



Cancer Care Ontario

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Management of Complex Polyps: Regional-Level Guidance

Cancer Care Ontario
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Clinical management of complex polyps: Current state

Endoscopic polypectomy (i.e., removal of colonic polyps using an endoscope) is a highly effective intervention that leads to a reduction in the incidence and mortality of colorectal cancer (1). Most polyps detected during endoscopy can be removed using standard endoscopic techniques. However, a small proportion of polyps detected during endoscopy are considered complex due to their size, location and/or morphology (i.e., shape or appearance); as a result, they may not be able to be removed using standard endoscopic techniques (1). Over the past decade, minimally invasive endoscopic resection techniques, such as endoscopic mucosal resection and endoscopic submucosal dissection, have been developed to safely and effectively remove complex polyps (1). Performing these advanced techniques requires specific expertise often acquired through formal training programs, which are now available across Canada and internationally. Despite the availability of these techniques, evidence shows that a substantial portion of non-malignant (i.e., not cancerous) complex polyps continue to be referred to surgery, putting people with complex polyps at risk of higher morbidity and mortality. A recent prospective study from the US National Surgical Quality Improvement Program that tracked 12,732 patients who underwent elective colonic resection for a non-malignant polyp from 2011 to 2014 reported a 30-day mortality of 0.7% (one in 143 cases) and a rate of surgeries resulting in an ostomy of 2.2% (2).

On June 24, 2019, Ontario transitioned from the guaiac fecal occult blood test (gFOBT) to the fecal immunochemical test (FIT) as the recommended screening test for people at average risk of developing colorectal cancer. Compared to the guaiac fecal occult blood test, FIT is expected to have higher participation rates and detect twice as many clinically relevant lesions (i.e., advanced adenomas and colorectal cancers) (3). As a result, FIT-positive colonoscopies are expected to be more complex, so Cancer Care Ontario developed the *Fecal Immunochemical Test (FIT)-Positive Colonoscopy: Facility-Level Guidance* to assist facilities that are planning to perform FIT-positive colonoscopies (4). The guidance document recommends that regions establish a polyp adjudication committee, or equivalent, to discuss the optimal management of complex cases to ensure that people with complex polyps receive the least invasive, safest and most effective care available.

Intended use of this resource

The *Management of Complex Polyps: Regional-Level Guidance* document was created to provide guidance to regions on the establishment and effective management of polyp adjudication processes, and to provide clinical guidance to endoscopists on polyps that may benefit from adjudication.

Disclaimers:

- The intended audience for this document is endoscopists, surgeons and administrative staff involved in establishing adjudication processes.
- The process outlined in this guidance document is meant to serve as a framework and is not intended to replace effective clinical processes already in place.
- Regions are encouraged to adopt solutions that are feasible within their local context.
- While Cancer Care Ontario developed this guidance to support regions that are considering developing a polyp adjudication process, it is not expected that all regions will have these processes in place by the time FIT replaces the gFOBT (i.e., June 24, 2019).

Goals of polyp adjudication

The primary goals of polyp adjudication are:

- ensuring the optimal management of people with complex polyps to reduce the number of surgical resections for non-malignant polyps;
- promoting endoscopist education on how to identify complex polyps that require expert adjudication;
- encouraging collaboration among providers to ensure the optimal management of complex polyps;
- supporting appropriate referral patterns for people with complex polyps; and
- reducing bottlenecks for access to advanced therapeutic endoscopy through case review at appropriate regional and/or facility levels.

Methodology

A clinical working group that included experts in therapeutic endoscopy and colorectal surgery from across Ontario informed the development of this guidance document. Cancer Care Ontario's provincial and regional clinical leadership also provided input.

