Colorectal Cancer Screening: "To Scope or Not to Scope"

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Presenter Disclosure

- **Faculty: Ross Stimpson**

- **Relationships with commercial interests:**
  - **None**

Mitigating Potential Bias

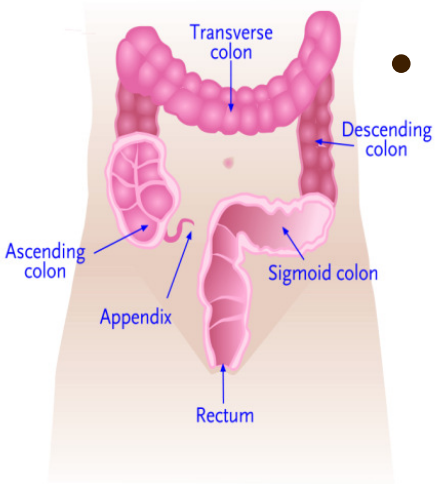
- Not Applicable

Learning Objectives

At the end of this session, participants will be able to:

1) Identify the patient population eligible for CRC screening.
2) Describe appropriate CRC screening options for their patient population.
3) Explain how to enroll their patients in the ColonCheck program.
4) Identify provincial initiatives to reduce patient wait times to colonoscopy.

Quick Facts



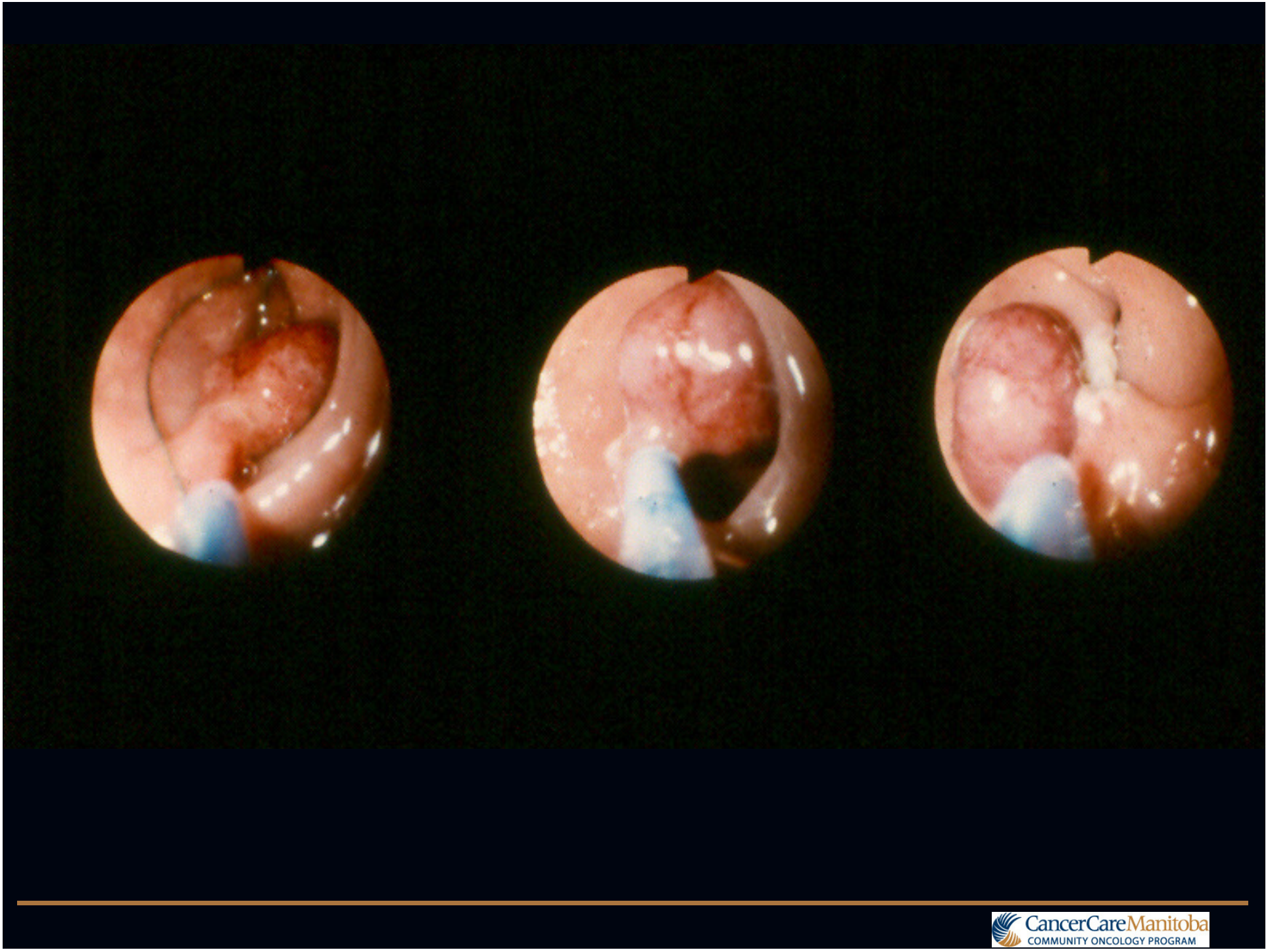
- This year in Manitoba:
  - 970 will be diagnosed with colorectal cancer (CRC)
  - 340 will die from CRC
- 94% of cases are found in people >50 years of age.
- CRC is treated successfully 90% of the time when detected in the earliest stages.
- RCTs have shown that regular screening with a fecal occult blood test (FOBT) can reduce mortality from CRC by up to 25%.

