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Evaluation & Management of Patients with a Pancreatic Lesion or Cancer

Description of the Activity	Patients with pancreatic lesions or new diagnosis of pancreatic cancer are referred to surgical oncologists. Surgical oncologists are expected to evaluate and lead guideline-concordant management of patients presenting with these conditions. Surgical oncologists must be able to accurately and cost-effectively diagnose, treat, and provide surveillance for patients with benign and malignant pancreatic lesions.
Functions	❖ Nonoperative/Preoperative ➢ Synthesize essential information from a patient's records, history, physical examination, and initial diagnostic evaluations to develop a differential diagnosis. ▪ Obtain a focused history, including the presence of jaundice, weight loss, abdominal pain, functional performance, family history, and cancer risk factors. ▪ Perform a general assessment of the patient's nutritional status, presence of biliary obstruction, and a focused physical examination of the abdomen. ➢ Complete a cost-effective, evidence-based diagnostic evaluation, staging evaluation, or both, including molecular and biochemical/serological testing, endoscopic data, and cross-sectional multiphase imaging studies as indicated. ➢ Interpret the pancreatic lesion. ▪ Describe the lesion in relation to the surrounding anatomy and its related vascular supply, including variants, and categorize the lesion as resectable, borderline resectable, locally advanced/unresectable, or metastatic. ▪ For cystic lesions, describe their architecture, relationship to the pancreatic duct, and malignant potential. ➢ Describe the indications for endoscopic interventions for diagnosis and treatment. ➢ Interpret endoscopic assessment of pancreatic cystic fluid cytology/chemistries and biopsies when performed. ➢ Describe the indications for surgery in patients with pancreatic lesions. ▪ Use current evidence-based literature to develop the correct sequence of oncologic treatment, including surgery, neoadjuvant or adjuvant chemotherapy, radiation, and other treatments as necessary. ▪ Participate in a multidisciplinary conference or discussion regarding staging and treatment plans. ▪ Define individualized surveillance strategies for patients not undergoing initial surgery. ➢ Communicate a diagnosis and potential treatment options to a patient/caregiver(s) and consultants. Use shared decision-making to develop a treatment plan consistent with the patient's goals and beliefs. ➢ Identify treatment goals, such as curative intent, life prolongation without curative option, palliation, or end-of-life care. Communicate sympathetically in a culturally appropriate manner when de-escalation of care is preferable because of a poor prognosis or based on the patient/caregiver's goals of care. ➢ Collaborate with other specialties to manage comorbidities that will affect treatment (eg, chronic anticoagulation, cardiopulmonary disease, immunosuppression). ➢ When indicated, develop a prehabilitation plan, including a focus on nutritional status. ➢ Develop a safe, evidence-based operative plan. ➢ Screen patients for and propose clinical trials when appropriate. ➢ Obtain informed consent with cultural humility.

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- Describe the indications, risks, potential short- and long-term benefits, alternative therapies, and potential early and late 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 as necessary.
- Ensure that the patient/caregiver(s) can ask questions, and address any expressed concerns, taking patient/caregiver preferences into account.
- Discuss potential limitations in the desire for resuscitation (eg, do-not-resuscitate order) and how this will be addressed in the perioperative period.

❖ Intraoperative

➢ Manage the perioperative environment, including room setup, equipment checks, preprocedural time-out, need for blood and alternatives, specimen processing, counts, wound classification, and debriefing functions.

➢ Collaborate with perioperative health care professionals (eg, nursing team, anesthesia team) 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. Coordinate with other members of the operating room team to use specialized equipment or procedures.

➢ Perform intraoperative assessment of resectability and the following operative interventions:

- Pancreaticoduodenectomy
  - Perform vascular resection and reconstruction when indicated.
  - Orient and label a resected lesion for pathologic margin evaluation.
  - Perform enteric reconstructions (pancreaticojejunostomy, hepaticojejunostomy, enteric anastomosis).
- Distal pancreatectomy
  - Assess indications and feasibility for spleen preservation.
  - Orient and label a resected lesion for pathologic margin evaluation.
- Pancreatic enucleation
  - Perform intraoperative ultrasound to localize the lesion for resection.
  - Identify factors requiring formal resection (proximity to pancreatic duct).
- Total pancreatectomy
- Palliative bypass (to maintain biliary and enteric flow)

➢ Determine the need for drain placement, feeding access, and stenting.