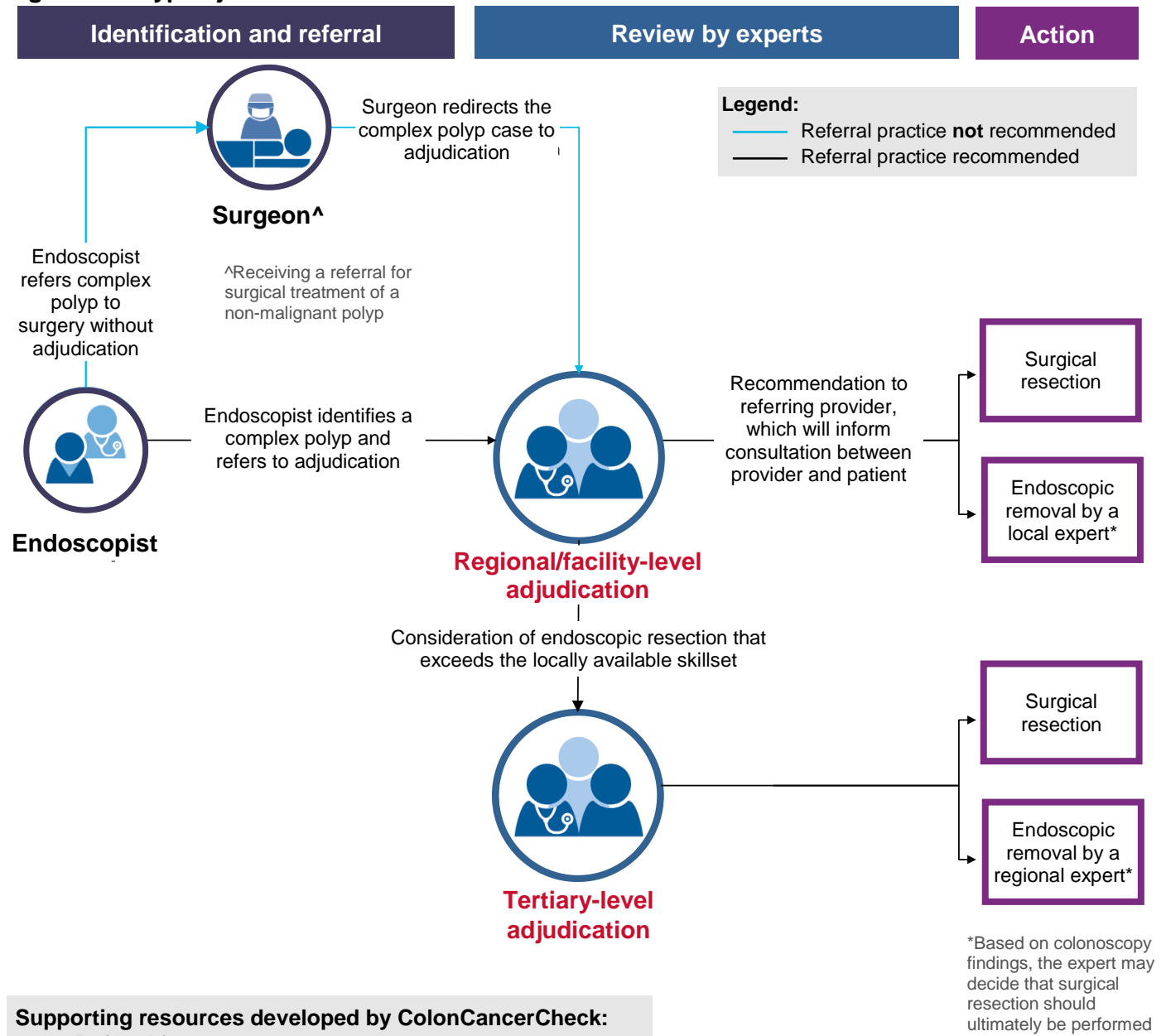
Establishing a complex polyp adjudication process

The following section provides guidance for establishing a polyp adjudication process. Polyp adjudication processes will vary significantly based on local context, and regions will need to tailor the guidance provided here based on available infrastructure and expertise.

Framework for polyp adjudication

As shown in Figure 1, in order to reduce bottlenecks for access to advanced therapeutic endoscopy, a two-tiered model of case review is proposed.

Figure 1: Polyp adjudication framework



Referrals to polyp adjudication can come from endoscopists who identify complex polyps during colonoscopy or from surgeons who receive referrals for surgical treatment of non-malignant complex polyps (see Figure 1). To promote the recommended referral practices, we encourage regions to engage surgeons and endoscopists when developing their polyp adjudication processes.

Tier one (regional/facility-level adjudication) should:

- be organized at the regional-level or the facility-level;
- have representation from within the region and/or facility; and
- review the majority of complex cases referred to polyp adjudication.