Natural History

- Precursor polyp (adenoma to carcinoma)- 90%
  - Polyp to cancer – 10 years
  - Risk increases with increased size, high-grade dysplasia, or villous content (advanced adenomas)
  - Undergo progressive dysplastic changes
- Serrated adenoma pathway
  - Faster progression ?

Benefits of Screening

1) CRC mortality reduction – "Stage Shift"
2) Cancer prevention with polypectomy
   – Colonoscopy screening
   – National Polyp Study Workgroup.
   N Eng J Med 1993 – 6 year follow-up
   - Reduced incidence of cancer - 76 to 90% compared to control population (scoped vs. never scoped)

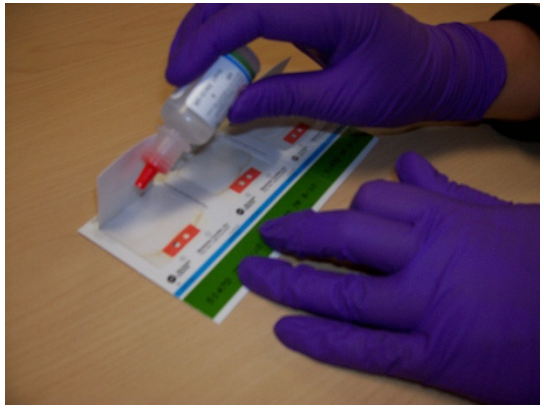


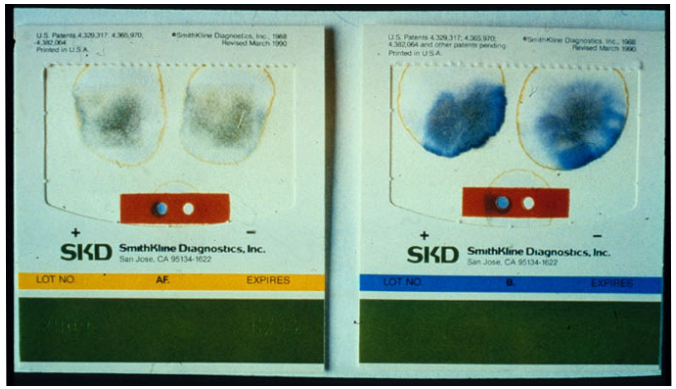
Colon Cancer Detection
FOBT Facts

- "Detection" depends on blood loss
- Bleeding greater with: Cancer> advanced adenomas> simple polyps
- Increased detection with:
  - multiple samples
  - frequent intervals
  - lower threshold (50 ng vs. 300 ng/gram stool)
  - Increased sensitivity = decreased specificity = more positives
- All positives require colonoscopy

Guaiac-based tests (gFOBT)

- Results are qualitative
- Reagent applied
- Colour reaction noted



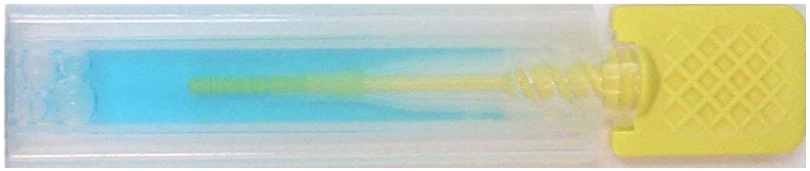


The Test: Hemoccult II SENSA

- Fecal Occult Blood Test (FOBT) or home screening test
- Test used to check for blood in the stool; blood may be a sign of polyps or colon cancer
- Test has six windows; 2 windows for 3 different bowel movements
- If any 1/6 windows are positive, overall result = positive

Alere Immunochemical (FIT)Test

- Sample taken with probe and vial
- Automated analysis



gFOBT vs FIT (iFOBT)

- Inexpensive
- Lower compliance due to restrictions and multiple samples
- Interference due to animal blood, peroxidases in diet and upper GI blood
- Qualitative analysis
- Poor sensitivity for advanced adenomas

- More expensive
- Increased compliance Specific for human blood
- No interference
- Quantitative analysis allows control of positive cut off
- Improved sensitivity for advanced adenomas

Most Suitable Screening Test?

