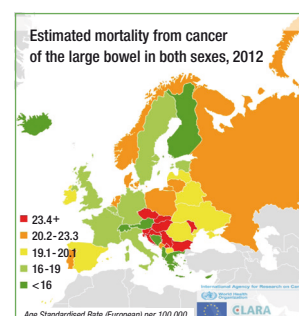
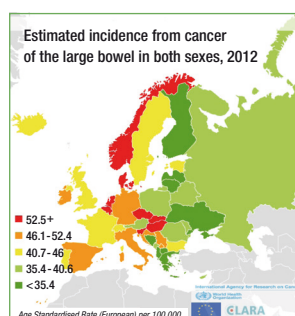
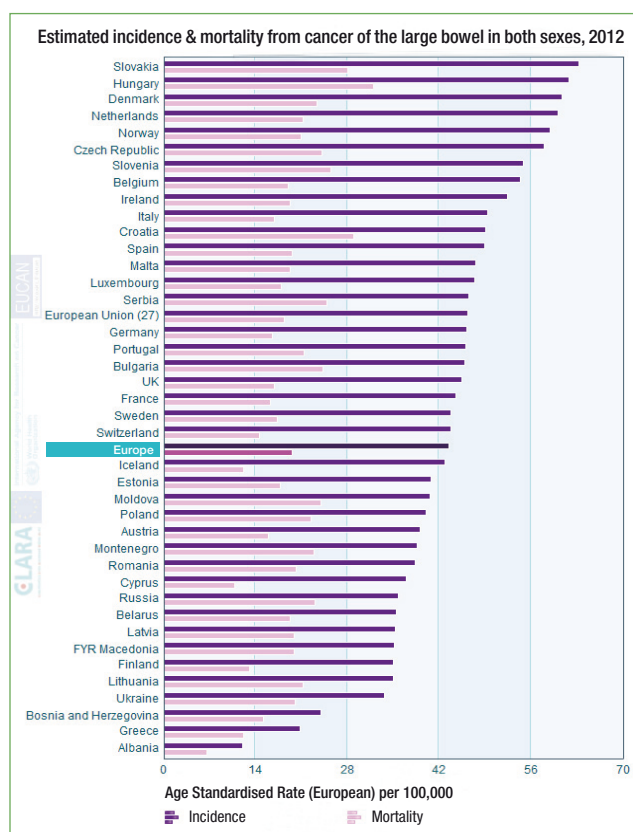


Colorectal (CRC)-Large Bowel Cancer Factsheet



Regional differences in 2012 Estimated incidence and mortality

- The countries with the highest estimated incidence rates in Europe were Slovakia, Hungary and Denmark.
- Slovakia reported the highest estimated age-standardized incidence rate** (ASR) of 63.3 new cases per 100 000 person-years, to be compared to the European ASR of 43.5.
- The European countries with the lowest estimated incidence were Albania, Greece and Bosnia and Herzegovina, with ASR less than or equal to 24.
- The European countries with the highest mortality belong to Eastern Europe: Hungary (ASR: 31.9), Croatia (ASR: 29.0) and Slovakia (ASR: 28.0), compared with an European average of 19.5 deaths per 100 000 person-years.
- Albania (ASR: 6.5), Cyprus (ASR: 10.8) and Iceland (ASR: 12.1) reported the lowest estimated mortality rates from CRC among the European countries for 2012.

Gender differences in 2012 Estimated incidence and mortality

- CRC incidence and mortality were notably higher in men than in women.
- The incidence ASRs at European level were 55.7 for men compared to 34.7 for women.
- The mortality ASRs were 25.2 compared to 15.4 cases per 100 000 person-years for men and women respectively.

