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GENERAL SURGERY
ENTRUSTABLE PROFESSIONAL ACTIVITIES
WITH MILESTONE MAPPING

(GS EPAs)

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1. EVALUATE AND MANAGE OF A PATIENT WITH ABDOMINAL WALL HERNIA
2. EVALUATE AND MANAGE OF A PATIENT WITH THE ACUTE ABDOMEN
3. EVALUATE AND MANAGE OF A PATIENT WITH BENIGN ANORECTAL DISEASE
4. EVALUATE A PATIENT WITH RIGHT LOWER QUADRANT PAIN AND MANAGE APPENDICITIS
5. EVALUATE AND MANAGE OF A PATIENT WITH BENIGN OR MALIGNANT BREAST DISEASE
6. EVALUATE AND MANAGE OF A PATIENT WITH BENIGN OR MALIGNANT COLON DISEASE
7. PROVIDE SURGICAL CONSULTATION TO OTHER HEALTH CARE PROVIDERS
8. PERIOPERATIVE CARE OF THE CRITICALLY ILL SURGERY PATIENT (INCLUDES SEPSIS AND HEMORRHAGE)
9. FLEXIBLE GI ENDOSCOPY
10. EVALUATE AND MANAGE A PATIENT WITH GALLBLADDER DISEASE
11. EVALUATE AND MANAGE A PATIENT WITH AN INGUINAL HERNIA
12. EVALUATE AND MANAGE OF A PATIENT WITH CUTANEOUS AND SUBCUTANEOUS NEOPLASMS
13. EVALUATE AND MANAGE OF A PATIENT WITH SEVERE ACUTE OR NECROTIZING PANCREATITIS
14. EVALUATE AND MANAGE OF A PATIENT NEEDING RENAL REPLACEMENT THERAPY
15. EVALUATE AND MANAGE OF A PATIENT WITH SMALL BOWEL OBSTRUCTION
16. EVALUATE AND MANAGE OF A PATIENT WITH SOFT TISSUE INFECTION (INC NSTI)
17. EVALUATE AND MANAGE OF A PATIENT WITH THYROID AND PARATHYROID DISEASE
18. EVALUATION AND INITIAL MANAGEMENT OF A PATIENT PRESENTING WITH BLUNT OR PENETRATING TRAUMA

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Evaluation & Management of a Patient with an Abdominal Wall Hernia

Description of the Activity	Patients with abdominal wall bulging or abdominal wall hernias are frequently referred to general surgeons. The general surgeon must be able to evaluate patients presenting with these conditions and provide operative and nonoperative management. Surgeons should collaborate with anesthesia staff, nursing staff, and other perioperative health care professionals to create and maintain an environment that promotes patient-centered care.
Functions	❖ Nonoperative/Preoperative ➢ Perform a focused history and physical examination, including prior abdominal operations, important comorbid conditions, and pertinent positive and negative signs and symptoms. ▪ Consider history and comorbidities that can modify patient care: • Prior abdominal hernia repairs • Cancer diagnoses or operations • Comorbid conditions that affect surgical risk: ♦ Cirrhosis ♦ Diabetes mellitus (DM) ♦ Major cardiac or pulmonary disease ♦ Obesity • Modifiable behaviors ♦ Alcohol use ♦ Smoking ➢ Determine if additional information or diagnostic evaluation should be obtained. ▪ Operative reports of prior abdominal wall surgery if not already available ▪ Ultrasound or cross-sectional imaging for diagnostic confirmation or delineation of hernia anatomy or prior mesh position ▪ Cancer screening or surveillance in patients at risk ➢ Evaluate a patient for any conditions that may require concomitant surgical intervention, and assess their effect on the hernia repair strategy: ▪ Colostomy or ileostomy closure ▪ Enterocutaneous fistula ▪ Symptomatic gallbladder disease ➢ Evaluate a patient's perioperative risk, and ensure the patient's comorbid conditions are adequately optimized before surgery, allowing for urgency of intervention. Conditions requiring consultation and management include: ▪ Cirrhosis ▪ Immunosuppression ▪ Obesity ▪ Poorly controlled DM ▪ Smoking and alcohol use ▪ Symptomatic cardiopulmonary disease

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- Identify the significance of chronic steroid use in the perioperative period, and apply an algorithm for intraoperative and postoperative management.
- Identify the effects of malnutrition.
- Identify the multisystemic effects of tobacco use and cessation timing as they relate to perioperative outcomes, including postoperative pulmonary complications and wound healing.
- Use adjunctive tools to assess common medical comorbidities and evaluate perioperative risks, including:
  - Assessment of preoperative nutritional status via laboratory testing and appreciation of its effect on postoperative healing and recovery
  - Cardiac risk stratification using echocardiography and the Revised Cardiac Risk Index (RCRI) as they pertain to the patient's cardiac history
  - Functional risk stratification via quantifying metabolic equivalents (METs) and the Frailty Index
  - Pulmonary function tests for patients with limited pulmonary reserve
- Identify variables that contribute to the proper timing of surgery (eg, status post myocardial infarction, poorly controlled DM, recent stent, electrolyte abnormalities, coagulopathy).
- Consider the role of prehabilitation.
- Synthesize information from the patient's history, physical examination, diagnostic evaluation, and risk assessment to determine if hernia surgery is indicated.
  - Determine the urgency of surgery based on presentation, identifying a patient with indications for emergency hernia management.
  - Identify a patient who should be referred to a hernia specialist for intervention.
- Develop an operative approach that integrates a patient's history, physical examination, prior surgeries, imaging findings, and concomitant disease.
  - Laparoscopic/minimally invasive (MIS) versus open approach
  - Need for use of mesh
  - Mesh type selection
  - Incorporation of patient preferences into the operative plan
- Obtain informed consent with cultural humility.
  - 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.

❖ Intraoperative

- Manage the perioperative environment, including room setup, equipment check, preprocedural time-out, specimen processing, counts, wound classification, and debriefing functions.
- Position the patient to expose the operative field, taking precautionary measures to prevent iatrogenic injury.

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- Confirm the availability of necessary equipment and mesh.
- Collaborate with other perioperative health care professionals to create and maintain an intraoperative environment that promotes safe patient care.
- Perform abdominal wall hernia repair:
- Laparoscopic hernia repair (intraperitoneal onlay mesh)
  - Safely access the abdominal cavity using the Veress or Hassan technique, and establish pneumoperitoneum.
  - Select and position working ports.
  - Perform lysis of adhesions without injury to bowel or other structures.
  - Ensure the abdominal wall around the hernia is cleared to place the mesh with sufficient overlap.
  - Reduce all hernia contents, and assess the hernia defect size.
  - Integrate new information discovered intraoperatively to modify the surgical plan/technique as necessary (eg, bowel ischemia [incarcerated hernia], bowel injury, defect size, additional defects).
  - Decide whether (and how) to close the primary defect.
  - Select the type and size of mesh required for hernia repair.
  - Position, orient, and fixate the mesh.
- Open hernia repair
  - Safely access the abdominal cavity.
  - Expose the hernia sac and neck at the abdominal wall fascial plane.
  - Perform lysis of adhesions without injury to bowel or other structures.
  - Assess hernia size.
  - Identify fascial and peritoneal planes to select the location of mesh placement.
  - Identify fascial planes for anterior component separation and for peritoneal dissection for posterior component release and preperitoneal mesh placement.
  - Integrate new information discovered intraoperatively to modify the surgical plan/technique as necessary (eg, bowel ischemia [incarcerated hernia], bowel injury, defect size, additional defects).
  - Determine if mesh is needed, and select the type and size required for hernia repair in light of intraoperative factors.
  - Position, orient, and fixate the mesh in the selected anatomic position.
  - Select sutures and measure wound length ratios for stitch spacing to close the anterior fascia.
  - Use surgical drains to prevent complications (seroma/hematoma) based on intraoperative conditions.

❖ Postoperative

- Communicate a postoperative plan to a patient/caregiver(s) and other health care team members that considers location, postoperative needs, outcome expectations, and follow-up.
- Develop a follow-up plan that considers patient-specific barriers to care.
- Recognize and manage the most common complications after operative management of abdominal wall hernia, such as:
  - Acute early hernia recurrence (within 7 days) and early fascial dehiscence with or without bowel obstruction
  - Early mesh infection
  - Hematoma and seroma formation

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	▪ Prolonged postoperative ileus ▪ Superficial and deep wound space infections ▪ Unrecognized visceral injury ➢ Provide follow-up in clinic to include proper timing of drain removal and patient precautions for resumption of activities to prevent complications and early hernia recurrence.
Scope	❖ In scope ➢ Incisional hernia ➢ Laparoscopic/MIS repair ➢ Open hernia repair ➢ Primary umbilical hernia repair/ventral hernia repair ➢ Recurrent incisional hernia ❖ Out of scope ➢ Complex abdominal wall reconstruction ➢ Parastomal hernia ➢ Rare abdominal wall hernias (eg, Spigelian)

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Evaluation & Management of a Patient with an Abdominal Wall Hernia

Level	Nonoperative/ Preoperative	Intraoperative	Postoperative
1 **Limited Participation** Demonstrates understanding of information and has very basic skills **Framework:** What a learner directly out of medical school should know The attending can show and tell.	• Obtains an H&P inclusive of hernia-specific symptoms with cultural humility but may not ask about modifiable risk factors (PC1 L1) • Respectfully communicates basic facts about the condition to a patient/caregiver(s) but inconsistently uses applicable language services and audio/visual aids (ICS1 L1) • Displays limited understanding of abdominal wall hernia repair options, including use of MIS and mesh (MK2 L1) • Identifies evidence regarding the best approach to abdominal wall hernia repair (PBLI1 L1)	• Assists with surgical positioning and preparation of a patient (PC2 L1) (Both) • Maintains a sterile field (PC2 L1) (Both) • Identifies tissue planes with active guidance and retraction (PC3 L1) (Both) • Requires active instruction to move the operation forward (PC3 L1) (Both) • Performs superficial wound closure (PC2 L1) (Both) • Assists with adequate exposure by retracting (PC2 L1) (Open) • Follows intraoperative directions; demonstrates basic skills but is inefficient with them (suturing and knot tying); displays limited ability to reduce a hernia or lyse adhesions (PC2 L1) (Open) • Handles instruments inefficiently and with limited dexterity; displays incomplete understanding of correct tissue handling (PC3 L1) (Open) • Handles instruments and the camera safely but often tentatively and demonstrates a lack of coordination between both hands (PC2 L1) (MIS) • Displays coordinated hand movements for simple maneuvers under direct instruction but does so inefficiently (PC3 L1) (MIS) • Needs help to obtain abdominal access using the Veress or Hasson technique; places ports with guidance but cannot select port location (PC3 L1) (MIS) • Centers the operative field (anatomy and instruments) with the camera but needs frequent adjustments and reminders (PC3 L1) (MIS)	• Communicates basic aspects of the operative procedure and ongoing management plan to a patient/caregiver(s) but needs prompting to clarify expected outcomes and the overall anticipated treatment course (ICS1 L1) • Evaluates simple postop problems, such as fever, wound erythema hypotension, PONV, or wound hematoma, but requires direction to manage them (PC4 L1)

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Level	Nonoperative/ Preoperative	Intraoperative	Postoperative
2 **Direct Supervision** Demonstrates understanding of the steps of the operation but requires direction through principles and does not know the nuances of a basic case **Framework:** The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression.	• Evaluates a patient with an abdominal wall hernia and identifies modifiable risk factors (eg, smoking, obesity); needs guidance to manage comorbid risks like lung or liver disease or steroid use (PC1 L2) • Requests and interprets imaging studies with assistance; obtains prior operative reports and determines a patient's cancer screening status (PC1 L2) • Demonstrates understanding of basic approaches to hernia repair but does not consider hernia characteristics, comorbid conditions, or patient preferences to select an optimal hernia repair strategy; displays limited knowledge of advanced hernia repair techniques such as component separation (MK2 L2) • Respectfully communicates basic facts about the diagnosis to a patient/caregiver(s), customizing communication to overcome barriers and cultural differences and using applicable language services and audio/visual aids (ICS1 L2) • Communicates the elements that constitute an informed consent discussion in a straightforward case but is unable to lead a discussion about risk factor modification (ICS1 L2) • Applies evidence when planning a hernia repair strategy (PBL1 L2) • Discerns incarcerated and reducible hernias and demonstrates understanding of nonoperative and operative strategies for abdominal wall hernia repair (PC1 L2)	• Performs some steps of simple abdominal wall hernia repair (eg, open umbilical hernia repair) with minimal assistance but cannot perform the whole operation (PC2 L2) (Both) • Initiates dissection of the hernia sac but requires frequent prompting to stay in the correct plane and avoid entering the hernia sac (PC3 L2) (Both) • Uses surgical energy safely throughout the case (PC2 L2) (Both) • Needs prompting to use surgical drains for large potential spaces (MK2 L2) (Both) • Requires assistance to dissect the planes needed in a component separation or retrorectus repair (PC3 L2) (Open) • Performs straightforward abdominal closure with minimal assistance (PC2 L2) (Open) • Handles instruments safely but tentatively; struggles with 2-handed operating and operating against the camera (PC3 L2) (MIS) • Gains abdominal access with the Veress or Hasson technique; places working ports, though the ports are sometimes too lateral or close to the hip and limit dissection; demonstrates understanding of the concept of triangulation but does not always achieve it with port placement (PC2 L2) (MIS) • Anticipates some next steps in the operation and necessary instruments (PC2 L2) (MIS) • Places subsequent laparoscopic trocars after initial entry and closes skin independently (PC2 L2) (MIS) • Reduces a simple hernia without help but needs assistance if significant adhesions are involved and cannot reliably excise a hernia sac without assistance (PC3 L2) (MIS) • Sizes intraperitoneal mesh but needs help to position/fix the mesh (MK2 L2) (MIS)	• Communicates details of the operative procedure and ongoing management plan to a patient/caregiver(s) but omits some elements when discussing expected outcomes and the overall anticipated treatment course (ICS1 L2) • Evaluates a patient with a complex postop problem (eg, sepsis, anastomotic leak) but needs help to develop a management plan (PC4 L2) • Manages simple postop problems (eg, fever, pain, oliguria) (PC4 L2)

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Level	Nonoperative/ Preoperative	Intraoperative	Postoperative
3 **Indirect Supervision** Can do a basic operation but will not recognize abnormalities and does not understand the nuances of an advanced case **Framework:** The learner can perform the operation in straightforward circumstances. The attending gives passive help. This help may be given while scrubbed for more complex cases or during a check-in for more routine cases.	• Develops a plan for managing a healthy patient with a primary hernia, considering all operative approaches and the use of mesh as indicated (PC1 L3) • Develops an evidence-based plan for a patient with a recurrent or complex hernia, considering hernia characteristics, comorbid conditions, and patient preferences (PBLI1 L3) • Identifies an unusual hernia type such as a flank or Spigelian hernia and selects a repair strategy (MK2 L3) • Respectfully communicates a patient's medical condition barriers and cultural differences; discusses modification of risk factors and comorbid conditions to elicit a personalized care plan for a straightforward presentation in a shared decision-making process (ICS1 L3) • Conducts an informed consent discussion for operative management of an abdominal wall hernia with cultural humility and completely documents the discussion (ICS1 L3)	• Identifies tissue planes that have not been previously dissected but may need help to identify/manage variable anatomy or identify tissue planes in a reoperative field to prevent iatrogenic injuries (PC2 L3) (Both) • Smoothly dissects a hernia sac and enters the abdomen of a patient with prior operations with minimal assistance (PC3 L3) (Both) • Needs faculty input for decisions about drain use and positioning (MK2 L3) (Both) • Performs an open umbilical or epigastric hernia repair with minimal assistance (PC2 L3) (Open) • Demonstrates understanding of the planes of anterior and posterior component separation but needs help to develop these planes and position the mesh for TAR repair (PC3 L3) (Open) • Obtains abdominal access and places ports in an effective position without assistance (PC2 L3) (MIS) • Performs laparoscopic enterolysis and reduces hernia contents safely and with minimal assistance (PC3 L3) (MIS) • Clears an appropriate extent of abdominal wall for mesh placement without assistance (MK2 L3) (MIS) • Excises the hernia sac without assistance; closes a small hernia defect independently but requires help with a large hernia defect (PC3 L3) (MIS) • Handles laparoscopic instruments smoothly and begins to work effectively against the camera (PC3 L3) (MIS) • Sizes mesh for IPOM repair but needs help to position/affix large pieces of mesh (MK2 L3) (MIS)	• Proactively explains customized postop instructions and updates to a patient/caregiver(s) using a variety of methods to ensure understanding; discusses unexpected findings or changes to the intended plan with cultural humility (ICS1 L3) • Formulates a postop plan for a patient with a ventral hernia, including drain management and activity limitations (MK2 L3) • Evaluates and manages a patient with a complex postop problem after hernia repair (eg, sepsis, anastomotic leak) (PC4 L3)

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Level	Nonoperative/ Preoperative	Intraoperative	Postoperative
4 **Practice Ready** Can manage more complex patient presentations and operations and take care of most cases **Framework:** The learner can treat all straightforward abdominal wall hernias and has a strong understanding of surgical options and techniques for less common scenarios. 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	• Manages a complex patient with an abdominal wall hernia (eg, concomitant fistula, infected mesh, parastomal hernia) (PC1 L4) • Develops a treatment plan that accounts for hernia characteristics and a patient's comorbid conditions (MK2 L4) • Discusses nuances of hernia repair, including futility, use of mesh, and need for management of (modifiable) risk factors and comorbid conditions with a patient/caregiver(s) across barriers and cultural differences; negotiates and manages conflict between a patient, caregivers, and the health care team (ICS1 L4) • Conducts an informed consent discussion for complex abdominal wall repair with cultural humility, eliciting patient preferences and documenting risks and benefits individualized to the patient (ICS1 L4) • Critically appraises and applies evidence but can adjust for a more complex and nuanced hernia presentation and tailor the plan to a patient's situation (PBLI1 L4) • Identifies the need to coordinate another intra-abdominal operation with hernia repair (PC1 L4) • Addresses modifiable risk factors before surgery; optimizes comorbid conditions before elective surgery (PC1 L4)	• Anticipates challenges in a difficult case (eg, reoperative surgery) and asks for assistance as needed (PC2 L4) (Both) • Identifies the need for mesh and selects the type and size required for hernia repair (MK2 L4) (Both) • Uses surgical drains for prevention of complications (seroma/hematoma) based on intraoperative conditions (MK2 L4) (Both) • Identifies the need to change the operative approach based on intraoperative findings such as enteric contamination (PC3 L4) (Both) • Minimizes potentially preventable complications, such as iatrogenic enterotomies or serosal injuries (PC2 L4) (Both) • Independently performs the technical aspects of abdominal wall hernia repair (mobilization of fascia, development of flaps, selection of mesh) (PC2 L4) (Open) • Independently exposes the fascial planes for anterior component separation and for peritoneal dissection for posterior component release and preperitoneal mesh placement (MK2 L4) (Open) • Selects the correct suture for mesh fixation; correctly measures a wound length ratio for stitch spacing to close the anterior fascia (MK2 L4) (Open) • Independently identifies and dissects the hernia sac, lyses adhesions, delineates defects; obtains abdominal wall access for repair (PC3 L4) (MIS) • Selects appropriate mesh and size based on intraoperative factors and evidence-based recommendations (PBLI1 L4) (MIS) • Independently positions and fixates the mesh (PC2 L4) (MIS) • Identifies the need for conversion to open repair in the face of unexpected intraoperative findings without assistance (PC3 L4) (MIS)	• Customizes emotionally difficult news (eg, changes to the operative plan, adverse outcome, end-of-life discussion) to a patient/caregiver(s) in a culturally dexterous and caring manner (ICS1 L4) • Anticipates complications after hernia repair (eg, superficial and deep wound space infections, early mesh infection, hematoma/seroma formation, prolonged postop ileus, unrecognized visceral injury, acute early hernia recurrence [within 7 days], early fascial dehiscence with/without bowel obstruction) and manages them independently (PC4 L4)

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Evaluation & Management of a Patient with an Acute Abdomen

Description of the Activity	General surgeons are vital in the evaluation and management of adult and pediatric patients with an acute abdomen. Surgeons must be able to determine if a patient presenting in the inpatient, outpatient, or emergency department setting has an acute abdomen and develop and execute a treatment plan.
Functions	❖ Nonoperative/Preoperative ➢ Recognize the level of urgency for surgical consultation. ➢ Perform a focused history and physical examination, assessing pertinent positive and negative signs and symptoms. ➢ Synthesize essential information from a patient's referring providers, medical records, history, physical examination, and initial diagnostic evaluations to develop a differential diagnosis. ➢ Determine the need for additional diagnostic studies, including radiologic and laboratory evaluations. ➢ Determine the need and timing for operative intervention. ➢ Guide preoperative resuscitation and management. ➢ Communicate with all health care team members regarding the plan of care. ➢ Obtain informed consent with cultural humility. ▪ 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. ➢ Adapt communication style and interventions based on challenging encounters, such as futility or language barriers. ❖ Intraoperative ➢ Manage the perioperative environment, including room setup, equipment check, preprocedural time-out, specimen processing, counts, wound classification, and debriefing functions. ➢ Develop an initial operative plan that demonstrates understanding of a patient's pathology, anatomy, physiology, indications, contraindications, and potential complications. ➢ Collaborate with perioperative health care professionals to create and maintain an intraoperative environment that promotes safe patient care. ➢ Position the patient to expose the operative field, and take precautionary measures to prevent iatrogenic injury. ▪ Position the patient for use of table-mounted retractors. ➢ Explore the abdomen to identify a causative pathology. ➢ Perform operative intervention, such as: ▪ Bowel resection ▪ Irrigation and drainage ▪ Repair of perforation ➢ Integrate new information discovered intraoperatively, and modify the operative plan if necessary, including:

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	▪ Anastomosis versus ostomy as indicated ▪ Damage control with an open abdomen and a plan for a second look ▪ Need for intraoperative consultation ❖ Postoperative ➢ Initiate and oversee postoperative care, including the patient's postoperative disposition. ➢ Guide postoperative resuscitation and management. ➢ Communicate a postencounter plan with a patient/caregiver(s) and other health care team members that considers location, postencounter needs, outcome expectations, and follow-up. ➢ Develop a postencounter plan that includes analysis of patient-specific barriers to care. ➢ Recognize and manage the most common complications: ▪ Abdominal compartment syndrome ▪ Anastomotic leak ▪ Bleeding ▪ Bowel obstruction/ileus ▪ Deep organ-space infection ▪ Ischemic bowel ▪ Superficial surgical-site infection ➢ Communicate with the patient/caregiver(s) to ensure understanding of perioperative care and information regarding the prognosis related to further therapy so the patient can carry out the resultant plan within the context of their lives (eg, transportation, living situation, insurance, access to a pharmacy).
Scope	❖ In scope ➢ Adult patients ➢ Pediatric patients over the age of 2 years ❖ Out of scope ➢ Pediatric patients under the age of 2 years ➢ Recognize surgeon or facility-specific limitations and the need for referral to a subspecialty pediatric surgeon at the surgeon's discretion.

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Evaluation & Management of a Patient with an Acute Abdomen

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
1 **Limited Participation** Demonstrates understanding of information and has very basic skills **Framework:** What a learner directly out of medical school should know The attending can show and tell.	• Obtains an H&P with cultural humility and develops a limited differential for a patient presenting with acute abdominal pain/peritonitis (PC1 L1) • Initiates diagnostic testing for a patient with acute abdominal pain but in an unfocused way and without urgency (ICS2 L1) • Communicates the elements of an informed consent discussion but omits some elements when documenting the discussion (PROF1 L1) • Completes admitting documentation to a non-ICU level of care with assistance (ICS3 L1) • Displays limited ability to communicate clearly with all care team members regarding the plan of care (ICS3 L1)	• Assists with surgical positioning and preparation of the patient (PC2 L1) • Assists with adequate exposure (PC2 L1) • Maintains a sterile field (PC2 L1) • Handles instruments safely but tentatively; displays a lack of coordination between both hands; performs suturing and knot tying inefficiently (PC2 L1) • Performs superficial wound closure (PC2 L1)	• Communicates basic aspects of the operation and ongoing management plan with a patient/caregiver(s) but needs prompting to clarify expected outcomes and the anticipated treatment course (ICS1 L1) • Documents brief operative notes and postop evaluation, with some errors or omissions (ICS3 L1) • Writes routine postop orders for a patient being admitted to the floor (SBP2 L1) • Performs a postop evaluation and relays patient status, including abnormal status (PC4 L1)
2 **Direct Supervision** Demonstrates understanding of the steps of the operation but requires direction through principles and does not know the nuances of a basic case	• Evaluates a patient presenting with acute abdominal pain/peritonitis, recommends and interprets lab and imaging studies, and stratifies the urgency of the presentation (PC1 L2) • Initiates resuscitation and develops a plan for managing a patient presenting with acute abdominal pain/peritonitis (PC1 L2) • Initiates informed consent for an operation, requiring help to address best- and worst-case scenarios for the short, medium, and long term and ensure patient/caregiver comprehension (PROF1 L2) • Completes admitting documentation to the floor or ICU (ICS3 L2)	• Identifies the area of concern but has difficulty identifying causative pathology; requires coaching for most intraoperative decisions (PC2 L2) • Anticipates some next steps in the operation and necessary instruments (PC2 L2) • Places subsequent laparoscopic trocars after initial entry and closes skin independently (PC2 L2) • Demonstrates understanding of triangulation of port sites and safe entry into the abdomen (PC2 L2) • Uses surgical energy safely throughout the case (PC2 L2) • Positions the patient for maximal operative exposure and takes	• Communicates details of the operative procedure and postop instructions to a patient/caregiver(s) with cultural humility but omits some elements when discussing expected outcomes and the overall anticipated treatment course (ICS1 L2) • Documents postop plans for a patient, with some errors or omissions (ICS3 L2) • Writes postop orders for a patient being admitted to the ICU or receiving coordinated care from multiple services (SBP2 L2) • Performs basic postop procedures (eg, VAC changes) (PC2 L2) • Manages basic postop considerations (eg, fluid status, electrolyte abnormalities, wound care, drains, tubes) (PC4 L2)

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Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression.	• Articulates all key facts to supervisors, including the urgency of the condition (ICS2 L2)	precautionary measures to prevent iatrogenic injury (PC2 L2) • Performs the basic steps of entering and systematically exploring the abdomen (PC2 L2) • Closes the surgical incision, including fascia and skin (PC2 L2) • Handles tissue inconsistently, intermittently causing tissue trauma; requires redirection to maintain the optimal tissue plane (PC3 L2) • Provides a basic description of the operative plan but omits some steps; maintains the plane of dissection if identified but cannot independently enter it; frequently deviates from the correct plane (PC3 L2) • Usually proceeds to the next step of the procedure but sometimes requires direction (PC3 L2) • Controls bleeding only with direction (PC3 L2)	• Initiates evaluation for basic postop complications (eg, fever, pain, wound issues) (PC4 L2)
3 **Indirect Supervision** Can do a basic operation but will not recognize abnormalities and does not understand the nuances of an advanced case	• Manages an otherwise healthy patient presenting with common causes of acute abdominal pain (eg, diverticulitis, perforated appendicitis, free air from other perforation) (PC1 L3) • Develops and implements a plan for resuscitation and operative intervention if needed (PC1 L3) • Obtains informed consent for an operation, if indicated and goal concordant, with cultural humility; addresses best- and worst-case scenarios for the short, medium, and long term but does not always ensure patient/caregiver comprehension by using applicable	• Explores the abdomen and identifies causative pathology (PC2 L3) • Makes straightforward intraoperative decisions, such as need for bowel resection, repair of perforation, or irrigation and drainage in common scenarios, but requires coaching in less common scenarios (PC2 L3) • Demonstrates careful instrument and tissue handling, resulting in minimal tissue trauma, though dissection techniques may be inefficient and result in excess maneuvers; demonstrates difficulty with inflamed fields or altered anatomy (PC3 L3)	• Communicates customized postop instructions and updates to a patient/caregiver(s) using a variety of methods to ensure understanding; discusses unexpected findings or changes to the intended plan with cultural humility (ICS1 L3) • Documents all components of a patient's course with few if any errors or omissions (ICS3 L3) • Coordinates discharge of a patient with complex care needs, such as wound management, home TPN, and IV line or feeding tube maintenance (SBP2 L3)

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Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can perform the operation in straightforward circumstances. The attending gives passive help. This help may be given while scrubbed for more complex cases or during a check-in for more routine cases.	language services and audio/visual aids (PROF1 L3) • Discusses recommendations with the consulting team and verifies understanding using closed-loop communication (ICS2 L3) • Communicates respectfully and efficiently with all team members regarding the urgency of the patient's condition and the plan of care (ICS2 L3)	• Identifies most potential errors at the relevant portion of the procedure and takes steps to avoid them (PC3 L3) • Identifies when delayed closure of the abdomen is indicated due to difficulty in closing (PC3 L3)	• Performs postop procedures, including decompression of abdominal compartment syndrome, delayed abdominal wall closure, and bedside control of bleeding (PC2 L3) • Identifies and manages all postop complications (PC4 L3)
4 **Practice Ready** Can manage more complex operations and take care of most cases **Framework:** The learner can treat all acute abdomen presentations and has a strong understanding of surgical options and techniques for less common scenarios.	• Manages a patient with acute abdominal pain/peritonitis and complex comorbidities or atypical presentation (eg, frozen abdomen, carcinomatosis, mesenteric ischemia, internal hernia, comorbid medical disease impacting management) (PC1 L4) • Initiates resuscitation and develops a management plan inclusive of an operation and based on the urgency and complexity of the patient's presentation, seeking input from other health care team members as needed (PC1 L4) • Communicates the urgency of the plan and the priority of interventions to all team members, including the attending physician and the OR and anesthesia teams (ICS2 L4)	• Collaborates with the OR team to promote safe care (SBP2 L4) • Performs an efficient exploration of the abdomen and identifies causative pathology (PC2 L4) • Identifies tissue planes that have not been previously dissected but needs help to manage variable anatomy or identify tissue planes in a reoperative field to prevent iatrogenic injury (PC2 L4) • Develops an operative plan and performs operative interventions to address causative pathology (PC2 L4) • Functions as teaching assistant for a straightforward case (PC2 L4) • Identifies causative pathology and executes intraoperative decisions in a	• Communicates with a patient/caregiver(s) using methods such as teach-back to ensure they understand perioperative care (ICS1 L4) • Conveys information regarding prognosis and need for further therapy with cultural humility; determines if a patient/caregiver(s) can carry out the resultant plan within the context of their lives (transportation, living situation, insurance, access to a pharmacy) (ICS1 L4) • Reviews and provides feedback about documentation in the medical record (ICS3 L4) • Identifies specific needs and coordinates care for a patient according to their socioeconomic context, including navigating challenges (eg, transportation,

