



Flexible GI Endoscopy

Description of the Activity	<p>The use of flexible gastrointestinal (GI) endoscopy is essential in general surgery practice. Although it is primarily used by surgeons as a diagnostic tool, many therapeutic maneuvers have been developed. General surgeons should be able to evaluate and manage patients needing flexible endoscopy in an outpatient or inpatient setting.</p>
Functions	<ul style="list-style-type: none">❖ Preprocedure<ul style="list-style-type: none">➤ Synthesize information from the patient’s history, physical examination, medical records, and existing diagnostic evaluations to develop a differential diagnosis.➤ Recognize diagnostic and therapeutic indications and contraindications to upper and lower flexible endoscopy.➤ Complete an evidence-based, cost-effective evaluation before beginning the procedure.➤ Select the setting for performing flexible endoscopy (endoscopic suite, operating room, office).➤ Optimize the patient for the procedure:<ul style="list-style-type: none">▪ Risk stratification▪ Bowel prep➤ For an anticoagulated patient, understand the significance of the indication, and apply an algorithm for discontinuation and resumption of anticoagulant medication in the perioperative period.➤ Select a safe anesthetic approach for the clinical situation, potentially in collaboration with an anesthesia provider.➤ Obtain informed consent with cultural humility.<ul style="list-style-type: none">▪ Describe the indications, risks, benefits, alternative therapies, and potential complications of the planned procedure, and incorporate a discussion of the goals of care.▪ Ensure patient/caregiver comprehension using applicable language services and audio/visual aids.▪ Ensure that the patient/caregiver(s) can ask questions, and address any expressed concerns, taking patient/caregiver preferences into account.▪ Document the consent discussion.❖ Intraprocedure<ul style="list-style-type: none">➤ Collaborate with other perioperative health care professionals to create and maintain an intraoperative environment that promotes safe patient care.➤ Synthesize a plan that demonstrates understanding of the operative anatomy, physiology, indications, contraindications, risks, benefits, alternatives, and potential complications of:<ul style="list-style-type: none">▪ Colonoscopy▪ Esophagogastroduodenoscopy (EGD)▪ Flexible sigmoidoscopy➤ Perform the steps required to manage a patient requiring either upper or lower flexible endoscopy.<ul style="list-style-type: none">▪ Position the patient for the endoscopic procedure, and ensure the accessibility of necessary equipment.▪ Have a basic understanding of the type of endoscope necessary based on a diagnostic versus therapeutic purpose and the location for intervention.



Flexible GI Endoscopy

- Understand the necessity of correct instruments (eg, snare, forceps), medications, and energy devices for a patient undergoing therapeutic endoscopy.
- Identify and recognize relevant normal and abnormal anatomy.
- Integrate new information discovered intraoperatively to modify the surgical plan or technique as necessary, such as:
 - Aberrant anatomy
 - Bleeding
 - Foreign objects
 - Inability to progress
 - Lesions
- Perform EGD.
 1. Intubate the esophagus.
 2. Visualize the mucosa of the esophagus, squamocolumnar junction, and stomach.
 3. Visualize a retroflexed view of the gastroesophageal junction.
 4. Pass through the pylorus.
 5. Evaluate the second portion of the duodenum.
- Perform colonoscopy/flexible sigmoidoscopy (for flexible sigmoidoscopy, skip step 5).
 1. Perform an external anal examination and a digital rectal examination.
 2. Insufflate the rectum, and assess for internal hemorrhoids in a retroflexed view.
 3. Pass through the sigmoid colon.
 4. Reduce loops when encountered.
 5. Obtain a view of the cecum, identifying the ileocecal valve and appendiceal orifice.
 6. Withdraw the colonoscope, taking care to assess as much of the mucosal surface as possible.
- ❖ Postprocedure
 - Communicate a postprocedure plan to a patient/caregiver(s) and other health care team members that considers the patient's location, postprocedure needs, outcome expectations, and follow-up.
 - Develop a postprocedure plan that includes an analysis of patient-specific barriers to care.
 - Diagnose and manage the most common complications:
 - Anesthetic related
 - Bleeding
 - Perforation
 - Postpolypectomy syndrome
 - Interpret pathologic findings of specimens obtained at endoscopy.
 - Recommend postprocedure follow-up in accordance with guidelines.
 - Identify gaps in knowledge or technical skills, and establish a plan for improvement through the Fundamentals of Endoscopy Curriculum.