- Fecal occult blood test (FOBT)
- Colonoscopy
- Flexible sigmoidoscopy
- Air contrast barium enema
- Other technologies
  - CTC- CT colonography or “virtual colonoscopy”
  - Serum tests- Septin 9
  - DNA Stool analysis

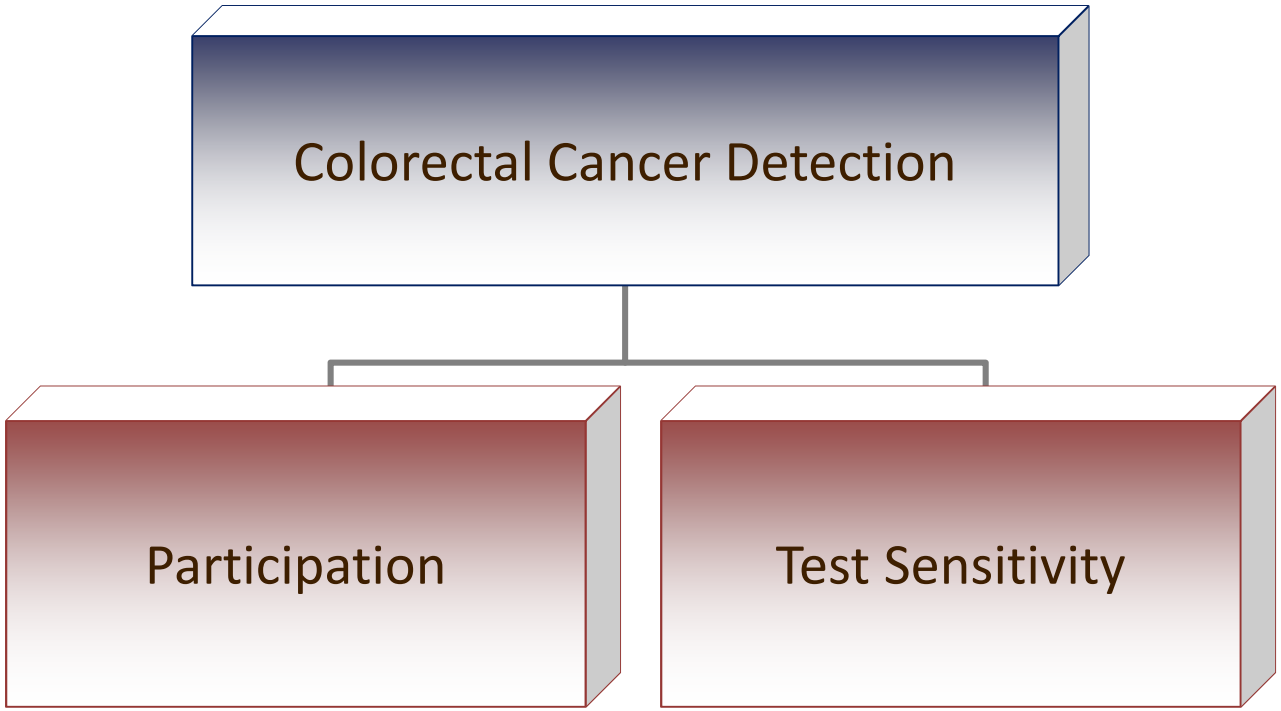
Colonoscopy and Screening

- Baxter et al, Ann Int Med, 2009; 150: 1-8
  - Case-control study
  - Odds Ratio – estimation of CRC death after colonoscopy, for complete colonoscopies
    - 0.63 – All cancers
    - 0.33 – Left-sided
    - 0.99 – Right- sided –NO PREVENTION
  - Bowel preparation, flat lesions, endoscopist skill and tumour biology may affect colonoscopy efficacy in screening particularly right colon.