➢ Adapt operative steps and the operative plan to information discovered intraoperatively, calling consulting services as necessary.

❖ Postoperative

➢ Communicate a postencounter plan with a patient/caregiver(s) and other health care team members that considers intraoperative and pathologic findings, future treatment needs, postencounter needs (eg, nutrition, drain management if present), outcome expectations, and follow-up.

➢ Manage common early and late complications related to pancreatic surgery, including:

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	▪ Anastomotic leak ▪ Delayed gastric emptying ▪ Malnutrition, including pancreatic insufficiency ▪ Pancreatic fistula ▪ Pseudoaneurysm ▪ Surgical site infection ➢ Recognize and mitigate patient-specific barriers to care. ➢ Coordinate care with other specialties and ancillary care (physical therapy, rehabilitation, nutrition services) as needed. ➢ Review intraoperative and pathologic findings in the multidisciplinary tumor board, and coordinate continued oncologic therapy and surveillance. ▪ Refer for adjuvant therapy. ▪ Discuss outcomes in patients who cannot return to intended oncologic therapy. ▪ Plan for post–cancer treatment surveillance and survivorship.
Scope	❖ In scope ➢ Diagnoses ▪ Cystic lesions of the pancreas ▪ High-risk and genetic predisposition scenarios ▪ Intraductal papillary neoplasms ▪ Neuroendocrine tumors of the pancreas (functional and nonfunctional) ▪ Obstructive jaundice ▪ Pancreatic adenocarcinoma ○ Resectable ○ Borderline or locally advanced ○ Unresectable ○ Metastatic pancreatic cancer ▪ Pancreatic mass of undetermined malignant potential (eg, with no tissue diagnosis) ▪ Pseudopapillary tumors ▪ Tumors metastatic to the pancreas ➢ Procedures ▪ Distal pancreatectomy with or without splenectomy ▪ Enucleation ▪ Palliative bypass ▪ Pancreatoduodenectomy with or without venous reconstruction ▪ Total pancreatectomy

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- Populations
  - Adults
  - Nonsurgical scenarios*

- Out of scope

- Diagnoses
  - Adjacent tumors invading the pancreas
  - Gallstones and other benign causes of obstructive jaundice
  - Lymphoma
  - Pancreatic trauma
  - Pancreatitis

- Procedures
  - Ablative techniques
  - Cyst enterostomy
  - Intraoperative radiation

- Populations
  - Pregnant patients

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1 **Limited Participation** **Demonstrates understanding of information and has very basic skills.** **Framework:** **Performs at the general surgery resident level, lower than expected for a typical residency graduate. Has some experience with simple cases but has been an observer of complex cases.**	• Synthesizes essential information from a patient's records, H&P, family history, and initial diagnostic evaluations to develop a differential, including assessment of biliary obstruction • Evaluates cross-sectional imaging, identifies the lesion, and arrives at a limited differential; needs guidance to characterize the lesion relative to vascular anatomy • Identifies the components of a diagnostic/staging workup, including biochemical/serological testing and additional cross-sectional imaging studies • Describes options for biopsy of a characterized lesion or biliary decompression (eg, EUS, FNA, ERCP) but may require guidance to choose the modality • Considers the role of a multidisciplinary tumor board and participates in but cannot lead a case discussion; needs guidance to develop a multidisciplinary treatment plan • When prompted, accesses available evidence to develop the correct sequence of treatment (eg, surgery, chemotherapy, radiation therapy) • Records information in a patient's record but may omit some important information	• Lists potential intraop findings (eg, unidentified metastatic disease, invasion into adjacent structures) but is unable to articulate how they would change the surgical plan • Performs initial operative staging with assistance • Assists with exposure for dissection, including performing a Kocher maneuver and open cholecystectomy • Assists with enteric reconstruction but needs guidance to assess reconstruction options • Describes the anatomy relevant to a Whipple, distal pancreatectomy, or enucleation • Identifies basic intraop pancreatic and adjacent vascular anatomy with guidance • Creates a basic operative note but omits some important information; may need prompting for timeliness	• Demonstrates knowledge of and manages routine postop care following a Whipple or distal pancreatectomy • Accesses evidence-based guidelines for postop care and surveillance of malignant and high-risk lesions but needs assistance to formulate a plan based on tumor factors and patient preferences • Documents postop care but may omit the nuances of progress or minor complications; may choose an inappropriate means of communication (paging for minor details or email for urgent issues)