Flexible GI Endoscopy

Scope

- ❖ In scope
 - Biopsy, polypectomy, and tattooing of lesions
 - Colonoscopy
 - EGD
 - Flexible sigmoidoscopy
 - Foreign body
 - Workup of upper and lower GI bleeding
- ❖ Out of scope
 - Advanced therapeutic maneuvers (variceal banding, sphincterotomy)
 - Bronchoscopy
 - Inflammatory bowel disease (Crohn's disease, ulcerative colitis)
 - Proctoscopy



Flexible GI Endoscopy

Level	Preprocedure	Intraprocedure	Postprocedure
<p>1</p> <p><u>Limited Participation</u></p> <p>Demonstrates understanding of information and has very basic skills</p> <p><u>Framework:</u> What a learner directly out of medical school should know</p> <p>The attending can show and tell.</p>	<ul style="list-style-type: none"> Obtains an H&P with cultural humility and develops a limited differential for a patient undergoing flexible endoscopy Communicates the elements of an informed consent discussion but omits some elements when documenting the discussion Respectfully requests and receives a consultation for an endoscopy but does not necessarily recognize the urgency of the consult Applies evidence to guide care, including proper bowel prep and PO status Needs assistance to identify a patient at increased risk for complications associated with endoscopic procedures 	<ul style="list-style-type: none"> Demonstrates a basic understanding of the anatomy of the upper and lower GI tracts Describes the crucial steps of a simple endoscopy, but demonstrates limited ability to handle the endoscope and ancillary instruments 	<ul style="list-style-type: none"> Works respectfully with different members of the health care team; communicates basic endoscopic findings to a patient/caregiver(s) guided by a supervisor Identifies published guidelines for postprocedure follow-up based on pathologic findings in a straightforward case Establishes goals for professional development in the performance of flexible GI endoscopy Describes potential complications of flexible endoscopy, such as perforation or bleeding
<p>2</p> <p><u>Direct Supervision</u></p> <p>Demonstrates understanding of the steps of the procedure but requires direction through principles and does not know the nuances of a basic case</p> <p><u>Framework:</u> The learner can use the tools but may not know</p>	<ul style="list-style-type: none"> Evaluates a patient presenting for flexible endoscopy and interprets diagnostic testing Communicates the elements of an informed consent discussion in a straightforward case, providing comprehensive education regarding the procedure's risks, benefits, and alternatives; completely documents the discussion Clearly and concisely requests and responds to a consultation for endoscopy and recognizes the urgency of the consult Incorporates evidence to guide care and elicits patient preferences for bowel prep and sedation 	<ul style="list-style-type: none"> Demonstrates comprehensive understanding of the normal anatomy of the upper and lower GI tracts and identifies aberrant anatomy Performs the basic steps of an upper or lower flexible endoscopy but requires prompting to complete the procedure Inconsistently demonstrates the ability to handle the endoscope and ancillary instruments (biopsy forceps, snares, and injection needles) and may apply too much force with the endoscope or use excessive insufflation 	<ul style="list-style-type: none"> Communicates a postencounter plan to a patient/caregiver(s) and members of the health care team in a simple clinical situation Recommends postprocedure follow-up based on pathologic findings in a simple case in accordance with evidence-based practice Recognizes their limitations in performance of endoscopy and develops a plan for improvement, including the use of endoscopy simulation when available. Can recognize complications of flexible endoscopy such as perforation or bleeding but does so inconsistently



