

Recommendations on Screening for Colorectal Cancer 2016

Canadian Task Force on Preventive Health Care
(CTFPHC)

Putting Prevention
into Practice



Canadian Task Force on Preventive Health Care
Groupe d'étude canadien sur les soins de santé préventifs

Use of slide deck

- These slides are made available publicly as an educational support to assist with the dissemination, uptake and implementation of the guidelines into primary care practice.
- Some or all of the slides in this slide deck may be used in educational contexts.

CTFPHC Working Group Members

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Overview of Presentation

- Background on Colorectal Cancer
- Methods of the CTFPHC
- Findings and Recommendations
- Implement our Recommendations
- Conclusions
- Questions and Answers

Screening for Colorectal Cancer

BACKGROUND

Background

- Colorectal Cancer (CRC) is the second most common cause of cancer mortality in men and third most common in women, with a current lifetime probability of dying of 3.5% and 3.1% respectively
- It is estimated that 25,000 Canadians were diagnosed with CRC in 2015 (incidence of 49 per 100,000 Canadians) and 9,300 Canadians died from the disease (mortality of 17 per 100,000)
- Most CRCs appear to arise from colonic polyps that develops slowly, some of which transform to cancers
- Currently, all Canadian programs recommend guaiac fecal occult blood testing (gFOBT) or fecal immunochemical testing (FIT), with colonoscopy for follow-up of positive screening results

Screening Tests for Colorectal Cancer

- Fecal occult blood testing (FOBT)
 - Tests include guaiac fecal occult blood testing (gFOBT) and fecal immunochemical testing (FIT)
 - The patient provides a stool sample that will be tested for blood that cannot be seen with the naked eye
- Endoscopies
 - Tests include flexible sigmoidoscopy and colonoscopies
 - A long flexible tube with a light and camera attached is inserted into the anus, rectum, and lower colon of the patient to look for polyps
 - Before this procedure, patients will need to cleanse their bowels with enemas or laxatives

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METHODS

Methods of the CTFPHC

The task force is an

- Independent panel of:
 - Clinicians and methodologists
 - Expertise in prevention, primary care, literature synthesis, and critical appraisal
 - Application of evidence to practice and policy
- Colorectal Cancer Working Group
 - 7 Task Force members who
 - Establish research questions and analytical framework

Methods of the CTFPHC

The WG based its recommendation on the work done by the McMaster

- Evidence Review and Synthesis Centre (ERSC) who
 - Undertook a systematic review of the literature based on the analytical framework
 - Prepared a systematic review of the evidence with GRADE tables
 - Participated in working group and task force meetings
 - Obtained expert opinions