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Evaluation & Management of a Patient with an Acute Abdomen

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
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.	• Synthesizes available information and identifies additional tests needed, expressing to other health care providers the urgency and priority of testing in a respectful way (ICS3 L4) • Obtains informed consent for an operation, if indicated and goal concordant, with cultural humility; addresses best- and worst-case scenarios for the short, medium, and long term and ensures patient/caregiver comprehension by using applicable language services and audio/visual aids (PROF1 L4)	complex situation (eg, need for bowel resection, repair of perforation, irrigation and drainage, damage control) (PC2 L4) • Modifies and prioritizes surgical interventions based on operative findings and patient condition, including need for a second-look procedure (PC3 L4) • Devises and implements a plan when deviation from the initial operative plan is required (PC3 L4) • Devises a plan that includes minimizing potential postop complications (PC4 L4)	living situation stability/safety, insurance, pharmacy access) (SBP2 L4) • Determines the postop care level and guides postop resuscitation and management (use of pressors, advanced ventilator strategies, blood and blood components, antibiotics, nutrition) (PC4 L4) • Develops a postop plan to minimize anticipated complications and treat them if they develop (PC4 L4)

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Evaluation & Management of a Patient with Benign Anorectal Disease

Description of the Activity	❖ General surgeons are frequently called upon to evaluate and manage benign anorectal disease in the inpatient, outpatient, and emergency department settings. Anorectal disease is a source of great patient morbidity. Surgeons must be able to provide patient-centered care and treatment for the most commonly seen anorectal conditions and recognize complex disease that requires specialist referral.
Functions	❖ Nonoperative/ Preoperative ➢ Perform a focused history and physical examination, including pertinent positive and negative signs and symptoms. ▪ Give attention to comorbidities that could affect patient care, such as: ▪ Anticoagulation ▪ Bowel continence ▪ Cirrhosis ▪ Portal hypertension ➢ Use, perform, and incorporate into the management plan physical examination adjuncts when needed, including anoscopy, endoscopy, and imaging. ➢ Synthesize information from the patient's history and physical examination, medical records, and existing diagnostic evaluations to develop a differential diagnosis. ➢ Create a differential diagnosis that recognizes the broad diagnoses of anorectal disease. ➢ Manage a patient using a stepwise approach from nonoperative therapy to procedural intervention, and identify a patient in whom operative intervention is the appropriate first step. ➢ Select a setting and an anesthetic and surgical approach consistent with a patient's diagnosis and comorbidities. ➢ Obtain informed consent with cultural humility. ▪ Describe the indications, risks, benefits, alternative therapies, and potential complications of the planned procedure. 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. ➢ Initiate discussion with a patient/caregiver(s) to ensure understanding of perioperative expectations and the postoperative care plan, including topics such as: ▪ Bowel function ▪ Pain ▪ Potential staged procedure ➢ Recognize a patient who should be referred to a colorectal specialist. ❖ Intraoperative

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Evaluation & Management of a Patient with Benign Anorectal Disease

	➢ Manage the perioperative environment, including room setup, equipment check, preprocedural time-out, specimen processing, counts, wound classification, and debriefing functions. ➢ Position a patient to expose the operative field, taking precautionary measures to prevent iatrogenic injury. ➢ Confirm accessibility of necessary equipment. ➢ Collaborate with other perioperative health care professionals to create and maintain an intraoperative environment that promotes safe patient care. ➢ Develop an initial operative plan that demonstrates understanding of a patient's pathology, anatomy, physiology, indications, contraindications, and potential complications. ➢ Perform operative interventions such as: ▪ Anal sphincterotomy ▪ Anal fistulotomy ▪ Hemorrhoidectomy ▪ Seton placement ▪ Incision and drainage of perianal abscess ▪ Excision and fulguration of anal condyloma ➢ Integrate new information discovered intraoperatively to modify the operative plan as necessary, such as: ▪ Management of hemorrhoidal artery bleeding ▪ Recognition of a patient not appropriate for a fistulotomy ▪ Recognition of a patient not appropriate for a sphincterotomy ❖ Postoperative ➢ Communicate a postencounter plan with the patient/caregiver(s) and other health care team members that considers location, postencounter needs, outcome expectations, and a follow-up plan. ➢ Develop a postencounter plan that includes an analysis of patient-specific barriers to care. ➢ Recognize and manage (or identify the need for referral to a specialist) the most common complications following operative management of anorectal disease, such as: ▪ Bleeding ▪ Incontinence ▪ Infection ▪ Pain ▪ Recurrence ▪ Urinary retention
	❖ In scope ➢ Anal abscess ➢ Anal anesthesia ➢ Anal fissure ➢ Anal fistula

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Evaluation & Management of a Patient with Benign Anorectal Disease

Scope	➢ Hemorrhoid disease ➢ Perianal condyloma ❖ Out of scope ➢ Anal dysplasia ➢ Anal or rectal cancer ➢ Anal sexually transmitted infections other than condyloma ➢ Anorectal malformations ➢ Fecal incontinence ➢ Hidradenitis ➢ Pediatric anorectal disease ➢ Pilonidal cyst/abscess ➢ Pruritus ani ➢ Rectal prolapse ➢ Rectovaginal fistula

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Evaluation & Management of a Patient with Benign Anorectal Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
1 **Limited Participation** Demonstrates understanding of information and has very basic skills **Framework:** What a learner directly out of medical school should know The attending can show and tell.	• Obtains an H&P inclusive of an anorectal exam with cultural humility; develops an incomplete differential for anal pain or bleeding (PC1 L1) • Demonstrates cultural humility and respect for a patient's privacy while discussing sensitive matters; discusses exam findings with a patient (ICS1 L1) • Demonstrates knowledge of the basic pathophysiology of anorectal disease (MK1 L1) • Identifies normal anal anatomy and obvious exam findings such as a mass or decreased sphincter tone but does not identify subtle findings (MK2 L1) • Discusses the rationale for anoscopy with a patient (ICS1 L1) • Explains steps of a care plan to a patient but not the expected postop course or recovery times; reports some potential harms and benefits of an operation (ICS1 L1)	• Identifies some options for patient positioning for an anorectal procedure but demonstrates incomplete understanding of the potential for nerve or pressure injury (MK2 L1) • States the overall goals of the operation but is unable to outline the specific steps (MK2 L1) • Needs assistance to recognize tissue planes for dissection and needs help to proceed after each operative step (PC3 L1) • Handles instruments inefficiently and with limited dexterity and frequently repositions instruments; demonstrates incomplete understanding of tissue handling; with direction, can suture and tie knots in the correct location and with correct tension (PC3 L1)	• Provides updates and answers to straightforward questions from a patient/caregiver(s) and other health care team members in a respectful and understandable way (ICS1 L1) • Identifies simple postop problems such as pain and bleeding (PC4 L1)
2 **Direct Supervision** Demonstrates understanding of the steps of the operation but requires direction through principles and does not know the nuances of a basic case	• Broadly describes expected outcomes of nonoperative management but omits details such as the likelihood of treatment success or steps for escalation of therapy (ICS1 L2) • Needs assistance to differentiate between patients best served by office or OR procedures (PC1 L2) • Recognizes perianal lesions on external exam but displays limited ability to diagnose them (eg, condyloma vs skin tag) (MK2 L2)	• Uses physical exam findings to determine operative positioning (eg, prone for anterior lesions, lithotomy for posterior lesions) (MK2 L2) • Describes the use of some instruments used in anorectal procedures (PC3 L2) • Demonstrates knowledge of common positioning options but may select an inappropriate one; recognizes the importance of protecting against nerve and pressure injuries (PC3 L2; MK2 L2) • Provides a basic description of the operative plan but omits some steps;	• Initiates a discussion of intraop findings and postop course with a patient/caregiver(s) for an uncomplicated, straightforward procedure but cannot answer questions beyond these descriptions or recognize worrisome symptoms and warning signs of postop problems; articulates this information to other health care team members but does not develop a plan independently (ICS1 L2) • Carries out a postop plan initiated by a more experienced health care provider (PC4 L2)

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Evaluation & Management of a Patient with Benign Anorectal Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression.	• Evaluates a patient with anal pain or bleeding and orders diagnostic tests as indicated (PC1 L2) • Manages a patient with a common anorectal condition nonoperatively and recognizes the importance of bowel habit optimization (PC1 L2) • States the steps of anoscopy, including need for a chaperone, but cannot perform the procedure independently (PC3 L2) • Performs an internal and external physical exam of the anus but may omit assessment of reflexes, tone, and function (MK2 L2)	maintains the plane of dissection if identified for them but cannot independently enter it; frequently deviates from the correct plane (PC3 L2) • Sometimes requires guidance to move to the next step of the procedure (PC3 L2) • Controls bleeding only with direction (PC3 L2)	

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Indirect Supervision
 	
Can do a basic operation but will not recognize abnormalities and does not understand the nuances of an advanced case
 	
Framework:
The learner can perform the operation in straightforward circumstances.
 	
The attending gives passive help. This help
	• Discusses anoscopy findings, disease pathology, and options for treatment; explains nonoperative management of the identified pathology and names some surgical options (ICS3 L3)
	• Obtains informed consent for a straightforward procedure they are familiar with and answers basic questions (ICS1 L3)
	• Demonstrates understanding of treatment options for:
	  ○ Anal fissure: topical calcium channel blockers, topical vasodilators
	  ○ Fistula: exam under anesthesia
	  ○ Hemorrhoid: nonoperative management, banding, excisional hemorrhoidectomy
	  ○ Condyloma: excision and fulguration (MK1 L3)
	• Assesses baseline bowel continence but does not discover symptoms such as
		• Demonstrates knowledge of instruments typically used in most anorectal surgeries; suggests a position for the procedure and identifies other options; describes the potential for nerve injury and correctly identifies nerves at risk in each position (PC3 L3)
		• Outlines the steps of the procedure in a straightforward case (PC3 L3)
		• Demonstrates careful tissue handling and identifies the correct plane but cannot self-correct; anticipates the next step of the procedure correctly in a straightforward case (PC3 L3)
		• With supervision, performs operative treatment for:
		  ○ Fistula: Identifies the anatomy of the sphincter muscles relative to the tract but is unsure of which operation to perform
		  ○ Hemorrhoid: Dissects the submucosal plane when shown the correct plan
			• Discusses intraop findings and postop course with a patient/caregiver(s) but struggles to find straightforward language and does not confirm understanding (ICS1 L3)
			• Tells a patient how to report worsening symptoms but does not give specific warning signs (ICS1 L3)
			• Considers patient-specific barriers and disparities in care when devising and communicating the postop plan (ICS1 L3)
			• Recognizes a severe postop problem such as pelvic sepsis syndrome but requires assistance to manage it; selects an appropriate method of postop follow-up with consideration of case complexity, health care system cost, and patient resources (eg, telehealth) (PC4 L3)
			• Manages routine postop care, recognizes common postop complications, and evaluates and manages simple problems (PC4 L3)

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Evaluation & Management of a Patient with Benign Anorectal Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
may be given while scrubbed for more complex cases or during a check-in for more routine cases.	urgency, incontinence to flatus, and fecal smearing (MK1 L3) • Demonstrates knowledge of the limitations of in-office procedures and identifies a patient who may be a candidate (MK1 L3) • Discusses a step-wise treatment plan with a patient, including optimal anal health with fiber and healthy toileting habits (MK1 L3) • When surgery is appropriate, discusses a recommended approach and the alternatives, risks, and benefits of each option (MK1 L3) • Identifies abnormal sphincter anatomy or a fissure/fistula on physical exam (MK2 L3) • Develops a plan for managing a healthy patient with an anorectal condition, including operative intervention as indicated; manages comorbid conditions contributing to symptoms (PC1 L3) • Performs anoscopy in the presence of a chaperone and with cultural humility but needs assistance to perform it correctly; displays technique that is less gentle than ideal and does not provide the patient with a verbal narrative, causing the patient to be nervous and unexpecting of touch (PC3 L3)	and preserves the anal sphincter during dissection; needs prompting to consider the extent of the dissection ○ Condyloma: Needs direction to identify the subcutaneous plane beneath a condyloma and may create an unnecessarily large wound; needs prompting to consider the extent of the dissection ○ Abscess: Identifies when a drain is needed and the appropriate location and size of an incision ○ Fissure: Identifies a hypertrophic band in the internal anal sphincter muscle and correctly identifies the intersphincteric groove (PC3 L3)	
4 **<u>Practice Ready</u>** Can manage more complex patient presentations and	• Explains the process of the exam to a patient with calming reassurance (ICS1 L4) • Personalizes the discussion to a patient's language preference and social considerations, using a variety of methods to ensure understanding (ICS1 L4)	• Independently performs operative treatment for: ○ Fistula: Identifies the anatomy of the sphincter muscles relative to the tract and modifies the operative plan to	• Leads a discussion with a patient/caregiver(s) and other health care team members, ensuring understanding, employing cultural humility, and using appropriately straightforward language

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Evaluation & Management of a Patient with Benign Anorectal Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative

operations and take care of most cases
 	
Framework:
The learner can treat all straightforward anorectal disease and has a strong understanding of surgical options and techniques for less common scenarios.
 	
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.
	• Demonstrates comprehensive knowledge of treatment options and addresses them in discussion with a patient:
	  ○ Anal fissure: Botox, sphincterotomy
	  ○ Fistula: fistulotomy, seton, and fistulas requiring specialty referral
	  ○ Condyloma: topical treatments (MK1 L4)
	• Assesses baseline bowel continence, recognizing its influence on the treatment plan (MK1 L4)
	• Recognizes normal and abnormal pathology on exam (MK2 L4)
	• Synthesizes all relevant data and generates a personalized treatment plan for a patient with anorectal disease, including managing anticoagulation, portal HTN, and other relevant considerations (PC1 L4)
	• Protects themselves and advocates for other team members by identifying when precautions against aerosolized HPV are necessary; uses a respirator and closed circuit smoke evacuation to minimize exposure (PC1 L4)
	• Performs a thorough anal exam, including an external exam, assessing reflexes, tone, and function; performs anoscopy with cultural humility and in the presence of a chaperone using a gentle and thorough technique (PC3 L4)
	• Discusses postop care and expectations (PC4 L4)
		include a fistulotomy or seton as appropriate
		  ○ Hemorrhoid: Identifies the submucosal plane preserving the anal sphincter during dissection and recognizes and controls the hemorrhoidal vascular pedicle; recognizes and explains when excision of all prominent hemorrhoid tissue is not indicated
		  ○ Condyloma: Identifies the subcutaneous plane beneath a condyloma without damaging the anal sphincter or creating an excessive wound; recognizes and explains when excision of all condylomatous tissue is not indicated
		  ○ Abscess: Identifies when a drain is needed and the appropriate location and size of an incision to avoid sphincter muscle
		  ○ Fissure: Identifies the intersphincteric plane and determines the amount of sphincter to transect to treat the disease while mitigating incontinence (PC3 L4)
		• Attempts control of bleeding by packing, cautery, and suture ligation (PC3 L4)
		• Modifies instrument selection and tissue handling based on intraop findings; modifies the operative plan when the patient's disease or anatomy does not align with what was anticipated (PC3 L4)
			regarding the findings and intraop course (ICS1 L4)
			• Delivers news of postop complications in a caring and respectful manner (ICS1 L4)
			• Uses customized, multimodal, opioid-sparing pain management strategies consistent with evidence-based prescribing guidelines and discusses opioid management with the patient (PC4 L4)
			• Outlines a management plan for common and significant postop complications, including urinary retention, escalating pain, infection, incontinence, recurrence, and bleeding (PC4 L4)
			• Recognizes the importance of communication to mitigate the severity of postop complications; outlines to the patient the process for reporting worrisome findings such as urinary retention, escalating pain, infectious complications, incontinence, recurrence, and bleeding (PC4 L4)

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Evaluation & Management of a Patient with RLQ Pain and Appendicitis

Description of the Activity	Right lower quadrant pain is one of the most common conditions managed by general surgeons. All general surgeons must be able to evaluate and manage appendicitis as well as a variety of other conditions with similar presentations regardless of clinical setting, patient age, or resource availability.
Functions	❖ Nonoperative/Preoperative ➢ Synthesize essential information from records, history, physical examination, and initial diagnostic evaluations to develop a differential diagnosis. ➢ Establish the differential diagnosis based on the patient's age, sex, and medical history. ➢ Determine whether surgery is indicated. ➢ Select a safe anesthetic and surgical approach consistent with the patient's diagnosis and comorbidities. ➢ Triage the patient for resuscitation, evaluation, and management based on acuity. ➢ For patients diagnosed with appendicitis, customize treatment options such as resuscitation, medical management, and operative intervention based on presentation, including: ▪ Appendiceal phlegmon ▪ Appendicitis in the pregnant patient ▪ Diagnostic uncertainty ▪ Perforated appendicitis ▪ Retrocecal appendicitis ▪ Uncomplicated appendicitis ➢ Obtain informed consent with cultural humility. ▪ 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. ➢ Communicate patient-specific needs to the health care team. ❖ Intraoperative ➢ Manage the perioperative environment, including room setup, equipment check, preprocedural time-out, specimen processing, counts, wound classification, and debriefing functions. ➢ Manage the operative therapy of appendicitis. ▪ Perform both a laparoscopic and an open appendectomy. • Position the patient, and ensure the availability of relevant equipment. • Ask for correct instruments and sutures. • See tissue planes, and identify and dissect relevant normal and abnormal anatomy.

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Evaluation & Management of a Patient with RLQ Pain and Appendicitis

	• Perform operative steps efficiently. ▪ Manage operative complications and unexpected findings, including intraoperative consultation from other specialists when necessary, for conditions including: • Appendiceal mass • Gynecologic pathology • Inflammatory bowel disease ➢ Communicate patient-specific needs to the health care team. ❖ Postoperative ➢ Provide routine postoperative care immediately and in follow-up as needed. ➢ Recognize and manage complications related to appendicitis. ➢ Communicate clinical developments to the patient/caregiver(s), including treatment options, postprocedure developments, and discharge conditions. ➢ Communicate patient-specific needs to the health care team.
Scope	❖ In scope ➢ Pediatric and adult patients ➢ Diagnosis and initial management of pathology other than appendicitis (eg, cancer, gynecologic pathology, inflammatory bowel disease) ❖ Out of scope ➢ Comprehensive management of pathology other than appendicitis (eg, cancer, gynecologic pathology, inflammatory bowel disease)

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Evaluation & Management of a Patient with RLQ pain and Appendicitis

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
1 **Limited Participation** Demonstrates understanding of information and has very basic skills **Framework:** What a learner directly out of medical school should know The attending can show and tell.	• Obtains an H&P with cultural humility and develops a differential for a patient with RLQ pain (PC1 L1) • Demonstrates understanding of basic pathophysiology of the appendix and other RLQ organs and uses this knowledge to consider other causes of RLQ pain, including some of the most common disorders (MK1 L1) • Respectfully communicates basic facts about the condition to a patient/caregiver(s) but inconsistently uses applicable language services and audio/visual aids (ICS1 L1) • Communicates the elements of an informed consent discussion but omits some elements when documenting the discussion (ICS1 L1) • Accesses evidence about treatment options to manage appendicitis but requires guidance to select an approach (PBLI1 L1)	• Describes the key steps of an appendectomy and how to locate the appendix in the normal position (MK2 L1) • Identifies the layers of the abdominal wall at the midline and RLQ (MK2 L1) • Demonstrates understanding of the principles of maneuvering and focusing the angled laparoscope; centers the operative field with frequent adjustments (PC2 L1; PC3 L1) • Places subsequent laparoscopic trocars after initial entry; requires guidance to prevent iatrogenic injury and target the area of dissection (PC2 L1) • Closes wounds with input from a supervisor while demonstrating sharps safety, surgical energy use, and surgical field sterility (PC2 L1) • Displays coordinated hand movements for simple maneuvers, though inefficiently and under direct instruction (PC3 L1) • Requires active instruction to move the operation forward (PC3 L1)	• Evaluates general variances in the standard immediate postop course, such as fever, hypotension, or urinary retention, requiring supervision to manage them (PC4 L1) • Alerts supervisors about postop complications and initiates management with supervision (ICS1 L1; PC4 L1) • Initiates postop pathways, including multimodal pain management and discharge (PC4 L1) • Communicates basic aspects of the operative procedure to a patient/caregiver(s) but needs prompting to clarify expected outcomes and the anticipated treatment course (ICS1 L1) • Describes different models of health care coverage in the U.S. and basic components of documentation required for billing and coding for appendicitis patients (SBP3 L1)
2 **Direct Supervision** Demonstrates understanding of the steps of the operation but requires direction through principles and does not know the nuances of a basic case	• Evaluates a patient with appendicitis, determines when imaging is indicated, and interprets lab values and studies (PC1 L2) • Applies knowledge of the anatomy and physiology of the RLQ when evaluating RLQ pain (eg, psoas sign, rectal or pelvic exam) (MK1 L2) • Develops a broad differential when evaluating RLQ pain, including conditions that can masquerade as appendicitis (eg, Crohn's, typhlitis, lymphoma in HIV) (PC1 L2; MK1 L2)	• Locates the appendix despite anatomic variants (ie, retrocecal) (MK2 L2) • Smoothly performs basic maneuvers such as suturing and knot tying (MK2 L2) • Identifies common positioning options but cannot name factors to select one over another; recognizes the importance of protecting against nerve and pressure injuries but cannot describe the resulting morbidity (PC3 L2)	• Develops a discharge plan that includes pain management and is based on the hospital course and the patient's disease (PC4 L2) • Identifies when a patient deviates from a normal postop recovery pattern but omits some elements from the differential (PC4 L2) • Manages a simple postop problem independently (eg, fever, tachycardia) (PC4 L2)

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Evaluation & Management of a Patient with RLQ pain and Appendicitis

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression.	• Develops a plan for managing a patient with uncomplicated appendicitis (PC1 L2) • Respectfully communicates basic facts about the diagnosis to a patient/caregiver(s); customizes communication to overcome barriers (eg, literacy, language, and cultural differences); uses applicable language services and audio/visual aids to elicit preferences (ICS1 L2) • Communicates the elements of an informed consent discussion for a straightforward appendectomy in an uncomplicated patient and completely documents the discussion (ICS1 L2) • Incorporates published guidelines and scoring systems regarding the workup and management of appendicitis and applies them with guidance (PBLI1 L2)	• Anticipates some next steps in the operation and necessary instruments (PC2 L2) • Places subsequent laparoscopic trocars after initial entry, uses surgical energy safely, and closes skin independently (PC2 L2) • Demonstrates understanding of port site triangulation and safe entry into the abdomen, requiring guidance for each (PC2 L2) • Usually demonstrates careful tissue handling and uses both hands in a coordinated manner (PC3 L2) • Moves the operation forward, usually proceeding to the next step of the procedure, though sometimes requires direction (PC3 L2) • Provides a basic description of the operative plan but omits some steps; maintains the plane of dissection if identified but struggles to independently enter, and often deviates from, the correct plane (PC3 L2) • Requires assistance to enter the abdomen or control bleeding (PC3 L2)	• Communicates details of the operative procedure to a patient/caregiver(s) but omits some elements when discussing expected outcomes and the overall anticipated treatment course (ICS1 L2) • Recognizes the influence of health care system financing structures on the postop care of a patient with appendicitis (eg, global period, care of patient requiring initial percutaneous drainage) (SBP3 L2)
3 **Indirect Supervision** Can do a basic operation but will not recognize abnormalities and does not understand the nuances of an advanced case	• Synthesizes knowledge of patient factors, comorbidities, anatomy, and physiology when developing a differential and treatment plan (MK1 L3) • Develops a plan for managing a straightforward patient with complicated appendicitis (PC1 L3) • Communicates a patient's medical condition across cultural differences in a respectful way to elicit a personalized care	• Describes a systematic approach to exploring alternate pathology when the appendix appears normal (MK2 L3) • Locates the appendix, even with inflammation or scarring (MK2 L3) • Performs a straightforward laparoscopic appendectomy, including port site selection, entry to the abdomen, exposure, and resection of the appendix (PC2 L3)	• Interprets and communicates straightforward pathology accurately (MK1 L3) • Recognizes all postop complications, such as sepsis or deep or superficial wound infection, and completes the necessary workup for these problems independently in an uncomplicated patient (PC4 L3) • Evaluates postop problems in a patient with a complex medical condition,

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Evaluation & Management of a Patient with RLQ pain and Appendicitis

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can perform the operation in straightforward circumstances. The attending gives passive help. This help may be given while scrubbed for more complex cases or during a check-in for more routine cases.	plan in a shared decision-making process for a straightforward presentation (ICS1 L3) • Conducts an informed consent discussion for straightforward appendectomy with cultural humility, individualizing risks, benefits, and alternatives to the patient; completely documents the discussion (ICS1 L3) • Applies published guidelines regarding the workup and management of a complex presentation of appendicitis; incorporates patient preferences into the plan (PBLI1 L3)	• Smoothly maneuvers the laparoscope and instruments most of the time, exhibiting hand coordination (PC3 L3) • Consistently demonstrates careful tissue handling; identifies the plane of dissection accurately in a routine case (PC3 L3) • Identifies tissue planes that have not been previously dissected but needs assistance to identify or manage variable anatomy or tissue planes in a reoperative field (PC2 L3) • Maneuvers normal tissue, including the small bowel, colon, and omentum, to make sufficient progress without using excessive force (PC3 L3) • Moves fluidly through the operation, anticipating next steps and logistical needs and clearly communicating these needs to the OR team (PC3 L3)	requiring supervision to manage them (PC4 L3) • Prepares and customizes a discharge plan for a patient with a complicated course (PC4 L3) • Communicates unexpected findings or changes to the intended plan to a patient/caregiver(s) with cultural humility (ICS1 L3) • Analyzes how different treatment strategies (operative vs nonoperative management) impact outcomes and costs of care (SBP3 L3)
4 **Practice Ready** Can manage more complex patient presentations and operations and take care of most cases **Framework:** The learner can treat all straightforward appendicitis cases and has a strong understanding of	• Initiates a cost-effective workup; uses available technologies when a diagnosis is in doubt (PC1 L4) • Manages a complicated presentation, considering operative and nonoperative management strategies such as IR drainage of perforation and abscess or nonoperative management for a high-risk patient with uncomplicated appendicitis (PC1 L4; MK1 L4) • Manages a patient with a complex medical condition (eg, pregnancy, IBD, anticoagulation requiring reversal) (PC1 L4, MK1 L3) • Customizes communication based on individual patient characteristics and preferences across barriers and cultural	• Implements a systematic approach to exploring alternate pathology (eg, alternative trocar and patient positions) when the appendix is normal (MK2 L4) • Accesses the abdomen safely in a patient with prior abdominal operations or during pregnancy (MK2 L4) • Performs an appendectomy in a patient with significant inflammation or adhesions from prior operations (PC2 L4) • Manages variable anatomy in a reoperative field (PC2 L4) • Demonstrates careful tissue handling and plane development in both normal and abnormal tissue, including the cecum and appendix; adapts technique and instruments as necessary (PC3 L4)	• Elucidates initial therapy for pathology other than appendicitis (MK1 L4) • Identifies, evaluates, and independently manages complex immediate and delayed postop complications such as fistulas and dehiscence (PC4 L4) • Directs interdisciplinary care to manage a patient experiencing complications (PC4 L4) • Manages conflict between a patient, caregiver(s), and the health care team (ICS1 L4) • Customizes emotionally difficult news (eg, changes to the operative plan, adverse outcome, end-of-life discussion) to a patient/caregiver(s) in a culturally dexterous and caring manner (ICS1 L4)

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Evaluation & Management of a Patient with RLQ pain and Appendicitis

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
surgical options and techniques for less common scenarios. 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.	differences in a complex or life-threatening situation; manages and de-escalates conflict with a difficult or hostile patient/caregiver (ICS1 L4) • Conducts an informed consent discussion for a complex or emergent appendectomy with cultural humility; elicits patient preferences; documents risks and benefits individualized to the patient (ICS1 L4) • Applies current published guidelines and scoring systems regarding the workup and management of appendicitis, considering nuances and exceptions in a complex situation (PBLI1 L4)	• Devises and implements a plan when deviation from the initial operative plan is required (eg, conversion to open procedure) (PC3 L4) • Analyzes how the choice of instrumentation will affect the overall cost of the procedure (SBP3 L3)	• Selects a method of postop follow-up, considering case complexity, health care system cost, and patient wishes and resources (telehealth, transportation challenges) (SBP3 L4)

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Evaluation & Management of a Patient with Benign or Malignant Breast Disease

Description of the Activity	General surgeons are often called to evaluate patients with breast concerns. These surgeons must be able to evaluate and manage patients who present in the outpatient or elective setting as well as those who present with urgent or emergency conditions.
Functions	❖ Nonoperative/Preoperative ➢ Obtain a focused history, including family history, cancer risk factors, breast masses, nipple discharge, and skin changes. ➢ Perform a focused physical examination of the bilateral breasts, draining lymph node basins, and skin. ➢ Synthesize essential information from a patient's history and physical examination, medical records, and existing diagnostic evaluations to develop a differential diagnosis and care plan, including the following processes: ▪ Benign lesions, such as cysts, abscesses, and fibroepithelial lesions ▪ High-risk breast lesions, such as atypical ductal hyperplasia (ADH), atypical lobular hyperplasia (ALH), lobular carcinoma in situ (LCIS), papilloma, and flat epithelial atypia (FEA) ▪ Invasive breast cancer and stage 0 cancer, such as ductal carcinoma in situ (DCIS) ▪ Mastitis versus inflammatory breast cancer ➢ Order and evaluate breast imaging, including mammography and ultrasound in all patients and magnetic resonance imaging in selected patients. ➢ Perform whole-body staging such as computed tomography (CT)/bone scan or positron-emission tomography (PET)/CT when indicated in a patient with invasive breast cancer. ➢ Obtain or perform core needle biopsy or fine-needle aspiration for tissue diagnosis of breast and axillary lesions. ➢ Identify the need for and initiate multidisciplinary care of a patient with malignant breast diagnosis, including medical oncology, genetics, radiation oncology, fertility planning, and plastic surgery, and demonstrate understanding of how the timing of breast surgery depends on input from these teams. ➢ Use shared decision-making to develop a treatment plan consistent with a patient's goals and beliefs. ➢ Use current evidence-based literature to develop correct sequencing of oncologic surgery, reconstructive surgery, chemotherapy, radiation, and antihormonal therapy. ➢ Communicate to a patient/caregiver(s) how comorbid conditions will affect the risk/benefit ratio in a decision to pursue surgery and postoperative recovery. ➢ Collaborate with anesthesia providers to develop a safe anesthetic approach for a clinical situation. ➢ For an anticoagulated patient, demonstrate understanding of the significance of the indication, and apply an algorithm for discontinuation and resumption in the perioperative period. ➢ Recognize the multisystemic effects of tobacco use and cessation timing as they relate to perioperative outcomes, including postoperative pulmonary complications and wound healing. ➢ Obtain informed consent with cultural humility. ▪ 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.

