiative was instigated in collaboration with the Felix Burda Foundation, an organization that has been extremely successful in promoting CRC screening in Germany and that has launched a European Declaration on CRC screening. This has been further endorsed by a Transatlantic Declaration on CRC that has broadened our support base to the International Digestive Cancer Alliance [13]. An additional impetus for promoting CRC screening was the creation of the European Society of Digestive Oncology, now a full member of the UEGF. The specific approach of the Barcelona declaration aimed at improving the early detection and management for European citizens with a familial risk of developing CRC.

In 15–20% of new cases of CRC, a family history of this disease can be identified. The earlier known high-risk genes of CRC can be found through molecular-genetic investigations. These low-frequency, high-penetrance genes relate, however, only to patient groups with hereditary CRC (mainly Lynch syndrome and polyposis syndromes, e.g. familial adenomatous polyposis), in a total of

approximately 5% of new cases). All other familial risks of CRC can currently only be identified through a detailed examination of family history [14].

It is still not widely appreciated that people with familial CRC have a three-to-six-fold increased risk compared with the normal population. Patients with familial CRC are the second largest group of patients with CRC, exceeded only by the sporadic risk group.

Up to 2% of healthy people aged between 45 and 70 years have a family history compatible with familial CRC. This means that more than 3 million healthy people in Europe are at risk of familial CRC [13].

National CRC screening programmes are aimed at average risk populations aged at least 50 years and therefore do not cover individuals with cancer and precancerous adenomas at an earlier age such as those with familial risk. In some European countries, colonoscopy surveillance for people with a higher risk of familial CRC is recommended from the age of 40 years onwards. To remedy the under-detection of citizens with a higher risk of familial CRC, they must be offered the chance of risk-adapted early cancer identification and management. This is not only necessary for reasons of equality of treatment, but also helps to optimize the use of resources [15,16].

The signatories of the Barcelona Declaration urge the supranational and national healthcare leaders and decision makers (EU parliament, EU Commission, health ministries, health funds, scientific and professional societies and physicians and surgeons) to launch a Europe-wide initiative to improve the early identification and management of familial CRC. This would lead to supplementing the EU guidelines and the national guidelines with measures for the early identification of the risk group with family history alongside measures to manage this group. The early identification of the risk must take place through a detailed family history and it is accepted that colonoscopy is the only suitable screening method for this group to date. The medical curriculum should include cancer genetics with particular reference to proper assessment of the family history.

Attempts should be made to identify those at risk as early as possible through a detailed investigation of family history, and at the latest by early adulthood.

Appropriate electronic systems should be used, including electronic case files, electronic health records, and reminder systems to increase and maintain awareness of the theme of familial CRC, especially among general practitioners, physicians and surgeons and specialists of other disciplines, and it is urgently recommended that a questionnaire be compiled and agreed with human geneticists to simplify the identification of affected persons. This should make it easier to estimate the CRC risk and differentiate between familial and hereditary CRC in medical practice.

To improve the early identification and management of groups of people with familial CRC problems, researchers and users should set up a 'European Familial Colorectal Cancer Network'.

### European guidelines for quality assurance in colorectal cancer

The European Guidelines for quality assurance in CRC screening and diagnosis [17], soon to be published, will provide national authorities, healthcare providers, and programme administrators with all the information required to establish high-quality colorectal screening programmes or to improve existing programmes to achieve optimum standards in CRC screening. This will, in turn, lead to greater control of the disease and reduce the burden of the cancer in the EU in the coming years. It critically evaluates all the evidence regarding CRC screening including established methods and possible future strategies. It emphasizes the importance of careful planning and quality assurance at every stage of the screening process. It recognizes that effective screening should supplement ongoing efforts to improve primary prevention as well as diagnosis and therapy of symptomatic disease.

The guidelines cover the entire screening process from invitation to management of screen-detected lesions. Although the main focus is on elements essential to screening, it is recognized that certain principles are equally important in diagnosis. Training, multidisciplinary teamwork, monitoring and evaluation, cost effectiveness, minimizing adverse effects and timeliness of further investigations are referred too frequently.

For CRC screening to achieve its full potential in reducing the burden of the most common cancer in Europe, it is essential that the maximum number of people participate. This will require substantial resources and expanded efforts in the field of quality assurance. Efforts to improve quality and expand screening services should lead to improvement not just in screening, but also in symptomatic care.

The new European guidelines also describe additional tools that are now being developed to assist gastroenterologists in evaluating their current level of performance in screening. It should be kept in mind, however, that these initiatives, though important, can only be effective if they stimulate action to continuously improve and maintain high levels of professional performance. Essential steps to achieve high quality in colonoscopy include:

(1) Thorough cleansing of the large bowel. If the endoscopist's vision is obscured, small or flat lesions anywhere in the colon and particularly sessile lesions in the right colon may go undetected. The patient tolerance and acceptance of the endoscopic examination is also of prime importance and can be increased by sedation. National or cultural differences in this domain should be taken into account.

(2) Training, adequate equipment and external evaluation of endoscopy units has proved to be essential during the start-up of a national screening programme. Such activities are likely to play an increasingly important role in quality assurance of symptomatic endoscopy in the coming years.

### Conclusion

CRC is an enormous health and economic burden. Early detection and prevention have the possibility of reducing this burden significantly. There is no doubt that we have to work together with politicians to achieve this worthwhile aim.

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