CTFPHC Review Process

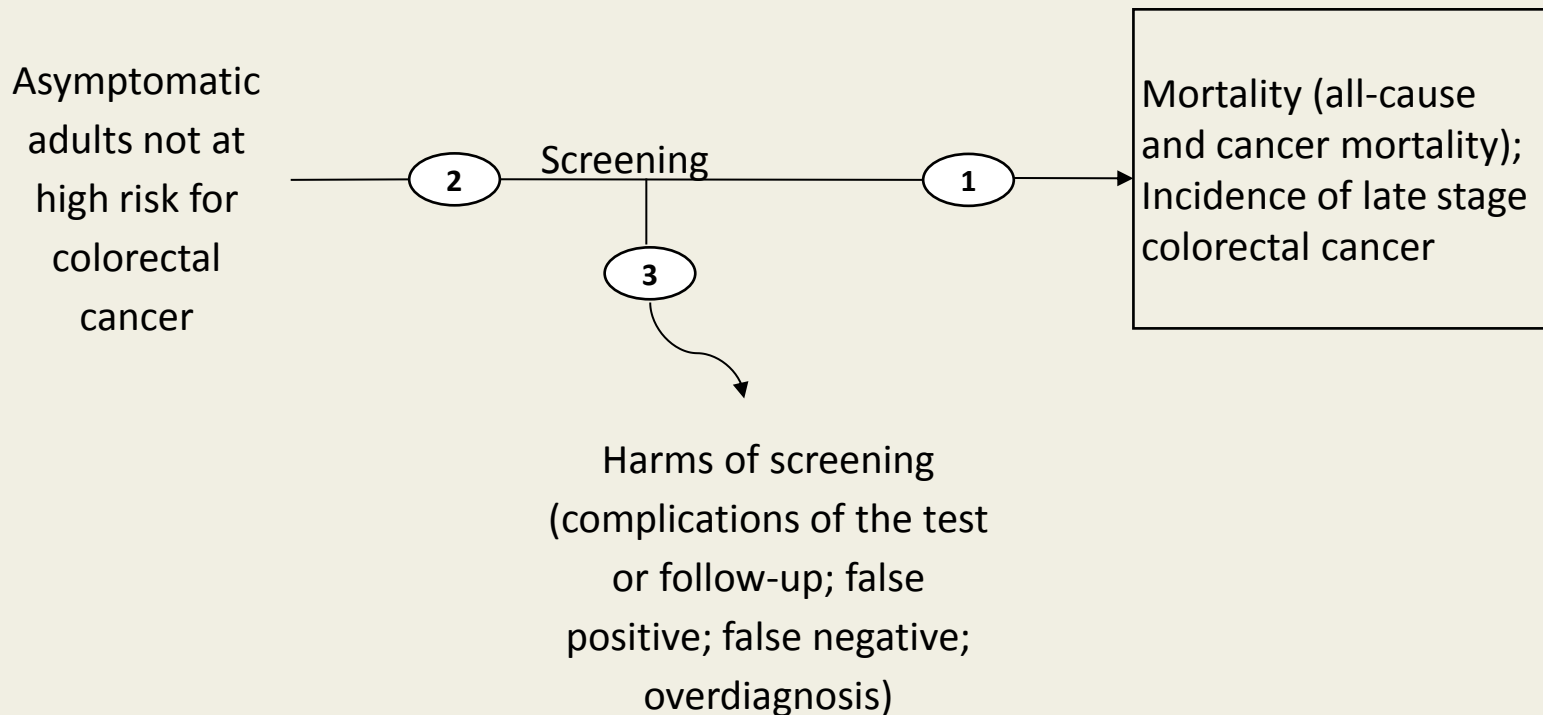
- Internal review process involving guideline working group, Task Force, scientific officers and ERSC staff
- External review process involving key stakeholders such as
 - Generalist and disease specific stakeholders
 - Federal and P/T stakeholders, also occurred
- The CMAJ undertook an independent peer review journal process to review guidelines

Research Questions

- The systematic review for screening for colorectal cancer with any screening tool included:
 - (3) key research question with (2) sub-questions
 - (4) supplemental or contextual questions

For more detailed information please access the systematic review
www.canadiantaskforce.ca

Analytical Framework: Screening



Eligible Study Types

- **Population:** Asymptomatic adults 18 years and older who were not at high risk of colorectal cancer. Excluded were adults who were at high risk, patients with symptoms suggesting underlying colorectal cancer, those with known genetic mutations associated with increase colorectal cancer risk.
- **Language:** English, French
- **Study type:** Randomized control trials (RCTs), cohort (with comparison) and case control studies.
- **Outcomes:** For benefits – CRC mortality, all-cause mortality, and incidence of late stage CRC. For harms – complications of the test/follow-up test, false positive, false negative, and over-diagnosis.

How is Evidence is Graded?

The “**GRADE**” System:

- **G**rading of **R**ecommendations, **A**ssessment, **D**evelopment & **E**valuation

What are we grading?

1. **Quality of Evidence**

- Degree of confidence that the available evidence correctly reflects the theoretical true effect of the intervention or service.
- high, moderate, low, very low

2. **Strength of Recommendation**

- the balance between desirable and undesirable effects; the variability or uncertainty in values and preferences of citizens; and whether or not the intervention represents a wise use of resources.
- strong and weak

How is the Strength of Recommendations Determined?

The strength of the recommendations (strong or weak) are based on four factors:

- **Quality** of supporting evidence
- Certainty about the **balance between desirable and undesirable** effects
- Certainty / variability in **values and preferences** of individuals
- Certainty about whether the intervention represents a **wise use of resources**



This table is a guide to

Interpretation of Recommendations

Implications	Strong Recommendation	Weak Recommendations
For patients	<ul style="list-style-type: none">• Most individuals would want the recommended course of action;• only a small proportion would not.	<ul style="list-style-type: none">• The majority of individuals in this situation would want the suggested course of action but many would not.
For clinicians	<ul style="list-style-type: none">• Most individuals should receive the intervention.	<ul style="list-style-type: none">• Recognize that different choices will be appropriate for individual patients;• Clinicians must help patients make management decisions consistent with values and preferences.
For policy makers	<ul style="list-style-type: none">• The recommendation can be adapted as policy in most situations.	<ul style="list-style-type: none">• Policy making will require substantial debate and involvement of various stakeholders.