Evaluation & Management of a Patient with Benign or Malignant Breast Disease

- Ensure that the patient/caregiver(s) can ask questions, and address any expressed concerns, taking patient/caregiver preferences into account.
- Document the consent discussion.

❖ Intraoperative

- ➢ Manage the perioperative environment, including room setup, equipment check, preprocedural time-out, specimen processing, counts, wound classification, and debriefing functions.
- ➢ Collaborate with other perioperative health care professionals to create and maintain an intraoperative environment that promotes safe patient care and collegiality.
- ➢ Position the patient to expose the operative field, taking precautionary measures to prevent iatrogenic injury.
- ➢ Confirm the presence of necessary equipment such as a Geiger counter, blue dye, a localizing device, and specimen imaging.
- ➢ Develop an initial operative plan that demonstrates understanding of the pathology, anatomy, physiology, indications, contraindications, and potential complications.
- ➢ Perform operative interventions such as:
  - Nonpalpable excisional biopsy or partial mastectomy
    - Perform image-guided preoperative localization of a lesion.
    - Perform image-guided intraoperative resection of a localized lesion.
    - Orient a resected lesion for pathologic margin assessment.
    - Assess the adequacy of a resected lesion with imaging with or without radiologist input.
  - Palpable excisional biopsy or partial mastectomy
    - Perform enucleation versus complete resection technique.
  - Total mastectomy
    - Identify the tissue plane between viable skin and breast tissue.
    - Identify the tissue plane between breast and pectoralis muscle.
    - Demonstrate understanding of the extent of necessary dissection, using borders of the breast (clavicle, inframammary fold, parasternal, latissimus dorsi muscle).
  - Axillary sentinel lymph node (SLN) biopsy
    - Demonstrate understanding of the dual-tracer (technetium [99mTc] sestamibi), blue dye) technique for identification of SLNs.
    - Demonstrate understanding that a complete SLN biopsy includes all blue, all hot, and all palpably abnormal nodes.
  - Axillary node dissection
    - Identify and preserve the axillary vein, thoracodorsal bundle, and long thoracic nerve.
    - Identify borders of level 1 and 2 axillary dissection.
- ➢ Integrate new information discovered intraoperatively to modify the operative plan for situations such as:
  - Frozen section evaluation of lymph nodes
  - Inadequate sampling of calcifications
  - Invasion of chest wall musculature
  - Lack of identification of SLNs

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Evaluation & Management of a Patient with Benign or Malignant Breast Disease

	▪ Missing localization markers/clip ❖ Postoperative ➢ Communicate a postencounter plan to a patient/caregiver(s) and other team members that considers location, postencounter needs, outcome expectations, and a follow-up plan, including: ▪ Intraoperative findings ▪ Pain management ▪ Wound or drain management ➢ Develop a postoperative plan that includes an analysis of patient-specific barriers to care. ➢ Recognize and manage the most common complications after breast surgery, including: ▪ Hematoma ▪ Lymphedema ▪ Nerve injury ▪ Seroma ▪ Surgical site infection ➢ Develop and coordinate a care plan for a patient with malignant disease based on interpretation of postoperative pathology and current evidence. ▪ Management of positive breast margins and positive axillary lymph nodes ▪ Referral for adjuvant therapy ▪ Postcancer treatment surveillance and survivorship
Scope	❖ In scope ➢ Diagnosis ▪ Benign breast diagnoses, such as cysts, mastitis, abscess, fibroadenoma, and gynecomastia ▪ Higher-risk breast disease, such as fibroepithelial lesions, ADH, ALH, LCIS, atypical papilloma, FEA, and radial scar ▪ Malignant breast disease, such as phyllodes, invasive breast cancer, and DCIS ➢ Procedures ▪ Axillary node dissection ▪ Axillary SLN biopsy ▪ Image-localized/palpable excisional biopsy ▪ Localized/palpable partial mastectomy ▪ Modified radical mastectomy ▪ Total mastectomy ➢ Populations ▪ All adult patients, including men, pregnant women, and gene mutation carriers ❖ Out of scope ➢ Diagnosis ▪ Hidradenitis or idiopathic granulomatous mastitis

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	▪ Mucocele ▪ Pseudoangiomatous stromal hyperplasia (PASH) ▪ Spindle cell masses ➢ Procedures ▪ Nipple-sparing mastectomy ▪ Oncoplastics ▪ Reconstructive procedures ▪ Reoperative neck operation ➢ Populations ▪ Pediatric

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Evaluation & Management of a Patient with Benign or Malignant Breast Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
1 **<u>Limited Participation</u>** Demonstrates understanding of information and has very basic skills **<u>Framework:</u>** What a learner directly out of medical school should know The attending can show and tell.	• Obtains a history inclusive of breast disease and performs a breast-focused physical exam with cultural humility; gathers radiology and pathology results but is unable to interpret the images or pathology (PC1 L1) • Develops a limited differential for a patient presenting with breast disease (PC1 L1) • Respectfully communicates basic facts about breast disease to a patient/caregiver(s) but inconsistently uses applicable language services and audio/visual aids (ICS1 L1) • Suggests an initial plan for a patient with breast cancer but does not understand the sequencing of interdisciplinary care, including medical oncology, radiation therapy, and other treatment options (ICS2 L1) • Communicates the elements that constitute an informed consent discussion but omits some elements when documenting the discussion (ICS1 L1) • Identifies evidence regarding the differential and management of breast erythema, including abscess and inflammatory breast cancer (PBLI1 L1)	• Demonstrates understanding of the principles of labeling and orienting pathology specimens for handoff to nursing staff in the room (SBP2 L1) • Assists with surgical positioning and preparation of a patient (PC2 L1) • Maintains a sterile field, assists with adequate exposure by providing retraction, and performs superficial wound closure (PC2 L1) • Handles instruments safely but tentatively and displays a lack of coordination between both hands; follows intraop directions; demonstrates basic skills but is inefficient with them (eg, suturing and knot tying) (PC2 L1) • Performs aspiration or incision and drainage of a breast abscess with supervision (PC2 L1) • Performs a punch biopsy with supervision (PC2 L1) • Identifies tissue planes only with active guidance and retraction; removes the breast from the pectoralis with guidance, sometimes veering off of the correct plane (PC3 L1)	• Communicates postop pain management, drain care, and discharge planning to a patient/caregiver(s) with supervision (ICS1 L1) • Communicates intraop procedures, findings, and complications immediately to a patient/caregiver(s) for benign diagnoses (ICS1 L1) • Demonstrates foundational knowledge of interdisciplinary care of a patient with breast cancer and safely discharges a patient with routine needs (SBP2 L1) • Demonstrates understanding that some form of adjuvant therapy is typically required for a patient with breast cancer but is not able to delineate a plan (PC1 L1) • Identifies early postop complications, including hematoma, infection, seroma, and PE, but is unable to initiate management (PC4 L1) • Manages a patient's postop pain, drain care, and discharge planning with indirect supervision (PC4 L1)
2 **<u>Direct Supervision</u>** Demonstrates understanding of the steps of the operation but requires direction through principles and	• Forms a broad differential that includes benign and malignant disease for a patient with a breast mass, erythema, or nipple discharge; interprets a breast mammogram and ultrasound with guidance (PC1 L2) • Describes a benign or early cancer diagnosis to a patient/caregiver(s) in a	• Coordinates combined intraop management of a patient with multicentric or bilateral disease with pathology and plastics colleagues (SBP2 L2) • Positions a patient and ensures that a Geiger counter and localization equipment are available (PC2 L2)	• Immediately communicates operative procedures performed and intraop findings to a patient/caregiver(s) for benign and early cancer diagnoses (ICS1 L2) • Begins to develop a postop adjuvant care plan for a patient with early-stage breast cancer, including radiation, chemotherapy,

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Evaluation & Management of a Patient with Benign or Malignant Breast Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
does not know the nuances of a basic case **Framework:** The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression.	culturally sensitive way and answers any questions, consistently using applicable language services and audio/visual aids (ICS1 L2) • Communicates the elements that constitute an informed consent discussion in a straightforward case and completely documents the discussion (ICS1 L2) • Articulates clinical questions and uses evidence to develop a treatment approach for a patient with a breast mass, erythema, or nipple discharge; develops a treatment approach for benign and malignant disease (PBLI1 L2) • Develops a management plan for a patient with a benign breast diagnosis (PC1 L2) • Develops a management plan for a healthy patient with ductal breast carcinoma (PC1 L2) • Attends and actively listens to interdisciplinary care conferences and presents information from a surgical perspective to other specialists (eg, medical and radiation oncology, pathology, radiology) (ICS2 L2)	• During a mastectomy, visualizes and dissects the correct tissue plane between viable skin and breast tissue with multiple redirections (PC3 L2) • Handles axillary tissue inconsistently; removes a primary sentinel node with significant assistance (PC3 L2) • Enucleates a benign breast lesion with attention to the correct tissue plane with assistance (PC3 L2) • Requires assistance to dissect tissues to localize an image-guided excisional biopsy and obtain a proper margin (PC3 L2) • Demonstrates understanding of common positioning options but may select an incorrect position; identifies the importance of protecting against nerve and pressure injuries but cannot describe the resulting morbidity (PC3 L2) • Provides a basic description of the operative plan but omits some steps; maintains the plane of dissection if it is identified but cannot independently enter it; frequently deviates from the correct plane (PC3 L2) • Proceeds to the next step of the procedure but sometimes requires direction (PC3 L2) • Controls bleeding only with direction (PC3 L2)	or hormonal therapy, but with some omissions or deficiencies (SBP2 L2) • Coordinates a discharge plan for a patient with drains or wound care needs (SBP2 L2) • Develops a follow-up plan for a patient after excision of a benign breast lesion (eg, fibroadenoma) (PC1 L2) • Troubleshoots a clogged drain and removes a drain with limited supervision (PC4 L2) • Identifies early surgical postop complications, including hematoma and PE, and manages them with indirect supervision (PC4 L2)
3 **Indirect Supervision** Can do a basic operation but will not	• Independently manages a patient presenting with benign breast disease and straightforward ductal breast carcinoma and independently interprets a breast mammogram and ultrasound (PC1 L3)	• Supervises a safe and effective transition and handoff to the ICU for postop care of a patient with significant comorbidities and complex resection and reconstruction (SBP2 L3)	• Communicates intraop procedures, findings, and complications to a patient/caregiver(s) immediately for benign, early, and advanced cancer diagnoses (ICS1 L3)

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Evaluation & Management of a Patient with Benign or Malignant Breast Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
recognize abnormalities and does not understand the nuances of an advanced case **Framework:** The learner can perform the operation in straightforward circumstances. The attending gives passive help. This help may be given while scrubbed for more complex cases or during a check-in for more routine cases.	• Communicates a locally advanced cancer diagnosis to a patient/caregiver(s) across barriers and cultural differences and answers any questions; formulates a plan with the patient/caregiver(s) with cultural dexterity using shared decision-making (ICS1 L3) • Develops an evidence-based operative plan for a patient with early-stage breast cancer (stage 0-2), considering patient preferences and sequencing of chemotherapy, radiation, and antihormonal and surgical therapies (PBLI1 L3) • Conducts an informed consent discussion related to the operative management of breast disease with cultural humility and completely documents the discussion (ICS1 L3) • Presents patient cases at an interdisciplinary care conference; discusses care options with other specialists (eg, medical oncology, radiation oncology, pathology, radiology) (ICS2 L3)	• Draws correct skin incisions for a patient undergoing breast-conserving therapy and mastectomy with or without reconstruction (PC2 L3) • Performs technical aspects of breast surgery (eg, creates mastectomy flaps, performs wire-guided biopsy) with occasional guidance and assistance; progresses the case and asks for assistance when needed (PC2 L3) • Uses lymphoscintigraphy to plan an operative approach for a sentinel lymph node biopsy (PC2 L3) • Performs wide local excision and sentinel lymph node biopsy with minimal guidance; respects tissue planes to minimize trauma (PC2 L3; PC3 L3) • Correctly orients the specimen for pathology (SBP2 L3) • During a mastectomy in a patient with uncomplicated anatomy, visualizes and dissects the correct tissue plane between viable skin and breast tissue with limited redirection (PC3 L3) • Handles axillary tissue gently and without excessive bleeding or trauma to surrounding structures (PC3 L3) • Dissects tissues to localize an image-guided excisional biopsy but requires assistance to obtain a proper margin (PC3 L3)	• Coordinates a postop adjuvant care plan for a patient with early-stage breast cancer, including radiation, chemotherapy, or hormonal therapy (SBP2 L3) • Develops an adjuvant care plan for a healthy postmenopausal patient with hormone receptor–positive breast cancer (PC1 L3) • Identifies when a breast abscess is not adequately controlled after incision and drainage (PC1 L3) • Manages postop complications such as hematoma and flap compromise in a patient with complex comorbidities (eg, anticoagulation, prior breast radiation) (PC4 L3)
4 **Practice Ready** Can manage more complex patient	• Independently integrates all clinical information and elicits patient preferences to develop an evidence-based interdisciplinary treatment plan for benign and malignant disease, including	• During an axillary node dissection, identifies and preserves the axillary vein, thoracodorsal bundle, and long thoracic nerve while obtaining an	• Discusses complex and emotionally difficult postop findings such as advanced disease, positive margins, or metastatic disease with a patient/caregiver(s) with care and cultural dexterity (ICS1 L4)

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Evaluation & Management of a Patient with Benign or Malignant Breast Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
presentations and operations and take care of most cases **Framework:** The learner can treat all straightforward breast conditions and has a strong understanding of surgical options and techniques for less common scenarios. 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.	sequencing chemotherapy, radiation, and antihormonal and surgical therapies; identifies the need for genetic testing and fertility consultations (PBLI1 L4) • Develops a plan to manage a patient presenting with complex breast disease (eg, inflammatory breast cancer, lobular carcinoma, locally advanced breast cancer); considers sequencing of multimodal therapy and molecular diagnostics (PC1 L4) • Develops a plan to manage a patient with comorbid disease that impacts the treatment plan for their breast cancer (PC1 L4) • Describes a complex disease process to a patient/caregivers(s), including recurrences, unexpected metastatic disease, and second opinions; formulates a plan with cultural dexterity based on individual patient characteristics and preferences and answers any patient/caregiver questions (ICS1 L4) • Conducts an informed consent discussion for a complex procedure with cultural humility, eliciting patient preferences and documenting the risks and benefits individualized to the patient (ICS1 L4) • Leads and coordinates an interdisciplinary care conference; facilitates professional care discussions with other specialists (eg, medical and radiation oncology, pathology, radiology); resolves conflict when needed (ICS2 L4)	adequate lymph node packet with some attending-level guidance (PC2 L4) • During an axillary sentinel node procedure, independently identifies and removes sentinel nodes using radioactive tracer, blue dye, or both (PC2 L4) • Independently performs primary closure, simple reconstruction, and skin grafting (PC2 L4) • During a mastectomy, independently performs a simple mastectomy with sufficient and viable skin flaps (PC3 L4) • During an image-guided lumpectomy, localizes the lesion, resects it with adequate margins, and troubleshoots difficulties, including positive margins on frozen section (PC3 L4) • Identifies when complex wound closure is required (PC2 L4) • Devises and implements a plan when deviation from the initial operative plan is required (PC3 L4) • Manages competing tensions between oncologic and reconstructive teams in intraop decision-making (SBP2 L4) • Coordinates an intraop consultation with a patient's caregiver(s) with cultural sensitivity when an unexpected event occurs, navigating any language or cultural differences (SBP2 L4)	• Considers a patient's preferences and ability to access, afford, and coordinate transportation for adjuvant therapies such as radiation, chemotherapy, or hormonal therapy (SBP2 L4) • After reviewing surgical pathology, independently develops a postop adjuvant care plan for a patient with locally advanced cancer, including consideration for further surgery, chemotherapy, or hormonal and radiation therapies (PC1 L4) • Identifies and manages all immediate postop surgical complications, including hematoma, infection, and skin necrosis, with limited oversight (PC4 L4)

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Evaluation & Management of a Patient with Benign or Malignant Colon Disease

Description of the Activity	General surgeons are often called to evaluate patients presenting with benign or malignant diseases of the colon in the inpatient, outpatient, and emergency department (ED) settings. Patients may present without symptoms in the elective setting or more acutely with perforation, obstruction, or bleeding requiring urgent intervention in the ED; therefore, these surgeons must be able to diagnose and treat a variety of conditions to provide patient-centered care.
Functions	❖ Nonoperative/Preoperative ➢ Synthesize essential information from a patient's referring providers, medical records, history, physical examination, and initial diagnostic evaluations to develop a differential diagnosis, including inflammation, infection, obstruction, and malignancy. ➢ Recognize the acuity of a patient's presentation, and determine whether elective or emergency surgery is indicated. ▪ If surgery is not indicated, determine the need for additional testing, and identify treatment alternatives (antibiotics, anti-inflammatory medications, endoscopic therapies, palliative care). ▪ If surgery is needed electively, determine the other required workup or resuscitation. • Complete staging of the malignancy. • Determine if any bowel preparation or perioperative antibiotics are required. • Perform perioperative optimization, including nutritional optimization, smoking cessation, diabetes control, and reduction of steroid use. • Conduct an interdisciplinary discussion for patients with cancer. ▪ Obtain informed consent with cultural humility. • 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. ➢ Collaborate with the anesthesia team for perioperative pain control. ➢ Synthesize an operative plan that demonstrates understanding of the operative approach (open and minimally invasive approaches), anatomy, physiology, indications, contraindications, risks, benefits, alternatives, and potential complications of: ▪ Ostomy procedures (ileostomy, colostomy) ▪ Partial colectomy (right, left, sigmoid) ▪ Subtotal colectomy ▪ Total abdominal colectomy ❖ Intraoperative ➢ Manage the perioperative environment, including room setup, equipment check, preprocedural time-out, specimen processing, counts, wound classification, and debriefing functions. ➢ Perform the techniques required to manage colon disease. ▪ Position the patient to: • allow for access (lithotomy, split leg, supine).

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Evaluation & Management of a Patient with Benign or Malignant Colon Disease

	• expose the operative field, taking precautionary measures to prevent iatrogenic injury. ▪ Determine necessary adjuncts to the procedure (ureteral stents, endoscope) if needed. ▪ Perform high ligation of feeding vessels in cases of malignancy. ▪ Mobilize the hepatic and splenic flexures to facilitate a tension-free anastomosis. ▪ Obtain appropriate margins (assess tissue quality and margins for oncologic surgery). ▪ Perform and evaluate the anastomosis. ▪ Recognize unexpected intraoperative findings, calling consulting services as necessary. ➢ Partner with perioperative health care professionals (eg, nursing team, anesthesia team) to create and maintain an intraoperative environment that promotes safe patient care. ❖ Postoperative ➢ Recognize and manage the complications that can occur after colon surgery, including those requiring intervention. ▪ Anastomotic complications, including leak, intra-abdominal abscess, bleeding, and stricture formation ▪ Ostomy complications ▪ Postoperative bleeding ▪ Surgical site complications ➢ Communicate a postencounter plan to the patient/caregiver(s) and other health care team members that considers location, postencounter needs, outcome expectations, and follow-up. ➢ Develop a postencounter plan that includes analysis of patient-specific barriers to care. ➢ Communicate a postencounter surveillance plan as indicated in cases of malignancy to the patient/caregiver(s) and other care team members.
Scope	❖ In scope ➢ Colitis (Crohn's, infectious, ischemic, ulcerative) ➢ Colon malignancy ➢ Colonic bleeding ➢ Colonic polyps not amenable to endoscopic resection ➢ Diverticulitis (complicated, uncomplicated) ➢ Large bowel obstruction, including volvulus, stricture, and Ogilvie syndrome ❖ Out of scope ➢ Colonic inertia ➢ Hereditary colon cancers ➢ Hirschsprung disease ➢ Polyposis syndromes

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Evaluation & Management of a Patient with Benign or Malignant Colon Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
1 **Limited Participation** Demonstrates understanding of information and has very basic skills **Framework:** What a learner directly out of medical school should know The attending can show and tell.	• Obtains an H&P relevant to colon disease with cultural humility but may omit some elements (eg, family history of CRC or IBD); develops a limited differential (PC1 L1) • Demonstrates basic understanding of the pathophysiology of common colon disease (eg, diverticular perforation/abscess) (MK1 L1) • Demonstrates basic knowledge of preoperative care coordination (eg, lab tests, communication with ostomy therapists) for a routine colectomy in a patient with no other comorbidities (SBP2 L1) • Demonstrates understanding of how to report a patient safety event (SBP1 L1)	• Demonstrates basic understanding of colon anatomy (PC2 L1) • Assists with surgical positioning and preparation of a patient; maintains a sterile field (PC2 L1) • Follows intraoperative directions; handles instruments safely but tentatively; displays a lack of coordination between both hands; performs basic skills (suturing and knot tying) inefficiently (PC2 L1) • Assists with adequate exposure by retracting (PC2 L1) • Performs superficial wound closure (PC2 L1)	• Manages routine postop care of an uncomplicated patient and demonstrates knowledge of ERAS protocols (PC4 L1; SBP1 L1) • Demonstrates understanding of and executes the discharge plan for a routine patient with direction (eg, ostomy, wound, and drain management); respectfully communicates with a patient/caregiver(s) but provides superficial information, particularly for anything not routine (SBP2 L1) • Manages initial resuscitation with IV fluids and antibiotics (when necessary), requiring support for more complex decision-making (PC4 L1) • Identifies and notifies supervisors of changes in a patient's condition (eg, fever, leukocytosis, tachycardia) that may indicate complications, such as anastomotic leak or abscess (PC4 L1)
2 **Direct Supervision** Demonstrates understanding of the steps of the operation but requires direction through principles and does not know the nuances of a basic case	• Demonstrates understanding of the pathophysiology of most benign and malignant colon pathologies but may miss a more nuanced or unusual presentation; offers a complete treatment plan for a straightforward condition but needs help to plan more complex treatment (MK1 L2; PC1 L2) • Evaluates a patient and identifies important information (eg, recent endoscopy, prior bowel resection, family history of CRC or IBD); incorporates this information into diagnostic testing orders and development of a treatment plan (PC1 L2)	• Demonstrates understanding of when to use MIS versus open techniques, triangulation of port sites, and safe entry into the abdomen; places laparoscopic trocars and closes skin independently (PC2 L2) • Uses surgical energy safely throughout the case (PC2 L2) • Actively retracts and assists during the procedure; identifies some structures (eg, white line of Toldt, duodenum); looks for the ureter but cannot identify it independently (PC2 L2) • Performs basic surgical tasks, such as tying mesenteric vessels and deploying	• Evaluates and initially manages a patient with a straightforward postop problem (eg, oliguria, fever, SSI, ileus) but needs help to synthesize a complete management plan for a more severe postop complication (eg, hypotension due to postop bleeding, infection related to anastomotic leak) (PC4 L2) • Communicates routine interdisciplinary postop instructions and updates to a patient/caregiver(s) and other health care providers; coordinates transition of care in a complex setting but may omit specific concerns to watch for (eg, high ileostomy output) (SBP2 L2)

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Evaluation & Management of a Patient with Benign or Malignant Colon Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression.	• Initiates orders for admission of a patient with colon and rectal disease undergoing nonoperative management (eg, fluids, diet, antibiotics, DVT prophylaxis) (PC1 L2) • Describes local quality improvement activities such as ERAS protocols and *C diff* protocols to prevent infection (SBP1 L2) • Identifies the importance of patient comorbidities (DM, HTN, kidney/heart disease) preoperatively; identifies when consultation is needed before surgery (eg, cardiac risk stratification) but may not consider prehabilitation or genetic counseling (SBP2 L2)	the linear stapler with instruction (PC2 L2) • Demonstrates some coordination of instruments; handles tissue inconsistently with both hands, especially laparoscopically; needs frequent adjustments of the camera to triangulate instruments (PC2 L2)	• Independently incorporates ERAS protocols but needs help to recognize when deviations are needed (PC4 L2) • Reports patient safety events through institutional reporting systems (SBP1 L2)
3 **Indirect Supervision** Can do a basic operation but will not recognize abnormalities and does not understand the nuances of an advanced case **Framework:** The learner can perform the operation in straightforward circumstances.	• Demonstrates knowledge of the impact of patient factors on the pathophysiology of colon disease (eg, smoking in patients with IBD; family history of early-onset colon cancer) (MK1 L3) • Manages a healthy patient needing elective or emergency treatment for colon disease; adapts the plan as needed for an evolving clinical situation (eg, abscess drainage); may need help to determine if additional workup is needed in a more complex case (PC1 L3) • Synthesizes an operative plan for a patient undergoing routine colon surgery that incorporates an understanding of indications and risks but may need help to consider all alternatives in a more complex case (PC1 L3) • Participates in quality improvement strategies (ERAS, SSI reduction, interdisciplinary discussion, multimodal	• Identifies the instruments/devices needed for a routine colon procedure; positions a patient to facilitate access and exposure (eg, lithotomy, tucking arms) and prevent pressure injury (PC2 L3) • Performs technical aspects of colon surgery (mobilization of the colon and flexures, high ligation of feeding vessels, tension-free bowel anastomosis, assessment of anastomotic integrity) with occasional guidance and assistance; progresses the case and asks for assistance when necessary (PC2 L3) • Recognizes when transition from an MIS to an open procedure is needed (eg, exposure, failure to progress) (PC2 L3) • Identifies tissue planes that have not been previously dissected but may	• Identifies and evaluates a complex postop problem (eg, bowel obstruction, intra-abdominal abscess, ureteral/bladder injury) in a patient with significant comorbid disease and adapts ERAS protocols as needed (PC4 L3) • Executes discharge plans for a patient with multiple comorbidities; respectfully communicates with a patient/caregiver(s) regarding discharge instructions and complications to look for (SBP2 L3) • Participates in local quality improvement initiatives, such as high ileostomy discharge protocols to minimize readmission after colon surgery (SBP1 L3)

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Evaluation & Management of a Patient with Benign or Malignant Colon Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
The attending gives passive help. This help may be given while scrubbed for more complex cases or during a check-in for more routine cases.	pain management) to improve postop outcomes for patients undergoing routine colon surgery (SBP1 L3) • Identifies conditions that require interdisciplinary management and facilitates coordination of care (eg, CRC, anticoagulation, cirrhosis, malnutrition, immunosuppression, cardiopulmonary disease) (SBP2 L3)	need help to identify or manage variable anatomy or tissue planes in a reoperative field to prevent iatrogenic injury (PC2 L3)	
4 **<u>Practice Ready</u>** Can manage more complex patient presentations and operations and take care of most cases **<u>Framework</u>:** The learner can treat all colon disease and has a strong understanding of surgical options and techniques for less common scenarios. The attending is available at the request of the learner but is not routinely needed for common presentations, though input may be	• Demonstrates substantial knowledge of pathophysiology, variations in presentation, and acuity of colon disease (MK1 L4) • Manages a complex patient needing elective or emergency treatment for colon disease; determines if additional workup is needed (eg, cardiac function tests, repeat endoscopic exams, imaging to evaluate progression of disease) (PC1 L4) • Initiates management of a patient with factors/comorbidities that negatively impact outcomes (eg, anticoagulation, immunosuppression, cardiopulmonary disease) (PC1 L4) • Synthesizes an operative plan that incorporates understanding of the indications, alternative strategies (eg, neoadjuvant therapy in CRC), and potential complications of surgery for colon disease (PC1 L4) • Demonstrates skills required to identify, develop, and implement quality improvement projects (eg, SSI prevention) (SBP1 L4)	• Identifies the instruments, devices, and team members needed for a complex colon procedure; demonstrates to others how to safely position a patient to facilitate access and exposure (PC2 L4) • Independently performs the technical aspects of colon surgery (mobilization of the colon and flexures, high ligation of feeding vessels, tension-free bowel anastomosis, assessment of anastomotic integrity) (PC2 L4) • Anticipates challenges in a difficult case (eg, reoperative surgery) and asks for assistance as needed (PC2 L4) • Identifies normal and abnormal tissue planes; minimizes potentially preventable complications, such as iatrogenic enterotomy, serosal injury, or injury to adjacent structures (eg, duodenum, spleen, ureter) (PC2 L4) • Identifies variable anatomy or unexpected findings (eg, altered surgical anatomy, atypical blood supply) and adjusts the operative plan as indicated (PC2 L4)	• Independently diagnoses and manages routine and complex complications (eg, SSI, anastomotic leak, obstruction, urinary injury) in a patient, with consultation as needed and deviations from ERAS pathways as indicated (PC4 L4) • Leads discharge planning and anticipates postdischarge needs (eg, antimotility agents for elevated ostomy output, adjuvant therapy referral, CRC surveillance); collaborates with the health care team to address barriers (eg, access to Crohn's medical management, insurance barriers to adjuvant therapy or supplies, lack of social support, cultural concerns related to stoma, inability to manage ostomy care) (SBP2 L4) • Discloses complications and safety events to a patient/caregiver(s) (SBP1 L4)

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Evaluation & Management of a Patient with Benign or Malignant Colon Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
needed for more complex presentations.	• Coordinates care of a patient with barriers to health care access; facilitates care with referring providers (eg, oncologists, GI) (SBP2 L4)		

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Provide Surgical Consultation to Other Health Care Providers

Description of the Activity	All general surgeons must be able to serve as consultants in inpatient, outpatient, emergency, and operative settings. As consultants, surgeons play a unique role in interacting with clinicians in other disciplines to provide optimal care for patients.
Functions	❖ Elicit the major question or reason for the consult. ➢ Recognize the consultation's urgency level, and triage accordingly (eg, setting, timing). ➢ Synthesize essential information from the patient's referring health care providers, records, history, physical examination, and initial diagnostic evaluations to develop a differential diagnosis. ▪ Avoid "anchoring" on the explicit reason for the consult. ❖ Identify patients with primary surgical conditions. ➢ Collaborate with the consulting health care provider or service regarding the possible need for patient transfer (setting or service). ❖ Determine the need for additional diagnostic testing in collaboration with the consulting health care provider or service. ❖ Determine the need for operative intervention. ➢ Determine the timing of surgical intervention in coordination with other required care. ➢ If the case is nonoperative, make recommendations regarding management and required follow-up. ➢ Identify patients who require subspecialty referral. ❖ Discuss findings, recommendations, and rationale with the consulting health care provider or service in a timely fashion. ➢ Consider providing pertinent literature references. ❖ In collaboration with the primary health care provider or service, counsel the patient regarding the plan. ❖ Document the consultation in the medical record. ➢ Ensure that documentation is consistent with the level of service for billing purposes. ❖ Determine when consultative services are no longer needed.
Scope	❖ In scope ➢ Any condition regularly managed by general surgeons ❖ Out of scope ➢ Any condition not regularly managed by general surgeons

