

## GASTROINTESTINAL PATHOLOGY GROSSING GUIDELINES

**Specimen Type:** PANCREATICODUODENECTOMY (Whipple Procedure)

**Procedure:**

1. Describe the organs included in the resection. These usually include the pancreatic head, common bile duct (mostly intrapancreatic), and small bowel. Distal portion of stomach may be included for standard Whipple specimens. A portion of superior mesenteric vein (either a patch or a segment) may be included at the vascular groove.
2. Describe the external surfaces of the organs.
3. Ink the uncinata margin BLACK.
4. Ink the vascular groove ORANGE. If a portion of superior mesenteric vein is present, it should be inked with a different color (blue).
  - Usually the portion of vein will be sutured by the surgeon for easier identification.
  - **If vessel wall IS IDENTIFIED:** submit entire vessel wall (perpendicular to tumor/pancreas). Sections do not need to be deep, so you can place more than one piece of tissue in a cassette.
5. Ink the serosal surface between pancreas and small bowel (posterior surface) for small bowel tumors in order to better assess serosal involvement.
6. Open the small bowel along the outside of the c-loop.
7. Photograph all pancreas specimens
8. Measure the length of the small bowel and circumferences at the proximal and distal small bowel margins.
9. Measure the length and cross diameters of the pancreas.
10. Measure the length of the stomach (if present) and circumference at the proximal margin.
11. Measure the size, or length and diameter of attached superior mesenteric vein.
12. Probe the pancreatic and common bile ducts to determine if they are obstructed. Bivalve the pancreas along the pancreatic and common bile ducts all the way to the ampulla of Vater.
13. Measure the diameter or circumference of the common bile duct and pancreatic duct.
  - If the pancreatic duct is patent there is no need to measure the length of the duct as this measurement is the same length of the pancreas
  - If the pancreatic duct is obstructed then you may measure the unobstructed length of the duct (usually the distal portion)
14. Describe the size, location, color and consistency of the tumor. Note its relationship to the bile duct, pancreatic duct, Ampulla and margins of resection (uncinate, pancreatic neck, vascular groove, and bile duct). Determine if tumor extends beyond confines of the pancreas.
15. Dissect the lymph nodes from peripancreatic soft tissue, the mesentery and attached adipose tissue.
16. Examine each organ included in the resection individually, as detailed elsewhere in the manual.

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### **MMODAL COMMAND: "INSERT WHIPPLE"**

It consists of an intact [*pylorus-preserving whipple/ whipple, give any orientation and additional organs present*\*\*\*]. The pancreatic head measures [\*\*\*] cm in length x [\*\*\* x\*\*\*] cm in cross sections. Peripancreatic soft tissue extends up to [\*\*\*] cm from the pancreas. There [*is/is no*\*\*\*] portion of vessel wall identified [*if identified provide dimensions and suture designation*\*\*\*]. The pancreatic duct [*is/is not*\*\*\*] obstructed. **[If pancreatic duct is partially obstructed (usually at the proximal portion), measure the length and diameter or circumference of the distal unobstructed portion from the pancreatic neck resection margin; if not obstructed do NOT measure the length of the duct, just measure the diameter or circumference**\*\*\*]The common bile duct measures [\*\*\*] cm in length x [\*\*\*] cm in average diameter. The small bowel measures [\*\*\*] cm in length x [\*\*\*] cm in open circumference. [The stomach (if present) measures \*\*\* cm in length x \*\*\* cm in open circumference at the proximal resection margin\*\*\*] [*If attached gallbladder is present, mention and measure*\*\*\*]

Sectioning the specimen reveals a lesion located in the [*pancreatic head, neck, etc.*\*\*\*]. [*Describe lesion size in three dimensions, shape, color, consistency*\*\*\*]. The lesion [*is grossly confined to the pancreas, involves the peripancreatic soft tissue, involves other attached structures-specify*\*\*\*]. The lesion is located [\*\*\*] cm from the pancreatic neck margin, [\*\*\*] cm from the common bile duct margin, [\*\*\*] cm from the uncinate margin, [\*\*\*] cm from the vascular groove, [\*\*\*] cm from the proximal [*gastric/ small bowel*\*\*\*] margin, [\*\*\*] cm from the distal small bowel margin, [\*\*\*] cm from the posterior pancreatic fibroadipose tissue, and [\*\*\*] cm from the anterior pancreatic fibroadipose tissue.

The pancreatic duct [*is/is not*\*\*\*] patent with a [*describe mucosal surface (e.g. smooth, roughened, granular, hemorrhagic)*], and a luminal diameter ranging from [\*\*\*] cm at [location (e.g. distal vs. proximal to the tumor)\*\*\*] to [\*\*\*] cm at [location (e.g. distal vs. proximal to the tumor)\*\*\*], and a wall thickness averaging [\*\*\*] cm. [*If there is a discrete stricture of the duct, additionally describe location, length of the stricture, relationship to distal pancreatic margin, wall thickness, luminal diameter or circumference, and mucosal surface of the stricture.*\*\*\*] The lesion measures [\*\*\*] cm from the main pancreatic duct [*or abuts the main pancreatic duct or obliterates the main pancreatic duct for a length of (\_\_\_ cm) at the (describe location and/or measure distance from applicable margin*\*\*\*].

