



Complete Summary

GUIDELINE TITLE

Prevention and screening of colorectal cancer.

BIBLIOGRAPHIC SOURCE(S)

Finnish Medical Society Duodecim. Prevention and screening of colorectal cancer. In: EBM Guidelines. Evidence-Based Medicine [Internet]. Helsinki, Finland: Wiley Interscience. John Wiley & Sons; 2008 May 22 [Various]. [1 reference]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Finnish Medical Society Duodecim. Prevention and screening of colorectal cancer. In: EBM Guidelines. Evidence-Based Medicine [Internet]. Helsinki, Finland: Wiley Interscience. John Wiley & Sons; 2005 Feb 23 [Various].

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SCOPE

DISEASE/CONDITION(S)

Colorectal cancer

GUIDELINE CATEGORY

Prevention
Risk Assessment
Screening

CLINICAL SPECIALTY

Colon and Rectal Surgery
Family Practice
Gastroenterology
Internal Medicine
Preventive Medicine

INTENDED USERS

Health Care Providers
Physicians

GUIDELINE OBJECTIVE(S)

Evidence-Based Medicine Guidelines collects, summarizes, and updates the core clinical knowledge essential in general practice. The guidelines also describe the scientific evidence underlying the given recommendations.

TARGET POPULATION

- General population
- Asymptomatic persons at increased risk for colorectal cancer
- Individuals with symptoms of colorectal cancer

INTERVENTIONS AND PRACTICES CONSIDERED

Screening/Prevention

1. Detection and removal of adenomatous polyps from symptomless individuals
2. Follow-up of patients with colorectal adenomata
3. Screening of asymptomatic individuals in cases with marked familial susceptibility to cancer
 - Fecal occult blood testing
 - Sigmoidoscopy
4. Examination of whole colon (e.g., colonoscopy) or sigmoidoscopy in symptomatic patients

MAJOR OUTCOMES CONSIDERED

- Adenomatous polyp detection rate
- Colorectal cancer detection rate
- Cost per life year gained
- Mortality rate

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The evidence reviewed was collected from the Cochrane database of systematic reviews and the Database of Abstracts of Reviews of Effectiveness (DARE). In addition, the Cochrane Library and medical journals were searched specifically for original publications.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Classification of the Quality of Evidence

Code	Quality of Evidence	Definition
A	High	Further research is very unlikely to change our confidence in the estimate of effect. <ul style="list-style-type: none">• Several high-quality studies with consistent results• In special cases: one large, high-quality multi-centre trial
B	Moderate	Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate. <ul style="list-style-type: none">• One high-quality study• Several studies with some limitations
C	Low	Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate. <ul style="list-style-type: none">• One or more studies with severe limitations
D	Very Low	Any estimate of effect is very uncertain. <ul style="list-style-type: none">• Expert opinion• No direct research evidence

Code	Quality of Evidence	Definition
		<ul style="list-style-type: none"> • One or more studies with very severe limitations

GRADE (Grading of Recommendations Assessment, Development and Evaluation) Working Group 2007 (modified by the EBM Guidelines Editorial Team).

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The levels of evidence [A-D] supporting the recommendations are defined at the end of the "Major Recommendations" field.

In General

- Prevention of colorectal cancer by screening will probably prove cost-effective. This is based on the facts that colorectal cancer is common (among

the three most common cancers in the industrialized world), there is an operable benign precursor lesion (adenoma) and methods suitable for screening of colorectal tumours are available. Research is ongoing on the applicability of different methods both to population-based screening and to screening of risk groups.

Detection and Removal of Adenomata

- Removing adenomatous colorectal polyps from symptomless persons reduces the incidence of and mortality from colorectal cancer. However, all adenomata do not turn malignant during a person's lifetime.
- If a polyp is detected the whole colon should be examined and all polyps removed. Polyp removal may be considered unnecessary if the patient is of high age (>75 years) and the polyp can be deemed benign on the basis of its small size (<5 mm in diameter).

Follow-up of Patients with Colorectal Adenomata

- A patient with a diagnosed colorectal adenoma or carcinoma has an increased risk of developing a new colorectal neoplasm. Follow-up is worthwhile in patients in whom the possible new colorectal neoplasm is considered to pose a greater health risk than other diseases during the next 10 years.
- For recommendations for follow-up of patients with adenomata, see the Finnish Medical Society Duodecim guideline "Long-term Follow-up of Patients at Risk of Colorectal Cancer".