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Provide Surgical Consultation to Other Health Care Providers

Level	
1 **<u>Limited Participation</u>** Demonstrates understanding of information but may not be able to apply it **<u>Framework:</u>** What a learner directly out of medical school should know The attending can show and tell.	❖ Evaluation ➢ Respectfully receives a consultation, not necessarily recognizing its urgency (ICS2 L1) ➢ Obtains an H&P with cultural humility and develops a differential with some omissions or extraneous information (PC1 L1) ➢ Recognizes an acute, potentially life-threatening surgical problem (MK1 L1) ➢ Demonstrates understanding of core surgical conditions (MK1 L1) ➢ Seeks additional information when a consult question outstrips knowledge base (MK1 L1) ➢ Asks for help in a timely manner (PROF2 L1) ❖ Management ➢ Identifies potential barriers to personal completion of a consult and describes strategies to mitigate them (PROF2 L1) ➢ Applies evidence for a routine condition (PBLI1 L1) ➢ Incorporates a patient's preferences and values into patient care (PBLI1 L1) ❖ Communication and Documentation ➢ Respectfully communicates basic facts about the condition to a patient/caregiver(s) in a timely way but inconsistently uses applicable language services and audio/visual aids (ICS1 L1) ➢ Uses language that values all members of the health care team (ICS2 L1) ➢ Accurately records information in the patient record, including use of documentation templates when indicated (ICS3 L1)
2 **<u>Direct Supervision</u>** Needs directing but demonstrates understanding of the content; needs coaching throughout management beyond basic cases **<u>Framework:</u>** The learner can use knowledge and tools but needs help as the complexity increases The attending gives active help.	❖ Evaluation ➢ Responds to a consult in a timely manner, altering the pace of consultation for urgent problems (PROF2 L2) ➢ Evaluates a patient and recommends diagnostic tests as indicated for further evaluation (PC1 L2) ➢ Demonstrates knowledge of pathophysiology and treatments for a patient with a complex surgical condition (MK1 L2) ❖ Management ➢ Recommends management for a patient with a straightforward condition, including placement of orders or coordination of the OR if necessary (PC1 L2) ➢ Seeks help when limits in the knowledge/skills of the team require it (PROF2 L2) ➢ Incorporates patient preferences and values to guide evidence-based care (PBLI1 L2) ❖ Communication and Documentation ➢ Actively listens to a patient/caregiver(s) to elicit patient questions and expectations (ICS1 L2) ➢ Respectfully communicates basic facts about the diagnosis to a patient/caregiver(s), customizing communication to overcome barriers and cultural differences and using applicable language services and audio/visual aids (ICS1 L2) ➢ Clearly and concisely articulates the plan and next steps to the primary team, the ED team, and other team members (ICS2 L2) ➢ Documents the encounter efficiently in the EMR (ICS3 L2)

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Provide Surgical Consultation to Other Health Care Providers

Level	
3 **<u>Indirect Supervision</u>** Can manage a straightforward case but will not always recognize or understand the nuances of an advanced case **<u>Framework:</u>** The learner can apply knowledge to increasingly complex cases. The attending gives passive help.	❖ Evaluation ➢ Responds to a consult in a timely manner with attention to detail in a complex situation (PROF2 L3) ➢ Demonstrates professional behavior in a complex or stressful situation (PROF2 L3) ➢ Exhibits confidence in skills with self-awareness of limits in knowledge/skills (PROF2 L3) ➢ Demonstrates knowledge of the impact of patient factors on pathophysiology and the treatment of patients with surgical conditions (MK1 L3) ➢ Recognizes patient-specific emotional reactions (eg, fear or other psychological distress, mental illness) that impair medical decision-making (ICS1 L3) ➢ Recognizes differences in culture and values that affect medical decisions (ICS 1 L3) ❖ Management ➢ Manages a healthy patient with a straightforward condition (eg, appendicitis, cholecystitis) (PC1 L3) ➢ Makes recommendations for managing a patient with an evolving clinical condition (eg, drainage of diverticular abscess) (PC1 L3) ➢ Applies evidence, integrated with patient preference, to the care of a patient with a complex condition (eg, colon cancer, pancreas cancer) (PBLI1 L3) ➢ Incorporates shared decision-making and current evidence to make a personalized care plan consistent with patient goals of care (ICS1 L3) ❖ Communication and Documentation ➢ Delivers complex and difficult information respectfully and clearly to a patient/caregiver(s) across language and cultural differences (ICS1 L3) ➢ Verifies understanding of recommendations when communicating with other services (ICS2 L3) ➢ Adapts communication style to fit team needs (ICS2 L3) ➢ Communicates concerns and feedback (positive and negative) to peers and learners (ICS2 L3) ➢ Integrates and synthesizes all relevant data from outside systems and prior encounters into documentation and the plan of care (ICS3 L3)
4 **<u>Practice Ready</u>** Can manage more complex consults **<u>Framework</u>:** The learner can consult on all straightforward cases and has a strong understanding of surgical	❖ Evaluation ➢ Recognizes a situation that may impact others' ability to complete tasks and responsibilities in a timely manner and provides assistance (PROF2 L4) ➢ Demonstrates comprehensive knowledge of the varying patterns of disease presentation and alternative and adjuvant treatments (MK1 L4) ➢ Takes active steps to mitigate patient-specific emotional reactions (eg, fear or other psychological distress, mental illness) that impair medical decision-making (ICS1 L4) ➢ Comfortably accepts differences in culture and values that affect medical decisions (ICS1 L4) ❖ Management ➢ Makes recommendations for managing a patient with a complex surgical condition (eg, intra-abdominal sepsis) or associated comorbidities (PC1 L4) ➢ Critically appraises the literature, considering nuanced clinical situations in its application (PBLI1 L4)

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Provide Surgical Consultation to Other Health Care Providers

Level	
options for complex or less common scenarios. 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.	❖ Communication and Documentation ➢ Facilitates a discussion productively, respectfully, and accurately across language and cultural differences in a caregiver conference (ICS1 L4) ➢ Negotiates and manages conflict between a patient, their caregiver(s), and the health care team (ICS1 L4) ➢ Coordinates recommendations from different members of the health care team and a patient/caregiver(s) to develop a comprehensive care plan that aligns with the patient's cultural values (ICS2 L4) ➢ Maintains effective communication with a patient/caregiver(s), other services, and team members in a crisis situation (ICS2 L4) ➢ Communicates constructive feedback to superiors (ICS2 L4)

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Perioperative Care of the Critically Ill Surgery Patient (Includes Sepsis and Hemorrhage)

Description of the Activity	All general surgeons should be able to perform perioperative care for critically ill surgical patients. Surgeons are often called to diagnose and manage critically ill patients; consider what operation (or whether any operation) is indicated; and in the postoperative setting, perform critical care, recognize early complications, and adjust the plan of care when necessary.
Functions	❖ Resuscitation ➢ Expeditiously identify whether a patient is "sick" or "not sick," and perform the following 3 steps in order: ▪ Perform a focused history and physical examination, including an assessment of pertinent positive and negative signs and symptoms. ▪ Synthesize essential information from a patient's history, physical examination, medical records, and existing diagnostic evaluations to identify the patient's primary surgical problem and illness severity. ▪ Stabilize/resuscitate a critically ill surgical patient based on available evidence-based guidelines, including administering indicated treatments such as blood/blood products, antimicrobials, and cardiopulmonary support. ➢ Recognize whether any specialty-specific surgical care will be needed, including transfer to a tertiary or quaternary center. ➢ Work collaboratively with referring practitioners and consulting teams (including inpatient teams, the emergency department team, or teams from outside facilities) to expedite care. ➢ Identify a patient's current illness severity and underlying comorbidities to determine potential peri- and intraoperative challenges. ➢ With the potential risks, benefits, and goals of care in mind and with a patient/caregiver(s) and any other involved health care teams, determine whether an operation is indicated. ➢ If an operation is indicated, ensure patient/caregiver comprehension using applicable language services and audio/visual aids. ▪ Ensure the patient or surrogate can ask questions and address any expressed concerns, and take patient/caregiver preferences into account. ➢ Monitor endpoints of resuscitation, and reassess the patient to identify whether any additional stabilization or specialist consultation is indicated. ➢ Develop a safe anesthetic approach for the clinical situation in collaboration with the anesthesia team. ❖ Procedures ➢ Perform straightforward and complex bedside procedures, including placement of arterial lines, central venous lines (resuscitative and for continuous renal replacement therapy), and pigtail or chest tubes. Additional procedures include airway management, point-of-care ultrasound evaluation to assess volume status (cardiac contractility/inferior vena cava diameter), thoracentesis and paracentesis, bronchoscopy, and endoscopy. ❖ Post-resuscitation ➢ Recognize and manage common perioperative problems or complications using available evidence-based guidelines, including: ▪ Fluid, electrolyte, or renal system abnormalities ▪ Gastrointestinal/hepatobiliary systems ▪ Hematologic system abnormalities ▪ Hemodynamic instability and associated pathophysiology based on etiology

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Perioperative Care of the Critically Ill Surgery Patient (Includes Sepsis and Hemorrhage)

	▪ Infection/immune system dysfunction ▪ Metabolic, nutrition, or endocrine system abnormalities ▪ Neurologic system abnormalities ▪ Respiratory failure ➢ Reassess the patient in the early postoperative course for consideration of additional stabilization, intervention, or specialist consultation, and communicate additional status and needs to the relevant teams. ➢ Communicate an updated plan of care to a patient/caregiver(s) to ensure understanding of the illness severity, prognosis, additional treatment options, and feasibility of carrying out the plan within the patient's psychosocioeconomic context. ➢ Throughout the care continuum, and especially when there are unanticipated changes in the course of a patient's treatment, provide primary palliative care in communication, symptom management, and goal concordance, adjusting as needed and communicating any changes to all involved teams. ➢ Document changes to a patient's/caregiver's goals and goal-concordant plan of care in the electronic medical record. ➢ In complex patient care scenarios, weigh the risks, benefits, and goal concordance of possible therapies, using the assistance of subspecialty palliative care and ethics as needed. ➢ In the event that the disease has become acutely life-limiting and there are no additional disease-directed treatments, identify the end-of-life stage of care, and help a patient/caregiver(s) into this stage, prioritizing comfort and symptom-directed therapy as indicated. ➢ Reflect on the experience of having been involved in the patient's care, and facilitate healthy ways to process the experience both inside and outside of the hospital to support the care team's physical, mental, emotional, and spiritual well-being.
Scope	❖ In scope ➢ All adult patients ➢ Pediatric patients older than 2 years ❖ Out of scope ➢ Specialty-specific subsequent management or operative intervention

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Perioperative Care of the Critically Ill Surgery Patient (Includes Sepsis and Hemorrhage)

Level	Resuscitation	Procedures	Post-resuscitation
1 **<u>Limited Participation</u>** Demonstrates understanding of information and has very basic skills **<u>Framework:</u>** What a learner directly out of medical school should know The attending can show and tell.	• Reports information received from referring/consulting teams (ICS2 L1) • Obtains an H&P inclusive of reviewing medical records and available testing with cultural humility; develops a differential for a patient's primary surgical problem (PC1 L1) • Communicates the elements of an informed consent discussion for bedside procedures but omits some elements when documenting the discussion (PROF1 L1) • Demonstrates limited understanding of the pathophysiology of critical illness (MK1 L1) • Identifies but cannot yet apply evidence-based guidelines (PBLI1 L1) • Reports new data and other endpoints of resuscitation (MK1 L1; PC1 L1)	• Demonstrates superficial knowledge of indications, steps, and basic skills (knot tying, suturing) for bedside procedures (eg, arterial and venous line placement, tube thoracostomy, surgical airway, POCUS, thoracentesis, paracentesis, bronchoscopy) (PC2 L1) • Demonstrates limited understanding of execution, confirmatory testing, and associated risks of bedside procedures (PC2 L1)	• Reports an updated plan of care to a patient/caregiver(s) in a timely way (ICS1 L1) • Documents a goals-of-care discussion with a patient/caregiver(s) but omits some elements, particularly nuances (ICS3 L1) • Identifies evidence-based critical care guidelines that apply to perioperative complications or management of a critically ill patient (PBLI1 L1) • Needs assistance to recognize a patient at the end of life and incorporate patient/caregiver preferences into the plan of care (PBLI 1 L1) • Requires prompting to reassess a patient in their early postop/post-resuscitation course and adjust treatment based on new information (PC1 L1) • Evaluates an ICU patient for perioperative problems/complications (PC4 L1)
2 **<u>Direct Supervision</u>** Demonstrates understanding of the steps of the procedure but requires direction through principles and does not know the nuances of a basic case	• Identifies indicated referring/consulting teams, reports information received, and asks follow-up questions (ICS2 L2) • Initiates informed consent for bedside procedures and, if indicated and goal concordant, an operation; requires help to complete the consent, address best- and worst-case scenarios for the short, medium, and long term, and ensure patient/caregiver comprehension (PROF1 L2)	• Demonstrates comprehensive knowledge of the indications, steps, and basic skills (knot tying, suturing) for bedside procedures (eg, arterial and venous line placement, tube thoracostomy, surgical airways, POCUS, thoracentesis, paracentesis, bronchoscopy) (PC2 L2) • Demonstrates solid understanding of execution, confirmatory testing, and associated risks of bedside procedures (PC2 L2)	• Communicates an updated plan of care to a patient/caregiver(s) without reliably considering if they can carry it out within their psychosocioeconomic context (ICS1 L2) • Reports an updated plan of care to other involved specialist teams (ICS2 L2) • Documents patient/caregiver goals and goal-concordant plan of care in the

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Perioperative Care of the Critically Ill Surgery Patient (Includes Sepsis and Hemorrhage)

Level	Resuscitation	Procedures	Post-resuscitation
Framework: The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression.	• Demonstrates understanding of the pathophysiology of critical illness and normal physiologic response (MK1 L2) • Demonstrates superficial knowledge of evidence-based guidelines for managing a critically ill patient (PBLI1 L2) • Evaluates a critically ill patient and orders/interprets diagnostic testing with assistance to discern underlying etiology (PC1 L2) • Reports new data and other endpoints of resuscitation and begins to formulate a management plan in response (PC1 L2)		EMR with few, if any, omissions (ICS3 L2) • Reflects on their involvement in a patient's care but is unsure how to process their experience in and outside of the hospital in healthy ways (PROF4 L2) • Elicits patient/caregiver input regarding management to inform evidence-based care (PBLI1 L2) • Identifies a patient at the end of life and seeks to incorporate patient/caregiver preferences into the plan of care (PBLI 1 L2) • Reassesses a patient in their early postop/post-resuscitation course but needs assistance to adjust management (PC1 L2) • Identifies perioperative problems/complications but needs assistance to manage them (PC4 L2)
3 **Indirect Supervision** Can do a basic procedure but will not recognize abnormalities and does not understand the nuances of an advanced case **Framework:** The learner can perform the procedure	• Communicates with referring/consulting teams, including centers offering higher levels of care, but needs supervision to ensure all essential points have been relayed (ICS2 L3) • Obtains informed consent for bedside procedures and, if indicated and goal concordant, an operation; addresses best- and worst-case scenarios for the short, medium, and long term but does not always ensure patient/caregiver comprehension by using applicable language services and audio/visual aids (PROF1 L3) • Considers the effect of comorbidities on physiologic response (β-blockers, steroids, immunosuppression) (MK1 L3)	• Performs bedside procedures such as arterial and venous line placement, tube thoracostomy, surgical airways, POCUS, thoracentesis, and bronchoscopy, with confirmatory testing when indicated (PC2 L3) • Identifies the associated risks of bedside procedures (PC2 L3) • Calls for help if unable to accomplish a procedure and modifies an approach when initially unsuccessful in completing a procedure (PC2 L3) • Requires assistance to make a patient-specific decision regarding treatment approach and time sensitivity of a procedure (PC2 L3)	• Communicates an updated plan of care to a patient/caregiver(s) with consideration of some, but not all, patient factors (eg, illness severity, prognosis, additional treatment, feasibility of carrying out plan within psychosocioeconomic context) (ICS1 L3) • Considers a subspecialty consultation, including palliative care or ethics (ICS2 L3) • Demonstrates understanding of the importance of primary palliative care but cannot reliably provide or adjust it as needed (ICS2 L3) • Promptly documents changes to a patient's/caregiver's goals and goal-

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Perioperative Care of the Critically Ill Surgery Patient (Includes Sepsis and Hemorrhage)

Level	Resuscitation	Procedures	Post-resuscitation
in straightforward circumstances. The attending gives passive help.	• Demonstrates understanding of the pathophysiology of critical illness and normal/abnormal physiologic responses (MK1 L2) • Identifies an unexpected response or lack of response to an intervention (MK1 L3) • Resuscitates a patient based on available evidence-based guidelines with some supervision (PBLI1 L3) • Monitors some but not all endpoints of resuscitation, including UOP, labs, and imaging (eg, echo); reassesses the patient to identify if additional resuscitation or specialist consultation is indicated (PC1 L3) • E3; Identifies whether an operation is indicated to address a patient's primary surgical problem but does not always do so in a timely way (PC1 L3)		concordant plan of care in the EMR (ICS3 L3) • Identifies end-of-life stage of care, prioritizing comfort and symptom-directed therapy as indicated with assistance (PROF1 L3) • Reflects on the experience of having been involved in a patient's care and uses strategies to process the experience (PROF4 L3) • Applies evidence-based critical care guidelines applicable to perioperative problems/complications or management of a critically ill patient (PBLI1 L3) • Reassesses a patient in their early postop/post-resuscitation course using data from interventions performed; considers additional resuscitation, interventions, or specialist consultation, including subspecialty palliative care or ethics (PC1 L3) • Evaluates postop complications in light of comorbid conditions (bleeding in patients with coagulopathy or infection in immunosuppressed patients) (PC4 L3)
4 **Practice Ready** Can manage more complex patient presentations and procedures and take care of most cases	• Communicates with referring/consulting teams, including centers offering higher levels of care, ensuring all essential points have been relayed to expedite resuscitation (ICS2 L4) • Obtains informed consent for bedside procedures and, if indicated and goal concordant, an operation; addresses best- and worst-case scenarios for the short, medium, and long term; uses	• Independently makes patient-specific decisions regarding approach, admitting disposition, and time sensitivity (PC2 L4)	• Communicates an updated plan of care to a patient/caregiver(s), considering illness severity, prognosis, additional treatment, and feasibility of carrying out the plan within their psychosocioeconomic context (ICS1 L4) • Provides primary palliative care in communication, symptom management, and goal concordance in an ongoing plan of care (ICS2 L4)

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Perioperative Care of the Critically Ill Surgery Patient (Includes Sepsis and Hemorrhage)

Level	Resuscitation	Procedures	Post-resuscitation
Framework: The learner can treat all critically ill surgery patients and has a strong understanding of surgical options and techniques for less common scenarios. 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.	applicable language services and audio/visual aids to ensure patient/caregiver comprehension (PROF1 L4) • Resuscitates a patient in accordance with evidence-based guidelines (PBLI1 L4) • Synthesizes all information to identify a patient's illness severity and initiate management (PC1 L4) • Independently resuscitates a patient based on available evidence-based guidelines, administering indicated treatments (eg, blood/blood products; antimicrobials [including those active against toxins as indicated]; cardiopulmonary support) (PC1 L4; PBLI1 L4) • Monitors endpoints of resuscitation (eg, UOP, labs, imaging such as echo) and adapts management as indicated, including making timely decisions regarding necessary operative intervention (PC1 L4) • Develops a management plan using decision-making that is concordant with patient/caregiver goals of care (PC1 L4)		• Adjusts a goal-concordant plan when there are unanticipated changes in a patient's course and communicates any changes to all involved teams (ICS2 L4) • Reviews and gives feedback on documentation in the EMR regarding changes to a patient's/caregivers' goals and goal-concordant plan of care (ICS3 L4) • Reflects on the experience of having been involved in a patient's care; uses multiple strategies to process the experience both in and outside of the hospital in ways that support physical, mental, emotional, and spiritual well-being (PROF4 L4) • Critically appraises and applies evidence to a critically ill patient and adapts the plan of care when the patient does not respond (PBLI 1 L4) • Reassesses the patient in their early postop/post-resuscitation course using data from interventions performed; independently identifies when additional information is required or management needs to be modified (PC1 L4) • Identifies and manages perioperative problems/complications using a systems-based approach and available evidence-based guidelines (PC4 L4)

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Flexible GI Endoscopy

Description of the Activity	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.
Functions	❖ Preprocedure ➢ 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: ▪ 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. ▪ 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 ➢ 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: ▪ Colonoscopy ▪ Esophagogastroduodenoscopy (EGD) ▪ Flexible sigmoidoscopy ➢ Perform the steps required to manage a patient requiring either upper or lower flexible endoscopy. ▪ 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 postencounter plan to a patient/caregiver(s) and other health care team members that considers the patient's location, postencounter needs, outcome expectations, and follow-up.

➢ Develop a postencounter 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.

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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

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Flexible GI Endoscopy

Level	Preprocedure	Intraprocedure	Postprocedure
1 **Limited Participation** Demonstrates understanding of information and has very basic skills **Framework:** What a learner directly out of medical school should know The attending can show and tell.	• Obtains an H&P with cultural humility and develops a limited differential for a patient undergoing flexible endoscopy (PC1 L1) • Communicates the elements of an informed consent discussion but omits some elements when documenting the discussion (ICS1 L1) • Respectfully requests and receives a consultation for an endoscopy but does not necessarily recognize the urgency of the consult (ICS2 L1) • Applies evidence to guide care, including proper bowel prep and PO status (PBLI1 L1) • Needs assistance to identify a patient at increased risk for complications associated with endoscopic procedures (PC1 L1)	• Demonstrates a basic understanding of the anatomy of the upper and lower GI tracts (MK2 L1) • Describes the crucial steps of a simple endoscopy, but demonstrates limited ability to handle the endoscope and ancillary instruments (PC3 L1)	• Works respectfully with different members of the health care team; communicates basic endoscopic findings to a patient/caregiver(s) guided by a supervisor (ICS2 L1) • Identifies published guidelines for postprocedure follow-up based on pathologic findings in a straightforward case (PBLI1 L1) • Establishes goals for professional development in the performance of flexible GI endoscopy (PBLI2 L1) • Describes potential complications of flexible endoscopy, such as perforation or bleeding (PC4 L1)
2 **Direct Supervision** Demonstrates understanding of the steps of the procedure but requires direction through principles and does not know the nuances of a basic case **Framework:** The learner can use the tools but may not know	• Evaluates a patient presenting for flexible endoscopy and interprets diagnostic testing (PC1 L2) • 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 (ICS1 L2) • Clearly and concisely requests and responds to a consultation for endoscopy and recognizes the urgency of the consult (ICS2 L2) • Incorporates evidence to guide care and elicits patient preferences for bowel prep and sedation (PBLI1 L2)	• Demonstrates comprehensive understanding of the normal anatomy of the upper and lower GI tracts and identifies aberrant anatomy (MK2 L2) • Performs the basic steps of an upper or lower flexible endoscopy but requires prompting to complete the procedure (PC2 L2) • 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 (PC3 L2)	• Communicates a postencounter plan to a patient/caregiver(s) and members of the health care team in a simple clinical situation (ICS2 L2) • Recommends postprocedure follow-up based on pathologic findings in a simple case in accordance with evidence-based practice (PBLI1 L2) • Recognizes their limitations in performance of endoscopy and develops a plan for improvement, including the use of endoscopy simulation when available. (PBLI2 L2) • Can recognize complications of flexible endoscopy such as perforation or bleeding but does so inconsistently (PC4 L2)

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Flexible GI Endoscopy

Level	Preprocedure	Intraprocedure	Postprocedure
exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression.	• Identifies a patient at increased risk for complications associated with endoscopic procedures (PC1 L2)		
3 **<u>Indirect Supervision</u>** Can do a basic procedure but will not recognize abnormalities and does not understand the nuances of an advanced case **<u>Framework:</u>** The learner can perform the procedure in straightforward circumstances. The attending gives passive help.	• Performs a complete, evidence-based, cost-effective evaluation based on patient-specific risk factors before beginning the procedure (PBLI1 L3) • 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 (ICS1 L3) • Discusses recommendations with the consulting team and verifies understanding using closed-loop communication (ICS2 L3) • Manages a healthy patient requiring endoscopy, recognizing diagnostic and therapeutic indications and contraindications to upper and lower flexible endoscopy (PC1 L3) • Adapts the plan for endoscopy for a patient with a changing clinical situation (eg, engages anesthesia provider support) (PC1 L3)	• Recognizes aberrant anatomy and adjusts the procedural technique to accommodate anatomic variations during the procedure (MK2 L3) • Performs every step of an elective, straightforward screening for upper or lower flexible endoscopy without prompting (PC2 L3) • Consistently demonstrates the ability to handle the endoscope and ancillary instruments (biopsy forceps, snares, and injection needles for tattoo and hemostasis) (PC3 L3)	• Communicates a postencounter plan to a patient/caregiver(s) and members of the health care team in a complex clinical case (ICS2 L3) • Recommends postprocedure follow-up based on pathologic findings in a complex case in accordance with evidence-based practice (PBLI1 L3) • Identifies gaps in knowledge or endoscopic technical skill and integrates performance data and feedback into the development of a learning plan (PBLI2 L3) • Consistently recognizes complications of flexible endoscopy, such as GI perforation, bleeding, or postpolypectomy syndrome, but requires guidance to initiate management (PC4 L3)
4 **<u>Practice Ready</u>**	• Manages a patient with complex comorbidities (eg, anticoagulation, risk stratification, adaptation of bowel prep as indicated); recognizes diagnostic and therapeutic indications and	• Recognizes aberrant anatomy and adjusts the procedural technique to accommodate anatomic variations during colonoscopy (MK2 L4)	• Communicates a postencounter plan to a patient/caregiver(s) and members of the health care team and considers patient barriers to access (ICS2 L4)

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Flexible GI Endoscopy

Level	Preprocedure	Intraprocedure	Postprocedure
Can manage more complex patient presentations and operations and take care of most cases **<u>Framework</u>:** The learner can perform all straightforward endoscopies and has a strong understanding of techniques for more challenging scenarios (eg, loop reduction). 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.	contraindications to upper and lower flexible endoscopy in a medically complex patient (PC1 L4) • 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 (ICS1 L4) • 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 (ICS2 L4) • Critically appraises the literature and considers how to apply it in nuanced clinical situations (PBLI1 L4) • Collaborates with other health care providers to formulate a patient-centered operative plan for all common skin neoplasms (PC1 L4; ICS2 L4)	• 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 (PC2 L4) • Handles the endoscope and ancillary instruments (biopsy forceps, snares, and injection needles for tattoo and hemostasis) with efficiency, coordination, and dexterity (PC3 L4) • Integrates new information discovered intraprocedurally to modify the procedural plan or technique as necessary (PC3 L4) • 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 (PC3 L4)	• 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 (PBLI1 L4) • Identifies gaps in knowledge or endoscopic technical skill and revises the learning plan based on a review of clinical outcomes (PBLI2 L4) • Recognizes all complications of flexible endoscopy, including GI perforation, bleeding, and postpolypectomy syndrome, and independently initiates management (PC4 L4)

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Evaluation & Management of a Patient with Gallbladder Disease

Description of the Activity	General surgeons often encounter patients with gallbladder disease in elective and emergency care settings. All surgeons must be able to treat the spectrum of benign biliary disease and recognize disease requiring specialty referral in adolescent and adult patients.
Functions	❖ Nonoperative/Preoperative ➢ Synthesize essential information from the patient's records, history, physical examination, and initial diagnostic evaluations to develop a differential diagnosis. ➢ Complete a cost-effective, evidence-based diagnostic evaluation (American Society for Gastrointestinal Endoscopy [ASGE] guidelines on the role of endoscopic retrograde cholangiopancreatography [ERCP] in benign diseases of the biliary tract). ➢ Communicate a diagnosis and treatment options to the patient/caregiver(s) and consultants. ➢ Obtain informed consent with cultural humility. ▪ 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. ➢ Communicate with the patient/caregiver(s) to ensure that preprocedure instructions are understood. ➢ Identify a patient in whom operative intervention may be contraindicated, such as a patient with: ▪ Asymptomatic disease ▪ Atypical symptoms ▪ High risk or who exceeds the capacity of the surgical environment ▪ Indication for cholecystostomy placement ▪ Prohibitive surgical or anesthetic risk secondary to medical morbidity ❖ Intraoperative ➢ Manage the perioperative environment, including room setup, equipment check, preprocedural time-out, specimen processing, counts, wound classification, and debriefing functions. ➢ Complete the procedures required to manage gallbladder disease. ▪ Perform cholecystectomy using minimally invasive and open techniques. • Identify and dissect the structures of the hepatocystic triangle systematically to achieve the critical view of safety. • Expose the cystic duct and cystic artery circumferentially before clipping and dividing structures. • Recognize when the cystic plate is obliterated or there is failure to progress, and transition to either a laparoscopic or open dome-down approach or a partial cholecystectomy. ▪ Recognize indications for and perform cholangiography (with interpretation). • High suspicion of common duct stones • Uncertainty regarding biliary anatomy

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Evaluation & Management of a Patient with Gallbladder Disease

	▪ Manage common intraoperative complications such as bleeding from the liver bed. ➢ Recognize and develop a management plan for unexpected intraoperative findings such as aberrant anatomy, biliary tract injury, choledocholithiasis, or a gallbladder mass. ❖ Postoperative ➢ Provide postoperative management for a patient with benign biliary tract disease, including: ▪ Communication with the patient/caregiver(s) to ensure that postprocedure instructions are understood ▪ Management of a cholecystostomy tube ▪ Routine postoperative, immediate, and follow-up care ➢ Recognize early and late complications related to biliary tract procedures. ▪ Bile leak ▪ Late presentation of biliary injury ▪ Persistent postcholecystectomy pain or chronic diarrhea ▪ Retained stone
Scope	❖ In scope ➢ Diagnosis and management of: ▪ Acalculous cholecystitis ▪ Acute cholecystitis ▪ Biliary dyskinesia ▪ Choledocholithiasis ▪ Chronic cholecystitis ▪ Gallbladder polyps ▪ Gallstone pancreatitis ▪ Gangrenous cholecystitis ▪ Symptomatic cholelithiasis ❖ Out of scope ➢ Unexpected diagnoses (specialty referral may be indicated), such as: ▪ Choledochal cysts ▪ Gallbladder and bile duct cancer ▪ Operative injuries to the biliary tree

