

## Gastrointestinal Pathophysiology (HST-121)

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### Laboratory Assignment #4

*(Due Monday November 28<sup>th</sup>)*

NAME:

**Recommended reading:**

1. Lecture notes on pancreatic physiology and pancreatitis

**Additional optional reading:**

Pages 63-77 in Gastroenterology, Saunders Text and Review Series, 1997, W. B. Saunders Co.

**Fill in the blanks:**

- Centroacinar and intralobular duct cells secrete \_\_\_\_\_ and \_\_\_\_\_.
- Interlobular and main duct cells secrete \_\_\_\_\_ and \_\_\_\_\_.
- Acetylcholine acts through \_\_\_\_\_ as the second messenger and stimulates secretion by the \_\_\_\_\_ cells.
- Secretin acts through \_\_\_\_\_ as the second messenger and stimulates ductal \_\_\_\_\_ secretion.
- \_\_\_\_\_ inhibits CCK and secretin release.
- Pancreatic trypsinogen is converted to trypsin in the duodenum by the action of \_\_\_\_\_.
- \_\_\_\_\_ and \_\_\_\_\_ are the two leading causes of acute pancreatitis.
- Ranson's criteria for prognosis of acute pancreatitis at admission include:
  1. Age > \_\_\_\_\_ years
  2. \_\_\_\_\_ > 200 mg/dl
  3. AST > \_\_\_\_\_ U/L
  4. WBC > \_\_\_\_\_
  5. \_\_\_\_\_ > 350 IU/L

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### ***Case 1:***

The microscopic slide GI-14 is from an emergency operation on a 52-year-old alcoholic man who presented with a precipitous drop in hematocrit, shock, and markedly elevated amylase and lipase. What is the most appropriate description for this slide?

- Acute pancreatitis
- Chronic pancreatitis
- Acute hemorrhagic pancreatitis superimposed on chronic pancreatitis
- Pancreatic adenocarcinoma

### ***Case 2:***

The microscopic slide GI-15 is from an elective operation (to relieve back pain) on a 48-year-old alcoholic man who has had bouts of steatorrhea and back pain for many years. What is the most appropriate description for this slide?

- Acute pancreatitis
- Chronic pancreatitis
- Acute hemorrhagic pancreatitis superimposed on chronic pancreatitis
- Pancreatic adenocarcinoma

### ***Case 3:***

The microscopic slide GI-16 is from a pancreatic resection in a 54-year-old man with weight loss and abdominal pain. What is the most appropriate description for this slide?

- Acute pancreatitis
- Chronic pancreatitis
- Acute hemorrhagic pancreatitis superimposed on chronic pancreatitis
- Pancreatic adenocarcinoma

### ***Case 4:***

The microscopic slide GI-17 is from a cholecystectomy specimen in a 46-year-old woman with chronic right upper quadrant pain. Are there any Rochitansky-Aschoff sinuses in this gallbladder?