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	or include some extraneous information; requires correction or augmentation of documentation of services; may need prompting for timeliness		
2 **Direct Supervision:** **Manages cases at the level of a newly graduated general surgery resident. Can manage less complicated cases independently but needs active guidance for complex cases.** **Framework:** **The learner can manage simple or straightforward cases.** **The learner may require guidance in managing multidisciplinary care (eg, planning neoadjuvant treatment or postoperative chemotherapy).** **During surgery, the attending gives active help throughout the case**	• Obtains a focused H&P, including an assessment of functional/nutritional status and the presence of biliary obstruction • Evaluates cross-sectional imaging and characterizes the lesion and adjacent vascular anatomy; needs guidance to assess resectability • Interprets biochemical/serological testing and assesses the need for additional cost-effective, cross-sectional imaging • Describes indications for biopsy of the lesion and the need for biliary decompression (eg, EUS, FNA, ERCP) but may require guidance to interpret diagnostic findings • Participates in a multidisciplinary tumor board discussion to develop a treatment plan but needs assistance to guide the discussion; demonstrates awareness of multidisciplinary treatment options but needs guidance to formulate multimodality treatment; incorporates multidisciplinary oncology team recommendations to guide patient-centered, evidence-based care • Accesses available evidence to develop the correct sequence of treatment (eg, surgery,	• Identifies intraop findings (eg, unidentified metastatic disease, invasion into adjacent structures) but requires redirection when encountering unanticipated intraop findings • Performs intraop staging but requires guidance to modify the preop surgical plan based upon intraop findings • Independently performs the steps of initial exposure, including the Kocher maneuver and biliary and bowel mobilization; assesses resectability in uncomplicated cases with guidance • Performs an enteric anastomosis independently and assists with pancreaticobiliary reconstructions with guidance • Performs distal pancreatectomy with guidance • Describes the anatomy and anatomic variations relevant to detailed steps of a Whipple, distal pancreatectomy, or enucleation	• Demonstrates management of routine postop care but needs assistance to manage complex postop care that includes a complication-specific management plan following a Whipple or distal pancreatectomy • Interprets and discusses pathologic findings with interdisciplinary team members but requires guidance to formulate a multidisciplinary oncologic treatment plan • Requires prompting to elicit patient preferences and values to guide evidence-based adjuvant care and surveillance for malignant and high-risk lesions • Thoroughly documents postop progression and the presence of any complications within the plan of management

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to maintain forward progression.	chemotherapy, radiation therapy) but needs assistance to elicit patient preferences when guiding care • Demonstrates organized diagnostic and therapeutic reasoning through notes in a patient's record; demonstrates timely and efficient use of the EHR to communicate with the health care team	• Identifies detailed intraop vascular anatomy (eg, gastroduodenal artery, IPDA) • Creates an operative note with a complete description of the procedure	
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.** **Manages multidisciplinary care of straightforward cases. Seeks assistance in managing complex cases.** **<u>Framework:</u>** **The learner can perform the operation in straightforward circumstances. The attending gives passive help. This help may be given while**	• Obtains a focused H&P, including assessment of functional/nutritional status and the presence of biliary obstruction • Evaluates cross-sectional imaging and fully characterizes the lesion and its resectability (eg, borderline, locally advanced, unresectable) with limited guidance • Interprets discrepancies in biochemical/serological testing • Interprets findings on endoscopic assessment, biopsy, and fluid serologies (eg, EUS, FNA) • Leads a discussion of routine cases at an interdisciplinary cancer care conference, incorporating multimodality treatment options into the formulation of a treatment plan; requires assistance to develop a plan for a complex case or when conflicting opinions exist; incorporates multidisciplinary oncology team recommendations to guide patient-	• With assistance, refines the preop surgical plan based on information discovered intraoperatively (eg, unidentified metastatic disease, invasion into adjacent structures) • Performs operative staging assessing distant metastatic disease and identifies the presence of locally advanced, unresectable disease with limited guidance • Independently assesses resectability in an uncomplicated case • Performs retropancreatic/uncinate dissection during a Whipple procedure with guidance • Performs enteric anastomosis and biliary anastomosis independently; performs pancreatic anastomosis with guidance • Independently performs distal pancreatectomy and considers techniques for splenic preservation	• Independently manages complex postop care and complications in most cases; forms a complication-specific management plan following a Whipple or distal pancreatectomy • Interprets pathologic findings and forms a multidisciplinary oncologic treatment plan with interdisciplinary team members • Locates and applies the best available evidence for adjuvant therapies and surveillance of malignant and high-risk pancreatic lesions, integrated with patient preference • Selects direct (telephone, in-person) and indirect (progress notes, secure text messages) forms of communication based on context and urgency