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Evaluation & Management of a Patient with Gallbladder Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
1 **Limited Participation** Demonstrates understanding of information and has very basic skills **Framework:** What a learner directly out of medical school should know The attending can show and tell.	• Obtains an H&P with cultural humility and develops a differential for a patient with uncomplicated gallbladder (GB) disease in elective and emergent settings (PC1 L1) • Demonstrates understanding of the basic elements of GB anatomy (MK2 L1) • Respectfully communicates basic facts about the condition to a patient/caregiver(s) but inconsistently uses applicable language services and audio/visual aids (ICS1 L1) • Communicates the elements of an informed consent discussion but omits some elements when documenting the discussion (ICS1 L1) • Demonstrates basic awareness of costs of care as they relate to diagnostic and treatment options, including radiologic and lab assessments for biliary disease (SBP3 L1) • Accesses evidence and considers patient preference in determining the best approach for managing GB pathology at a basic level (eg, operative vs nonoperative management) (PBLI1 L1)	• Describes the anatomic structures and relationships in gallbladder (GB) surgery (eg, cystic duct, cystic artery, hepatocystic triangle) and identifies them with assistance in a routine case (MK2 L1) • Describes the basic steps of the operation and the critical view of safety (MK2 L1) • Handles instruments safely but tentatively, displays a lack of coordination between both hands, and is inefficient with suturing and knot tying (PC2 L1) • Requires direct instruction to perform simple maneuvers (PC3 L1) • Articulates sharps safety, safe surgical energy use, and surgical field sterility (PC2 L1) • Requires active instruction to move the operation forward (PC3 L1) • Centers the operative field (anatomy and instruments) with the camera with frequent adjustments and reminders (PC3 L1)	• Evaluates a patient with a common postop complication such as fever or hypotension, requiring assistance to recognize and evaluate gallbladder (GB)-specific or severe complications (PC4 L1) • Alerts supervisors about postop complications and initiates management with supervision (ICS1 L1; PC4 L1) • Communicates basic aspects of the operative procedure and standard postop instructions to a patient/caregiver(s) but needs prompting to clarify expected outcomes and the anticipated treatment course (ICS1 L1) • Describes different models of health care coverage in the U.S. and basic components of documentation required for billing and coding for GB disease patients (SBP3 L1)
2 **Direct Supervision** Demonstrates understanding of the steps of the operation but requires direction through	• Evaluates a patient with GB disease, interpreting lab values and imaging studies (PC1 L2) • Develops a plan for managing a patient with uncomplicated GB disease (PC1 L2)	• Identifies variations in cystic duct and artery anatomy in a straightforward case and articulates their implications for the operation (MK2 L2) • Identifies common positioning options but cannot name factors to select one over another; recognizes the importance	• Recognizes when a patient deviates from a normal postop recovery pattern, though the differential may contain omissions (PC4 L2) • Manages a simple postop problem independently (eg, fever, tachycardia) (PC4 L2)

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Evaluation & Management of a Patient with Gallbladder Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
principles and does not know the nuances of a basic case **Framework:** The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression.	• Communicates basic facts of a plan for uncomplicated GB disease to a patient/caregiver(s); customizes communication to overcome barriers and cultural differences; consistently uses applicable language services and audio/visual aids (ICS1 L2) • Communicates the elements of an informed consent discussion for a straightforward cholecystectomy, providing information about risks, benefits, and alternatives; completely documents the discussion (ICS1 L2) • Demonstrates understanding of health care cost challenges but suggests duplicate or unnecessary test(s) (SBP3 L2) • Incorporates published guidelines regarding the cost-effective management of patients presenting with gallstone disease (PBLI1 L2)	of protecting against nerve and pressure injuries but cannot describe the resulting morbidity (PC3 L2) • Smoothly performs basic maneuvers, such as suturing and knot tying (MK2 L2) • Provides a basic description of the operative plan but omits some steps (PC3 L2) • Demonstrates understanding of port site triangulation and safe entry into the abdomen, requiring guidance for each (PC2 L2) • Places subsequent laparoscopic trocars after initial entry, uses surgical energy safely, and closes skin independently (PC2 L2) • Places clips securely and accurately with guidance (PC3 L2) • Identifies the plane of dissection (eg, to remove the gallbladder from the liver bed), requiring redirection to maintain dissection in the optimal plane (PC3 L2) • Usually demonstrates careful tissue handling and uses both hands in a coordinated manner (PC3 L2) • Moves the operation forward, usually proceeding to the next step of the procedure, though sometimes requires direction (PC3 L2) • Requires assistance to control bleeding or perform IOC (PC3 L2)	• Recognizes but requires assistance to manage a complication specific to GB disease or more severe postop complications (PC4 L2) • Communicates details of the operative procedure and postop instructions to a patient/caregiver(s) but omits some elements when discussing expected outcomes and the overall anticipated treatment course (ICS1 L2) • Recognizes the influence of health care system financing structures on the postop care of the GB disease patient (eg, global period, care of patients requiring initial percutaneous drainage) (SBP3 L2)
3 **Indirect Supervision** Can do a basic operation but will not recognize abnormalities and does not	• Independently develops and concisely presents a comprehensive management plan for both complicated and uncomplicated GB disease, considering whether	• Identifies variations in cystic duct and artery anatomy in a setting of inflammation or scarring but requires assistance to adapt the operative approach in response to variant anatomy (MK2 L3)	• Recognizes all postop complications, such as biliary leak or injury, and completes the necessary workup for these problems independently in a straightforward patient (PC4 L3)

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Evaluation & Management of a Patient with Gallbladder Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
understand the nuances of an advanced case **Framework:** The learner can perform the operation in straightforward circumstances. The attending gives passive help. This help may be given while scrubbed for more complex cases or during a check-in for more routine cases.	nonoperative management is indicated (ICS1 L3, PC1 L3) • Communicates with a patient/caregiver(s) across barriers and cultural differences to elicit a personalized care plan for GB disease in a shared decision-making process for a straightforward presentation (ICS1 L3) • Conducts an informed consent discussion for a straightforward cholecystectomy with cultural humility; completely documents the discussion related to the operative management of GB disease (ICS1 L3) • Selects preoperative imaging and testing to diagnose GB pathology in a resource- and time-efficient manner; distinguishes the cost and outcome differences associated with various treatment strategies (SBP3 L3) • Applies published guidelines regarding the workup and management of a complex presentation of GB disease and incorporates patient preference into the plan (PBLI1 L3)	• Performs laparoscopic cholecystectomy with straightforward anatomy and minimal inflammation safely, including identifying the critical view of safety (PC2 L3) • Performs IOC independently in a routine case (PC2 L3) • Demonstrates careful tissue handling; dissects the cystic duct and artery efficiently, obtains the critical view of safety, and places clips accurately without assistance in routine and some difficult cases (PC3 L3) • Moves fluidly through the operation, anticipating next steps and logistical needs and clearly communicating these needs to the OR team (PC3 L3) • Identifies the plane of dissection (eg, to remove the gallbladder from the liver bed) accurately in a routine case (PC3 L3) • Recognizes when deviation from the initial operative plan (eg, conversion to open or subtotal) is required (PC3 L3)	• Evaluates postop problems in a patient with a complex medical condition, requiring supervision to manage them (PC4 L3) • Communicates customized postop instructions and updates to a patient/caregiver(s) using a variety of methods to ensure understanding; discusses unexpected findings or changes to the intended plan with cultural humility (ICS1 L3) • Analyzes how different treatment strategies (early vs delayed cholecystectomy in pancreatitis, operative vs endoscopic management of choledocholithiasis) impact outcomes and costs of care (SBP3 L3)
4 **Practice Ready** Can manage more complex patient presentations and operations and take care of most cases	• Manages a patient with complicated GB disease (eg, severe cholecystitis, choledocholithiasis post R-Y gastric bypass) or a medically complex patient (eg, sepsis, anticoagulation use, cardiac dysfunction), customizing use of nonoperative management (PC1 L4) • Customizes communication based on a patient's characteristics and preferences across barriers in a critical or life-threatening situation; manages	• Adapts to unexpected variant anatomy in a complex cholecystectomy (eg, inflamed, shortened cystic duct) and changes the operative approach (subtotal or dome-down) (MK2 L4; PC3 L4) • Functions as a teaching assistant for a case with normal anatomy while recognizing when technical requirements of an operation necessitate them to take over (PC2 L4) • Performs IOC safely in the presence of scarring and inflammation (PC2 L4)	• Manages GB-specific and complex postop problems (eg, biliary leak, CBD injury), even in patients with comorbid conditions (PC4 L4) • Directs interdisciplinary care to manage a patient experiencing complications (PC4 L4) • Manages conflict between a patient, caregiver(s), and the health care team (ICS1 L4)

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Evaluation & Management of a Patient with Gallbladder Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can treat all patients with straightforward gallbladder disease and has a strong understanding of surgical options and techniques for less common scenarios. 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.	and de-escalates conflict with a difficult or hostile patient/caregiver (ICS1 L4) • Conducts an informed consent discussion for a complex or emergent cholecystectomy with cultural humility, eliciting patient preferences and documenting risks and benefits individualized to the patient (ICS1 L4) • Triages treatment of GB disease with consideration of patient circumstances and preferences (comorbidities, socioeconomics) (SBP3 L4) • Applies current published guidelines regarding the workup and management of GB disease, considering nuances and exceptions in a complex situation (PBLI1 L4)	• Adapts operative technique to tissue quality and case complexity; identifies the correct plane, dissects the cystic duct and artery, and obtains the critical view of safety in the presence of scarring and inflammation (PC3 L4) • Devises and implements a plan when deviation from the initial operative plan (eg, conversion to open procedure or subtotal cholecystectomy) is required (PC3 L4) • Implements early management steps, including calling for assistance, when an intraoperative complication is identified (PC3 L4) • Analyzes how the choice of instrumentation will affect the overall cost of the procedure (SBP3 L4)	• Customizes emotionally difficult news (eg, changes to the operative plan, adverse outcome, end-of-life discussion) to a patient/caregiver(s) with care and cultural humility (ICS1 L4) • Selects a method of postop follow-up, considering case complexity, health care system cost, and patient wishes and resources (eg, telehealth, transportation challenges) (SBP3 L4)

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Evaluation and Management of a Patient with an Inguinal Hernia

Description of the Activity	General surgeons are often called to evaluate patients with a groin mass, pain, or other symptoms of an inguinal hernia. The general surgeon must be able to evaluate and manage patients in the outpatient or elective setting as well as those who present in the emergency department with urgent or emergent conditions.
Functions	❖ Nonoperative/Preoperative ➢ Synthesize essential information from a patient's referring providers, medical records, history, physical examination, and diagnostic evaluations to develop a differential diagnosis. ➢ Determine whether surgery is indicated. ➢ Recognize complications of inguinal hernia that require an emergency operation. ➢ Select a safe anesthetic and surgical approach that is consistent with the patient's diagnosis and comorbidities. ➢ Synthesize an operative plan that demonstrates understanding of the operative anatomy, physiology, indications, contraindications, risks, benefits, alternatives, and potential complications of: ▪ Femoral hernia repair ▪ Inguinal hernia repair with and without mesh ▪ Open and minimally invasive herniorrhaphy ➢ Obtain informed consent with cultural humility. ▪ 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. ❖ Intraoperative ➢ Manage the perioperative environment, including room setup, equipment check, preprocedural time-out, specimen processing, counts, wound classification, and debriefing functions. ➢ Perform the procedures required to manage an inguinal hernia. ▪ Position the patient, and ensure the availability of relevant equipment, including mesh if used. ▪ Ask for the correct instruments and sutures. ▪ Visualize tissue planes, and identify and dissect relevant normal and abnormal anatomy. ▪ Perform operative steps efficiently. ➢ Integrate new information discovered intraoperatively to modify the surgical plan or technique as necessary in patients with: ▪ Aberrant anatomy ▪ Adenopathy but no hernia identified ▪ Femoral venous bleeding ▪ Hernia containing nonviable bowel ▪ Indications and contraindications for use of mesh

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Evaluation and Management of a Patient with an Inguinal Hernia

	▪ Need for laparotomy ▪ Sliding hernia ➢ Work with the anesthesia and nursing teams as well as other perioperative health care professionals to create and maintain an intraoperative environment that promotes patient-centered care. ❖ Postoperative ➢ Initiate and oversee postoperative care, including postoperative disposition. ➢ Communicate with the patient/caregiver(s) and members of the health care team (primary care provider, nursing staff, other care providers) to ensure an understanding of postprocedure instructions so the patient can carry out the resultant plan within the context of their lives (eg, transportation, living situation, insurance, access to a pharmacy). ➢ Recognize and manage the most common complications following inguinal hernia repair: ▪ Chronic pain or nerve injury ▪ Hematoma ▪ Infected seroma ▪ Recurrence ▪ Testicular ischemia ▪ Urinary retention
Scope	❖ In scope ➢ Adult patients ❖ Out of scope ➢ Pediatric patients, recognizing the limitations of the surgeon or facility and the subsequent need for a referral to a subspecialty pediatric surgeon at the surgeon's discretion

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Evaluation & Management of a Patient with an Inguinal Hernia

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
1 **Limited Participation** Demonstrates understanding of information and has very basic skills **Framework:** What a learner directly out of medical school should know The attending can show and tell.	• Obtains an H&P with cultural humility and develops a differential for a patient presenting with signs and symptoms of an inguinal hernia (PC1 L1) • Respectfully communicates basic facts about the condition to a patient/caregiver(s) but inconsistently uses applicable language services and audio/visual aids (ICS1 L1) • Communicates the elements of an informed consent discussion but omits some elements when documenting the discussion (ICS1 L1) • Requires oversight to initiate a cost-effective workup (PBL1 L1) • Accesses evidence and considers patient preference regarding the management of inguinal hernia with respect to open and MIS approaches (PBLI1 L1)	• Describes the anatomic structures and relationships of the inguinal canal (inguinal ring, vas deferens, ilioinguinal nerve, inguinal floor, femoral vein) (MK2 L1) • Describes major steps of inguinal hernia repair and some critical structures at risk (MK2 L1) • Demonstrates inefficient suturing and knot tying (PC2 L1) • Requires prompting to identify correct tissue planes (PC2 L1) • Demonstrates understanding of sharps safety, safe surgical energy use, and surgical field sterility (PC2 L1) • Requires active instruction to move the operation forward (PC3 L1) • Displays coordinated hand movements for simple maneuvers, though inefficiently and under direct instruction (PC3 L1)	• Uses multimodal pain management strategies (PC4 L1) • Recognizes and informs supervisor of general variances in the standard immediate postop course (eg, hematoma, hypotension, urinary retention) (PC4 L1) • Communicates basic aspects of the operative procedure and standard postop instructions to a patient/caregiver(s) but needs prompting to clarify expected outcomes and the anticipated treatment course (ICS1 L1) • Identifies literature regarding pain management strategies for postop inguinal hernia patients (PBLI1 L1)
2 **Direct Supervision** Demonstrates understanding of the steps of the operation but requires direction through principles and does not know the nuances of a basic case	• Evaluates a patient with an inguinal hernia, discerns incarcerated and reducible hernias, and makes recommendations for management (PC1 L2) • Determines when imaging is indicated for an inguinal hernia and interprets results (PC1 L2) • Determines an operative plan for a straightforward presentation, including differentiating between open and MIS approaches (PC1 L2) • Reduces a straightforward hernia (PC2 L2) • Respectfully communicates basic facts of a plan for a straightforward inguinal hernia to a patient/caregiver(s); uses applicable	• Identifies the anatomic boundaries of the inguinal canal and direct and indirect inguinal and femoral hernias (MK2 L2) • Identifies critical structures during dissection such as the ilioinguinal nerve and vas deferens (MK2 L2) • Performs incision and exposure of the inguinal canal and layered closure of the operative site (PC2 L2) • Requires guidance to place mesh in straightforward inguinal hernia repair (PC3 L2) • Demonstrates awkward instrument handling in small spaces, with inefficient	• Uses multimodal pain management with a focus on opioid-sparing strategies and adjusts the regimen for symptoms such as postop neuropathy (PC4 L1) • Recognizes and manages a common immediate or delayed postop complication (eg, hematoma, hypotension, urinary retention, hernia recurrence, pain syndromes, wound infection) (PC4 L2) • Recognizes but requires assistance to synthesize a

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Evaluation & Management of a Patient with an Inguinal Hernia

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression.	language services and audio/visual aids (ICS1 L2) • Communicates the elements of an informed consent discussion for a straightforward elective inguinal hernia repair, answers questions related to hernia management, and completely documents the discussion (ICS1 L2) • Initiates a cost-effective workup for a straightforward presentation independently, requiring oversight for an advanced or unusual presentation (PBLI1 L2) • Considers patient preference for straightforward open versus MIS inguinal hernia repair (PBLI1 L2)	suturing technique during mesh placement (PC3 L2) • Identifies common positioning options but cannot name factors to select one over another; recognizes the importance of protecting against nerve and pressure injuries but cannot describe the resulting morbidity (PC3 L2) • Provides a basic description of the operative plan but omits some steps; maintains the plane of dissection if identified but struggles to independently enter, and often deviates from, the correct plane (PC3 L2) • Usually proceeds to the next step of the procedure, though sometimes requires direction (PC3 L2) • Controls bleeding only with direction (PC3 L2)	complete management plan for a complication specific to inguinal hernia or severe postop complications (eg, severe scrotal hematoma, chronic groin pain, mesh infection, sepsis) (PC4 L2) • Communicates details of the operative procedure and postop instructions to a patient/caregiver(s) but misses some elements when discussing expected outcomes and the overall anticipated treatment course (ICS1 L2) • Partners with the patient on selection of a postop pain regimen (PBLI1 L2)
3 **Indirect Supervision** Can do a basic operation but will not recognize abnormalities and does not understand the nuances of an advanced case **Framework:** The learner can perform the operation in straightforward circumstances. The attending gives passive help. This help may be given	• Develops a nonoperative or operative management plan for a patient with an inguinal hernia (PC1 L3) • Forms a complete differential for a patient presenting with signs and symptoms of an inguinal hernia, without errors of omission or commission (PC1 L3) • Reduces a hernia requiring multiple different approaches (PC2 L2) • Recognizes the need for a chaperone when conducting a physical examination of a sensitive body region (PC2 L2) • Respectfully communicates the medical condition of a complex patient or a patient with a complicated presentation across barriers and cultural differences to elicit a personalized care plan in a shared decision-making process (ICS1 L3)	• Identifies all pertinent inguinal anatomy (eg, cord structures, nerves, musculofascial layers) in a patient with a straightforward (eg, elective) inguinal or femoral hernia with minimal supervision (MK2 L3) • Identifies the need for modifications in operative technique for femoral or incarcerated/strangulated hernia contents and explains steps needed to address these variants (MK2 L3) • Performs straightforward inguinal hernia repair (eg, elective repair of a small or moderately sized hernia) (PC2 L3) • Identifies and protects critical structures during dissection, including nerves and the vas deferens, and adjusts tissue handling based on tissue quality (PC2 L3)	• Recognizes and manages a common immediate postop complication (e.g., hematoma or urinary retention) or a delayed complication specific to inguinal hernia repair (e.g., testicular ischemia, pain syndromes, hernia recurrence, wound infections) (PC4 L2) • Recognizes and initiates the workup of a severe immediate or delayed postop complication (e.g., hemorrhage; large, severe scrotal hematoma/seroma; chronic pain; mesh infection; sepsis) (PC4 L2) • Communicates customized postop instructions and pertinent

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Level	Preoperative/Nonoperative	Intraoperative	Postoperative
while scrubbed for more complex cases or during a check-in for more routine cases.	• Conducts an informed consent discussion for a straightforward, elective inguinal hernia repair with cultural humility, individualizing risks, benefits, and alternatives to the patient; completely documents the discussion (ICS1 L3) • Applies evidence to manage complex situations (eg, infected mesh, hernia with large scrotal component) (PBLI1 L3)	• Recognizes tissue planes that have not been previously dissected but may need assistance in identifying/managing variable anatomy or tissue planes in a reoperative field to prevent iatrogenic injuries (PC2 L3)	updates to a patient/caregiver(s) using a variety of methods to ensure understanding and discusses unexpected findings or changes to the intended plan (ICS1 L3) • Uses multimodal, opioid-sparing pain management strategies consistent with evidence-based prescribing guidelines (PBLI1 L3)
4 **<u>Practice Ready</u>** Can manage more complex patient presentations and operations and take care of most cases **<u>Framework</u>:** The learner can treat all straightforward hernias and has a strong understanding of surgical options and techniques for less common scenarios. 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.	• Manages a patient with a complex presentation of an inguinal hernia or with significant comorbidities (eg, strangulated hernia, infected mesh, sepsis, anticoagulation, cardiopulmonary issues); anticipates logistical problems when optimizing a patient for surgery (PC1 L4) • Customizes communication based on individual patient characteristics and preferences across barriers (eg, literacy, language, and cultural differences) in a critical or life-threatening situation (ICS1 L4) • Conducts an informed consent discussion for a complex or emergent inguinal hernia repair with cultural humility, eliciting patient preferences and documenting risks and benefits individualized to the patient (ICS1 L4) • Determines the best therapy for a patient by applying best available evidence, reconciling conflicting evidence, and integrating patient preferences (PBLI1 L4)	• Identifies all pertinent inguinal structures in a complex operative situation (eg, large hernia, recurrent hernia, strangulation with perforation) and adapts the operative plan as needed (MK2 L4) • Performs inguinal hernia repair in a patient with a recurrent, strangulated, or large and complex hernia with minimal or no guidance (PC2 L4) • Adapts planned repair based on unexpected findings (eg, incarcerated bowel, enterotomy, iatrogenic injury) (PC3 L4) • Identifies tissue planes in an inflamed condition and adapts the dissection technique in a patient with a large, incarcerated, or recurrent inguinal hernia (PC3 L4)	• Anticipates and develops a plan to mitigate potential postop complications (PC4 L4) • Manages a severe immediate or delayed postop complication (eg, hemorrhage; large, severe scrotal hematoma/seroma; chronic pain; mesh infection) (PC4 L4) • Customizes emotionally difficult news (eg, changes to the operative plan, adverse outcome, end-of-life discussion) to a patient/caregiver(s) in a culturally dexterous and caring manner (ICS1 L4) • Manages a complex patient with chronic pain syndrome using best evidence for postop pain management (PBLI1 L4)

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Evaluation & Management of a Patient with Cutaneous and Subcutaneous Neoplasms

Description of the Activity	Cutaneous and subcutaneous neoplasms are conditions commonly encountered by general surgeons in the outpatient and elective care setting. All general surgeons must be able to treat benign and malignant diseases of the skin and subcutaneous tissue in adult patients.
Functions	❖ Nonoperative/Preoperative ➢ Synthesize information from the patient's medical records, history, physical examination, and existing diagnostic evaluations to develop a differential diagnosis. ➢ Determine if additional preoperative workup is needed, including imaging studies such as computed tomography, magnetic resonance imaging, and lymphoscintigraphy, based on specific disease pathologies. ➢ Define the extent of surgery required (including the need for sentinel lymph node biopsy versus lymphadenectomy), integrating any obtained findings of additional preoperative workup. ➢ Direct or perform biopsy procedures needed to facilitate the diagnosis and management of cutaneous and subcutaneous lesions and neoplasms. ➢ Obtain informed consent with cultural humility. ▪ 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. ❖ Intraoperative ➢ Manage the perioperative environment, including room setup, equipment check, preprocedural time-out, specimen processing, counts, wound classification, and debriefing functions. ➢ Develop a safe anesthetic approach for the clinical situation in collaboration with in-office staff or the anesthesiology team, depending on the environment selected for the performance of the procedure. ➢ Collaborate with other perioperative health care professionals to create and maintain an intraoperative environment that promotes safe patient care. ➢ Position the patient to expose the operative field, taking precautionary measures to prevent iatrogenic injury. ➢ Confirm accessibility of necessary equipment. ➢ Develop an initial operative plan that demonstrates understanding of the patient's pathology, anatomy, physiology, indications, contraindications, and potential complications. ➢ Perform operative interventions such as: ▪ Wide local excision • Mark out margins (based on current evidence-based guidelines). • Visualize and respect tissue planes; identify and dissect relevant normal and abnormal anatomy; dissect around, but not into, the lesion being excised, and maintain margins.

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	• Orient specimens based on institutional protocols. • Use frozen sections intraoperatively for pathologies in which margin assessment is needed. • Maintain awareness of and perform simple reconstruction options to close large defects. ▪ Perform sentinel lymph node biopsy based on current evidence-based guidelines. • Use adjuncts to identify sentinel lymph nodes. ➢ Integrate new information discovered intraoperatively to modify the operative plan if any of the following situations are encountered: ▪ Infected lesions, such as cysts or hematomas (primary wound closure versus healing by secondary intention) ▪ Larger than anticipated cutaneous defects following excision, requiring subspecialist consultation ▪ Lymphadenopathy not identified preoperatively ▪ Satellite or in-transit lesions ❖ Postoperative ➢ Communicate a postencounter plan with a patient/caregiver(s) and other health care team members that considers location, postencounter needs, outcome expectations, and follow-up. ➢ Include a specific plan for wound care. ➢ Develop a postencounter plan that includes analysis of patient-specific barriers to care. ➢ Provide surveillance follow-up care for disease recurrence that is guideline adherent. ➢ In the setting of malignancy, communicate with both the multidisciplinary cancer care team and the patient/caregiver(s) to ensure that further diagnostic workup and management plans are understood. ➢ Recognize early and late complications related to procedures performed for management of cutaneous and subcutaneous neoplasms. ▪ Chronic pain ▪ Hematoma ▪ Recurrence of neoplasm ▪ Seroma ▪ Wound infection
Scope	❖ In-scope diagnoses ➢ Epidermal inclusion cyst ➢ Hematoma ➢ Lipoma/neuroma/leiomyoma/lymphangioma ➢ Melanoma and nevi ➢ Nonmelanoma skin cancers ➢ Basal cell carcinoma ➢ Squamous cell carcinoma ❖ Out-of-scope diagnoses ➢ Cystic lesions of the neck ➢ Desmoids/fibromatosis

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	➢ Sarcoma (inclusive of lymphangiosarcoma) ❖ In-scope procedures ➢ Excisional biopsy ➢ Incisional biopsy ➢ Sentinel lymph node biopsy ➢ Wide local excision ❖ Out-of-scope procedures ➢ Completion lymphadenectomy

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Evaluation & Management of a Patient with Cutaneous and Subcutaneous Neoplasms

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
1 **Limited Participation** Demonstrates understanding of information and has very basic skills **Framework:** What a learner directly out of medical school should know The attending can show and tell.	• Obtains an H&P with cultural humility, including a focused dermatologic exam of the lesion (PC1 L1) • Develops a differential that includes most common cutaneous and subcutaneous neoplasms but may omit less common diagnoses (PC1 L1) • Describes 1 or 2 biopsy techniques (PC2 L1) • Describes the "ABCDE" of a skin lesion that is concerning for malignancy (MK1 L1) • Respectfully communicates basic facts about the condition to a patient/caregiver(s) but inconsistently uses applicable language services and audio/visual aids (ICS1 L1) • Communicates the elements of an informed consent discussion but omits some elements when documenting the discussion (ICS1 L1) • Identifies specialties involved in interdisciplinary care, including medical oncology and radiation therapy, but needs guidance to understand sequencing of approaches (ICS2 L1) • Applies evidence-based literature to guide the use of lab and imaging studies for assessment and staging as indicated (PBLI1 L1)	• Identifies the basic anatomy of the skin and subcutaneous tissues (MK2 L1) • Assists with surgical positioning, patient preparation, and adequate exposure with retraction; performs superficial wound closure (PC2 L1) • Makes a skin incision along a marked outline drawn by a supervisor (PC3 L1) • Requires active instruction to move the operation forward (PC3 L1) • Identifies tissue planes with active guidance and retraction (PC3 L1) • Handles instruments inefficiently and with limited dexterity; displays incomplete understanding of tissue handling (PC3 L1) • Demonstrates respect for and engages in communication with all members of the OR team (ICS2 L1) • Demonstrates uncertainty about the necessary equipment for the operation (ICS2 L1)	• Communicates a basic postop plan to a patient/caregiver(s), needing prompting to clarify expected outcomes and the anticipated treatment course (PC4 L1) • Describes common postop complications such as hematoma or infection, requiring help to articulate or recognize signs of these complications (PC4 L1) • Provides updates and answers straightforward questions from a patient/caregiver(s) in a respectful and understandable way (ICS1 L1) • Attends and, if requested, presents at an interdisciplinary conference when involved in the care of a patient with a skin neoplasm (ICS2 L1) • Respectfully requests a consultation with medical and radiation oncology for adjuvant treatment of a malignant neoplasm (ICS2 L1) • Accesses evidence-based guidelines for treatment of cutaneous and subcutaneous neoplasms (PBLI1 L1)
2 **Direct Supervision** Demonstrates understanding of the steps of the operation but requires direction through principles and does not know the nuances of a basic case	• Respectfully communicates basic facts about the diagnosis to a patient/caregiver(s); uses applicable language services and audio/visual aids (ICS1 L2) • Evaluates a patient with a cutaneous or subcutaneous neoplasm and identifies risk factors for malignancy, including family history and environmental exposures (PC1 L2) • Orders and interprets imaging and other diagnostic tests as indicated (PC1 L2)	• Marks out the correct margins of excision for a skin neoplasm with active help (PC2 L2) • Interprets single-node lymphoscintigraphy for sentinel lymph node biopsy (SLNB) (PC2 L2) • Performs wide local excision and SLNB in a straightforward case with guidance (PC2 L2) • Correctly orients the specimen for pathology with assistance (PC2 L2)	• Oversees routine postop care, including use of multimodal pain management strategies (PC4 L2) • Recognizes common postop complications such as hematoma, seroma, and infection, requiring assistance to manage them (PC4 L2) • Conveys but does not independently develop a postencounter plan that includes postop patient care needs,

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Evaluation & Management of a Patient with Cutaneous and Subcutaneous Neoplasms

