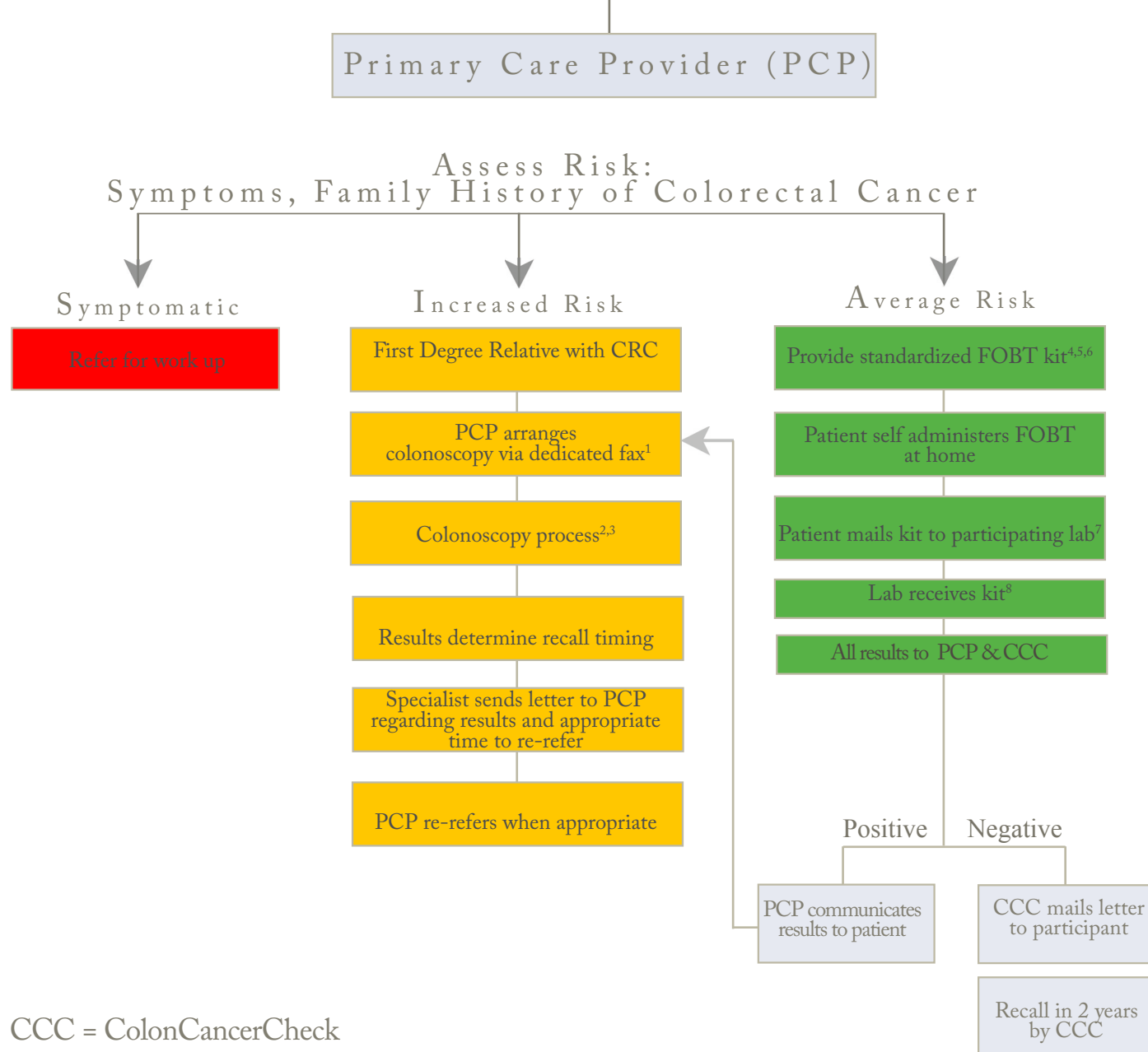


ColonCancerCheck Program Details

Media Trigger • Doctor Visit • Invitation



CCC = ColonCancerCheck

¹ For a list of participating colonoscopy centres in your area to refer patients for colonoscopy who have a positive FOBT or one or more first degree relatives with CRC please visit: www.ColonCancerCheck.ca
² CCC evidence based colonoscopy standards to ensure physician competency and hospital standards
³ Colonoscopy capacity and quality assurance monitored through mandatory reporting by participating funded hospitals
⁴ FOBT kits include participant instructions and mail in envelope addressed to participating laboratory.
⁵ One standard FOBT test kit for all Ontarians to improve consistency and ease of use.
⁶ Research shows personal recommendation from regular primary care provider dramatically increases participation in cancer screening.
⁷ Participating laboratories to ensure consistent quality standards and maintenance of central registry
⁸ If the lab does not receive a requisition or the sample is inadequate or indeterminate, CCC will mail a letter to the participant instructing them to obtain another FOBT kit and retest.