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scrubbed for more complex cases or during check-in for more routine cases.	centered, evidence-based care for an uncomplicated case presentation • Independently integrates oncologic information with patient-specific factors to design a succinct diagnostic and workup plan and adjusts the plan based on available evidence in a straightforward case • Concisely integrates all relevant data from outside systems and prior encounters and reports diagnostic and therapeutic reasoning in a patient's record	• With assistance, identifies the anatomy and anatomic variations relevant to detailed steps of a Whipple and distal pancreatectomy or enucleation, including the extent of dissection • With assistance, identifies detailed intraop vascular anatomy and variations (eg, replaced right hepatic artery) • Creates an operative note with a complete description of the procedure, including key intraop findings; documents anatomic or disease variants in a thorough and understandable way	
4 **<u>Practice Ready</u>** **Manages complex disease presentations and performs complex operations independently. Guides a multidisciplinary approach to complex cases. Performs as an expert consultant in surgical oncology.** **<u>Framework:</u>** **The learner can treat all common variations of the disease and has a strong understanding of**	• Independently integrates a patient's H&P, imaging, endoscopic findings, and pancreatic biopsy pathology (when performed) with patient-specific factors to design an evidence-based, cost-effective diagnostic and staging plan • Leads a multidisciplinary cancer care conference to synthesize patient care plans for routine and complex cases, resolving conflict when needed; independently coordinates multidisciplinary care, including functional and nutritional optimization; reassesses imaging response after neoadjuvant therapy • Considers the role of molecular profiling for a patient who may be a candidate for targeted therapy	• Independently refines the preop surgical plan based on information discovered intraoperatively (eg, unidentified metastatic disease, invasion into adjacent structures) • Independently performs complete intraop staging (including the use of intraop ultrasound when indicated) and modifies the preop surgical plan based on intraop findings of locally advanced disease, unresectable disease, and nonregional adenopathy in straightforward and complex cases • Independently performs retropancreatic/uncinate dissection, regional lymphadenectomy, and anastomoses during a Whipple	• Anticipates and provides early intervention for early postop complications, including engaging consultative services when needed and forming a complication-specific management plan following Whipple or distal pancreatectomy (eg, pancreatic fistula, hemorrhage) • Independently develops a care plan for subacute complications of a Whipple or distal pancreatectomy (eg, delayed gastric emptying, malnutrition, pancreatic insufficiency) • Reviews and interprets pathologic findings with a multidisciplinary team to create an evidence-based postop oncologic treatment plan; participates

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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 or unusual presentations.**	• Identifies and counsels a patient who is eligible for enrollment in clinical trials • Sympathetically and with cultural humility discusses noncurative and palliative options with a patient with unresectable disease • Independently characterizes resectability status (eg, borderline, locally advanced, unresectable) and identifies variations in relevant vascular anatomy • Independently integrates oncologic information with patient-specific factors to design a succinct diagnostic and workup plan and adjusts the plan based on available evidence in a complex or unusual presentation • Communicates diagnostic and therapeutic reasoning clearly, concisely, promptly, and in an organized written form, including anticipatory guidance; written or verbal communication (patient notes, email) serves as an example for others to follow	procedure; assesses the quality of the anastomoses • Assesses intraop margin status along dissection planes • Identifies indications for and performs major vascular resection with reconstructions • Performs palliative biliary and enteric bypasses when resection or endoscopic approaches are not feasible • Independently performs distal pancreatectomy and multivisceral resection when indicated and considers techniques for splenic preservation • Independently identifies intraop pancreatic vascular anatomic variants • Creates an operative note with a complete description of the procedure, a rationale for modifications of the operative plan, and documentation of anatomic or disease variants	in a care plan for a patient who cannot obtain intended adjuvant therapy; develops a palliation/end-of-life patient care plan with an interdisciplinary team when applicable • Critically appraises an evidence-based rationale for adjuvant therapies for follow-up of malignant and high-risk pancreatic lesions, even in the face of uncertain or conflicting evidence • Communicates clearly, concisely, promptly, and in an organized written form, including anticipatory guidance so the postop plan of care is clear to other members of the health care team