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression.	• Gathers needed instruments and equipment and initiates biopsy of a suspicious skin lesion (PC2 L2) • Demonstrates understanding of differences between melanoma and nonmelanoma regarding treatment and additional tests needed for accurate staging workup (lab and imaging studies) (MK1 L2) • Communicates the elements of an informed consent discussion in a straightforward case and completely documents the discussion (ICS1 L2) • Attends an interdisciplinary care conference and presents information from a surgical perspective to other specialists (eg, medical oncology, radiation oncology, pathology, radiology) (ICS2 L2) • Applies evidence and incorporates patient preferences when planning removal of a cutaneous or subcutaneous neoplasm (PBLI1 L2)	• Completes tissue dissection without violating the lesion (PC3 L2) • Provides examples of unexpected intraoperative findings, such as in-transit melanoma, lymphadenopathy not identified preoperatively, or atypical lipomas, but is unable to identify them intraoperatively (PC3 L2) • Demonstrates inconsistent skin and subcutaneous tissue-handling skills (PC3 L2) • Demonstrates understanding of common positioning options but cannot name factors to select one over another; identifies the importance of protecting against nerve and pressure injuries but cannot describe resulting morbidity (PC3 L2) • Requires assistance to control bleeding (PC3 L2) • Communicates clearly with all members of the health care team in the OR (ICS2 L2) • Demonstrates understanding of necessary equipment for the operation but requires assistance to coordinate with perioperative staff to ensure it is available (ICS2 L2)	outcome expectations, and follow-up (ICS1 L2) • Assists with patient-specific barriers to care, such as access to wound VACs (ICS2 L2) • Participates in an interdisciplinary cancer care conference (ICS2 L2) • Describes some elements of evidence-based treatment guidelines for benign or malignant cutaneous/subcutaneous neoplasms (PBLI1 L2)
3 **Indirect Supervision** Can do a basic operation but will not recognize abnormalities and does not understand the	• Obtains a straightforward patient's history and communicates their medical condition across barriers and cultural differences in a respectful way (ICS1 L3; PC1 L3) • Develops and helps coordinate a treatment plan for a malignant neoplasm, including an operative plan, considering patient comorbidities (eg, no SLNB in those unable to tolerate dissection or adjuvant therapy) (MK1 L3)	• Positions the patient to expose the operative field and all associated sites (eg, donor sites); marks out indicated margins based on lesion type (PC2 L3) • Uses lymphoscintigraphy to plan an operative approach for SLNB (PC2 L3) • Performs wide local excision and SLNB with minimal guidance; respects tissue planes to minimize trauma;	• Recognizes and manages early postop complications such as seroma, hematoma, or infection; recognizes late findings like recurrent disease (PC4 L3) • Develops a postencounter plan that includes patient care needs, outcome expectations, and follow-up but omits some elements when discussing

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Level	Preoperative/Nonoperative	Intraoperative	Postoperative
nuances of an advanced case **Framework:** The learner can perform the operation in straightforward circumstances. The attending gives passive help. This help may be given while scrubbed for more complex cases or during a check-in for more routine cases.	• Describes and performs a punch biopsy; describes and initiates other biopsy techniques (PC2 L3) • Describes additional tests needed for accurate and comprehensive staging workup, including lab and imaging studies (MK1 L3) • Conducts an informed consent discussion with cultural humility and completely documents the discussion related to operative management (ICS1 L3) • Presents patient cases at an interdisciplinary care conference and discusses care options with other specialists (eg, medical oncology, radiation oncology, pathology, radiology) (ICS2 L3) • Identifies and applies high-quality current literature for the management of cutaneous and subcutaneous neoplasms (PBLI1 L3)	anticipates next steps and logistical needs (PC2 L3; PC3 L3) • Independently and accurately orients the specimen for pathology (PC2 L3) • Performs simple reconstruction or skin grafting with guidance (PC2 L3) • Recognizes unexpected intraoperative findings (eg, presence of in-transit melanoma, lymphadenopathy, or atypical lipomas) but needs direction to modify the operative plan (PC3 L3) • Demonstrates fairly smooth technical movements, hand coordination, and careful tissue handling (PC3 L3) • Considers the location of important structures and preserves them during excision of neoplasms (eg, spinal accessory nerve) (MK2 L3) • Collaborates with plastic surgery for reconstructive options and with nuclear medicine for SLNB (ICS2 L3) • Coordinates with perioperative staff to ensure most necessary equipment is available and ready to use (ICS2 L3)	expected outcomes and the overall anticipated treatment course (ICS1 L3) • Engages in shared decision-making with a patient/caregiver(s), integrating unique goals of care (ICS1 L3) • Assists in coordinating an interdisciplinary cancer care conference (ICS2 L3) • Uses evidence-based treatment guidelines to outline treatment options for malignant neoplasms, requiring guidance for complex presentations (eg, metastatic melanoma, unresectable neoplastic recurrences) (PBLI1 L3)
4 **Practice Ready** Can manage more complex patient presentations and operations and take care of most cases	• Synthesizes all information to develop a plan for managing a patient with a complex cutaneous or subcutaneous neoplasm/condition (eg, localized or metastatic melanoma, Merkel cell carcinoma, large subcutaneous mass) (PC1 L4) • Anticipates when primary closure will not be feasible or high risk and develops a plan for closure (eg, local flap coverage, collaboration with other specialists) (PC1 L4) • Develops a plan and coordinates interdisciplinary care for a patient with a malignant cutaneous neoplasm (PC1 L4)	• Positions the patient to expose the surgical field while minimizing risk of iatrogenic injury (PC2 L4) • Independently marks out indicated margins of excision for skin neoplasms (PC2 L4) • Performs wide local excision and SLNB in straightforward and complex lesions (PC2 L4; PC3 L4) • Independently performs primary closure, simple reconstruction, and skin grafting (PC2 L4)	• Recognizes and manages both early and late postop complications, such as seroma, hematoma, infection, and recurrences; biopsies a lesion suspicious for recurrence (PC4 L4) • Communicates a postencounter plan to a patient/caregiver(s) with cultural humility, including wound care, surveillance, and follow-up of malignant lesions per evidence-based treatment guidelines (PC4 L4; ICS1 L4)

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Evaluation & Management of a Patient with Cutaneous and Subcutaneous Neoplasms

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can treat all straightforward skin and subcutaneous neoplasms and has a strong understanding of surgical options and technique for less common scenarios. 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	• Performs or directs performance of the optimal biopsy technique for a suspicious skin lesion (PC2 L4) • Customizes communication based on individual patient characteristics and preferences across barriers and cultural differences in a complex situation; manages and de-escalates conflict with a difficult or hostile patient or caregiver (ICS1 L4) • Conducts an informed consent discussion for a complex lesion excision or reconstruction with cultural humility; elicits patient preferences; documents risks and benefits individualized to the patient (ICS1 L4) • Leads and coordinates an interdisciplinary care conference, facilitating professional care discussions with other specialists (eg, medical oncology, radiation oncology, pathology, radiology) and resolving conflict when needed (ICS2 L4) • Critically appraises and applies evidence while incorporating patient preferences to develop a plan for a nuanced and complex cutaneous and subcutaneous neoplasm presentation (PBLI1 L4) • Collaborates with other health care providers to formulate a patient-centered operative plan for all common skin neoplasms (PC1 L4; ICS2 L4)	• Recognizes when complex wound closure is required and prospectively coordinates with other specialists (PC2 L4; ICS2 L4) • Integrates unexpected intraoperative findings, including in-transit melanoma, lymphadenopathy not identified preoperatively, or atypical lipomas, and modifies the operative plan (PC2 L4) • Coordinates with perioperative staff in advance to ensure that all necessary equipment is available and ready for use (PC2 L4; ICS2 L4)	• Engages in postencounter shared decision-making with a patient/caregiver(s), integrating unique goals of care and treatment options (eg, metastatic melanoma, unresectable neoplastic recurrence) (PC4 L4; ICS1 L4) • Coordinates a treatment plan as outlined in an interdisciplinary cancer care conference (ICS2 L4) • Critically appraises and applies evidence, adapting the plan based on a nuanced presentation (PBLI1 L4)

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Evaluation & Management of a Patient with Severe Acute or Necrotizing Pancreatitis

Description of the Activity	General surgeons are often called to evaluate patients with severe acute or necrotizing pancreatitis and its sequelae in the emergency department or inpatient setting. The surgeon must be able to evaluate and manage patients who present in the acute setting as well as those who present with complications of acute or necrotizing pancreatitis, such as abdominal compartment syndrome, infected necrosis, bleeding, pseudocyst, or walled-off pancreatic necrosis (WOPN).
Functions	❖ Evaluation ➢ Perform an initial evaluation and form a diagnosis for a patient presenting with severe or necrotizing pancreatitis, including interpreting imaging. ➢ Recognize severe and necrotizing pancreatitis. ➢ Determine and describe the severity of acute pancreatitis using published scoring systems. ➢ Demonstrate knowledge of the most common etiologies of pancreatitis (alcohol and gallstones) as well as less common etiologies (hypercalcemia, hypertriglyceridemia, iatrogenic post–endoscopic retrograde cholangiopancreatography [ERCP], medications). ➢ Differentiate sterile pancreatic necrosis from infected pancreatic necrosis. ➢ Identify complications associated with severe and necrotizing acute pancreatitis, such as abdominal compartment syndrome, biliary obstruction, and gastric outlet obstruction. ❖ Management ➢ Initiate resuscitation and organ failure management in a patient with severe acute pancreatitis. ➢ Provide early enteral nutritional support, reserving parenteral nutrition for feeding intolerance. ➢ Manage gastric outlet obstruction associated with severe/necrotizing pancreatitis. ➢ Develop a management plan for complications associated with severe and necrotizing acute pancreatitis, such as abdominal compartment syndrome, biliary obstruction, bleeding (pseudoaneurysm), and gastric outlet obstruction. ➢ Identify indications for and appropriate timing of cholecystectomy for complicated gallstone pancreatitis. ➢ Use published evidence-based guidelines to guide management decisions, including antibiotic use. ➢ Manage a patient with infected pancreatic necrosis using a “step-up approach.” ▪ Select antibiotic therapy for a patient with infected necrosis. ▪ Communicate and coordinate care with other specialties. ▪ Employ escalating degrees of invasive interventions for infected pancreatic necrosis/WOPN with demonstrated knowledge of the roles of: • Laparoscopic/endoscopic strategies (video-assisted retroperitoneal debridement, transgastric debridement) • Open surgery • Percutaneous drainage ▪ Delay surgical intervention in infected necrosis until mature, walled-off collections develop. ▪ Prepare a patient for operative pancreatic debridement. ➢ Communicate recommendations and use shared decision-making for proposed interventions to a patient/caregiver(s). ➢ Manage a postoperative patient after pancreatic debridement.

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Evaluation & Management of a Patient with Severe Acute or Necrotizing Pancreatitis

	➢ Anticipate the potential for long-term complications of severe pancreatitis (eg, associated vitamin deficiencies, chronic pancreatic fistula, diabetes mellitus, disconnected pancreatic tail syndrome, pancreatic exocrine insufficiency), and refer for management as indicated.
Scope	❖ In scope ➢ Abdominal compartment syndrome ➢ Acute necrotizing pancreatitis ➢ Biliary obstruction secondary to severe pancreatitis ➢ Gastric outlet obstruction ➢ Infected necrosis ➢ Nutrition management ➢ Step-up approach to care for severe pancreatitis ➢ Timing of cholecystectomy (when indicated) ➢ WOPN ❖ Out of scope ➢ Acute edematous pancreatitis ➢ Chronic pancreatitis ➢ Pancreatic debridement

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Evaluation & Management of a Patient with Severe Acute or Necrotizing Pancreatitis

Level	Evaluation	Management
1 **<u>Limited Participation</u>** Can perform and articulate an H&P but lacks the knowledge to complete the evaluation or perform basic management **<u>Framework:</u>** What a learner directly out of medical school should know The attending guides most evaluation and management decisions.	• Obtains an H&P with cultural humility and identifies pancreatitis, including common causes (gallstones, EtOH), but may not be able to determine etiology or grade the severity of pancreatitis (MK1 L1; PC1 L1) • Needs support to evaluate a critically ill patient requiring resuscitation for end-organ failure, and demonstrates limited knowledge of systemic pathophysiologic responses to severe/necrotizing pancreatitis (eg, SIRS, fluid sequestration) (MK1 L1; PC1 L1) • Respectfully communicates basic facts about the condition to a patient/caregiver(s) but inconsistently uses applicable language services and audio/visual aids (ICS1 L1)	• Initiates basic initial therapies for a patient with acute pancreatitis such as IV fluids and pain control, requiring assistance for most aspects of management for severe/necrotizing pancreatitis, including strategies for nutritional support and critical care resuscitation/support for a patient with end-organ failure (MK1 L1; PC1 L1) • Identifies guidelines for management of infected pancreatic necrosis such as the "step-up approach," using a least invasive to most invasive strategy, requiring assistance to apply these guidelines (PBLI1 L1) • Respectfully communicates with a patient/caregiver(s) but does not consider the importance of addressing alcohol use disorder if applicable (ICS1 L1) • Requests consultation from specialty services with assistance and performs handoff regarding the basic elements of care but has difficulty coordinating and communicating with multiple specialties regarding complex care (SBP2 L1; ICS2 L1)
2 **<u>Direct Supervision</u>** Demonstrates understanding of the evaluation in straightforward cases but requires direction through principles and does not know the nuances of basic patient care	• Uses lab data such as base deficit, creatinine, WBC count, and LFTs to determine the degree of severity of acute pancreatitis; identifies evidence of end-organ failure (PC1 L2; MK1 L2) • Evaluates a patient with necrotizing pancreatitis, including interpretation of CT imaging (eg, lack of pancreatic enhancement); identifies the etiology and severity of pancreatitis using the Balthazar score; identifies a critically ill patient with SIRS/fluid sequestration (PC1 L2) • Demonstrates understanding of potential complications (eg, bleeding, gastric outlet	• Demonstrates knowledge of timing and benefit of early enteral feeding strategies in a patient with severe/necrotizing pancreatitis and resuscitates a patient presenting with hemodynamic instability using endpoints of resuscitation (eg, lactate, base deficit, UOP); requires guidance for ongoing management of a critically ill patient with end-organ failure (eg, management of ventilator, AKI) and feeding intolerance (MK1 L2; PC1 L2) • Demonstrates understanding of evidence-based consensus guidelines for management of infected pancreatic necrosis (eg, step-up approach) and applies guidelines in a patient with straightforward anatomic considerations (eg, fluid collections accessible percutaneously or surgically) (PBLI1 L2)

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Evaluation & Management of a Patient with Severe Acute or Necrotizing Pancreatitis

Level	Evaluation	Management
Framework: The learner may not know next steps or have a clear understanding of best diagnostic techniques or decision-making. The attending gives active help throughout the evaluation and management to maintain forward progression.	obstruction, biliary obstruction, abdominal compartment syndrome), requiring guidance to complete the evaluation (PC1 L2) • Respectfully communicates basic facts about the diagnosis and treatment for severe pancreatitis to a patient/caregiver(s), customizing communication to overcome barriers and cultural differences and using applicable language services and audio/visual aids (ICS1 L2)	• Identifies the importance of engaging in discussions about managing alcohol use disorder in relevant settings (ICS1 L2) • Requests individual consultation from specialty services (eg, IR consultation for drain placement) but needs guidance in a complex clinical situation requiring coordination across services; needs guidance regarding key elements to emphasize during handoff of a complex patient (ICS2 L2; SBP2 L2)
3 **Indirect Supervision** Can do a basic evaluation and perform management but will not recognize subtle abnormalities or understand the nuances of a complex case **Framework:** The learner can perform evaluation and management in straightforward circumstances. The attending gives passive help. This help may be given while present for	• Demonstrates understanding that air/gas in the pancreatic bed on CT imaging is indicative of possible infection (MK1 L3) • Demonstrates understanding of the signs and symptoms of acute bleeding (eg, pseudoaneurysm), abdominal compartment syndrome, and end-organ failure associated with severe acute pancreatitis and adapts management for this evolving clinical situation (MK1 L3; PC1 L3) • Respectfully communicates with a patient/caregiver(s) across barriers and cultural differences to elicit a personalized care plan in a shared decision-making process for a straightforward presentation (ICS1 L3)	• Demonstrates understanding that percutaneous drainage is the preferred drainage approach for infected necrosis within 4 weeks of initial presentation and that debridement should not be performed in this time frame (MK1 L3) • Engages IR as indicated for assistance in managing acute arterial bleeding in the setting of necrotizing pancreatitis (PC1 L3) • Demonstrates understanding of the step-up approach for management of acute necrotizing pancreatitis and that the initial step is placement of a percutaneous drain into the collection but is unsure of patient selection criteria for endoscopic vs surgical necrosectomy (PBLI1 L3; PC1 L3) • Uses evidence-based guidelines to guide use of antibiotics, route and timing of nutritional support, and management of infected pancreatic necrosis (PBLI1 L3) • Identifies when a patient with necrotizing pancreatitis is worsening or not progressing and adjusts the approach as indicated (PC1 L3)

Evaluation & Management of a Patient with Severe Acute or Necrotizing Pancreatitis

Level	Evaluation	Management
more complex patient care or during a check-in for more routine patient care.		• Discusses options for engaging in a program of recovery or therapy with a patient with alcohol use disorder (ICS1 L3) • Provides comprehensive information when requesting interdisciplinary consultations and uses closed-loop feedback and active listening to incorporate feedback from all team members when coordinating care (ICS2 L3; SBP2 L3)
4 **Practice Ready** Can manage more complex patient presentations and take care of most cases **Framework:** The learner can treat all patients with severe acute or necrotizing pancreatitis and has a strong understanding of surgical options and techniques for less common scenarios. The supervisor 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.	• Demonstrates comprehensive knowledge of the varying patterns of disease presentation and progression (eg, acute necrotizing pancreatitis, WOPN, infected necrosis) (MK1 L4) • Determines the etiology and severity of pancreatitis, interprets CT imaging, and synthesizes clinical data, differentiating and managing acute peripancreatic fluid collections, pseudocysts, sterile necrotizing pancreatitis, infected necrosis, and WOPN (PC1 L4) • Identifies and manages complications associated with severe/necrotizing acute pancreatitis (eg, abdominal compartment syndrome, gastric outlet obstruction, biliary obstruction, pseudoaneurysm bleeding) (PC1 L4) • Customizes communication based on individual patient characteristics and preferences across barriers and cultural differences in a complex or critical situation (ICS1 L4)	• Demonstrates understanding of considerations for timing of laparoscopic cholecystectomy for complicated biliary pancreatitis, such as resolving pancreatitis, ensuring absence of infected necrosis, and delaying invasive interventions for pseudocysts until there is a mature thickened pseudocyst wall (MK1 L4; PC1 L4) • Demonstrates understanding of patient selection for endoscopic or operative options (MIS or open) for necrosectomy or pseudocyst drainage, such as video-assisted retroperitoneal debridement, transperitoneal debridement, or transgastric debridement (MK1 L4; PC1 L4) • Applies evidence-based guidelines but can adapt to a complex and nuanced situation as required (eg, fistula to duodenum or colon, failure of step-up approach) (PBLI1 L4) • Manages a critically ill patient with end-organ failure (eg, ventilator and AKI management) (PC1 L4) • Addresses social barriers to successful discharge related to alcohol use disorder or access to care after discharge and engages a patient/caregiver(s) in these difficult discussions (SBP2 L4; ICS1 L4) • Coordinates interdisciplinary care with colleagues in other disciplines (eg, GI, IR, social work, home health) (ICS2 L4)

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Evaluation & Management of a Patient Needing Renal Replacement Therapy

Description of the Activity	General surgeons are commonly called to evaluate patients with chronic kidney disease in need of renal replacement therapy (RRT). All surgeons must be able to devise a plan for RRT in adult patients and recognize patient considerations requiring specialty referral.
Functions	❖ Nonoperative/Preoperative ➢ Synthesize information from a patient's medical records, history, physical examination, referring providers, nephrologists, and existing diagnostic evaluations to determine the presence and severity of comorbid disease. ➢ Discuss the indications and options for RRT (hemodialysis catheters, kidney transplant, permanent hemodialysis access, peritoneal dialysis). ➢ Use a cost-effective preoperative testing strategy when planning the approach to hemodialysis access to limit complications and optimize success (eg, selective use of venography and arteriography, ultrasound vascular mapping). ➢ Formulate a permanent hemodialysis access operative plan in accordance with patient preference and anatomy, intraoperative findings, alternatives choices (eg, fistula or grafts), and potential postoperative complications in the setting of personal biases and barriers (eg, age, literacy, and cultural differences; cognitive disabilities). ➢ Obtain informed consent for permanent hemodialysis access with cultural humility. Respectfully describe the indications, risks, benefits, and alternatives of the planned operation, including goals of care. Ensure patient/caregiver comprehension using applicable language services and audio/visual aids. This process should include details of the patient's lifestyle and RRT life plan, and the consent discussion should be documented. ➢ Recognize how cardiac, pulmonary, hepatic, and renal comorbidities, as well as age, frailty, and surgical history, contribute to risk for surgery (eg, National Surgical Quality Improvement Program [NSQIP] risk calculator). ➢ For an anticoagulated patient, understand the significance of the indication, and apply an algorithm for discontinuation and resumption in the perioperative period. ➢ Recognize the variables that contribute to the proper timing of surgery (eg, coagulopathy, electrolyte abnormalities, poorly controlled diabetes mellitus, recent myocardial infarction or stent). ❖ Intraoperative ➢ Manage the perioperative environment, including room setup, equipment check, preprocedural time-out, specimen processing, counts, wound classification, and debriefing functions. ➢ Perform the planned hemodialysis procedure, and articulate a plan for managing unusual intraoperative findings. Procedures include: ▪ Arteriovenous fistula (AVF) • Brachiobasilic AVF with transposition • Brachiocephalic AVF • Radiocephalic AVF ▪ Arteriovenous graft • Forearm • Upper arm ➢ Use surgical skills to execute these standard access creations, including:

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	▪ Dissection and exposure of relevant upper-extremity vascular structures ▪ Knowledge of relevant instruments and supplies (sutures, needles, prosthetic graft materials) ▪ Principles of vascular control (inflow, outflow) and tunneling ▪ Selective indicated use of pharmacologic adjuncts such as antibiotics, antispasmodic compounds, and antithrombotic agents ▪ Vascular anastomosis construction ➢ Communicate with the anesthesiology team to select the optimal anesthetic method for a patient undergoing permanent hemodialysis access creation (eg, use of local, regional, or general anesthesia), taking the patient's condition into account. ❖ Postoperative ➢ Monitor the patient's postoperative course and disposition, and determine the venue for permanent hemodialysis access care. ➢ Respectfully communicate a medium- and long-term care strategy with the patient/caregiver(s) and other health care team members, including specific instructions related to proper permanent hemodialysis access use to ensure efficacy and long-term durability. ➢ Provide postoperative care for a patient with significant comorbid disease, including minimizing cardiac, pulmonary, and renal complications and resuming medications such as anticoagulation. ➢ Recognize and manage postoperative permanent hemodialysis access complications, such as: ▪ Extremity edema ▪ Failure to mature ▪ Hematoma ▪ Infection ▪ Postoperative bleeding ▪ Pseudoaneurysm ▪ Steal syndrome ▪ Thrombosis ➢ Diagnose and manage complications after permanent hemodialysis access creation. ▪ Perform a careful physical examination of upper extremity AV fistulas and grafts (inspection, pulsatility, thrill, bruit, augmentation, collapse against gravity). ▪ Use imaging adjuncts to support a diagnosis in a selective and cost-effective way.
Scope	❖ In scope ➢ Hemodialysis access in adult patients needing RRT ❖ Out of scope ➢ Complicated permanent hemodialysis access (eg, chest wall, lower limb) ➢ Management of central venous stenosis ➢ Pediatric patients ➢ Permanent hemodialysis access revision procedures ➢ Technical execution of endovascular procedures

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Evaluation & Management of a Patient Needing Renal Replacement Therapy

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
1 **Limited Participation** Demonstrates understanding of information and has very basic skills **Framework:** What a learner directly out of medical school should know The attending can show and tell.	• Articulates etiologies of renal disease and the 3 general types of renal replacement therapies (MK1 L1) • Performs a basic arterial exam in an access patient (MK2 L1) • Respectfully communicates basic facts about the condition to a patient/caregiver(s) but inconsistently uses applicable language services and audio/visual aids (ICS1 L1) • Communicates the elements of an informed consent discussion but omits some elements when documenting the discussion (ICS1 L1) • Receives consultation for placement of permanent hemodialysis access and obtains a focused history but requires guidance to articulate a plan (ICS2 L1; PC1 L1) • Identifies some indications for consultation and requests a consult from other services (nephrology, cardiology, anesthesiology) (ICS2 L1) • Enumerates basic health payment systems in the U.S. (SBP3 L1)	• Requires prompting to articulate operative steps of direct autogenous fistula creation (MK2 L1) • Names but requires prompting to intraoperatively identify nervous, musculoskeletal, and subfascial vascular structures (MK2 L1) • Requires assistance to describe anesthetic considerations and approaches for permanent hemodialysis access creation in the arm (MK2 L1) • Assists with positioning and preparation of a patient and retraction for exposure (PC2 L1) • Maintains a sterile field and performs superficial wound closure (PC2 L1) • Handles instruments safely but tentatively; follows intraoperative directions; displays coordinated hand movements for simple maneuvers under direct instruction, though inefficiently (PC2 L1) • Demonstrates respect for and engages in culturally sensitive communication with all members of the OR team (ICS2 L1) • Demonstrates uncertainty about the necessary equipment for the operation (ICS2 L1)	• Manages a routine postop course with guidance after direct AV fistula construction (PC4 L1) • Evaluates vascular construction patency and basic postop problems (eg, bleeding, hypotension, HTN), requiring assistance to recognize some signs or symptoms of complications (PC4 L1) • Requires prompting to generate criteria for access maturation (MK2 L1) • Clearly and respectfully communicates basic aspects of the operative procedure along with routine discharge instructions and wound care details to a patient/caregiver(s) (ICS1 L1) • Describes basic elements of documentation for billing/coding (SBP3 L1)
2 **Direct Supervision** Demonstrates understanding of the steps of the operation but	• Identifies utility of and interprets preop imaging (duplex, venography, arteriography) to recognize anatomic variants and diagnose arterial inflow disease (PC1 L2; MK2 L2)	• Articulates basic operative steps of direct autogenous fistula creation and identifies optimal skin incision location (MK2 L2)	• Manages a routine postop course without guidance after direct AV fistula construction (PC4 L2) • Performs a basic permanent hemodialysis access physical

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Level	Preoperative/Nonoperative	Intraoperative	Postoperative
requires direction through principles and does not know the nuances of a basic case **Framework:** The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression.	• Articulates the 3 general types of hemodialysis access (MK1 L2) • Performs a complete extremity vascular exam (arterial and venous exam, qualitative assessment of skin/soft tissue) in a first-time access patient (MK2 L2) • Articulates a plan for hemodialysis access creation but may omit consideration of comorbidities that confound surgical timing and outcomes (PC1 L2) • Respectfully communicates basic facts about the diagnosis to a patient/caregiver(s), customizing communication to overcome barriers and cultural differences and using applicable language services and audio/visual aids (ICS1 L2) • Communicates the elements of an informed consent discussion in a straightforward case and completely documents the discussion (ICS1 L2) • Identifies general indications for consultation and respectfully requests a consult from other services (ICS2 L2) • Completes a full consultation for straightforward placement of permanent hemodialysis access; communicates urgency to supervisors and surgical recommendation to the consulting service (ICS2 L2) • Demonstrates basic understanding of financing structures for renal health in the U.S. health care system (SBP3 L2)	• Identifies arm nerves and musculoskeletal and subfascial vascular structures under normal conditions (MK2 L2) • Anticipates some next steps in the operation and necessary instruments but requires assistance to coordinate with perioperative staff to ensure these are available (PC2 L2; ICS2 L2) • Performs basic vascular surgery skills (eg, dissects and ligates subcutaneous veins, performs suture ligation, closes incisions) without oversight (PC3 L2) • Requires active direction to move the operation forward, including obtaining vascular control and constructing an anastomosis (PC3 L2) • Identifies common positioning options but cannot name factors to select one over another; recognizes the importance of protecting against nerve and pressure injuries but cannot describe resulting morbidity (PC3 L2) • Maintains the plane of dissection if identified for them but frequently deviates from the correct plane (PC3 L2) • Requires assistance to control bleeding (PC3 L2) • Clearly communicates with all members of the OR team (ICS2 L2)	exam but misses some abnormal findings (eg, thinning skin, distal pulse augmentation with access occlusion, outflow thrill) (PC4 L2) • Recognizes and manages early standard surgical complications (eg, bleeding, cellulitis) (PC4 L2) • Recognizes early access-specific complications (eg, bleeding, thrombosis, steal syndrome), requiring assistance to manage them (PC4 L2) • Generates most criteria for access maturation without prompting (MK2 L2) • Completes documentation with few omissions of needed elements for billing/coding (SBP3 L2)

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Evaluation & Management of a Patient Needing Renal Replacement Therapy

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
3 **Indirect Supervision** Can do a basic operation but will not recognize abnormalities and does not understand the nuances of an advanced case **Framework:** The learner can perform the operation in straightforward circumstances. The attending gives passive help. This help may be given while scrubbed for more complex cases or during a check-in for more routine cases.	• Recognizes comorbidities that may confound surgical timing and outcomes (MK1 L3) • Performs a complete extremity vascular exam in a redo access patient (MK1 L3) • Develops a plan for a straightforward patient requiring hemodialysis access that incorporates preop imaging findings; identifies medical history (eg, failed permanent access attempts, central venous occlusion) that prompts involvement of specialized providers (eg, vascular surgeons) (PC1 L3) • Communicates a straightforward patient's medical condition across barriers and cultural differences to elicit a personalized care plan in a shared decision-making process (ICS1 L3) • Conducts an informed consent discussion for a straightforward procedure with cultural humility; completely documents the discussion (ICS1 L3) • Completes consultation for complicated placement of permanent hemodialysis access, including assessment of urgency, and communicates the surgical recommendation clearly to others (ICS2 L3) • Discusses how different types of renal replacement therapies impact patients, their caregivers, and the health care system (SBP3 L3)	• Performs operative steps of direct autogenous fistula creation in a straightforward case, including obtaining vascular control and constructing technically sound vascular anastomoses (PC3 L3) • Performs more advanced vascular surgery skills (eg, dissects and exposes subfascial arteries and veins) (PC3 L3) • Positions the patient to prevent iatrogenic injury (MK2 L3) • Identifies optimal skin incision location for arm prosthetic straight or loop grafts (MK2 L3) • Identifies but cannot adapt to abnormal anatomy discovered intraoperatively (eg, high brachial artery bifurcation, poor quality arterial inflow, smaller than expected vein) (MK2 L3) • Identifies arm tissue planes and musculoskeletal and subfascial vascular structures in the setting of inflammation or scarring and adapts tissue handling based on tissue quality (MK2 L3; PC3 L3) • Formulates an anesthetic approach in partnership with the operative team (ICS2 L3)	• Manages the routine postop course of a patient with a complex construction or a complicated course after a routine construction (PC4 L3) • Recognizes and manages early access-related complications (eg, bleeding, thrombosis, steal syndrome) (PC4 L3) • Identifies standard criteria for access maturation (MK2 L3) • Completes documentation, including all needed elements for billing/coding (SBP3 L3)

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Evaluation & Management of a Patient Needing Renal Replacement Therapy