Asymptomatic Persons

- Screening of asymptomatic persons is indicated in cases with marked familial susceptibility to cancer.
 - If a person belongs to a family with dominant inheritance of colorectal cancer, appropriate investigations of the family members should be arranged because it may be possible to detect the genetic predisposition by gene testing and thus verify the need of screening tests.
 - If a person's two close relatives have had colorectal neoplasm, testing of faecal blood is recommended at 1- to 2-year intervals starting at an age that is 5 years lower than the age of the youngest affected relative at the time of his/her diagnosis.
 - If one close relative of a person has developed colorectal cancer before the age of 55, the person is considered to belong to the same risk group as general population.
 - All the three randomized long-term screening trials carried out in general population (50- to 75-year-olds) using Hemoccult II guaiac testing showed a decrease in the incidence of and morbidity from colorectal cancer in the screened group (Hewitson et al., 2007) [**A**].
 - The cost of colorectal cancer screening per life-year gained is lower than with cervical cancer screening and in the same range with breast cancer screening.
 - Population-based screening based on faecal occult blood testing (FOBT) requires, however, an increase in colonoscopy capacity.

- In some countries, yearly FOBT and sigmoidoscopy every 5 years is recommended for 50- to 75-year-olds, but true general screening covering the whole population has not been arranged.
- The effect of fiberoptic sigmoidoscopy combined with removal of adenomata, performed once at the age of 50 to 60 years, on the incidence of colorectal cancer is under research as an optional strategy.

Examining a Symptomatic Patient

- The most common symptom of a malignant colorectal tumour is the development of anaemia. Significant haemorrhagic anaemia always warrants the examination of the whole large intestine (colonoscopy).
- Other symptoms suggesting colorectal cancer include pain, macroscopic blood in the stools, and a palpable abdominal mass. However, the majority of patients with colorectal cancer are symptomless.
- There is a view that the colon of a patient with intestinal symptoms should be examined at least once (colonoscopy or colography with sigmoidoscopy). According to another view, the primary investigation of intestinal symptoms (pain, functional disturbances of the bowel, macroscopic blood in the stools) is sigmoidoscopy. If the symptoms are not explained by this, the next step would be testing of occult faecal blood if the only goal is to exclude a symptomatic neoplasm of the proximal bowel.

Related Resources

Refer to the original guideline document for related evidence, including Cochrane reviews and other evidence summaries.

Definitions:

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B	Moderate	<p>Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate.</p> <ul style="list-style-type: none"> • One high-quality study • Several studies with some limitations

Code	Quality of Evidence	Definition
C	Low	<p>Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate.</p> <ul style="list-style-type: none"> • One or more studies with severe limitations
D	Very Low	<p>Any estimate of effect is very uncertain.</p> <ul style="list-style-type: none"> • Expert opinion • No direct research evidence • One or more studies with very severe limitations

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CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

[References open in a new window](#)

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

Concise summaries of scientific evidence attached to the individual guidelines are the unique feature of the Evidence-Based Medicine Guidelines. The evidence summaries allow the clinician to judge how well-founded the treatment recommendations are. The type of supporting evidence is identified and graded for select recommendations (see the "Major Recommendations" field).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate prevention and screening of colorectal cancer

POTENTIAL HARMS

Harmful effects of screening include the psycho-social consequences of receiving a false-positive result and the potentially significant complications of colonoscopy or a false-negative result, the possibility of overdiagnosis (leading to unnecessary investigations or treatment) and the complications associated with treatment.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2002 Apr 27 (revised 2008 May 22)

GUIDELINE DEVELOPER(S)

Finnish Medical Society Duodecim - Professional Association

SOURCE(S) OF FUNDING

Finnish Medical Society Duodecim

GUIDELINE COMMITTEE

Editorial Team of EBM Guidelines

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Primary Authors: Editors

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

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GUIDELINE AVAILABILITY

This guideline is included in a CD-ROM titled "EBM Guidelines. Evidence-Based Medicine" available from Duodecim Medical Publications, Ltd, PO Box 713, 00101 Helsinki, Finland; e-mail: info@ebm-guidelines.com; Web site: www.ebm-guidelines.com.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on December 17, 2002. The information was verified by the guideline developer as of February 7, 2003. This summary was updated by ECRI on July 15, 2004. This summary was updated by ECRI Institute on September 26, 2008.

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