Colonoscopy vs. FIT (iFOBT)

- Quintero et al. N Engl J Med. 2012 Feb;366(8):697-706
  - Randomized screening study
  - Cancers detected equally in each group
  - Greater participation in FIT
  - Advanced adenomas greater in Colonoscopy group

Population Screening Benefit



Flexible Sigmoidoscopy

- Limited exam of colon (60 cm)
- Technically easier than colonoscopy
- Performance without sedation
- Performed by nurses, FPs and PAs
- Significant pathology followed by colonoscopy
- Less risk than colonoscopy
- Similar resources to colonoscopy required

Flexible Sigmoidoscopy

- 3 case-control studies suggest benefit:
  - Up to 60% mortality benefit for CRC in reach of scope
  - Overall 33% mortality reduction

- Atkins et al., Lancet, 2010
  - One time flex sig.-55-64 years of age
  - Intention to treat
    - Reduction CRC cancer incidence – 23%
    - Reduction CRC mortality – 31%
  - Per protocol
    - Reduction CRC cancer incidence – 33%
    - Reduction CRC mortality – 43%

2016 CTFPHC Recommendations

- 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*)
- We recommend screening adults aged 50 to 59 for CRC with FOBT (either gFOBT or FIT) every two years OR flexible sigmoidoscopy every 10 years. (*Weak recommendation; moderate quality evidence*)
- We recommend not screening adults aged 75 years and over for CRC. (*Weak recommendation; low quality evidence*)
- We recommend not using colonoscopy as a screening test for CRC. (*Weak recommendation; low quality evidence*)

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Average Risk

50 to 74 years of age with:

- with no symptoms of Colorectal Cancer (CRC)
- no personal history of CRC, polyps or first –degree relatives diagnosed with colorectal cancer
- no diseases of the colon requiring monitoring by colonoscopy

Recommendation

Fecal Occult Blood Test (FOBT) every 2 years

OR Flexible sigmoidoscopy at intervals of 10 years or more (No organized program for flexible sigmoidoscopy in Manitoba)

- Colonoscopy is **NOT** recommended for average-risk screening

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Above Average Risk

- one first degree relative diagnosed with CRC or advanced adenomatous polyps* at 60 years of age or older
- 2 or more second degree relatives diagnosed with CRC or advanced adenomatous polyps*

Recommendation

- Colonoscopy, every 10 years beginning at age 50, or 10 years earlier than the diagnosis of CRC in the family
- Average-risk screening with FOBT starting at age 40 may be an alternative

ColonCheck Manitoba

Above Average Risk

- One first-degree relative diagnosed with CRC or advanced adenomatous polyps* before 60 years of age
- 2 or more first-degree relatives diagnosed with CRC or advanced adenomatous polyps* at any age

Recommendation

- Colonoscopy, every 5 years - beginning at 50 years of age or 10 years earlier than youngest diagnosis of CRC or polyps in the family

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High Risk

- A personal history of CRC, adenomatous polyps
- Inflammatory bowel disease (IBD) with associated colitis
- Hereditary Cancer Syndromes

Recommendation

- Ongoing investigation and surveillance with colonoscopy
- Genetics referral for suspect hereditary cancer syndromes

What process does ColonCheck use for screening?

- ColonCheck has a data base which includes information from Manitoba Health:
  - Names & addresses of individuals age 50-74
  - Information about individuals who have completed an FOBT in the past 2 years or colonoscopy in the past 5 years

- The home screening test is distributed by ColonCheck through direct mail and primary care providers

What process does ColonCheck use for screening?

- Eligible individuals are sent a notification letter; three weeks later they are sent a home screening test

- Individuals complete the test and return it to Cadham Provincial Lab in the postage paid return envelope provided in the kit

Normal Results

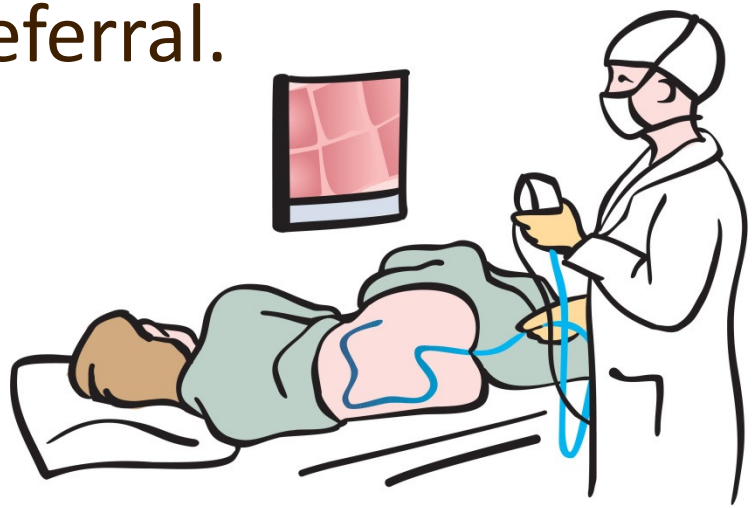
ColonCheck mails normal result letters to:

- Participant
- Health Care Provider

Abnormal Results

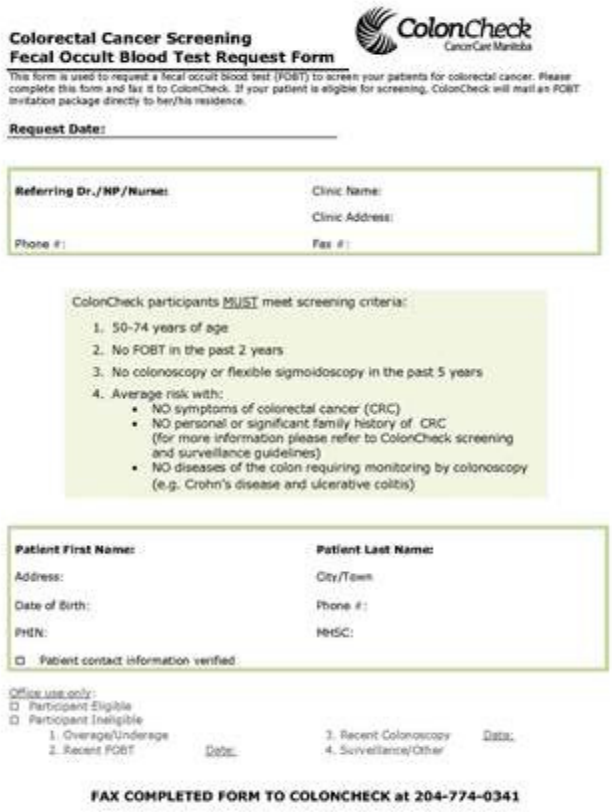
ColonCheck's Follow-up Coordinator:

- Contacts the individual by phone and letter to inform them of the result.
- Sends result letter to HCP.
- Coordinates colonoscopy referral.



FOBT Request Form

- ColonCheck has developed a simple to use form for health care providers **to request an FOBT for patients** due for screening.
- To request an FOBT, complete the *FOBT Request Form* on your EMR or paper (ensure all patient information filled) and fax to ColonCheck.
- If your patient is eligible for screening, ColonCheck will mail an FOBT invitation package directly to his/her residence.



Colorectal Cancer Screening
Fecal Occult Blood Test Request Form

ColonCheck
CancerCare Manitoba

This form is used to request a fecal occult blood test (FOBT) to screen your patients for colorectal cancer. Please complete this form and fax it to ColonCheck. If your patient is eligible for screening, ColonCheck will mail an FOBT invitation package directly to her/his residence.

Request Date:

Referring Dr./NP/Nurse:	Clinic Name:
	Clinic Address:
Phone #:	Fax #:

ColonCheck participants MUST meet screening criteria:

1. 50-74 years of age
2. No FOBT in the past 2 years
3. No colonoscopy or flexible sigmoidoscopy in the past 5 years
4. Average risk with:
   - NO symptoms of colorectal cancer (CRC)
   - NO personal or significant family history of CRC (for more information please refer to ColonCheck screening and surveillance guidelines)
   - NO diseases of the colon requiring monitoring by colonoscopy (e.g. Crohn's disease and ulcerative colitis)

Patient First Name:	**Patient Last Name:**
Address:	City/Town
Date of Birth:	Phone #:
PHN:	MHSC:
☐ Patient contact information verified	

Office use only:
☐ Participant Eligible
☐ Participant Ineligible
1. Overage/Underage
2. Recent FOBT Date:
3. Recent Colonoscopy Date:
4. Surveillance/Other

FAX COMPLETED FORM TO COLONCHECK at 204-774-0341

Future plans

- Piloting a new test (FIT)

Manitoba
Colonoscopy Wait Times

Problems

- Presently limited knowledge regarding length of individual endoscopist wait times for specific indications - Tendency to “stockpile” cases
- Little centralized colonoscopy scheduling or wait lists-individual booking and wait lists
- Long wait to office consultation delaying procedure

ColonCheck
CancerCare Manitoba

Manitoba
Colonoscopy Wait Times

Problems

- No prioritization of urgent diagnostic colonoscopy over screening and surveillance procedures
- Limited use of “Central Intake” and booking- offers prioritization and referral to earliest appointment -”Direct to Scope” in selected cases
- Resource allocation