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KEY FINDINGS & RECOMMENDATIONS

Summary of Key Findings

Screening tool	Age	Risk Ratio			
		CRC Mortality	95% CI	Incidence of late stage CRC	95% CI
FOBT (4 RCT meta analysis)	45-80	0.82	0.73-0.92	0.92	0.85-0.99
Flexible Sigmoidoscopy (pooled analysis, 4 RCTs)	55-74	0.72	0.65-0.81	0.75	0.66–0.86

- No RCTs have reported on the mortality benefits of screening colonoscopy, CT colonography, barium enema, DRE or fecal DNA testing
- No screening test reduced all cause mortality

Colorectal Cancer 2015 Guidelines

These guidelines provide recommendations for practitioners on preventive health screening in a primary care setting:

- These recommendations apply to **adults 50 years and over** who are **not at high risk** for CRC
- These recommendations do not apply to adults with:
 - Previous CRC or polyps
 - Inflammatory bowel disease
 - Signs or symptoms of CRC
 - History of CRC in one or more first degree relatives
 - Hereditary syndromes predisposing to CRC, such as familial adenomatous polyposis or Lynch Syndrome

FOBT or FlexSig Screening

Recommendation 1: We recommend screening adults aged 60 to 74 for CRC with FOBT (either gFOBT or FIT) every two years OR flexible sigmoidoscopy every 10 years.

• Strong recommendation; moderate quality evidence

Recommendation 2: We recommend screening adults aged 50 to 59 for colorectal cancer (CRC) with FOBT (gFOBT or FIT) every two years OR flexible sigmoidoscopy every 10 years.

• Weak recommendation; moderate quality evidence

FOBT or FlexSig Screening: Ages 50-74

Basis of the recommendation:

- In the judgment of the CTFPHC, FOBT and flexible sigmoidoscopy are both reasonable screening tests for patients aged 50-74 years based on RCT evidence.
- Splitting this recommendation for screening into two age groups places a relatively higher value on the different balance of benefits to harms by age, and a relatively lower value on the added complexity of two recommendations rather than one
- Although the relative benefits are similar for older (60-74) and younger (50-59) age groups, the absolute benefits are smaller in those 50-59 due to the lower incidence. This warrants a weak recommendation to screen in those aged 50-59 years as compared to the strong recommendation for people aged 60-74 years.

Not Screening Adults Aged 75+

Recommendation 3: We recommend not screening adults aged 75 years and over for colorectal cancer (CRC).

- *Weak recommendation; low quality evidence*

Basis of the recommendation:

- Lack of RCT data on benefits of screening in this age group (varied, but upper ages included were 64 years, 74 years, 75 years, and 80 years for gFOBT and 64 years and 74 years for flexible sigmoidoscopy).
- Reduced life expectancy in older age groups
- Adults over 74 years of age who are healthy (with longer life expectancy) and are less concerned with the lack of reported benefit or the potential harms may choose to be screened.

Not Screening Using Colonoscopy

Recommendation 4: We recommend not using colonoscopy as a screening test for colorectal cancer (CRC).

- *Weak recommendation; low quality evidence*

Basis of the recommendation:

- Although colonoscopy may offer clinical benefits that are similar to or greater than those associated with flexible sigmoidoscopy, direct RCT evidence of its efficacy in comparison to the other screening tests (in particular FIT) is currently lacking.
- In addition to a lack of evidence, there are also issues related to wait lists, resource constraints and a greater potential for harms.
- Patients who are less concerned about the potential harms of colonoscopy and/or who are more interested in a test that allows a longer screening interval may still request screening with colonoscopy.