The remaining pancreatic parenchyma is [*lobulated, fibrotic, unremarkable or describe any additional pathology including cysts (see descriptors above), strictures, fat necrosis, additional nodules, etc.*\*\*\*]. The serosa of the small bowel is [*tan, smooth, glistening, and unremarkable or describe any additional lesions*\*\*\*]. The small bowel mucosa is [*tan, glistening, and unremarkable or describe any additional lesions, such as ulcers/erosions, polyps*\*\*\*]. [*Describe any additional abnormalities of the pancreatic of biliary ductal system, such as the presence of an accessory pancreatic duct, a main pancreatic duct that empties at the minor papilla, a tortuous main pancreatic duct, pancreas divisum, etc*\*\*\*].]Multiple lymph nodes are identified, ranging from [*smallest to largest*\*\*\*] cm in greatest dimension.

All identified possible lymph nodes are entirely submitted. [*The lesion/mass is entirely submitted (if applicable, otherwise skip to next sentence)*\*\*\*] The peripancreatic fibroadipose tissue is entirely submitted. Representative sections of the remaining specimen are submitted. Gross photographs are taken.

#### **INK KEY:**

Blue        posterior peripancreatic soft tissue  
Green      anterior peripancreatic soft tissue  
Orange     vascular groove  
Black       uncinete margin

[*insert cassette summary*\*\*\*]

### **MMODAL COMMAND: "INSERT WHIPPLE AMPULLA"**

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It consists of an intact [*pylorus-preserving whipple/ whipple, give any orientation and additional organs present*\*\*\*]. The pancreatic head measures [\*\*\*] cm in length x [\*\*\* x\*\*\*] cm in cross sections. Peripancreatic soft tissue extends up to [\*\*\*] cm from the pancreas. There [is/is no\*\*\*] portion of vessel wall identified [*if identified provide dimensions and suture designation*\*\*\*]. The pancreatic duct [is/is not\*\*\*] obstructed. **[If pancreatic duct is partially obstructed (usually at the proximal portion), measure the length and diameter or circumference of the distal unobstructed portion from the pancreatic neck resection margin; if not obstructed do NOT measure the length of the duct, just measure the diameter or circumference\*\*\*]** The common bile duct measures [\*\*\*] cm in length x [\*\*\*] cm in average diameter. The small bowel measures [\*\*\*] cm in length x [\*\*\*] cm in open circumference. [The stomach (if present) measures \*\*\* cm in length x \*\*\* cm in open circumference at the proximal resection margin\*\*\*] [*If attached gallbladder is present, mention and measure*\*\*\*]

Sectioning the specimen reveals a lesion located in the [*small bowel/ampulla*\*\*\*]. The lesion measures [*measure in two dimensions*\*\*\*] and involves [\*\*\*] cm of the open circumference of the small bowel where the open circumference is [\*\*\*] cm. Sectioning of the lesion reveals a [*describe cut surface*\*\*\*]. The lesion has a maximum depth of [\*\*\*] cm. The lesion [*is grossly confined to the pancreas, involves the peripancreatic soft tissue, involves other attached structures-specify*\*\*\*]. The lesion is located [\*\*\*] cm from the pancreatic neck margin, [\*\*\*] cm from the common bile duct margin, [\*\*\*] cm from the uncinate margin, [\*\*\*] cm from the vascular groove, [\*\*\*] cm from the proximal [*gastric/small bowel*\*\*\*] margin, [\*\*\*] cm from the distal small bowel margin, [\*\*\*] cm from the posterior pancreatic fibroadipose tissue, and [\*\*\*] cm from the anterior pancreatic fibroadipose tissue.

The pancreatic duct [is/is not\*\*\*] patent with a [*describe mucosal surface (e.g. smooth, roughened, granular, hemorrhagic)*], and a luminal diameter ranging from \*\*\* cm at [location (e.g. distal vs. proximal to the tumor)] to \*\*\* cm at [location (e.g. distal vs. proximal to the tumor)], and a wall thickness ranging from \*\*\* at [location (e.g. distal vs. proximal to the tumor)] to \*\*\* cm at [location (e.g. distal vs. proximal to the tumor)]. [*If there is a discrete stricture of the duct, additionally describe location, length of the stricture, relationship to distal pancreatic margin, wall thickness, luminal diameter or circumference, and mucosal surface of the stricture.*] The lesion measures \*\*\* cm from the main pancreatic duct [*or abuts the main pancreatic duct or obliterates the main pancreatic duct for a length of (\_\_\_ cm) at the (describe location and/or measure distance from applicable margin)*].