ColonCheck
CancerCare Manitoba

Colonoscopy Wait Times

Contributing Factors

- Poor adherence to screening and surveillance guidelines-”over-surveillance”
  - Coloncheck /CAG Guidelines
- Over usage of colonoscopy vs. FOBT for average-risk screening
  - Financial incentive” –Manitoba Health fee
  - Physician bias
- Inappropriate indications- GERD, Non- Fe Def. Anemia, Celiac Disease
- “

ColonCheck
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Manitoba Colonoscopy Wait-time Improvement

- ColonCheck Manitoba
  - Guidelines-Screening , Surveillance
  - Nurse assessment-Direct Referral
- “In-Sixty” Cancer Patient Journey (CPJ)
- Central Intake:
  - WRHA
  - Manitoba Health -Provincial-SRHA, NRHA
    - PMRHA, IERHA

ColonCheck
CancerCare Manitoba

Post Colonoscopy Screening and Surveillance Recommendations

ColonCheck
CancerCare Manitoba

To be completed upon review of final pathology and family history. If no pathology, please fax completed form with colonoscopy report.

Patient Name: _____ Procedure Date: _____

DOB: _____ Facility: _____

PHIN: _____ CRCSP#: _____ Endoscopist: _____

Primary Care Provider: _____

NEGATIVE RESULT	COLONCHECK RECOMMENDATION	ENDOSCOPIST RECOMMENDATION
Negative colonoscopy includes: • left-sided hyperplastic polyps. • non neoplastic pathology such as hemorrhoids, diverticula, etc.	**Average Risk Screening** • recall for FOBT by ColonCheck in 5 years	(PLEASE SELECT ONE OF THE FOLLOWING) ○ FOBT in 5 years
Negative colonoscopy with significant FHX with: • one first degree relative diagnosed with colon cancer < 60 years of age. • two first degree relatives at any age.	**High Risk Screening** • repeat colonoscopy in 5 years • no recall from ColonCheck	○ repeat colonoscopy in 5 years
Negative colonoscopy – post-curative resection for CRC.	• repeat colonoscopy end of year 1 (within 6 months if colon is not cleared preoperatively): re-scope at 3 years then every 5 years indefinitely if the outcome is normal.	○ repeat colonoscopy in: _____ month(s) _____ year(s)

POSITIVE RESULT	COLONCHECK RECOMMENDATION	ENDOSCOPIST RECOMMENDATION
Positive colonoscopy • 1-2 tubular adenomas < 1cm	• repeat colonoscopy in 5-10 years • no recall from ColonCheck	○ repeat colonoscopy ____ year(s) 20____
Positive colonoscopy • more than 2 tubular adenomas or any advanced (≥1cm in size, high grade dysplasia, or villous component) or serrated adenoma.	• repeat colonoscopy in 3 years; repeat colonoscopy in 5 years when polyp clearance is achieved • no recall from ColonCheck	○ repeat colonoscopy ____ year(s) 20____

OTHER	COLONCHECK RECOMMENDATION	ENDOSCOPIST RECOMMENDATION
Repeat colonoscopy required due to: ○ inadequate prep ○ incomplete exam ○ additional polyp clearance ○ re-examine polypectomy site	• repeat colonoscopy	○ repeat colonoscopy in: _____ month(s) _____ year(s)
○ Other Findings (state): _____ _____		○ repeat colonoscopy (state reason): _____ _____
○ Other procedure/test required (state): _____ _____ ○ Ordered		

Recommendation reviewed with patient ○ Yes ○ No

Recommendation communicated to Primary Care Provider ○ Yes ○ No

Signature: _____

Date: _____

FAX COMPLETED FORM TO COLONCHECK: 204-774-0341 05.14

CancerCare Manitoba
COMMUNITY ONCOLOGY PROGRAM

Work-Up of Suspected COLON or RECTAL CANCER

RISK FACTORS: Personal history of colorectal adenomas, CRC, inflammatory bowel disease, FAP or HNPCC, first degree relative with colorectal cancer (esp. if <60 years of age), male gender and/or age ≥ 60.
Not up-to-date with screening (colonoscopy in past 5 yrs/ FOBT in past 2 yrs.)

PRACTICE POINTS: **Abdominal & rectal exam** and a **CBC** done on **all** patients with symptoms suspicious for colorectal cancer.
All referrals sent within 24 hrs of visit. Provide complete information as requested to avoid delays.

Urgent
- Suspicious palpable rectal or abdominal mass
- Suspicious abnormal abdominal imaging ie: CT, CT Colonography, Barium Enema, etc.

→ **Urgent referral to surgeon** →

Preferred Experience Point (PREP talk):
Ensure patient is well informed and receives appt information. If patient is in distress, offer referral to local counsellor. Connect with Cancer Navigation Services in your region.