Tier two (tertiary-level adjudication) should:

- have representation with expertise that exceeds what is available at the tier-one level; and
- be used less frequently and used only to review the most complex cases that cannot be managed at the tier-one level.

This two-tiered approach supports the distribution of work across regions and reduces bottlenecks at tertiary-level adjudication. Regions without available tertiary-level expertise are encouraged to collaborate with other regions that do have this level of expertise.

To decrease the burden of work associated with establishing and effectively managing polyp adjudication processes, regions should consider using:

- existing infrastructure and processes when available, including, but not limited to
 - tumour boards;
 - multi-disciplinary cancer conferences; and
 - specialty rounds.
- a secure online platform or other secure sharing processes to facilitate review that aligns with facility and/or regional privacy and security requirements, including guidelines for protecting personal health information.

Complex polyp case reviewers

The following section provides guidance for selecting experts to adjudicate complex polyp cases.

Complex polyp cases should be adjudicated by therapeutic endoscopy experts with proficiency in optical diagnosis (i.e., differential diagnosis of colorectal polyps using chromoendoscopy, vascular patterns and surface patterns) and advanced endoscopic resection techniques (i.e., endoscopic mucosal resection and/or endoscopic submucosal dissection). These experts may be formally trained or locally recognized.

When possible, multidisciplinary involvement is encouraged (i.e., review by gastroenterologists and surgeons, as well as pathologists as appropriate).

In addition to expert representation, involvement of referring endoscopists and/or non-experts (i.e., providers with limited knowledge of optical diagnosis and/or advanced endoscopic resection) in the polyp adjudication process should be encouraged to promote education.

The number of adjudicators per case will vary based on each region's polyp adjudication process. Ideally, each case should be adjudicated by a minimum of two experts to ensure that every patient receives the safest and most effective therapy available.

Case turnaround

To optimize patient safety and experience, and to maximize uptake from referring endoscopists, the ideal turnaround time from referral to the recommendation on management is **two weeks**. Furthermore, case turnaround times should be monitored by regions to prevent delays that go beyond one month. Because it may not be feasible for adjudicators to meet on a consistent basis to review cases, regions may consider other ways to support polyp adjudication, such as sequential reviews (i.e., reviewers adjudicate cases individually as opposed to at the same time).

Referral documentation for polyp adjudication

To ensure that adequate information is available for adjudication and to facilitate an efficient review process, case reviewers should be provided with, at minimum:

- patient demographics;
- whether the patient is on antithrombotic medication;
- whether the patient has an implantable cardioverter defibrillator;
- whether the patient has major comorbidities;
- bowel preparation type used and quality;
- description of the complex polyp features; and
- images of the polyps (as described below).

Images are essential for the adjudication process and should always be included when sending a case to adjudication. If images are not included or the images included are of poor quality, a repeat procedure by an expert endoscopist may be required. To allow adjudicators to make the most informed decision about treatment, images should meet the following criteria:

- adequate cleaning and distention of the colon;
- in focus and in colour;
- show multiple angles of the complex polyp; and
- capture:
 - the size of the polyp (e.g., estimate size based on the size of the opened snare)
 - the morphology of the polyp;
 - the polyp proximity to nearby structures (e.g. appendiceal orifice); and
 - the attachment points of the polyp to the wall of the colon or rectum.

To capture a clear image of an attachment point consider, rolling the patient, manipulating the polyp with the shaft of biopsy forceps, or using water immersion as needed.

Resource available: To help endoscopists send cases to adjudication, Cancer Care Ontario has developed a template that outlines the information necessary to inform the adjudication process. Please note that the template can be edited by regions and/or facilities to best meet their needs. To access this resource, please visit the FIT Resource Hub at cancercareontario.ca/FITHub.

Billing for complex polyps adjudication

Depending how polyp adjudication is being managed within a region, endoscopists providing consultation on complex cases can consider claiming any of the following codes, if they are meeting all the criteria outlined in the Ontario Health Insurance Plan schedule of benefits:

- **K739:** Physician to physician e-consultation – consultant physician
- **K731:** Physician to physician telephone consultation - consultant physician

Clinical guidance for identifying and managing complex polyps

The following section provides clinical guidance on appropriate criteria for referral to polyp adjudication, and clinical guidance for tattooing and biopsying lesions.

