Cancer Care Ontario

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Fecal Immunochemical Test (FIT)-Positive Colonoscopy: Facility-Level Guidance

Cancer Care Ontario

June, 2017

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Intended use of this resource

The use of the fecal immunochemical test (FIT) in Ontario's population-based colorectal cancer screening program, ColonCancerCheck, is expected to result in several consequences for colonoscopy services in the province, including a higher volume of follow-up colonoscopies for those with a positive FIT and greater procedure complexity because more cancers and polyps will be identified.

Facilities providing FIT-positive colonoscopies are responsible for ensuring that the appropriate mechanisms are in place for safe, high-quality follow-up colonoscopies for patients with a positive FIT result. The high complexity of FIT-positive colonoscopies warrants additional guidance beyond that which is currently provided through the Quality Management Partnership's colonoscopy standards.[1] This guidance was therefore created as a means to assist facilities offering FIT-positive colonoscopies in their clinical management and resourcing decisions.

Rationale

The key areas of focus for this guidance relate to strategies to:

- **Support patient flow:** Patients with FIT-positive results should be referred to and undergo colonoscopy within eight weeks of an abnormal result.
- **Assist facilities in ensuring procedures are safe and complete:** The guidance will help ensure access to the necessary equipment and expertise to manage the complexity of FIT-positive colonoscopies. The facility-level guidance will also help to maximize patient safety and reduce the need for repeat procedures.

Methodology

Initial guidance was drafted based on best practices from other jurisdictions[2, 3, 4] and input from Cancer Care Ontario's provincial and regional leadership in colorectal screening and gastrointestinal endoscopy. Six screening and colonoscopy experts from jurisdictions across Canada (including Alberta, British Columbia, Newfoundland and Nova Scotia) who are currently using FIT in their population-based screening programs also reviewed and contributed to the guidance.

[1] Quality Management Partnership. [Internet]. Toronto (ON): Cancer Care Ontario. 2016 [cited 2016 Oct 24]. Available from: https://www.qmpontario.ca/.
[2] European Commission. European guidelines for quality assurance in colorectal cancer screening and diagnosis – 1st ed. Segnan N, Patnick J, von Karsa L (eds). Luxembourg: Publications Office of the European Union; 2010. Available at: http://www.kolorektum.cz/res/file/guidelines/CRC-screening-guidelines-EC-2011-02-03.pdf.
[3] Joint Advisory Group on GI Endoscopy (on behalf of the Bowel Cancer Screening Program). Accreditation of screening colonoscopists. BCSP guidelines. 2013. Available at: http://www.saas.nhs.uk/documents/Accreditation%20of%20screening%20colonoscopists%20guidelines%20final_June_2013.pdf.
[4] National Institute for Public Health and the Environment. Protocol for the authorization and auditing of the colonoscopy centres and endoscopists. The Netherlands. 2012.

Facility-level criteria

Organized referral intake and procedure booking

- FIT-positive colonoscopies are expected to be more challenging procedures, with a higher burden of colonic polyps. Additionally, FIT-positive patients have a greater likelihood of being diagnosed with colorectal cancer.
- Facilities are encouraged to work with their regional cancer program leadership to create a regional FIT referral network in order to ensure timely access to colonoscopy for FIT-positive patients, so that they receive the right procedure at the right time, with the right expertise. Access to colonoscopy for FIT-positive patients should be coordinated and communicated such that:
    - primary care physicians know where and how to refer their patients;
    - primary care physicians have easy access to colonoscopy for their FIT-positive patients; and
    - referrals for colonoscopy for FIT-positive patients are promptly identified, triaged and booked so as to be completed within eight weeks of a FIT-positive result.
- Facilities should manage FIT-positive colonoscopy booking such that:
    - adequate time is allocated for FIT-positive procedures;
    - adequate expertise is available (as described later in this document) for FIT-positive procedures; and
    - FIT-positive procedures are scheduled in a way that minimizes endoscopist fatigue.
- Suggestions that may be used to achieve these recommendations include:
    - use of a standardized referral sheet that includes information that is relevant to colonoscopy (e.g., use of antithrombotics, diabetes);
    - alignment of booking management with regional processes to support centralized referral of FIT-positive cases (through a diagnostic assessment program (DAP)[5, 6], if available);
    - achieving timely colonoscopy through the use of 'first available' FIT-positive slots or pooling of FIT-positive slots among endoscopists (e.g., patients are booked to endoscopy slots that are not assigned to a specific endoscopist, rather, any eligible endoscopist may perform the procedure);
    - protected slots for booking FIT-positive colonoscopies;
    - booking FIT-positive procedures for 45-minute time slots; and
    - careful consideration of the number of FIT-positive procedures, and their order and timing during the day to minimize endoscopist fatigue.