Continue to Diagnostic pathway

Semi -Urgent

Unexplained Rectal Bleeding with one or more of the following features:
- dark blood
- weight loss
- blood mixed with stool
- persistent bleeding
- change in bowel habits

Unexplained Iron Deficiency Anemia:
- males: Hb ≤110 g/L
- postmenopausal females: Hb ≤100 g/L
- drop of Hb >25g/L, even if within normal range

FOBT Positive:
- not a single office-based FOBT from DRE
- Do NOT test if active bleeding

→ **Referral** to specialist competent in endoscopy →

Non– Urgent
Other unexplained signs / symptoms that do not meet criteria for urgent or semi-urgent referral, including but not limited to:
- change in bowel habits
- abdominal pain
- Anemia

→ **Order FOBT** (if not up-to-date with screening)
- → **FOBT +** → Referral to specialist competent in endoscopy
- → **FOBT -** → Treat signs/ symptoms *follow up AND if not resolved within 4-6 weeks *Ensure patient books in 4-6 wks. → **Non-urgent referral to a GI specialist** (gastroenterologist or surgeon)

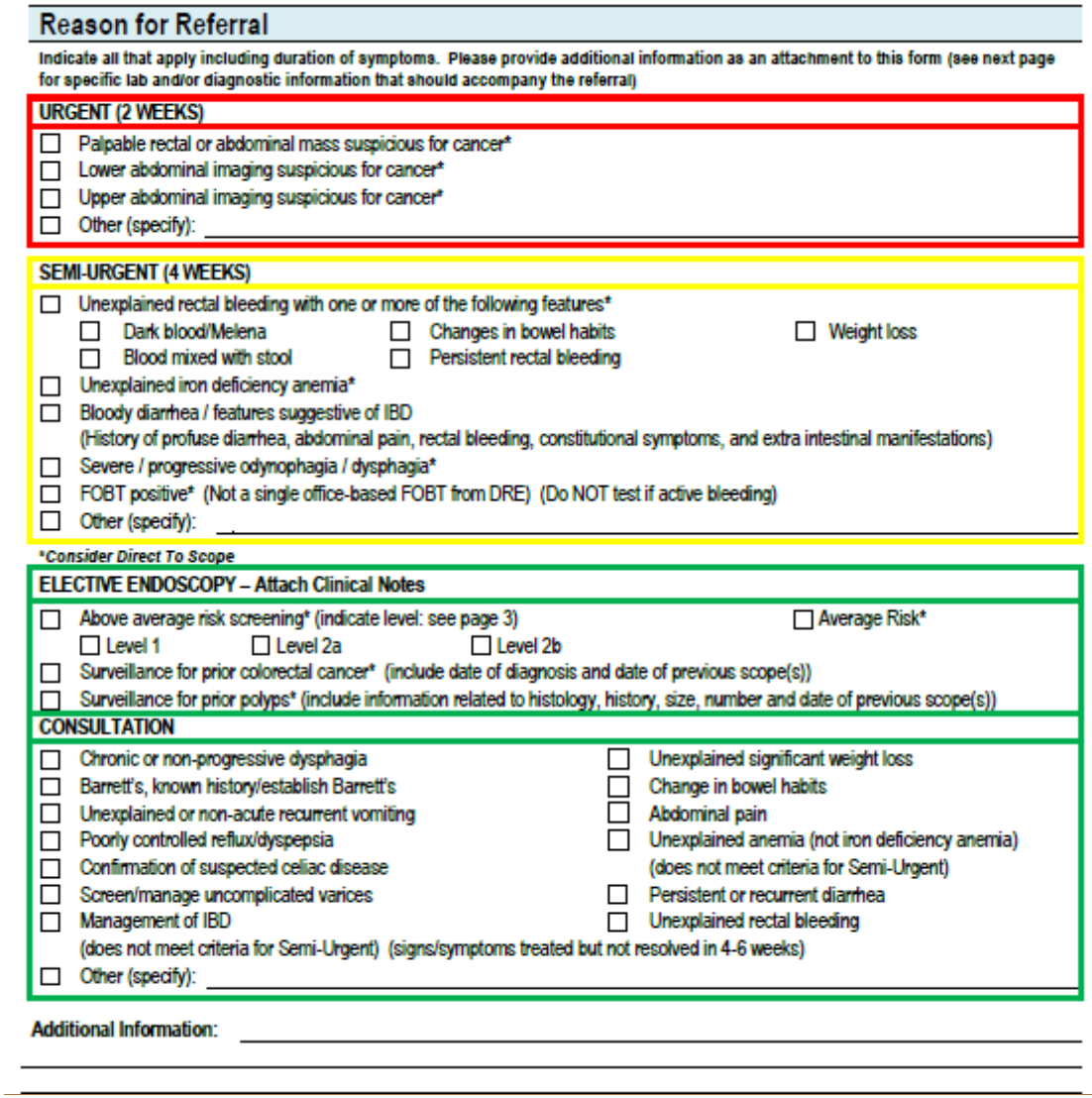
Non-Urgent
Unexplained rectal bleeding not meeting criteria for urgent or semi-urgent →