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
4 **Practice Ready** Can manage more complex patient presentations and operations and take care of most cases **Framework:** The learner can treat all straightforward kidney disease and has a strong understanding of surgical options and techniques for less common scenarios. 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.	• Synthesizes all relevant data and generates an informed renal replacement therapy life plan (short-, medium-, and long-term strategy for dialysis/transplant) for standard hemodialysis scenarios (PC1 L4) • Integrates preoperative imaging with aberrant anatomy (duplex, venography, arteriography) and initial choice of access (eg, autogenous fistula, graft, catheter) to recognize venous outflow issues that require alteration of the plan (PC1 L4) • Manages comorbidities that may confound surgical timing and outcomes (MK1 L4) • Customizes communication based on individual patient characteristics and preferences across barriers and cultural differences in a difficult kidney disease discussion; negotiates and manages conflict between a patient, caregivers, and the health care team (ICS1 L4) • Conducts an informed consent discussion for a complex hemodialysis access procedure with cultural humility, eliciting patient preferences and documenting risks and benefits individualized to the patient (ICS1 L4) • Completes a full consultation for all permanent hemodialysis access placements or their resultant complications and communicates the recommendations clearly to others (ICS2 L4) • Uses shared decision-making in treatment planning, taking into consideration costs to the patient (SBP3 L4)	• Identifies optimal incision location for complex access constructions (eg, basilic vein transposition) (MK2 L4) • Formulates an anesthetic approach accounting for complex comorbidities in partnership with the anesthesia team (MK2 L4; ICS2 L4) • Identifies additional instruments and equipment necessary for performing complex access creation and coordinates with the OR team for their availability (PC2 L4; ICS2 L4) • Performs operative steps of complex autogenous fistula and AV graft access creations, including obtaining vascular control and constructing technically sound vascular anastomoses (PC2 L4) • Adapts to abnormal anatomy discovered intraoperatively (eg, high brachial artery bifurcation, poor quality arterial inflow, smaller than expected vein) (PC3 L4) • Devises and implements a plan when deviation from the initial operative plan is required (PC3 L4) • Identifies intraoperative challenges (eg, dissections, access inflow and outflow lesions, hand ischemia) that prompt involvement of specialized providers (eg, vascular surgeons) (ICS2 L4)	• Manages a complicated postop course (PC4 L4) • Recognizes and coordinates management of complex short-term complications (eg, ischemic mononeuropathy) and long-term complications (eg, pseudoaneurysm, infection, arm edema, failure to mature) (PC4 L4) • Confirms that a permanent hemodialysis access is ready for attempted use (MK2 L4) • Communicates an access use timetable/plan to a patient/caregiver(s) and dialysis center/nephrologist in an understandable and respectful way (ICS2 L4) • Customizes and streamlines documentation, including all needed elements for billing/coding (SBP3 L4)

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Evaluation & Management of a Patient with Small Bowel Obstruction

Description of the Activity	General surgeons encounter patients with small bowel obstruction (SBO) in the emergency department, inpatient, and outpatient settings. They are expected to manage or assist with the management of adult and pediatric patients presenting with SBO due to any etiology.
Functions	❖ Nonoperative/Preoperative ➢ Elicit clinical information from referring providers or patients who present with signs and symptoms of SBO. Perform a focused history and physical exam, including an assessment of pertinent positive and negative signs and symptoms of risk factors, such as a history of Crohn's disease or cancer or prior abdominal surgery. ➢ Recognize the urgency of consultation and the level of care required, with particular attention to the potential for ischemic bowel (eg, closed-loop obstruction). ➢ Initiate resuscitative measures to correct or prevent physiologic derangements. ➢ Determine the need for gastrointestinal decompression, and discuss the risks and efficacy of nasogastric tube placement for decompression. ➢ Order guideline-concordant imaging as indicated for the evaluation of SBO (Eastern Association for the Surgery of Trauma). ➢ Identify patients meeting the criteria for a nonoperative approach to SBO. ➢ Collaborate with the consulting service regarding the possible need for patient transfer (setting or service) and additional imaging, and discuss management recommendations. ➢ Identify patients requiring surgical intervention, including those presenting with closed-loop SBO who require urgent surgical management. ➢ Tailor management of bowel obstruction in alignment with overall goals of care (eg, associated with end-of-life conditions). ➢ Obtain informed consent with cultural humility. ▪ 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. ❖ Intraoperative ➢ Manage the perioperative environment, including room setup, equipment check, preprocedural time-out, specimen processing, counts, wound classification, and debriefing functions. ➢ Synthesize an operative plan that demonstrates understanding of the operative anatomy, physiology, indications, contraindications, risks, benefits, alternatives, and potential complications. ▪ Discuss an operative approach to SBO based on clinical and radiographic findings. ▪ Manage SBO due to adhesions. ▪ Manage closed-loop SBO. ▪ Manage internal hernia after Roux-en-Y gastric bypass, including closing mesenteric defects.

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Evaluation & Management of a Patient with Small Bowel Obstruction

	▪ Perform open and minimally invasive adhesiolysis. ➢ Perform operative interventions required to manage SBO secondary to adhesions. ▪ Safely enter the reoperative abdomen. ▪ Perform blunt and sharp adhesiolysis (identification of tissue planes). ▪ Assess bowel viability, and determine when resection is indicated. ▪ Decide whether to perform temporary or definitive abdominal wall closure. ➢ Integrate new information discovered intraoperatively to modify the surgical plan/technique as necessary, such as: ▪ Deciding when to leave a patient's small bowel in discontinuity with further resuscitation and reevaluation ▪ Decision-making in the setting of massive loss of small bowel and survivability ▪ Management of a frozen abdomen ▪ Management of an internal hernia after Roux-en-Y gastric bypass (Petersen defect between the antecolic jejunum and colon, jejunojejunostomy mesenteric defect) ▪ Management of inadvertent enterotomy ▪ Management of serosal injury ➢ Partner with the anesthesia team, nursing staff, and other perioperative health care professionals to create and maintain an intraoperative environment that promotes patient-centered care. ❖ Postoperative ➢ Identify and manage postoperative complications. ▪ Electrolyte disturbances/high-output stoma ▪ Need for postoperative nutritional support ▪ Prolonged postoperative ileus/early postoperative obstruction ▪ Surgical site infection/postoperative fasciitis or dehiscence ▪ Unrecognized enterotomy/postoperative enteric fistula or intra-abdominal abscess ❖ Communicate with the patient/caregiver(s) and members of the care team (primary care provider, nursing staff, other health care providers) to ensure an understanding of preprocedure and postprocedure instructions and the ability to carry out the resultant plan within the context of the patient's social situation (transportation, living situation, insurance, access to a pharmacy).
Scope	❖ In scope ➢ Initial evaluation and management of all adult patients and pediatric patients older than 5 years presenting with SBO ➢ Intraoperative management of SBO secondary to adhesive disease ❖ Out of scope ➢ Pediatric patients younger than 5 years

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Evaluation & Management of a Patient with Small Bowel Obstruction

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
1 **Limited Participation** Demonstrates understanding of information and has very basic skills **Framework:** What a learner directly out of medical school should know The attending can show and tell.	• Obtains an H&P with cultural humility and identifies SBO in a patient; develops a differential that includes hernia or adhesions but may need assistance considering closed-loop obstruction or internal hernia (MK1 L1; PC1 L1) • Initiates fluid resuscitation and correction of electrolyte or acid-base derangements but may require guidance; considers the use of an NG tube but is uncertain when it is indicated or its associated risks (eg, incorrect placement, dislodgement, clogging, increased risk of aspiration, tube dysfunction) (MK1 L1) • Respectfully communicates the basic plan for initial management to a patient/caregiver(s) but inconsistently uses applicable language services and audio/visual aids (ICS1 L1) • If an operation is indicated, communicates the elements of an informed consent discussion but omits some elements when documenting the discussion (PROF1 L1)	• Identifies a common abdominal wall hernia but does not evaluate for an internal hernia (MK1 L1) • Needs prompting for basic room setup and steps to enter the abdomen, such as a midline laparotomy with careful entrance into the peritoneal space to avoid injury of dilated bowel and, in the reoperative setting, entrance into an undissected plane, identifying when a laparoscopic approach is potentially safe (PC3 L1) • Identifies adhesions and tissue planes with guidance and retraction but needs the supervisor to guide the entire adhesiolysis (PC3 L1) • Centers the operative field (anatomy and instruments) with the camera with frequent adjustments and reminders (PC3 L1) • Displays coordinated hand movements for simple maneuvers, though inefficiently and under direct instruction (PC3 L1)	• Identifies signs and symptoms of common postop complications such as ileus, infection, or bleeding, requiring guidance to manage them (PC4 L1) • Demonstrates basic knowledge of treatment strategies for common complications encountered in patients treated for SBO (eg, managing electrolyte abnormalities, minimizing opiate use) (PC4 L1) • Provides updates to a patient/caregiver(s) regarding progress with SBO (ICS1 L1)
2 **Direct Supervision** Demonstrates understanding of the steps of the operation but requires direction through principles and does not know the nuances of a basic case	• Evaluates a patient with SBO and interprets imaging (identifies ischemic bowel, pneumatosis, thickened bowel wall, intra-abdominal fluid, transition point) (PC1 L2) • Initiates resuscitation when it is needed, including addressing electrolyte and acid-base derangements (MK1 L2; PC1 L2) • Demonstrates knowledge of the significance of prior surgery but may	• Demonstrates understanding of anatomic and acquired findings that may be encountered intraoperatively during an abdominal exploration for SBO (MK1 L2) • Requires prompting to determine the need for bowel resection or repair of serosal injury once adhesiolysis is complete (PC3 L2) • Actively retracts and assists during the procedure and identifies some structures (PC2 L2)	• Engages with a patient/caregiver(s) to ensure they understand short- and long-term care for an ostomy, fistula, or wound (ICS1 L2) • Initiates management for a common postop complication such as ileus, infection, or bleeding (PC4 L2)

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Evaluation & Management of a Patient with Small Bowel Obstruction

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression.	need assistance identifying a closed-loop SBO or internal hernia on imaging (PC1 L2) • Nonoperatively manages a patient with presumed partial SBO or ileus without urgent surgical indication, including using a GGF challenge consistent with guidelines and demonstrating the ability to manage the NG tube and safely advance the diet (PC1 L2) • Respectfully communicates basic facts about the diagnosis to a patient/caregiver(s) and uses applicable language services and audio/visual aids (ICS1 L2) • Verbalizes consideration for nonoperative management of malignant obstruction causing SBO and engages the palliative care team; requires assistance to engage the patient/caregiver(s) in shared decision-making (PROF1 L2)	• Performs basic surgical tasks such as tying mesenteric vessels and deploying the linear stapler with instruction (PC2 L2) • Demonstrates some coordination of instruments but tissue handling is inconsistent with both hands, especially laparoscopically; needs frequent adjustments of the camera to triangulate instruments (PC2 L2) • Proceeds tentatively with adhesiolysis and has difficulty consistently identifying tissue planes, requiring redirection to avoid serosal injury or enterotomies (PC3 L2) • Demonstrates understanding of the impact of prior incisions and dilated bowel on port placement (PC3 L2) • Assesses bowel viability before closure (PC3 L2)	
3 **Indirect Supervision** Can do a basic operation but will not recognize abnormalities and does not understand the nuances of an advanced case **Framework:** The learner can perform the operation in straightforward circumstances.	• Develops a plan for managing a healthy patient with SBO and identifies when surgical intervention is required (PC1 L3) • Recognizes imaging findings of possible internal hernia or closed loop obstruction (eg, swirl sign, decompressed proximal and distal bowel) (PC1 L3) • Identifies when a patient's clinical condition changes with SBO (eg, concern for ischemic bowel) and adapts the management plan accordingly (MK1 L3; PC1 L3) • Respectfully communicates the medical condition of an uncomplicated patient	• Demonstrates knowledge of post–R-Y gastric bypass anatomy and the need to explore for internal hernia (MK1 L3) • Consistently demonstrates careful tissue handling when mobilizing small bowel and releasing adhesions (PC3 L3) • Identifies tissue planes; identifies and dissects relevant normal anatomy (PC3 L3) • Demonstrates understanding that when serosal injury is extensive, resecting the affected bowel is the best option (PC3 L3) • Safely places ports, treats a single-band adhesion, and runs the small bowel laparoscopically (PC3 L3)	• Identifies and manages postop problems in a patient with SBO and a complex condition (eg, kidney failure, CHF, cirrhosis) (PC4 L3) • Manages the postop course of a patient (with assistance as needed) and engages other specialty services as indicated for postop management of complex findings (eg, cancer, IBD) (PC4 L3) • Engages in shared decision-making with a patient/caregiver(s) regarding

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Evaluation & Management of a Patient with Small Bowel Obstruction

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
The attending gives passive help. This help may be given while scrubbed for more complex cases or during a check-in for more routine cases.	across barriers (eg, literacy, language, and cultural differences) to elicit a personalized care plan, using shared decision-making and teach-back to ensure understanding (ICS1 L3) • Seeks assistance to manage a patient with SBO secondary to a frozen abdomen or malignant obstruction (PROF1 L3)	• Identifies bowel that is not viable and should be resected (PC3 L3) • Moves the operation forward and discerns when sufficient adhesiolysis has been achieved to relieve the SBO (PC3 L3)	long-term care plans in the setting of SBO and a frozen abdomen or malignant obstruction (ICS1 L3)
4 **<u>Practice Ready</u>** Can manage more complex patient presentations and operations and take care of most cases **<u>Framework</u>:** The learner can treat all SBOs and has a strong understanding of surgical options and techniques for less common scenarios. The supervisor 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.	• Demonstrates comprehensive knowledge of the various presentations of SBO and identifies unique populations (patients with prior R-Y gastric bypass, closed-loop SBO, Crohn's, or malignant obstruction) that impact nonoperative and operative treatment decision-making (MK1 L4) • Synthesizes all information to develop a plan to manage a complex patient with SBO, identifying the dynamic nature of SBO, when the plan needs to be adjusted, and the need to engage other specialists (MK1 L4; PC1 L4) • Identifies the potential need for immune-modulating medication in a patient presenting with Crohn's and SBO (MK1 L4) • Facilitates difficult conversations with a patient/caregiver(s) in the setting of SBO with a frozen abdomen or malignant obstruction and engages the palliative care team or an ethics consult as indicated (ICS1 L4; PROF1 L4)	• Assesses bowel viability and makes decisions regarding restoration of intestinal continuity and abdominal closure based on intraoperative findings, including hemodynamic stability (MK1 L4) • Manages complex findings such as internal hernia (eg, Petersen, foramen of Winslow), malignant obstruction, enterotomy, and frozen abdomen (PC3 L4) • Demonstrates careful tissue handling and avoids injury in an open or MIS approach (PC3 L4) • Performs a complex lap adhesiolysis and identifies when to convert to an open procedure for failure to progress (PC3 L4)	• Independently identifies, differentiates, and manages complex postop complications such as ileus, early postop bowel obstruction, fistula formation, anastomotic failure, fascial dehiscence, and ostomy dysfunction (PC4 L4) • Communicates with a patient/caregiver(s) and members of the health care team with cultural humility regarding complications, long-term care needs for an ostomy or fistula, or palliation as indicated (ICS1 L4)

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Evaluation & Management of a Patient with Soft Tissue Infection (Inc NSTI)

Description of the Activity	General surgeons are frequently asked to consult on adult and pediatric patients with potential soft tissue infections. In the emergency department, inpatient, and outpatient settings, surgeons must be able to determine if an infection is present and develop and execute a treatment plan.
Functions	❖ Nonoperative/Preoperative ➢ Synthesize information from a patient's history, physical examination, medical records, and existing diagnostic evaluations to develop a differential diagnosis. ➢ Determine if additional diagnostic studies are needed, including radiologic and laboratory evaluations. ➢ Identify the severity of infection and systemic involvement, and perform expeditious preoperative management, including obtaining intravenous access, performing resuscitation, and administrating antibiotics (selection should include antibiotics with activity against endotoxin, with appropriate dosing and timely administration). ➢ Identify and manage perioperative risk factors for the development of soft tissue infection (eg, diabetes mellitus, immunocompromised state). ➢ Determine the need and timing for operative intervention. ▪ Plan for a scheduled reassessment if managing the patient nonoperatively. ➢ Develop a safe anesthetic and pain management approach consistent with a patient's age, diagnosis, and comorbidities. ➢ Communicate with all health care team members regarding the plan of care. ➢ Obtain informed consent with cultural humility. ▪ 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. ❖ Intraoperative ➢ Manage the perioperative environment, including room setup, equipment check, preprocedural time-out, specimen processing, counts, wound classification, and debriefing functions. ➢ Develop an initial operative plan that demonstrates understanding of a patient's pathology, anatomy, physiology, indications, contraindications, and potential complications. ➢ Collaborate with perioperative health care professionals to create and maintain an intraoperative environment that promotes safe patient care. ➢ Position the patient to expose the operative field, taking precautionary measures to prevent iatrogenic injury. ➢ Perform operative interventions: ▪ Identify, drain, debride, or resect infected or necrotic tissue to viable tissue. ▪ Identify the potential need for amputation (preserving life over limb). ▪ Perform operative steps while minimizing operative time.

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	➢ Integrate new information discovered intraoperatively, and modify the operative plan if necessary: ▪ Identify involvement of adjacent tissue and the potential need for amputation. ▪ Demonstrate understanding of when a return to the operating room for repeated examination and debridement is necessary. ▪ Perform wound management. ▪ Demonstrate understanding of when specialty consultation is needed. ▪ Identify the condition of physiologic futility (inability to control infection). ❖ Postoperative ➢ Initiate and oversee postoperative management, including wound management (dressing changes, need for further debridement, closure), multimodal pain-control strategies, disposition, initiation and use of adjunctive therapies, and ongoing resuscitation, in collaboration with members of the health care team. ➢ Communicate with a patient/caregiver(s) with cultural humility to ensure understanding of postencounter needs, outcome expectations, and the follow-up plan. ➢ Identify and manage the most common complications of soft tissue infection. ▪ Challenges in skin closure and wound coverage ▪ Inadequate drainage or debridement ▪ Multisystem organ failure ➢ Develop a postencounter plan that considers patient-specific barriers to care, including: ▪ Disposition ▪ Wound management ▪ Support services
Scope	❖ In scope ➢ Cellulitis, abscess (including pilonidal abscess) ➢ Infected pressure ulcers ➢ Necrotizing soft tissue infection: cellulitis, fasciitis, myonecrosis ❖ Out of scope ➢ Bite or envenomation ➢ Chemical, electrical, or radiation burns ➢ Lymphedema ➢ Thermal injury ➢ Calciphylaxis ➢ Hidradenitis (except acute abscess and cellulitis) ➢ Postoperative wound infection (included under postoperative complications)

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Level	Preoperative/Nonoperative	Intraoperative	Postoperative
1 **<u>Limited Participation</u>** Demonstrates understanding of information and has very basic skills **<u>Framework:</u>** What a learner directly out of medical school should know The attending can show and tell.	• Obtains an H&P of a patient with a soft tissue infection with cultural humility; develops a differential that includes most common disorders (eg, cellulitis, abscess), requiring assistance for more complex presentations (eg, hidradenitis suppurativa) (PC1 L1) • Respectfully communicates basic facts about the condition to a patient/caregiver(s) but inconsistently uses applicable language services and audio/visual aids (ICS1 L1) • Communicates the elements of an informed consent discussion but omits some elements when documenting the discussion (ICS1 L1) • Performs safe handoff of a stable patient to a new care team (SBP2 L1) • Seeks help in a timely manner when the severity of a patient's disease requires it (PROF2 L1) • Demonstrates understanding of strategies that enhance the ability to provide timely patient care (PROF2 L1) • Inconsistently demonstrates understanding of the severity of infection and systemic involvement (MK1 L1) • Initiates management of a patient's comorbidities and treatment for soft tissue infection with supervision; needs help to determine the need and urgency of operative intervention; if nonoperative management is selected, inconsistently determines timing and responsibility for reevaluation (MK1 L1)	• Demonstrates understanding of care coordination with the anesthesia and recovery unit teams for a stable patient with routine needs (SBP2 L1) • Seeks additional help in a timely manner when the severity of a patient's disease requires it (PROF2 L1) • Identifies strategies that enhance the ability to provide timely patient care (PROF2 L1) • Requires active instruction to move the operation forward (PC3 L1) • Identifies tissue planes only with active guidance and retraction (PC3 L1) • Handles instruments inefficiently and with limited dexterity; demonstrates incomplete understanding of correct tissue handling (PC3 L1) • Inconsistently identifies the extent of infected tissue (PC3 L1)	• Communicates basic aspects of the operative procedure and ongoing management plan to a patient/caregiver(s) but needs prompting to clarify expected outcomes and the overall anticipated treatment course (ICS1 L1) • Works respectfully with other members of the health care team (SBP2 L1) • Demonstrates understanding of the need for a discharge plan for disposition, support services, wound management, and follow-up; identifies barriers related to disparities of resources and access (SBP2 L1) • Seeks additional help in a timely manner when the severity of a patient's disease requires it (PROF2 L1) • Identifies strategies that enhance the ability to provide timely patient care (PROF2 L1) • Initiates basic postop management, including wound care; requires direct supervision to plan timing of dressing changes and further operative care (PC4 L1) • Demonstrates understanding of the fundamental aspects of multimodal pain control strategies, adjunctive therapies (including antibiotics), and resuscitation but cannot implement them (PC4 L1)

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			• Identifies some of the most common complications of soft tissue infection, including postop bleeding and need for further debridement; requires supervision to recognize and manage the occurrence of systemic complications (eg, AKI, septic shock) and is unsure of definitive wound management modalities (PC4 L1)
2 **<u>Direct Supervision</u>** Demonstrates understanding of the steps of the operation but requires direction through principles and does not know the nuances of a basic case **<u>Framework:</u>** The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case	• Evaluates a patient with a soft tissue infection and orders diagnostic testing as indicated, including imaging and lab evaluation (PC1 L2) • Respectfully communicates basic facts about the diagnosis to a patient/caregiver(s), customizing communication to overcome barriers and cultural differences and using applicable language services and audio/visual aids (ICS1 L2) • Communicates the elements of an informed consent discussion in a straightforward case and consistently documents the discussion (ICS1 L2) • Performs safe handoff of a complex patient to another care team or oversees the transition of a complex patient from the ED to the OR or ICU (SBP2 L2) • Responds to a consult for soft tissue infection in a timely manner (PROF2 L2) • Demonstrates understanding of the limits of the knowledge/skills of the health care team caring for a patient with soft tissue infection and seeks appropriate help (PROF2 L2) • Demonstrates understanding of the severity of infection and systemic	• Displays coordinated hand movements for simple maneuvers; uses common surgical instruments (PC3 L2) • Coordinates a multidisciplinary operative management strategy with consulting services such as urology or plastics in a straightforward case (SBP2 L2) • Performs basic debridement in a timely manner but is unable to complete the entire debridement (PROF2 L2) • Identifies limits in the knowledge/skills of the health care team caring for a patient with soft tissue infection and seeks appropriate help (eg, senior residents, additional services such as plastics or orthopedics) (PROF2 L2) • Displays tissue handling that may intermittently result in tissue trauma; requires redirection to maintain the optimal tissue plane (PC3 L2) • Demonstrates limited ability to integrate operative findings into the operative plan (PC3 L2)	• Communicates details of the operative procedure and ongoing management plan to a patient/caregiver(s) but omits some elements when discussing expected outcomes and the overall anticipated treatment course (ICS1 L2) • With supervision, develops a postencounter plan that considers patient-specific barriers to care, including disposition, support services, wound management, and follow-up; coordinates between care teams to ensure safe transition of care (SBP2 L2) • Respectfully works and collaborates with other members of the health care team (SBP2 L2) • Prioritizes response to potential postop complications (PROF2 L2) • Identifies limits in the knowledge/skills of the team caring for a patient with soft tissue infection and seeks appropriate help for advanced wound care (PROF2 L2) • Initiates and manages a patient's comorbid conditions but requires direction to recognize and mitigate their effects (MK1 L2)

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Level	Preoperative/Nonoperative	Intraoperative	Postoperative
to maintain forward progression.	involvement; initiates management of patient comorbidities and treatment for soft tissue infection (MK1 L2) • Determines the need for operative intervention but may not recognize its urgency; if nonoperative management is selected, demonstrates understanding that reevaluation is necessary but needs help to determine timing and responsibility (MK1 L2) • Manages a patient not requiring drainage or debridement with antimicrobial therapy (PC1 L2)		• Initiates postop management, including wound care; requires direction to manage complex wounds, including planning the timing and type of dressing changes and determining further operative care (PC4 L2) • Implements multimodal pain control strategies, adjunctive therapies (including antibiotics), and resuscitation with prompting (PC4 L2) • Demonstrates understanding of the most common complications of soft tissue infection, including postop bleeding and need for further debridement (PC4 L2) • Demonstrates understanding of systemic complications (eg, AKI, septic shock) but inconsistently manages them (PC4 L2) • Demonstrates understanding of definitive wound management modalities but inconsistently implements them (PC4 L2)
3 **<u>Indirect Supervision</u>** Can do a basic operation but will not recognize abnormalities and does not understand the nuances of an advanced case	• Communicates the medical condition of a straightforward patient across barriers and cultural differences to elicit a personalized care plan in a shared decision-making process; uses teach-back to ensure understanding (ICS1 L3) • Conducts an informed consent discussion related to operative management of soft-tissue infection with cultural humility and completely documents the discussion (ICS1 L3) • Supervises safe transition of care by junior residents in a complex situation,	• Leads coordination of care or a safe transition of care to a separate OR team for a critically ill patient requiring multiservice management (SBP2 L3) • Demonstrates attention to detail in a complex debridement (PROF2 L3) • Demonstrates professional behavior in a complex or stressful situation such as a decision to amputate primarily (PROF2 L3) • Exhibits confidence and self-awareness of limits in knowledge/skills (PROF2 L3) • Displays coordination and dexterity when handling tissue; demonstrates respect for tissue (PC3 L3)	• Communicates details of the operative procedure and ongoing management plan to a patient/caregiver(s) using a variety of methods to ensure understanding; clarifies expected outcomes and the anticipated treatment course in a sensitive and caring manner (ICS1 L3) • Respectfully communicates and coordinates the contributions of all health care team members regarding the plan of care (SBP2 L3) • Develops a postencounter plan that considers patient-specific barriers to

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Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can perform the operation in straightforward circumstances. The attending gives passive help. This help may be given while scrubbed for more complex cases or during a check-in for more routine cases.	including emergency transition to the OR or ICU (SBP2 L3) • Responds to a complex patient with a soft tissue infection in a timely manner and with appropriate attention to detail (PROF2 L3) • Demonstrates professional behavior in a complex or stressful situation, such as a patient's inability to comply with recommended care (PROF2 L3) • Exhibits appropriate confidence and self-awareness of limits in knowledge/skills (PROF2 L3) • Manages most patient comorbidities associated with the development and presentation of soft tissue infection (eg, DM, immunocompromised state, anticoagulation use), including IV access, multimodal pain management, antibiotic administration (selection should include antibiotics with activity against endotoxin, with accurate dosing and timely administration) (MK1 L3) • Determines the need for urgent operative intervention with consideration for a patient's overall condition (MK1 L3) • Develops a plan for managing a patient with a straightforward abscess requiring drainage (either I&D or percutaneous drainage) (PC1 L3) • Adjusts the care plan when a patient with a progressive soft tissue infection is decompensating or not improving, including proceeding to the OR for debridement (PC1 L3)	• Develops an operative plan that includes patient positioning; demonstrates understanding of a patient's pathology, anatomy, physiology, indications, contraindications, and potential complications (PC3 L3) • Demonstrates understanding of the principles of debridement; identifies the extent of infected tissue (PC3 L3) • Makes most intraoperative decisions independently (PC3 L3) • Integrates operative findings to modify the operative plan as needed; when applicable and with some supervision, identifies the potential need for amputation (preserving life over limb) and situations of physiologic futility in which infection cannot be controlled (PC3 L3)	care, including disposition, support services, wound management, and follow-up; coordinates health care teams to ensure safe transition of care (SBP2 L3) • Demonstrates professional behavior in a complex or stressful situation, such as a patient's inability to comply with recommended care (PROF2 L3) • Exhibits appropriate confidence and self-awareness of limits in knowledge/skills (PROF2 L3) • Initiates and oversees postop management of a patient's simple comorbid conditions; requires direction for a complex medical condition (MK1 L3) • Initiates and oversees postop management, including wound care (eg, vacuum dressing, daily dressing changes), timing of dressing changes, and further operative management; requires assistance to manage complex wounds (PC4 L3) • Uses multimodal pain control strategies and adjunctive therapies (including antibiotics) and guides ongoing resuscitation (PC4 L3) • Develops a plan to manage common complications of soft tissue infection, including postop bleeding, incomplete excision or progression of disease, need for further debridement, multisystem organ failure, and septic shock; develops a plan for definitive wound management and skin closure with assistance (PC4 L3)

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4 **Practice Ready** Can manage more complex patient presentations and operations and take care of most cases **Framework:** The learner can treat all straightforward presentations of soft tissue infection and has a strong understanding of surgical options and techniques for less common scenarios. 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.	• Customizes communication based on a patient's characteristics and preferences across barriers and cultural differences in a critical or life-threatening situation; ensures patient/caregiver comprehension by using applicable language services and audio/visual aids (ICS1 L4) • Conducts an informed consent discussion related to operative management of soft tissue infection with cultural humility, eliciting patient preferences and documenting risks and benefits individualized to the patient (ICS1 L4) • Coordinates transition to home care for a patient with significant wound care requirements and limited social/economic resources or cultural/language barriers (SBP2 L4) • If operative intervention is planned, coordinates with staff to facilitate expeditious movement to the OR, anticipating and addressing logistic impediments; with the anesthesia team, collaboratively develops a safe anesthetic approach that is consistent with a patient's physiologic status and comorbidities (SBP2 L4) • Helps get a patient to the OR when other staff members are having difficulty completing tasks and responsibilities in a timely manner (PROF2 L4) • Rapidly identifies the severity of infection and systemic involvement (MK1 L4)	• When caring for a complex patient, resolves conflicts or competing priorities between different services, including anesthesia or other surgical teams (SBP2 L4) • Coordinates an intraoperative consultation and caregiver decision-making process in a setting involving cultural and language barriers (SBP2 L4) • Provides assistance when others are having difficulty completing debridement (PROF2 L4) • Demonstrates coordination and dexterity with instrument handling and respect for tissue; displays debridement and dissection techniques that mirror those of a practicing surgeon with few extra maneuvers (PC3 L4) • Demonstrates all required knowledge to develop an optimal operative plan that includes patient positioning; indicates understanding of a patient's pathology, anatomy, physiology, indications, contraindications, and potential complications (PC3 L4) • Identifies the extent of infected tissue (PC3 L4) • Makes all intraoperative decisions independently, only requiring assistance for a very complex presentation (PC3 L4) • Integrates operative findings to modify the operative plan, determine dressing type, and anticipate future operative management for examination, debridement, and coverage; when applicable, identifies the potential need for amputation (preserving life over limb)	• Anticipates and develops a plan to mitigate common complications of soft tissue infection, including postop bleeding, incomplete excision or progression of disease, need for further debridement, multisystem organ failure, and septic shock; develops a plan for definitive wound management and skin closure (PC4 L4) • Independently initiates and oversees postop management, including complex wound care (eg, vacuum dressing, daily dressing changes), timing of dressing changes, and further operative management (PC4 L4) • Uses multimodal pain control strategies and adjunctive therapies (including antibiotics) and guides ongoing resuscitation (PC4 L4) • Initiates and oversees postop management of a patient's comorbid conditions and demonstrates understanding of their effects on the patient's course (MK1 L4) • Provides assistance in a situation that impacts others' ability to complete tasks and responsibilities in a timely manner, including postop wound management and discharge (PROF2 L4) • Communicates respectfully and efficiently with all health care team members regarding the plan of care; constructively resolves conflicting perspectives when they arise (SBP2 L4) • Supervises the development and execution of a postencounter plan that considers patient-specific barriers to