Equipment to perform polypectomies and manage complications

- Facilities should have access to the appropriate equipment to perform polypectomies and manage complications, including:
    - an electrocautery unit that allows a variety of adjustable settings, including soft coagulation;[7]
    - sufficient number and variety (i.e., size, shape, stiffness, monofilament vs. braided) of snares for polyp removal;

[5] Cancer Care Ontario. Diagnostic Assessment Programs. [Internet]. 2017. [cited 2017 Feb 22]. Available from: https://www.cancercare.on.ca/pcs/diagnosis/diagprograms/.

[6] Brouwers M, Crawford J, Elison P, Evans WK, Gagliardi A, Holmes D, et al. Organizational standards for diagnostic assessment programs. Toronto (ON): Cancer Care Ontario; 2007 Jun 15 [In review 2011 Sep]. Program in Evidence-based Care Evidence-based Series Organizational Standards for DAP IN REVIEW.

[7] Fahrtash-Bahin F, Holt BA, Jayasekeran V, Williams S, Sonson R, Bourke MJ. Snare tip soft coagulation achieves effective and safe endoscopic hemostasis during wide-field endoscopic resection of large colonic lesions (with videos). Gastrointestinal Endsocopy. 2013;78(1):158-163.

    - injection solutions for lifting and delineating polyps;
    - endoscopic clips and/or other equipment for hemostasis;
    - baskets/nets for retrieving polyps;
    - ink for tattooing; and
    - equipment that allows photographic documentation of lesions and landmarks.
- Where possible, facilities should use carbon dioxide as an insufflation agent.

Clinical management of incomplete colonoscopies and advanced/complicated polyps

- Facilities should have a system for discussing with colleagues the optimal management of large or complicated polyps to reduce the risk of complications and/or need for surgical intervention; this could take the form of a polyp adjudication committee, which could include both therapeutic endoscopy and surgical expertise.
- Facilities should have a system in place to collaborate (as needed) with and refer patients to dedicated therapeutic endoscopists for incomplete colonoscopies and advanced/complicated polyps in a timely manner.
- It is recognized that some patients will require repeat procedures, either because of a high burden of polyps or because of the presence of challenging polyps. However, if a patient has multiple non-challenging polyps that require snare cautery, all polyps should be managed during the initial diagnostic procedure, within reasonable limits in order to maintain safety.

Clinical management of newly diagnosed colorectal cancers

- It is the responsibility of the endoscopist to refer patients newly diagnosed with cancer to the appropriate cancer care service (e.g., surgery, DAP-2, cancer assessment clinic). It is not appropriate to refer such patients back to primary care without initiating the proper referral to cancer care. Cancer Care Ontario's colorectal cancer diagnostic pathway outlines a recommended approach to referral.[8]

Endoscopist expertise

- Endoscopists performing FIT-positive colonoscopies should have cognitive, integrative and technical competencies to safely and proficiently remove polyps up to two centimeters in diameter[9, 10, 11].
- Endoscopists performing FIT-positive colonoscopies should also be able to:
    - select electrocautery settings appropriate to polyp size and shape;
    - appropriately select different snares based on polyp size and shape;
    - use injection solutions (e.g., saline and methylene blue, volume expander and methylene blue) and techniques to lift and delineate polyps as indicated;
    - be familiar with and use techniques to reduce the chances of post-polypectomy bleeding;
    - manage post-polypectomy bleeding, including proficiency in the use of endoscopic clips;
    - identify complex polyps that require adjudication (e.g., by polyp committee) to determine best management (i.e., endoscopic versus surgical removal) ;
    - carefully assess polyps for features of submucosal invasion;