ColonCancerCheck Colorectal Cancer Screening

- Ontario has one of the highest rates of colorectal cancer (CRC) in the world
- In 2007, an estimated 7,800 Ontarians were diagnosed with CRC and 3,250 died from the disease
- CRC is the second deadliest form of cancer but curable 90% of the time if detected early
- Although CRC screening has been shown to save lives, screening rates in Ontario are low (<17% in 2004/05)

Increased Risk of Colorectal Cancer

- ~10-15% of CRC occurs in people with a family history of CRC especially if they are first degree relatives. Screening colonoscopy is strongly recommended for these individuals.
- ~5% of CRC occur as a result of a hereditary predisposition to CRC. These include familial adenomatous polyposis (FAP) and hereditary non-polyposis CRC (HNPCC). Both disorders have an autosomal dominant mode of transmission within families and carry a very high risk for cancer. In untreated FAP, mutation carriers have a lifetime risk for CRC close to 100%. In HNPCC, their risk for colorectal or other syndrome cancers is 70-90%. These individuals should be referred for genetic counseling and for appropriate screening. For the nearest genetic counseling centre please visit: <http://www.cagc-accg.ca/>
- Patients with a history of inflammatory bowel disease (Crohn's or Ulcerative Colitis) are also at high risk for developing CRC and should be referred to a specialist to determine an appropriate screening schedule.

Asymptomatic Average Risk Adults

- A variety of CRC screening options are available for average risk men and women beginning at age 50
- Although several screening options are effective, data are insufficient to determine the single best screening approach.
- Because CRC screening strategies are not equal with regard to evidence of effectiveness, magnitude of effectiveness, risk and up front costs, no single test is of unequivocal superiority
- There is Grade A, level 1 evidence showing that Fecal Occult Blood Testing reduces CRC mortality in average risk adults.
- CRC screening decisions for individual patients should be based on the benefits and harms associated with each test, the availability of local resources and acceptability to the patient
- Giving patients a choice allows them to apply personal preferences and may increase the likelihood that cancer screening will occur.
- Recommendation of screening by a person's own primary care practitioner has been shown to lead to a significant improvement in participation.

Colorectal Cancer Screening – Asymptomatic Average Risk Adults 50 Years of Age and Above

- The most commonly used colorectal cancer (CRC) screening strategies include Fecal Occult Blood Testing, Colonoscopy and Flexible Sigmoidoscopy.
- Barium enema is not commonly used for CRC screening. However it can play a role in patients for whom endoscopy cannot be completed or to study the rest of the colon when colonoscopy is incomplete.
- The role of CT colonography (virtual colonoscopy) as an effective CRC screening modality is currently being explored. CT colonography is currently not recommended as a routine CRC screening modality. Clinically, it is currently being used in some centres as a diagnostic tool to replace the role of barium enema in patients for whom flexible endoscopy cannot be completed.
- Promising new screening tests including Fecal Immunochemical Testing and tests for altered DNA in stool are in development but are not yet ready for use outside of research studies