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Level	Preoperative/Nonoperative	Intraoperative	Postoperative
	• Expeditiously manages a patient's comorbidities associated with the development and presentation of soft tissue infection (eg, DM, immunocompromised state, anticoagulation use), including IV access, multimodal pain management, antibiotic administration (selection should include antibiotics with activity against endotoxin, with accurate dosing and timely administration), and resuscitation for septic shock (MK1 L4) • Determines the need and urgency for operative intervention; if nonoperative management is selected, determines timing and responsibility for reevaluation (MK1 L4) • Manages a patient with a complex soft tissue infection requiring debridement; identifies when source control is achieved while managing other comorbid conditions (eg, DM) (PC1 L4) • Engages other specialists as indicated for a patient presenting with an atypical soft tissue infection or a perineal soft tissue infection (eg, Fournier gangrene) (PC1 L4)	or a situation of physiologic futility in which infection cannot be controlled (PC3 L4)	care, including disposition, support services, wound management, and follow-up; effectively coordinates between care teams to ensure safe transition of care in resource-challenged contexts (SBP2 L4) • Communicates necessary details of the operative procedure and ongoing management plan to a patient/caregiver(s), including expected outcomes and the anticipated treatment course; customizes emotionally difficult news (eg, changes to operative plan, adverse outcome, end-of-life discussion) in a culturally dexterous and caring manner (ICS1 L4)

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Evaluation & Management of a Patient with Thyroid and Parathyroid Disease

Description of the Activity	General surgeons are expected to evaluate and manage patients who present with signs and symptoms of thyroid or parathyroid disease, primarily in the outpatient setting. The surgeons must be able to accurately and cost-effectively diagnose and treat adult patients with common thyroid and parathyroid diseases and recognize complex thyroid/parathyroid disease that requires specialist referral.
Functions	❖ Nonoperative/Preoperative ➢ Synthesize essential information from a patient's records, history, physical examination, and initial diagnostic evaluations to develop a differential diagnosis. ➢ Complete a cost-effective, evidence-based diagnostic evaluation for thyroid or parathyroid disease, including biochemical testing and imaging studies as indicated. ➢ Identify indications for thyroid nodule fine-needle aspiration biopsy, and interpret the results. ➢ Communicate a diagnosis and potential treatment options to the patient/caregiver(s) and consultants. ➢ Recognize the need for specialist referral for a patient with complex thyroid or parathyroid disease (eg, medullary or anaplastic thyroid cancer, multiple endocrine neoplasia syndromes). ➢ Formulate a plan for medical management of hypo- and hyperthyroidism in the perioperative period. ➢ Select an operative procedure based on the indication for surgery, taking into account patient preferences. ➢ For an anticoagulated patient, understand the significance of the indication, and apply an algorithm for discontinuation and resumption in the perioperative period. ➢ Discuss the indications, risks, benefits, alternatives, and potential complications of the planned operation, including nuances relevant to the patient's individual condition and comorbidities. Ensure patient understanding, and document this discussion. ❖ Intraoperative ➢ Manage the perioperative environment, including room setup, equipment check, preprocedural time-out, specimen processing, counts, wound classification, and debriefing functions. ➢ Perform the procedures required to manage common thyroid and parathyroid disease. ▪ Position the patient to expose the neck. ▪ Visualize tissue planes, and identify and dissect relevant normal and abnormal anatomy. ▪ Perform total thyroidectomy and thyroid lobectomy. • Carefully mobilize the thyroid gland while protecting critical structures, including the recurrent laryngeal nerve. • Preserve parathyroid glands during dissection of the thyroid gland, including their blood supply. If unable to preserve them, perform parathyroid autotransplantation. ▪ Perform parathyroid exploration. • Identify the normal anatomic position of superior and inferior parathyroid glands, as well as common anatomic variants (eg, carotid sheath, thymus, thyrothymic ligament, tracheoesophageal groove). • Assess parathyroid glands for normal versus adenomatous appearance. • Interpret results of intraoperative parathyroid hormone (PTH) testing, if used. ➢ Adapt operative steps and the operative plan to new information discovered intraoperatively.

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	• Devascularized parathyroid gland after dissection of thyroid • Lack of expected drop in PTH level on intraoperative PTH testing, if used • Unexpected suspicious adenopathy ➢ Coordinate with the anesthesia and nursing teams and other perioperative health care professionals regarding the use of intraoperative adjuncts. ➢ Create and maintain an intraoperative environment that promotes patient-centered care. ❖ Postoperative ➢ Oversee routine postoperative care, including indications for calcium or thyroid hormone supplementation. ➢ Describe the indications for radioactive iodine adjuvant treatment for thyroid cancer. ➢ Develop a plan for surveillance after the initial treatment of thyroid cancer. ➢ Communicate with the patient/caregiver(s) to ensure understanding of postoperative instructions and their ability to carry out the resultant plan. ➢ Articulate a plan for managing common early and late complications related to thyroid and parathyroid procedures, including: ▪ Hoarseness or vocal changes ▪ Hypocalcemia ▪ Laryngeal nerve injuries, including bilateral nerve dysfunction ▪ Neck hematoma or seroma ▪ Persistent or recurrent primary hyperparathyroidism
Scope	❖ In-scope diagnoses ➢ Thyroid disease ▪ Follicular neoplasm ▪ Hyperthyroidism ▪ Papillary thyroid cancer ▪ Thyroid nodule ➢ Parathyroid disease ▪ Primary hyperparathyroidism ❖ Out-of-scope diagnoses ➢ Hypercalcemia of malignancy ❖ In-scope procedures ➢ Parathyroid gland autotransplantation ➢ Parathyroidectomy ➢ Thyroid lobectomy ➢ Total thyroidectomy

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	❖ Out-of-scope procedures ➢ Lateral neck dissection ➢ Minimally invasive thyroidectomy ➢ Reoperative neck operation ➢ Subtotal thyroidectomy

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Level	Preoperative/Nonoperative	Intraoperative	Postoperative
1 **Limited Participation** Demonstrates understanding of information and has very basic skills **Framework:** What a learner directly out of medical school should know The attending can show and tell.	• Obtains an H&P relevant to thyroid/parathyroid disease (eg, symptoms of thyroid hormone deficiency/excess or primary hyperparathyroidism) with cultural humility (PC1 L1) • Orders basic thyroid and parathyroid function tests (TSH, free T4, PTH, calcium), requiring assistance for a comprehensive workup (PC1 L1) • Develops a differential for a patient with a thyroid nodule, neck mass, or hypercalcemia that includes common disorders (PC1 L1) • Identifies relevant evidence-based guidelines for the management of thyroid and parathyroid disease (PBLI1 L1)	• Identifies normal neck anatomy but needs assistance to identify normal parathyroid glands (MK2 L1) • Describes the expected route of the recurrent laryngeal nerves (MK2 L1) • Assists with positioning a patient to expose the neck (PC3 L1) • Performs initial steps of the operation, such as dividing the layers of the neck down to the relevant tissue, with direct instruction, requiring prompting to identify the appropriate plane (PC3 L1) • Assists with exposure for dissection of the thyroid and parathyroid glands (PC3 L1) • Reapproximates the soft tissues with direct guidance (PC3 L1) • Displays coordinated hand movements for simple maneuvers, though inefficiently and under direct instruction (PC3 L1) • Respectfully engages in culturally sensitive communication with all members of the OR team (ICS2 L1) • Demonstrates uncertainty about the necessary equipment for the operation (ICS2 L1)	• Writes postop orders, provides PACU staff with contact information, and reviews postop lab studies, requiring assistance to interpret (PC4 L1) • Describes common complications of thyroid and parathyroid operations (PC4 L1) • Demonstrates understanding of the need for thyroid hormone and calcium supplementation and selects the dose with assistance (PC4 L1) • Reviews pathology results (PC4 L1) • Attends and, if requested, presents at an interdisciplinary conference (ICS2 L1) • Respectfully requests a consultation with endocrinology or radiation oncology for ongoing treatment (ICS2 L1) • Accesses evidence-based guidelines for surveillance of differentiated thyroid cancer (PBLI1 L1)
2 **Direct Supervision** Demonstrates understanding of the steps of the operation but requires direction through principles and does not know the nuances of a basic case	• Evaluates a patient presenting with thyroid disease/nodule, ordering and interpreting lab testing (eg, thyroid-related labs inclusive of antithyroid antibodies, thyroglobulin, and antithyroglobulin antibody if indicated) and imaging/biopsy results as indicated (eg, ultrasound, FNA	• Positions a patient to expose the neck (PC3 L2) • Performs initial steps of the operation, dividing the layers of the neck down to the relevant tissue, identifying tissue planes in the neck, and exposing the thyroid and parathyroid glands (PC3 L2)	• Oversees routine postop care, including determining need for and dose of calcium or thyroid hormone supplementation (PC4 L2) • Recognizes signs and symptoms of common complications of

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Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can use the tools but may not know exactly what, where, or how to do it. The attending gives active help throughout the case to maintain forward progression.	indications, Bethesda classification of thyroid cytopathology) (PC1 L2) • Articulates a comprehensive thyroid nodule workup (PC1 L2) • Diagnoses straightforward primary hyperparathyroidism in a patient based on lab evaluation (PC1 L2) • Describes some high-risk features of thyroid nodules on ultrasound (MK1 L2) • Elicits patient preferences to guide evidence-based care (PBLI1 L2)	• Requires prompting to continue making progress during a straightforward operation (PC3 L2) • Usually demonstrates careful tissue handling and coordination of both hands (PC3 L2) • Interprets straightforward results of intraoperative PTH testing, if used (PC3 L2) • Clearly communicates with all members of the OR team (ICS2 L2) • Identifies the standard equipment for the operation but requires assistance to coordinate with perioperative staff to ensure it is available (ICS2 L2) • Identifies abnormal anatomy of the neck (MK2 L2) • Describes normal anatomic positions of the superior and inferior parathyroid glands but usually requires assistance to identify normal parathyroid glands; describes some locations of ectopic glands (MK2 L2) • Identifies the recurrent laryngeal nerve and describes location of a nonrecurrent inferior laryngeal nerve (MK2 L2)	thyroid and parathyroid operations (PC4 L2) • Communicates a postop plan to a patient/caregiver(s) and other health care team members for a benign condition (PC4 L2) • Verbalizes steps to manage a postop neck hematoma with airway compromise (PC4 L2) • Describes the utility of RAI therapy and TSH suppression in thyroid cancer (PC4 L2) • Plans surveillance of differentiated thyroid cancer with assistance (PC4 L2) • Assists with patient-specific barriers to care (ICS2 L2) • Attends and participates in an interdisciplinary cancer care conference (ICS2 L2) • Describes some elements of evidence-based guidelines for surveillance of differentiated thyroid cancer (PC4 L2; PBLI1 L2)
3 **Indirect Supervision** Can do a basic operation but will not recognize abnormalities and does not understand the nuances of an advanced case	• Describes high- and low-risk patterns of thyroid nodules on ultrasound (MK1 L3) • Integrates results of a diagnostic workup to formulate a treatment plan, including indications for operative intervention for a patient with hyperparathyroidism,	• Moves fluidly through the course of a straightforward thyroid or parathyroid operation and anticipates next steps without prompting (PC3 L3) • Smoothly dissects through the layers of the neck down to the relevant	• Evaluates and manages common early and late complications of thyroid and parathyroid operations, including hypocalcemia, hoarseness or vocal changes, and laryngeal nerve injury (PC4 L3)

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Evaluation & Management of a Patient with Thyroid and Parathyroid Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can perform the operation in straightforward circumstances. The attending gives passive help. This help may be given while scrubbed for more complex cases or during a check-in for more routine cases.	straightforward thyroid nodules, or suspected thyroid cancer (PC1 L3) • Formulates a plan for medical management of straightforward hypo- and hyperthyroidism in the perioperative setting (PC1 L3) • Articulates indications for molecular testing of indeterminate thyroid nodules and interprets the results, if used (MK1 L3; PC1 L3) • Demonstrates understanding of key differences in complex disease presentations, such as Graves disease or thyroid storm, and the use of medical or surgical management (MK1 L3) • Applies a cost-effective, evidence-based diagnostic evaluation for thyroid and parathyroid disease (PBLI1 L3) • Applies current guideline-based indications for operative treatment of primary hyperparathyroidism (PBLI1 L3)	structures, visualizing tissue planes and adapting tissue handling based on tissue quality (PC3 L3) • Identifies a preoperatively localized parathyroid gland but requires assistance to locate all glands (PC3 L3) • Identifies and dissects the recurrent laryngeal nerve in a straightforward thyroidectomy (MK2 L3; PC3 L3) • Interprets intraoperative PTH testing when the level increases or fails to drop, if used (PC3 L3) • Describes most sites of ectopic parathyroid glands (MK2 L3) • Describes potential intraoperative adjuncts (eg, ET tube for nerve monitoring, access and timing of blood draws for intraoperative PTH, gamma probe) (ICS2 L3)	• Verbalizes general indications for RAI treatment and TSH suppression (PC4 L3) • Communicates a postop plan to a patient/caregiver(s) and other health care team members for differentiated thyroid cancer or complicated hyperparathyroidism (PC4 L3) • Offers constructive feedback to students or junior residents (ICS2 L3) • Assists in coordinating an interdisciplinary cancer care conference (ICS2 L3) • Identifies collaborating specialties to help formulate a postop plan of care (eg, endocrinology, nuclear medicine) (SBP2 L3) • Reviews pathology results and recognizes features that indicate high-risk disease (MK1 L3) • Describes a guideline-adherent plan for surveillance after initial treatment of differentiated thyroid cancer (PBLI1 L3)
4 **Practice Ready** Can manage more complex patient presentations and operations and take care of most cases	• Formulates a comprehensive plan for a patient with papillary and follicular thyroid cancer, including indications for central and lateral neck dissection (PC1 L4) • Manages a patient with thyroid and parathyroid disease presenting with complex comorbidities or complicating factors such as anticoagulation or immunosuppression (PC1 L4)	• Mobilizes the thyroid gland while identifying and protecting critical structures, including the recurrent laryngeal nerve and parathyroid glands; manages challenging anatomy or difficult dissections calmly and thoughtfully (PC3 L4)	• Quickly responds to complex or high-acuity postop emergencies such as an expanding neck hematoma (PC4 L4) • Makes an individualized and evidence-based plan for RAI treatment and TSH suppression based on patient-specific risk (PC4 L4)

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Evaluation & Management of a Patient with Thyroid and Parathyroid Disease

Level	Preoperative/Nonoperative	Intraoperative	Postoperative
Framework: The learner can treat all common thyroid and parathyroid disease and has a strong understanding of surgical and medical options for different presentations. 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.	• Diagnoses an unusual presentation of primary hyperparathyroidism (eg, normohormonal and normocalcemic hyperparathyroidism) based on an advanced understanding of lab evaluation (PC1 L4) • Articulates indications for nodal dissection in a patient with thyroid malignancy (PC1 L4) • Proposes referral to specialists for a patient with complex thyroid and parathyroid disease (eg, advanced thyroid cancer, MEN syndromes, suspected parathyroid carcinoma) (PC1 L4) • Describes the expected outcome of nonoperative management of papillary thyroid cancer and selects a patient for whom that would be an evidence-based option (PBLI1 L4)	• Identifies most or all parathyroid glands and can differentiate normal and abnormal glands (PC3 L4) • Modifies the surgical plan based on new information discovered intraoperatively (eg, unexpected suspicious adenopathy, extrathyroidal invasion, lack of expected drop in PTH level, devascularized parathyroid gland after thyroid dissection) (PC3 L4) • Describes operative maneuvers to identify ectopic parathyroid glands (MK2 L4) • Coordinates with other members of the OR team to use intraoperative adjuncts effectively, if used (eg, ET tube for nerve monitoring, access and timing of blood draws for intraoperative PTH, gamma probe) (ICS2 L4) • Communicates with others clearly and respectfully, even in crisis situations (eg, airway difficulty, unexpected bleeding, decompression of expanding neck hematoma) (ICS2 L4) • Identifies normal parathyroid glands and recurrent laryngeal nerves in a complex case (eg, large thyroid goiter or mass) (MK2 L4)	• Ensures participation of collaborating specialties and coordinates their recommendations at an interdisciplinary cancer care conference to synthesize a patient care plan, resolving conflict when needed (ICS2 L4) • Offers constructive feedback to superiors in addition to peers and other learners (ICS2 L4) • Critically appraises and applies evidence, adapting to complex clinical scenarios and tailoring recommendations to a patient's preferences and needs (PBLI1 L4) • Describes an evidence-based plan for surveillance after initial treatment of differentiated thyroid cancer (PC4 L4; PBLI1 L4)

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Evaluation & Management of a Patient Presenting with Blunt or Penetrating Trauma

Description of the Activity	Trauma is a common clinical problem encountered by general surgeons. The surgeon should be able to triage, diagnose, and treat injured patients and understand when local resources require consultation of additional providers or transfer to a higher level of care. The surgeon is expected to assess, stabilize, and treat patients in the emergency department (ED) as their condition warrants.
Functions	❖ Trauma bay ➢ Activate the trauma response based on the projected acuity of the patient as described by prehospital personnel. ➢ Interpret prearrival data, and mobilize in-hospital personnel and equipment based on the available information. ➢ Delegate roles to members of the trauma team. ➢ Elicit clinical information from prehospital personnel, including, but not limited to, mechanism of injury, significant physiologic and anatomic data, and relevant patient comorbidities. ➢ Lead the initial evaluation and management. ➢ Complete the primary survey. ➢ Perform a secondary survey. ➢ Determine the need to repeat the primary survey based on continued reassessment of the patient. ➢ Order and interpret laboratory and imaging studies based on a patient's clinical presentation. ➢ Develop and prioritize a catalog of injuries based on examination as well as laboratory and imaging studies. ➢ Manage a hemodynamically unstable injured patient. ▪ Activate the massive transfusion protocol when necessary. ➢ Initiate special care of an older adult patient. ▪ Assess for frailty, and adjust management accordingly. ➢ Initiate special care of a pregnant patient. ▪ Position a pregnant patient who is hypotensive. ▪ Weigh the risks and benefits of ionizing radiation in the diagnostic evaluation. ➢ Manage spinal injury. ▪ Identify the need for spinal precautions. ▪ Clear a cervical spine to allow for cervical collar removal in an awake patient. ▪ Clear a cervical spine to allow for cervical collar removal in an obtunded patient. ▪ Log roll a patient. ❖ Procedures ➢ Identify the need for and safely perform or delegate indicated bedside procedures, including but not limited to: ▪ Advanced airway management ▪ Application of a pelvic binder or tourniquet ▪ Arterial line placement ▪ Arterial puncture for arterial blood gases ▪ Central line placement ▪ Chest tube placement

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Evaluation & Management of a Patient Presenting with Blunt or Penetrating Trauma

	▪ Debridement and closure of skin and scalp lacerations ▪ Focused assessment with sonography for trauma (FAST) ▪ Foley catheter ▪ Splinting/traction ▪ Resuscitative endovascular balloon occlusion of the aorta (REBOA) placement ▪ Resuscitative thoracotomy ❖ Transition of care ➢ Recognize and triage patients with hemodynamic instability who need to be taken immediately to the operating room. ➢ Consult with additional surgical services based on identified associated injuries. ➢ Determine the disposition of a patient. ➢ Communicate a diagnostic treatment plan to a patient/caregiver(s).
Scope	❖ In scope ➢ Patients with blunt and penetrating thoracoabdominal trauma ➢ Pregnant and older adult patients ❖ Out of scope ➢ Patients with isolated extremity injury ➢ Patients with thermal, chemical, or inhalation injury ➢ Pediatric patients

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Evaluation & Management of a Patient with Blunt & Penetrating Trauma

Level	Trauma Bay	Procedures	Transition of Care
1 **Limited Participation:** **Demonstrates understanding of information and has very basic skills** **Framework:** **What a learner directly out of medical school should know** **The attending can show and tell.**	• Demonstrates knowledge of ATLS protocols (PBLI1 L1) • Obtains history and performs basic assessment during trauma resuscitation (PC1 L1) • Orders and interprets simple diagnostic studies for a stable patient, including radiologic and lab evaluations (PC1 L1) • Develops a differential for a straightforward trauma patient (PC1 L1)	• Performs a FAST exam with assistance but is unable to interpret the findings (PC2 L1) • Intervenes on a nonoperative trauma patient with straightforward problems (eg, holds pressure on or sutures lacerations, applies bandages) (PC2 L1) • Serves as an observer or requires significant guidance for all other procedures (PC2 L1)	• Communicates with a patient/caregiver(s) with cultural humility and provides timely updates (ICS1 L1) • Places indicated consults for a trauma patient who is not critically ill (SBP2 L1; ICS2 L1) • Accurately documents trauma resuscitation (ICS3 L1) • Accesses national best practice guidelines for management of trauma patients, requiring assistance to apply them (SBP1 L1; PBLI1 L1) • Demonstrates understanding of receiving consultant recommendations from other services and conducts an effective handoff of a trauma patient who is not critically ill (SBP2 L1; ICS2 L1) • Initiates the process of floor/ICU admission or transition to the OR for nonemergent care of a stable patient (SBP2 L1)
2 **Direct Supervision** **Knows the steps of resuscitation but requires direction through principles and does not know the nuances of evaluation**	• Gathers prehospital information for a stable trauma patient (PC1 L2) • Prepares the trauma bay with equipment and personnel for a straightforward trauma resuscitation (PC1 L2) • Gathers relevant information from the patient and performs a basic ATLS survey for a patient who is not critically ill, incorporating other trauma protocols as indicated (PC1 L2; PBLI1 L2) • Develops a comprehensive differential for a trauma patient who is not critically ill (PC1 L2) • Orders lab tests and imaging for a critically injured trauma patient,	• Performs a FAST exam and interprets normal and obviously abnormal exams (PC2 L2) • Intervenes on a nonoperative trauma patient with more complex problems with assistance (eg, splinting, pelvic binder application) (PC2 L2) • Performs a complex procedure such as central line or chest tube placement with assistance (PC2 L2)	• Customizes communication to a straightforward patient/caregiver(s) about management plans, considering personal/systemic biases; misses some elements when discussing expected outcomes and the anticipated treatment course (ICS1 L2) • Identifies and places indicated consults for a trauma patient who is not critically ill (SBP2 L2; ICS2 L2) • Provides timely and complete communication in the medical record for all members of the health care team to view (ICS3 L2)

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Evaluation & Management of a Patient with Blunt & Penetrating Trauma

Level	Trauma Bay	Procedures	Transition of Care
Framework: **The learner can use the tools but may not know next steps or have a clear understanding of best diagnostic techniques or decision-making.** **The attending gives active help throughout the resuscitation to maintain forward progression.**	requiring assistance with interpretation (PC1 L2) • Recognizes when a patient may need procedural or operative intervention based on significant changes in vital signs and considers hemorrhagic shock in a hypotensive trauma patient (PC1 L2)		• Identifies system factors that can impact trauma patient safety and lead to deviation from best practice guidelines (SBP1 L2) • Coordinates consultant communications and interdisciplinary care of a noncritically ill trauma patient (SBP2 L2; ICS2 L2) • Communicates with all trauma team members regarding next steps but omits some potentially important elements (SBP2 L2; ICS2 L2) • Articulates a care plan that considers priorities of multiple injuries (SBP2 L2) • Performs an effective handoff to a rehab unit or home care delivery system for a patient recovering from complex injury (SBP2 L2) • Elicits patient preferences and incorporates individual patient needs in a plan for transition of care after trauma (PBLI1 L2)
3 **Indirect Supervision** **Can do a basic resuscitation but will not recognize subtle abnormalities or understand the nuances of a critically ill trauma patient**	• Gathers information from prehospital providers or OSH information for a critically ill trauma patient (PC1 L3) • Prepares the trauma bay with equipment and personnel for resuscitation of a critically ill trauma patient (PC1 L3) • Gathers relevant information and performs ATLS on a critically injured trauma patient using an evidence-based, protocolized approach (PC1 L3; PBLI1 L3) • Orders and interprets diagnostic studies, including radiologic and lab evaluations (PC1 L3) • Recognizes when a patient needs an operative or procedural intervention and	• Performs a FAST exam and identifies subtle abnormalities (PC2 L3) • Intervenes on a nonoperative trauma patient with complex problems without assistance (eg, pelvic binder, traction splint) (PC2 L3) • Performs straightforward and complex bedside procedures without assistance (eg, central line and chest tube placement) (PC2 L3) • Requires guidance for a maximally invasive procedure such as	• Communicates patient care information with cultural humility to caregivers of a complex or difficult trauma patient (ICS1 L3) • Provides feedback to team members about performance (ICS2 L3) • Identifies and places consults for a critically ill trauma patient (SBP2 L3; ICS2 L3) • Communicates with all team members regarding next steps, capturing all potentially important elements (SBP2 L3; ICS2 L3) • Gathers relevant information from OSH and synthesizes it into the institution's EMR system (ICS3 L3) • Applies national best practice guidelines to address a trauma patient's comprehensive

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Evaluation & Management of a Patient with Blunt & Penetrating Trauma

Level	Trauma Bay	Procedures	Transition of Care
Framework: **The learner can perform the resuscitation in straightforward circumstances.** **The attending gives passive help. This help may be given while present for more complex cases or during a check-in for more routine cases.**	responds to subtle changes in vital signs (PC1 L3) • Recognizes a patient in hemorrhagic shock and initiates a massive transfusion protocol when indicated (PC1 L3) • Develops a comprehensive differential for a critically ill trauma patient (PC1 L3)	resuscitative thoracotomy or REBOA placement (PC2 L3) • Initiates but requires help to treat a patient in severe hemorrhagic shock using techniques such as rapid access to the chest or abdominal cavity, cross-clamping the aorta, 4-quadrant packing, and damage control principles (PC2 L3)	needs and analyze outcomes (PBLI 1 L3; SBP1 L3) • Identifies the need for and coordinates consults for a critically ill patient (SBP2 L3; ICS2 L3) • Clearly communicates with all health care team members and coordinates complex care plan discussions for trauma patients (SBP2 L3) • Implements a care plan that considers priorities of multiple injuries in a straightforward patient (SBP2 L3) • Initiates floor/ICU admission or transition to the OR for a complex trauma patient (SBP2 L3)
4 **Practice Ready** Can manage more complex trauma evaluations and can take care of most cases with strong leadership and communication skills **Framework:** The learner can treat all straightforward traumas and has a strong understanding of high-acuity cases and less common scenarios.	• Leads the trauma team, preparing the trauma bay with equipment and personnel and directing ATLS protocols (PC1 L4) • Recognizes when deviation from protocol is necessary; identifies missed injuries (PBLI1 L4) • Orders and interprets all diagnostic studies for a trauma patient and develops an operative/procedural intervention plan based on the patient's condition (PC1 L4) • Manages a critically ill trauma patient (PC1 L4)	• Adjusts technique to perform and interpret a FAST exam, considering patient-specific factors and mechanism of injury (eg, pregnancy) (PC2 L4) • Oversees intervention on a nonoperative trauma patient with complex problems (PC2 L4) • Performs most procedures independently but requires some guidance for maximally invasive procedures such as a resuscitative/clamshell thoracotomy or REBOA placement (PC2 L4) • Treats a patient in severe hemorrhagic shock using techniques such as rapid access to the chest or abdominal cavity, cross-clamping the aorta, 4-	• Customizes emotionally difficult news (eg, changes to the operative plan, adverse outcome, end-of-life discussion) for a patient/caregiver(s) with cultural humility, negotiating conflicts with the patient or health care team and facilitating goals-of-care discussions (ICS1 L4) • Oversees identification and placement of indicated consults for all trauma patients (SBP2 L4, ICS2 L4) • Maintains clear communication in a high-stress situation and provides constructive feedback to supervisors (ICS2 L4) • Reviews and provides feedback about documentation in the medical record (ICS3, L4) • Critically appraises evidence and integrates national best practice guidelines in local management protocols, tailoring recommendations to an individual trauma patient (SBP1 L4; PBLI1 L4)

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Level	Trauma Bay	Procedures	Transition of Care
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.		quadrant packing, and damage control principles (PC2 L4)	• Oversees admission to the floor/ICU or transition to the OR for all trauma patients (SBP2 L4) • Implements a care plan that considers priorities of multiple injuries in a critically ill patient (SBP2 L4) • Manages communication with the OR and subspecialty teams regarding need for transition to the OR and priorities of operative management by multiple services (SBP2 L4) • Oversees transfer of a patient to a long-term or home care setting and effectively navigates barriers for a patient with limited social and economic resources (SBP2 L4)

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GLOSSARY:

PC 1: Patient Evaluation and Decision Making

PC 2: Intra-Operative Patient Care – Performance of Procedures

PC 3: Intra-Operative Patient Care – Technical Skills

PC 4: Post-Operative Patient Care

MK 1: Pathophysiology and Treatment

MK 2: Anatomy

SBP 1: Patient Safety and Quality Improvement

SBP 2: System Navigation for Patient-Centered Care

SBP 3: Physician Role in Health Care Systems

PBLI 1: Evidence-Based and Informed Practice

PBLI 2: Reflective Practice and Commitment to Personal Growth

PROF 1: Ethical Principles

PROF 2: Professional Behavior and Accountability

PROF 3: Administrative Tasks

PROF 4: Self-Awareness and Help-Seeking

ICS 1: Patient and Family-Centered Communication

ICS 2: Interprofessional and Team Communication

ICS 3: Communication within Health Care Systems