The remaining pancreatic parenchyma is [*lobulated, fibrotic, unremarkable or describe any additional pathology including cysts (see descriptors above), strictures, fat necrosis, additional nodules, etc.*\*\*\*]. The serosa of the small bowel is [*tan, smooth, glistening, and unremarkable or describe any additional lesions*\*\*\*]. The small bowel mucosa is [*tan, glistening, and unremarkable or describe any additional lesions, such as ulcers/erosions, polyps*\*\*\*]. [*Describe any additional abnormalities of the pancreatic of biliary ductal system, such as the presence of an accessory pancreatic duct, a main pancreatic duct that empties at the minor papilla, a tortuous main pancreatic duct, pancreas divisum, etc*\*\*\*]. Multiple lymph nodes are identified, ranging from [*smallest to largest*\*\*\*] cm in greatest dimension.

All identified possible lymph nodes are entirely submitted. [*The lesion/mass is entirely submitted (if applicable, otherwise skip to next sentence)*\*\*\*] The peripancreatic fibroadipose tissue is entirely submitted. Representative sections of the remaining specimen are submitted. Gross photographs are taken.

### **INK KEY:**

Blue	posterior peripancreatic soft tissue
Green	anterior peripancreatic soft tissue
Orange	vascular groove
Black	uncinate margin

[*insert cassette summary*\*\*\*]

**Cassette Submission:** 20-25 cassettes

- **Note: Consult pathologist for assistance with orientation before grossing**

## GASTROINTESTINAL PATHOLOGY GROSSING GUIDELINES

- **Note: Pancreatic and bile ducts are histologically identical: do not include both in a single section OR if both are present in a single section, ink the mucosal surfaces differentially and note the inking in the ink key or cassette summary.**
- **Note: sections often taken for frozen section include pancreatic neck (to include duct), proximal margin (gastric or small bowel), and common bile duct margin.**
- **PHOTOGRAPH ALL PANCREAS SPECIMENS**
- Proximal gastric/ small bowel resection margin, shave
- Distal small bowel resection margin, shave
- Common bile duct resection margin, shave
- Uncinate margin – shave off the entire uncinate margin of specimen and then perpendicularly section. Submit entirely in 2-5 cassettes (one cassette can contain multiple pieces of perpendicularly sectioned tissue).
  
- Vascular groove- representative perpendicular section
  - o If vessel wall **IS IDENTIFIED**: submit entire vessel wall (perpendicular to tumor/pancreas). Sections do not need to be deep, so you can place more than one piece of tissue in a cassette.
- If a **solid tumor**: one cassette per 1 cm of lesion (OR at least five sections of mass OR if small enough, entirely submit)
  - o Show relationship to peripancreatic soft tissue
  - o Show relationship to pancreatic resection margin, if able
  - o Show relationship to common bile duct
  - o Show relationship to pancreatic duct
  - o Show relationship to ampulla of Vater and/or adjacent small bowel
  - o Show relationship to vascular groove
- If a **cystic lesion**: entirely embed the lesion (if the lesion is too large - consult with attending pathologist)
  - o Sample any papillary excrescences
  - o Sample any fibrotic areas or mural nodules
  - o Sample any strictures or areas of wall thickening
- If **small bowel or ampullary adenomatous polyp**:
  - o Entirely submit polyp
    - Include relationship to pancreatic and/or common bile ducts
    - Include relationship to serosal surface of small bowel (particularly the posterior surface) in a few sections
- One section of ampulla in relation to tumor (if not ampullary lesion)
- Any additional lesions in the gross description
- One cassette of unremarkable pancreatic parenchyma
- One cassette of unremarkable small bowel and stomach
- One cassette of unremarkable gallbladder
- Submit all lymph nodes identified (at least 12 lymph nodes are suggested)

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- Submit all peripancreatic soft tissue for lymph nodes if necessary (*i.e. resection is for cancer*)
- Most lymph nodes are buried in the posterior peripancreatic tissue, which may not be easy to strip off. Shave off the entire posterior pancreatic tissue may be helpful to find an adequate number of lymph nodes
- **Note:** If the tumor in the pancreas is ill defined and the tumor size cannot be accurately measured grossly, or a definitive mass lesion cannot be identified (such as post neoadjuvant therapy), both halves of the pancreas should be carefully breadloafed at 0.5 cm intervals (after bivalved along the pancreatic and common bile ducts). Take one cross section every 1 cm sequentially along the length of pancreas from distal neck margin towards the ampulla so that the tumor size may be estimated on microscopic examination. In that case, please keep remaining pancreatic tissue in order so that additional sections between 2 and 3 cms and between 4 and 5 cms can be taken later on if needed (important for T staging).