For endoscopists: Guidance for identifying complex polyps

Any polyp that exceeds an endoscopist's skill set should be referred to polyp adjudication. In addition, several polyp features related to size, morphology and location, may contribute to the overall complexity of a polyp. Table 1 identifies a list of complex polyp features that may benefit from polyp adjudication. Polyps with one or more of these features should be considered for referral to polyp adjudication.

Partial polypectomy and unsuccessful attempts at resection can compromise the safe and complete removal of the polyp during a subsequent colonoscopy. Therefore, if an endoscopist is uncertain about whether they can completely remove a polyp, they should not attempt the polypectomy. Instead, they should refer the case directly to polyp adjudication. Persistent or rapidly recurring polyps should also be referred for adjudication, as such lesions may be unrecognized malignancies.

Table 1: Complex polyp features

Size	Greater than 3 centimeters
	Greater than one-third of the luminal circumference
Location	Involvement of the appendiceal orifice
	Involvement of the ileocecal valve
	Involvement of a diverticular opening
	Close proximity to the dentate line
	Difficult position for endoscopic resection
Morphology	Non-granular surface
	Ulcer in an otherwise benign looking polyp
	Polyp is not lifting with submucosal injection
	Depressed component (Paris IIC morphology)
Other	Partial polypectomy/prior attempt at resection
	Any lesion that exceeds an endoscopist's skillset

Please note, the list displayed in Table 1 is not comprehensive.

Resource available: To help endoscopists identify complex polyps, Cancer Care Ontario developed a poster that can be displayed in endoscopy suites. In addition, the Hamilton Niagara Haldimand Brant Regional Cancer Program developed a PARIS and NICE polyp classification tool. To access these resources, please visit the FIT Resource Hub at cancercareontario.ca/FITHub.

For surgeons: Guidance for identifying cases appropriate for adjudication

Surgeons receiving referrals for surgical treatment of complex polyps are encouraged to redirect these referrals to a polyp adjudication process. While surgical resection may be appropriate for some non-malignant cases, referral back through a polyp adjudication committee ensures that the case is thoroughly discussed, including whether endoscopic resection options could be offered.

Tattooing and biopsying complex polyps

When polyps are identified during endoscopy, it is critical to make informed decisions to tattoo or biopsy lesions judiciously. For newly diagnosed cancer, it is important to tattoo the lesion first then take biopsies. If a tattoo is placed after biopsies are taken, concerns have been raised about the possibility of cancer spread to the area of tattooing. Table 2 provides guidance for endoscopists performing biopsies and tattoos on polyps.

Table 2: When and where to perform biopsies and tattoos

Biopsy	
When to biopsy	
✓	If a lesion is suspected to be cancerous, a biopsy is recommended.
×	If a lesion is not suspected to be cancerous, a biopsy is not recommended because it can negatively impact future attempts at resection. <ul style="list-style-type: none">○ Instead, take multiple high-quality images of the lesion to adequately describe its characteristics (see the “Referral documentation to polyp adjudication” section above for image criteria).
Where to biopsy	
✓	Perform targeted biopsies of the most invasive appearing or suspicious area.
Tattoo	
When to tattoo	
✓	If a lesion is suspected to be cancerous and is located in the sigmoid, ascending, descending or transverse colon, a tattoo is recommended.
✓	A tattoo is recommended after piecemeal polypectomy to identify the polypectomy site during surveillance.
✓	A tattoo is recommended before referring a polyp that is difficult to find (e.g., behind a fold, suspected sessile serrated polyp) as determined by the endoscopist .
×	If a lesion is located in the cecum or rectum, a tattoo is not recommended.
Where to tattoo	
✓	Inject small amounts of ink into the submucosa after first creating a bleb with a normal saline injection. <ul style="list-style-type: none">○ If a lesion is suspected to be cancerous, inject ink 5 centimeters distal from the mass and ideally in 3 spots○ Do not inject ink into a polyp; inject ink at least 3 centimeters away from the lesion.

Resource available: To support endoscopists who perform biopsies and tattoos on polyps, Cancer Care Ontario developed a poster that can be displayed in endoscopy suites. To access this resource, please visit the FIT Resource Hub at cancercareontario.ca/FITHub.

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