	Guaiaec Fecal Occult Blood Testing (gFOBT)	Colonoscopy (CS)	Flexible Sigmoidoscopy (FS)	Double Contrast Barium Enema (DCBE)	CT Colonography (CTC)
Frequency	Offer annually or biennially	Every 10 years if negative	Every 5 years if negative	Every 5-10 years	Not recommended for widespread screening
Patient Preparation	<ul style="list-style-type: none"> • Restrictions on oral intake of any prescribed medications, including aspirin, NSAIDs or iron, supplements or specific foods are not advised except for Vitamin C, citrus fruits or juices, which should be discontinued 3 days prior to and during stool collection. 	<ul style="list-style-type: none"> • Day prior to procedure patients must only consume clear liquids and then some form of purgative. • Patients generally spend the evening and day very close to, if not on a toilet. 	<ul style="list-style-type: none"> • At least 1-2 saline enemas administered the morning of the examination • A stool softener or stool motility agent may also be advised the night before 	<ul style="list-style-type: none"> • Same preparation as colonoscopy 	<ul style="list-style-type: none"> • Same preparation as colonoscopy
Patient Convenience	<ul style="list-style-type: none"> • Patients can complete at home. • Does not require any time off work. • Can be mailed to lab for processing 	<ul style="list-style-type: none"> • Sedation is administered to minimize pain and recall of the procedure • Patients cannot drive and must be accompanied by another individual to escort them home. 	<ul style="list-style-type: none"> • Patient often experiences some tolerable abdominal pain • Sedation is not administered • Patient may drive and return to work immediately following the procedure • Colonoscopy is required if polyps detected 	<ul style="list-style-type: none"> • Patient may experience temporary constipation or discomfort • Colonoscopy is required if polyps detected • Exposure to radiation 	<ul style="list-style-type: none"> • Patient may experience some slight discomfort from the air insufflation • Patient is exposed to radiation • No sedation is required. • Colonoscopy is required if polyps detected
Evidence of Clinical Efficacy	<ul style="list-style-type: none"> • Two large RCTs (UK and Denmark) showed nonhydrated serial gFOBT population screening reduced CRC mortality by 15-18% • CRC mortality was reduced by 43% among participants who completed all nine rounds of biennial gFOBT (Denmark). 	<ul style="list-style-type: none"> • No available population based screening studies with CRC as primary screening method • Indirect evidence from observational studies and diagnostic accuracy studies including <ul style="list-style-type: none"> -76-90% reduction in CRC incidence seen in 2 large cohort studies (US, Italy) of AP removal at CS compared to historical controls; - Case-control study show 57% reduction CR mortality (versus no CS) 	<ul style="list-style-type: none"> • Small RCT showed 50% reduction CRC mortality • Three current large RCTs in the US, UK/Italy are underway • Case control studies of FS showed a 50-79% mortality reduction of distal CRC but no mortality reduction of proximal CRC • FS + FOBT: small non-RCT showed non significant 43% reduction mortality; two RCTs showed 3-5 times more large polyps and cancers detected compared to FOBT alone 	<ul style="list-style-type: none"> • No published RCT or prospective studies have examined effectiveness of DCBE in reducing the incidence or mortality of CRC • One small case-control study showed 33% reduction CRC death • Indirect evidence of ability to detect cancers from diagnostic accuracy studies 	<ul style="list-style-type: none"> • Population-based evaluation for CRC screening underway • No current data on incidence or mortality reduction
Performance Characteristics Note: Sensitivity = ability to detect CRC or advanced polyps Specificity = proportion with no cancer who test negative	<ul style="list-style-type: none"> • Sensitivity <ul style="list-style-type: none"> - Single Test: 13-25% (CS all subjects) - Single Test: 25-79% (CS gFOBT + only) - Repeated Testing: 51-100% • Specificity <ul style="list-style-type: none"> - Single Test: 80-95% (CS all subjects) - Single Test: 87-100% (CS gFOBT + only) - Repeated Testing: 96-98% • Porportion who will need CS over ten years of screening: 3-10% <p>CS = colonoscopy</p>	<ul style="list-style-type: none"> • 5-10 % of CS cannot be completed to the cecum • Sensitivity: <ul style="list-style-type: none"> - CRC: 94-100% - AP >1cm: 94% - AP 6-9 mm: 87% - AP < 5 mm: 73% • Specificity: 99-100% • Miss rate up to 12% when compared to CT colonography • CRC incidence is 1-2.4% within 5 years after negative colonoscopy 	<ul style="list-style-type: none"> • ~50-60% of advanced adenomas and CRC occur in region detectable by sigmoidoscopy. • Prevalence of proximal advanced adenomas without distal adenomas is 2-5% • Detection of adenomas by FS screening followed by complete colonoscopy, sensitivity: 70-80% of advanced adenomas and neoplasms • Increased yield (~75%) if add FOBT • Cancer or advanced adenoma in distal colon is 0.8% within 3 years after negative FS • Specificity difficult to determine 	<ul style="list-style-type: none"> • Sensitivity: <ul style="list-style-type: none"> Polyps <0.5 cm: 32% Polyps 0.6-1 cm: 53% Cancer/ Polyps >1 cm: 39-56% • Specificity: 85% 	<ul style="list-style-type: none"> • Sensitivity: <ul style="list-style-type: none"> Polyps <6 mm: 48% (range 14-86%) Polyps 6-9 mm: 70% (range 30-95%) Polyps >9 mm: 85% (range 48-100%) • Specificity: <ul style="list-style-type: none"> 91% (< 6 mm) to 97% (>10 mm)
Risks	<ul style="list-style-type: none"> • High false positive rate. Risks associated with work up for positive FOBT;False sense of reassurance with false negatives 	<ul style="list-style-type: none"> • Perforation: 1/1500 • Death: 1/13 500 	<ul style="list-style-type: none"> • Perforation: 1/25 000 • Death: not well documented 	<ul style="list-style-type: none"> • Serious complications not well documented, rare 	<ul style="list-style-type: none"> • Serious complications not well documented, rare

Cost Effectiveness: Although the up-front costs vary by screening modality, all CRC sreening strategies have similar cost effectiveness that is well within accepted guidelines for cost per year of life saved.

- Less cost effective than colonoscopy