Flexible GI Endoscopy

Level	Preprocedure	Intraprocedure	Postprocedure
<p>exactly what, where, or how to do it.</p> <p>The attending gives active help throughout the case to maintain forward progression.</p>	<ul style="list-style-type: none"> Identifies a patient at increased risk for complications associated with endoscopic procedures 		
<p>3</p> <p><u>Indirect Supervision</u></p> <p>Can do a basic procedure but will not recognize abnormalities and does not understand the nuances of an advanced case</p> <p><u>Framework:</u> The learner can perform the procedure in straightforward circumstances.</p> <p>The attending gives passive help.</p>	<ul style="list-style-type: none"> Performs a complete, evidence-based, cost-effective evaluation based on patient-specific risk factors before beginning the procedure Conducts an informed consent discussion for a straightforward flexible endoscopic procedure with cultural humility, individualizing risks, benefits, and alternatives to the patient; completely documents the discussion Discusses recommendations with the consulting team and verifies understanding using closed-loop communication Manages a healthy patient requiring endoscopy, recognizing diagnostic and therapeutic indications and contraindications to upper and lower flexible endoscopy Adapts the plan for endoscopy for a patient with a changing clinical situation (eg, engages anesthesia provider support) 	<ul style="list-style-type: none"> Recognizes aberrant anatomy and adjusts the procedural technique to accommodate anatomic variations during the procedure Performs every step of an elective, straightforward screening for upper or lower flexible endoscopy without prompting Consistently demonstrates the ability to handle the endoscope and ancillary instruments (biopsy forceps, snares, and injection needles for tattoo and hemostasis) 	<ul style="list-style-type: none"> Communicates a postencounter plan to a patient/caregiver(s) and members of the health care team in a complex clinical case Recommends postprocedure follow-up based on pathologic findings in a complex case in accordance with evidence-based practice Identifies gaps in knowledge or endoscopic technical skill and integrates performance data and feedback into the development of a learning plan Consistently recognizes complications of flexible endoscopy, such as GI perforation, bleeding, or postpolypectomy syndrome, but requires guidance to initiate management



Flexible GI Endoscopy

Level	Preprocedure	Intraprocedure	Postprocedure
<p>4</p> <p>Practice Ready</p> <p>Can manage more complex procedures and take care of most cases</p> <p>Framework: The learner can perform all straightforward endoscopies and has a strong understanding of techniques for more challenging scenarios (eg, loop reduction).</p> <p>The attending is available at the request of the learner but is not routinely needed for common presentations, though input may be needed for more complex presentations.</p>	<ul style="list-style-type: none">• Manages a patient with complex comorbidities (eg, anticoagulation, risk stratification, adaptation of bowel prep as indicated); recognizes diagnostic and therapeutic indications and contraindications to upper and lower flexible endoscopy in a medically complex patient• Conducts an informed consent discussion with cultural humility for a patient undergoing a complex or emergency endoscopy, eliciting patient/caregiver preferences and documenting risks and benefits individualized to the patient• Coordinates recommendations from different members of the health care team to optimize patient care and develops a safe anesthetic approach for the clinical situation in collaboration with an anesthesia provider if present• Critically appraises the literature and considers how to apply it in nuanced clinical situations• Collaborates with other health care providers to formulate a patient-centered operative plan for all common skin neoplasms	<ul style="list-style-type: none">• Recognizes aberrant anatomy and adjusts the procedural technique to accommodate anatomic variations during colonoscopy• Efficiently performs every step of the procedure required to manage a patient undergoing elective upper or lower flexible endoscopy and requires minimal assistance in the face of significant pathology; can teach simple endoscopic maneuvers to junior residents• Handles the endoscope and ancillary instruments (biopsy forceps, snares, and injection needles for tattoo and hemostasis) with efficiency, coordination, and dexterity• Integrates new information discovered intraprocedurally to modify the procedural plan or technique as necessary• Anticipates most potential errors at the relevant portion of the procedure and takes steps to avoid them, such as positional moves for advancement of the procedure and loop reduction, and avoids the potential for bleeding or perforation	<ul style="list-style-type: none">• Communicates a postencounter plan to a patient/caregiver(s) and members of the health care team and considers patient barriers to access• Critically appraises and applies evidence to adapt to a complex clinical scenario; uses evidence to tailor recommendations based on a patient's findings or complications after flexible endoscopy• Identifies gaps in knowledge or endoscopic technical skill and revises the learning plan based on a review of clinical outcomes• Recognizes all complications of flexible endoscopy, including GI perforation, bleeding, and postpolypectomy syndrome, and independently initiates management