NNS for CRC Mortality by Age-Groups with Varying Underlying Baseline Risk

Outcome	Screening test	Age Group (years)	ARR	NNS	NNS (95% CI)
CRC Mortality	Biennial gFOBT	< 60 (45 to 59)	0.0377%	2655	1757 -6244
CRC Mortality	Biennial gFOBT	≥ 60 (60 to 80)	0.2032%	492	326-1157
CRC Mortality	Flex Sigmoidoscopy	< 60 (45 to 59)	0.0540%	1853	1441-2713
CRC Mortality	Flex Sigmoidoscopy	≥ 60 (60 to 80)	0.2912%	343	267-503

Harms of Screening

- No high quality studies evaluating the harms of screening for colorectal cancer
- Possible harms related to screening include:
 - Death
 - Perforation
 - Bleeding (with or without hospitalization)
 - False-positive or false-negative
 - Over-diagnosis

Comparison of Screening for Colorectal Cancer Recommendations

- Our recommendations are consistent with the previous 2001 CTFPHC guideline
- Provincial screening programs recommend screening with FOBT (the majority recommend FIT) every 1- 2 years
- No province currently recommends screening with flexible sigmoidoscopy
- The USPSTF published recommendations in 2008 (currently being updated), and recommended either FOBT, flexible sigmoidoscopy, or colonoscopy

Comparison: CTFPHC guideline vs. USPSTF draft guideline

GUIDELINE	CTFPHC (2015)		USPSTF DRAFT (2015)	
AGE GROUPS & RECOMMENDATIONS	50-59 YEARS	SCREEN (WEAK)	50-75 YEARS	SCREEN - Grade A
	60-74 YEARS	SCREEN (STRONG)		SCREEN - Grade A
	> 75 YEARS	DO NOT SCREEN (WEAK)	76-80 YEARS	SCREEN - Grade C
CRC SCREENING MODALITIES & INTERVALS	gFOBT or FIT	Every 2 years	gFOBT or FIT	Every year
	Flexible Sigmoidoscopy	Every 10 years	Flexible Sigmoidoscopy	Every 10 years plus FIT every year
	Colonoscopy	Do not recommend	Colonoscopy	Every 10 years

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IMPLEMENTATION OF RECOMMENDATIONS

Resources

- We expect that most Canadians will be screened with either FIT or gFOBT due to limited access to and availability of flexible sigmoidoscopy
- Although flexible sigmoidoscopy is not frequently performed for screening in many jurisdictions, it may warrant further consideration as it can be completed in the same facilities as colonoscopy and using similar equipment, but without the requirement of a specialist such as a gastroenterologist
- Screening programs would need to consider the implications of establishing screening facilities such as training of providers, the bowel preparation required by patients and the resources needed for flexible sigmoidoscopy as compared to FOBT

Values and Preferences

- A Canadian survey on screening test preferences indicated that invasiveness, level of preparation required and pain from the test were concerns.
- A US study rated patient priorities as preventing cancer (55%), avoiding test side effects (17%), minimizing false positives (15%) and the combination of screening frequency, test preparation and test procedures (14%).
- When patients have the option of screening tests, sedation needs, perceived test accuracy, confidence in completing the test, bowel preparation and frequency of tests may influence decision.

Knowledge Translation Tools

- The CTFPHC creates KT tools to support the implementation of guidelines into clinical practice
- A clinician recommendation table and patient FAQ were developed for the colorectal cancer guideline
- These tools are freely available for download in both French and English on the website:
www.canadiantaskforce.ca

Screening for Colorectal Cancer

CONCLUSIONS

Conclusions

- The CTFPHC recommends that starting at age 50 age, primary care providers should discuss the most appropriate choice of test with patients who are interested in screening
- Screening for CRC with FOBT or flexible sigmoidoscopy reduces CRC mortality in those aged 50-74 years and the direct harms associated with these tests are minimal
- The strong recommendation to screen adults aged 60-74 years with gFOBT, FIT or flexible sigmoidoscopy indicates that primary care providers should offer this service to all individuals in this age group

Conclusions

- The weak recommendation to screen adults aged 50-59 years with gFOBT, FIT or flexible sigmoidoscopy indicates that a more nuanced discussion of the harms and benefits will be required
- Starting at age 75, primary care providers should discuss individual screening preferences
- Patient values and preferences, test availability and life expectancy should all be considered in determining the best screening options for individuals.
- The CTFPHC recommends not using colonoscopy as a screening tool at this time. Four trials are currently underway investigating the mortality benefit of screening with colonoscopy. These will be considered by the CTFPHC as the results become available.

CTFPHC Mobile App Now Available



- The app contains guideline and recommendation summaries, knowledge translation tools, and links to additional resources.
- Key features include the ability to bookmark sections for easy access, display content in either English or French, and change the font size of text.

More Information

For more information on the details of this guideline please see:

- Canadian Task Force for Preventive Health Care website: <http://canadiantaskforce.ca/?content=pcp>

Questions & Answers

Thank you