[8] Cancer Care Ontario. Colorectal Cancer Diagnosis Pathway Map. Toronto (ON). [Internet]. 2016 [cited 2017 Feb 16]. Available from: https://www.cancercare.on.ca/common/pages/UserFile.aspx?fileId=353574.
[9] Walsh CM, Ling SC, Khanna N, Cooper MA, Grover SC, May G et al. Gastrointestinal endoscopy competency assessment tool: development of a procedure-specific assessment tool for colonoscopy. Gastrointest Endosc. 2014;79:798-807.
[10] Robertson DJ, Kaminski MF, Bretthauer M. Effectiveness, training and quality assurance of colonoscopy screening for colorectal cancer. Gut. 2015;64(6):982-90.
[11] Quality Management Partnership. Provincial quality management programs for colonoscopy, mammography and pathology in Ontario. Toronto (ON): Quality Management Partnership. [Internet]. 2015 [cited 2016 Oct 24]. Available at: https://www.qmpontario.ca/common/pages/UserFile.aspx?fileId=350481.

    - tattoo lesions suspected to be neoplastic or concerning polypectomy sites; and
    - describe polyps in endoscopy reports using Paris classifications.[12]
- Endoscopists performing FIT-positive colonoscopies should complete a minimum of 200 colonoscopies (not limited to FIT-positive indications) annually for maintenance of competency.[11,13]
- Endoscopists should provide complete colonoscopy reports, including the documentation and description of remaining polyps if the colon was not completely cleared during the procedure; endoscopists are responsible for ensuring that additional tests and/or referrals related to the procedure are ordered.
- Endoscopists should be knowledgeable about and compliant with the ColonCancerCheck surveillance recommendations.[14]
- Endoscopists performing FIT-positive colonoscopies are strongly encouraged to complete a Canadian Association of Gastroenterologists' Skills Enhancement in Endoscopy (CAG SEE© Program) course.[15]

Nurse expertise

- Facilities should have nurses who are:
    - adequately skilled in operating and troubleshooting the electrocautery unit;
    - familiar with the different snare sizes and shapes;
    - experienced in assisting with polypectomies of large and small polyps;
    - familiar with the use of the various injection solutions (e.g., methylene blue, saline, and India ink);
    - able to promptly assist the endoscopist in the management of bleeding, including being proficient in the use of endoscopic clips; and
    - able to get support from a second nurse within the unit without delay when needed for complex cases.

Best practices

- Facilities should follow best practice regarding pre-procedural care, including, but not limited to:
    - use of split dose bowel preparation[16] for morning and afternoon procedures; and
    - management of patients on antithrombotics.[17]
- Facilities should follow best practices in specimen submission (e.g., requisitions should include a description of polyp location, size and morphology; specimens should be appropriately labelled and placed in different containers).[2]
- Pathology reporting should adhere to recognized national and provincial standards (including standard terminology and recommended prognostic indicators).[18]

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[12] The Paris Classification. The Paris endoscopic classification of superficial neoplastic lesions: esophagus, stomach, and colon: November 30 to December 1, 2002, Gastrointest Endosc. 2003; 58(6):S3-43.
[13] Tinmouth J, Kennedy E, Baron D, Burke M, Feinberg S, Gould M, et al. Guideline for Colonoscopy Quality Assurance in Ontario. Toronto (ON): Cancer Care Ontario; 2013 Sept 9. Program in Evidence-based Care Evidence-based Series No.: 15-5 Version 2.
[14] Winawer SJ, Zauber AG, Fletcher RH, Stillman JS, O'Brien MJ, Levin B et al. Guidelines for colonoscopy surveillance after polypectomy: a consensus update by the US Multi-Society Task Force on Colorectal Cancer and the American Cancer Society. Gastroenterology. 2006;130:1872–1885. Available from: https://www.cancercare.on.ca/common/pages/UserFile.aspx?fileId=13484.
[15] Skills Enhancement for Endoscopy©. [Internet]. Canadian Association of Gastroenterology. [cited 2012 Nov 22]. Available from: https://www.cag-acg.org/education/see-program.
[16] Quality Management Partnership. Bowel preparation selection best practice guidelines (BPSBPG). Toronto (ON): Quality Management Partnership. [Internet]. 2016 [cited 2016 Oct 24]. Available from: https://www.qmpontario.ca/common/pages/UserFile.aspx?fileId=364561.
[17] Dubé C, Armstrong A, Barkin A, Baxter N, Chiba N, Hatcher M et al. Gastroscopy standards and quality indicators for Ontario. Toronto (ON): Cancer Care Ontario. [Internet]. 2016 [cited 2016 Oct 24]. Available from: https://www.cancercare.on.ca/common/pages/UserFile.aspx?fileId=362958.
[18] National Colorectal Cancer Screening Network. Classification of Benign Polyps. Pathology Working Group Report. June 2011. Available from: https://content.cancerview.ca/download/cv/resource_library/report_by_topic/documents/pathologyworkreportdec11pdf?attachment=0.