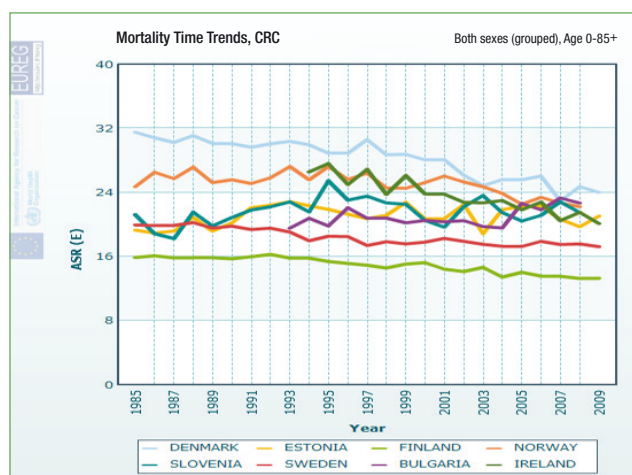
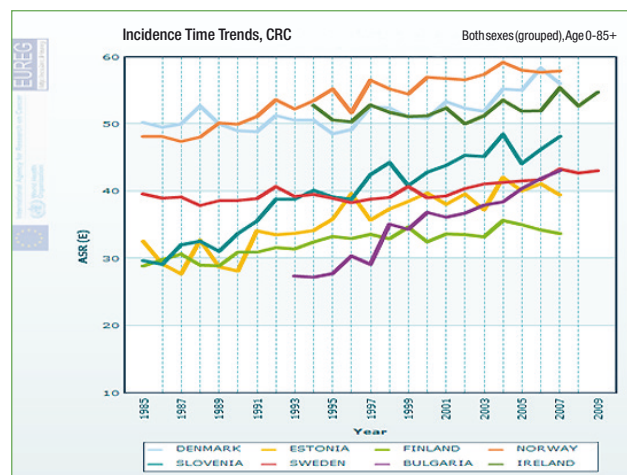
- Colorectal cancer (CRC), also known as Bowel Cancer, is cancer of the colon and/or rectum. The colon, also called the large intestine, is the part of the body's digestive system that moves waste material from the small intestine to the rectum.
- Each year approximately 447 000 Europeans* are newly diagnosed with CRC.
- In 2012 CRC accounted for nearly 13% of all new cases of cancer in Europe.
- In 2012, 214 675 people were estimated to die from the disease, making CRC the second leading cause of cancer deaths in Europe.
- Worldwide, the incidence of CRC varies tremendously, with the highest estimated rates occurring in Australia/ New Zealand and Western Europe.¹

* The European Cancer Observatory (ECO) estimates refers to the 39 European countries defined by the United Nations plus Cyprus.²

** ASR: age-adjusted rate to the standard European population (Doll, 1976), to account for the different age structure in various countries.

Temporal changes in selected European countries

- Increasing trends of CRC incidence have been observed in European Countries since 1985.
- Declines in mortality were observed in the last ten years in Northern Europe (Denmark, Norway, Ireland, Finland) compared to increases in Estonia and Bulgaria.
- Similar time trend patterns in incidence and mortality occurred among men and women from Northern Europe (Denmark, Norway, Finland—data not shown).
- The increase in CRC incidence and mortality over time in Slovenia and Bulgaria is faster among males compared to females (data not shown).



CRC aetiology

- The most common mechanism for the development of CRC involves the development and transformation of adenomatous polyps.⁵
- The risk of CRC increases with increasing polyp size and the percentage of villous component within the adenomas.⁶
- Furthermore, the risk of developing adenomatous polyps has been shown to increase with increasing age.⁷
- A diet high in the consumption of red meat increases the risk of developing CRC,⁸ while a diet high in cereal fiber and whole grains seems to be effective in reducing risk,⁹ although the preventive role of fibre is debatable.¹⁰
- Inflammatory bowel diseases (IBD) such as ulcerative colitis and Crohn's disease are also associated with an increased risk: CRC accounts for 10%-15% of deaths in patients with IBD.¹¹
- Genetic factors such as Lynch syndrome and familial adenomatous polyps increase the risk of CRC.^{12, 13}

Screening and prevention

- Screening can prevent CRC through the detection and removal of precancerous lesions and can also detect CRC at an early stage.
- The current recommendation for CRC screening in most countries is to begin screening at age 50 for men and women who are at average risk for developing CRC—persons at higher risk should begin screening at a younger age and may need to be tested more frequently.³
- Fecal occult blood test (FOBT), flexible sigmoidoscopy and colonoscopy are the most commonly used screening methods.³
- Nonetheless, the primarily sporadic nature of the disease indicates that a reduction in colorectal cancer incidence worldwide can best be achieved by effective primary prevention and changes in modifiable risk factors.⁴
- When screening is first implemented, an increase in cases is expected, followed by a fall and reduction in deaths.

Conclusions

- Although regular screening and removal of adenomatous polyps are effective prevention strategies, they are expensive and necessitate close medical supervision.⁴
- The most important lifestyle changes for disease prevention appear to be weight reduction, physical activity and smoking cessation. The majority of the current literature recommends a diet low in alcohol and red/processed meats, and suggests that a diet higher in fruits and vegetables may also moderately reduce risk.⁴
- Future research should focus on understanding the role of complex gene-diet interactions, and identifying protective dietary and lifestyle patterns.⁴

A list of references (1-13) is available (in PDF) at: <http://www.encr.eu/images/docs/factsheets/ENCR%20Factsheet%20Colorectal%202013-11%20References.pdf>.