In Sixty → All referrals sent within 24 hrs of visit

Suspicion Pathway Notes:

Sixty day suspicion to first treatment timeline begins on the date of patient visit when a clinical suspicion of cancer triggers further cancer-focused investigation.
Only requisitions for patients who fit the red pathway should be noted as "urgent " to ensure urgent resources and timeline capacity can be maintained in next stages of the pathway.
Pathways are subject to clinical judgement and actual practice patterns may not always follow the proposed steps in this pathway. For additional clinical support, contact Cancer Question Helpline for Primary Care: call/text▶ 204-226-2262 email▶ cancer.question@cancercare.mb.ca web▶ www.cancercare.mb.ca/cancerquestion

Central Referral Process



Reason for Referral

Indicate all that apply including duration of symptoms. Please provide additional information as an attachment to this form (see next page for specific lab and/or diagnostic information that should accompany the referral)

URGENT (2 WEEKS)

- ☐ Palpable rectal or abdominal mass suspicious for cancer*
- ☐ Lower abdominal imaging suspicious for cancer*
- ☐ Upper abdominal imaging suspicious for cancer*
- ☐ Other (specify): _____

SEMI-URGENT (4 WEEKS)

- ☐ Unexplained rectal bleeding with one or more of the following features*
  - ☐ Dark blood/Melena
  - ☐ Blood mixed with stool
  - ☐ Changes in bowel habits
  - ☐ Persistent rectal bleeding
  - ☐ Weight loss
- ☐ Unexplained iron deficiency anemia*
- ☐ Bloody diarrhea / features suggestive of IBD
  (History of profuse diarrhea, abdominal pain, rectal bleeding, constitutional symptoms, and extra intestinal manifestations)
- ☐ Severe / progressive odynophagia / dysphagia*
- ☐ FOBT positive* (Not a single office-based FOBT from DRE) (Do NOT test if active bleeding)
- ☐ Other (specify): _____

*Consider Direct To Scope

ELECTIVE ENDOSCOPY – Attach Clinical Notes

- ☐ Above average risk screening* (indicate level: see page 3)
  - ☐ Level 1
  - ☐ Level 2a
  - ☐ Level 2b
- ☐ Average Risk*
- ☐ Surveillance for prior colorectal cancer* (include date of diagnosis and date of previous scope(s))
- ☐ Surveillance for prior polyps* (include information related to histology, history, size, number and date of previous scope(s))

CONSULTATION

- ☐ Chronic or non-progressive dysphagia
- ☐ Barrett's, known history/establish Barrett's
- ☐ Unexplained or non-acute recurrent vomiting
- ☐ Poorly controlled reflux/dyspepsia
- ☐ Confirmation of suspected celiac disease
- ☐ Screen/manage uncomplicated varices
- ☐ Management of IBD
  (does not meet criteria for Semi-Urgent)
- ☐ Unexplained significant weight loss
- ☐ Change in bowel habits
- ☐ Abdominal pain
- ☐ Unexplained anemia (not iron deficiency anemia)
  (does not meet criteria for Semi-Urgent)
- ☐ Persistent or recurrent diarrhea
- ☐ Unexplained rectal bleeding
  (signs/symptoms treated but not resolved in 4-6 weeks)
- ☐ Other (specify): _____

Additional Information: _____

- Reasons for Referral
  - Indicators align with the In Sixty Colorectal Pathway
  - Targets for Urgent/Semi Urgent
- Single referral process for primary care
- This referral form replaces the following forms/documents:
  - referral letter
  - pre-operative history form
  - Cancer Navigation referral

“Bottom” Line

- FOBT is the recommended test for CRC screening in average-risk individuals age 50-74 years
- Colonoscopy is not recommended for average risk screening but should be reserved for increased risk screening
- FIT promises increased cancer detection and participation
- Central intake reduces colonoscopy wait times- participate

ColonCheck Program vs. Ad Hoc Screening

- Identifiable Target Population
  - Patients that benefit
  - Avoid unnecessary screening procedures
- Measures to guarantee high coverage and attendance
- Education of public and professionals
- Ensure adequate facilities and resources
- Data collection- information system
  - Reporting, quality control