- Facilities and endoscopists should comply with quality initiatives, processes, and standards for care published by Cancer Care Ontario, including:
    - Quality Management Program Colonoscopy Provincial Standards;[11]
    - Colonoscopy Quality Management Partnership early quality initiatives:[19]
        - Bowel Preparation Selection Best Practice Guidelines;[16]
        - Standardized Endoscopy Reporting Guidelines;[20]
        - Standardized Patient Discharge Guidelines;[21] and
        - Pre-and Post-Procedure Guidelines and Checklists;[22]
    - Colorectal Cancer Diagnostic Pathway Map;[7]
    - Quality Management Partnership colonoscopy provincial standards;[11]
    - Gastrointestinal (GI) endoscopy quality-based procedures (QBP) standards;[23] and
    - ColonCancerCheck screening guidelines[24] and surveillance recommendations.[14]

Data collection

- Facilities should collect and submit colonoscopy data through the GI Endoscopy Data Submission Portal.

Acknowledgements

We would like to acknowledge Dr. Dana Farina, Dr. Don MacIntosh, Dr. Jennifer Telford, Dr. Jerry McGrath, Dr. Robert Hilsden, and Dr. Steven Heitman, as well as Cancer Care Ontario's Regional Colorectal Screening Gastrointestinal Endoscopy Leads and Ontario's Regional Cancer Programs for their contributions to the development of this guidance document.

Suggested citation: Cancer Care Ontario. Fecal immunochemical test (FIT) – positive colonoscopy: facility-level guidance. Toronto (ON): CCO; 2017 June 13, 7p.

[19] Quality Management Partnership. The Early Quality Initiatives (EQIs) - Quality improvement resource package for endoscopy/colonoscopy: background and resource summary. Toronto (ON): Quality Management Partnership. [Internet]. 2016 [cited 2016 Oct 24]. Available from: https://www.qmpontario.ca/common/pages/UserFile.aspx?fileId=364559.
[20] Quality Management Partnership. Standardized endoscopy reporting guidelines. Toronto (ON): Quality Management Partnership. [Internet]. 2016 [cited 2016 Oct 24]. Available from: https://www.qmpontario.ca/common/pages/UserFile.aspx?fileId=364565.
[21] Quality Management Partnership. Standardized patient discharge guidelines for endoscopy facilities. Toronto (ON): Quality Management Partnership. [Internet]. 2016 [cited 2016 Oct 24]. Available from: https://www.qmpontario.ca/common/pages/UserFile.aspx?fileId=364567.
[22] Quality Management Partnership. Pre- and post-procedure guidelines and checklists for endoscopy facilities. Toronto (ON): Quality Management Partnership. [Internet]. 2016 [cited 2016 Oct 24]. Available at: https://www.qmpontario.ca/common/pages/UserFile.aspx?fileId=364570.
[23] Ministry of Health and Long-Term Care. Quality-based procedures clinical handbook for GI endoscopy. 2015. [cited 2016 Nov 22]. Available from: http://health.gov.on.ca/en/pro/programs/ecfa/docs/qbp_gi.pdf.
[24] Cancer Care Ontario. ColonCancerCheck (CCC) Screening Recommendations Summary - 2016. [cited 2017 Feb 24]. Available from: https://www.cancercare.on.ca/common/pages/UserFile.aspx?fileId=358486.