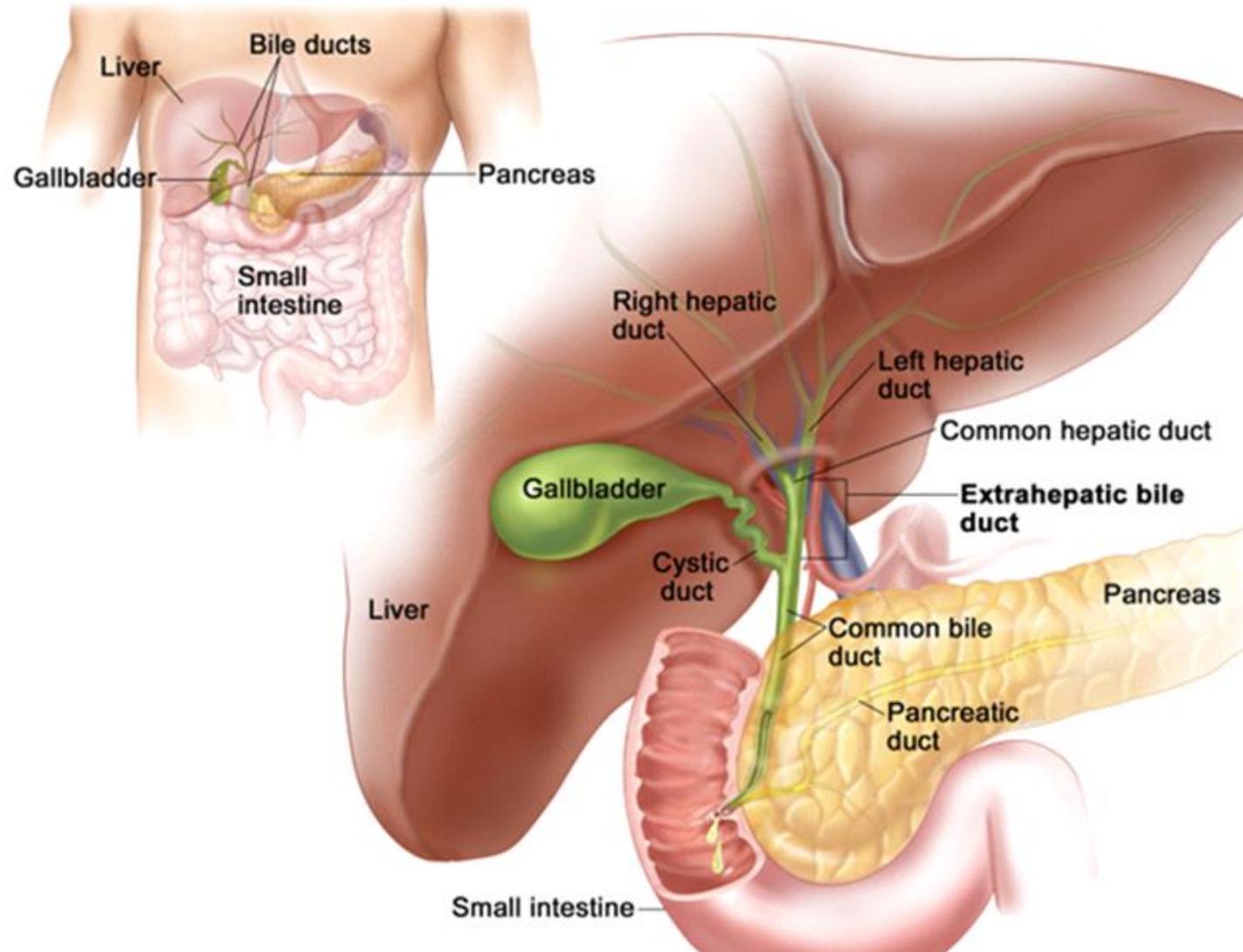




# Endoscopic Retrograde Cholangiopancreatography (ERCP)

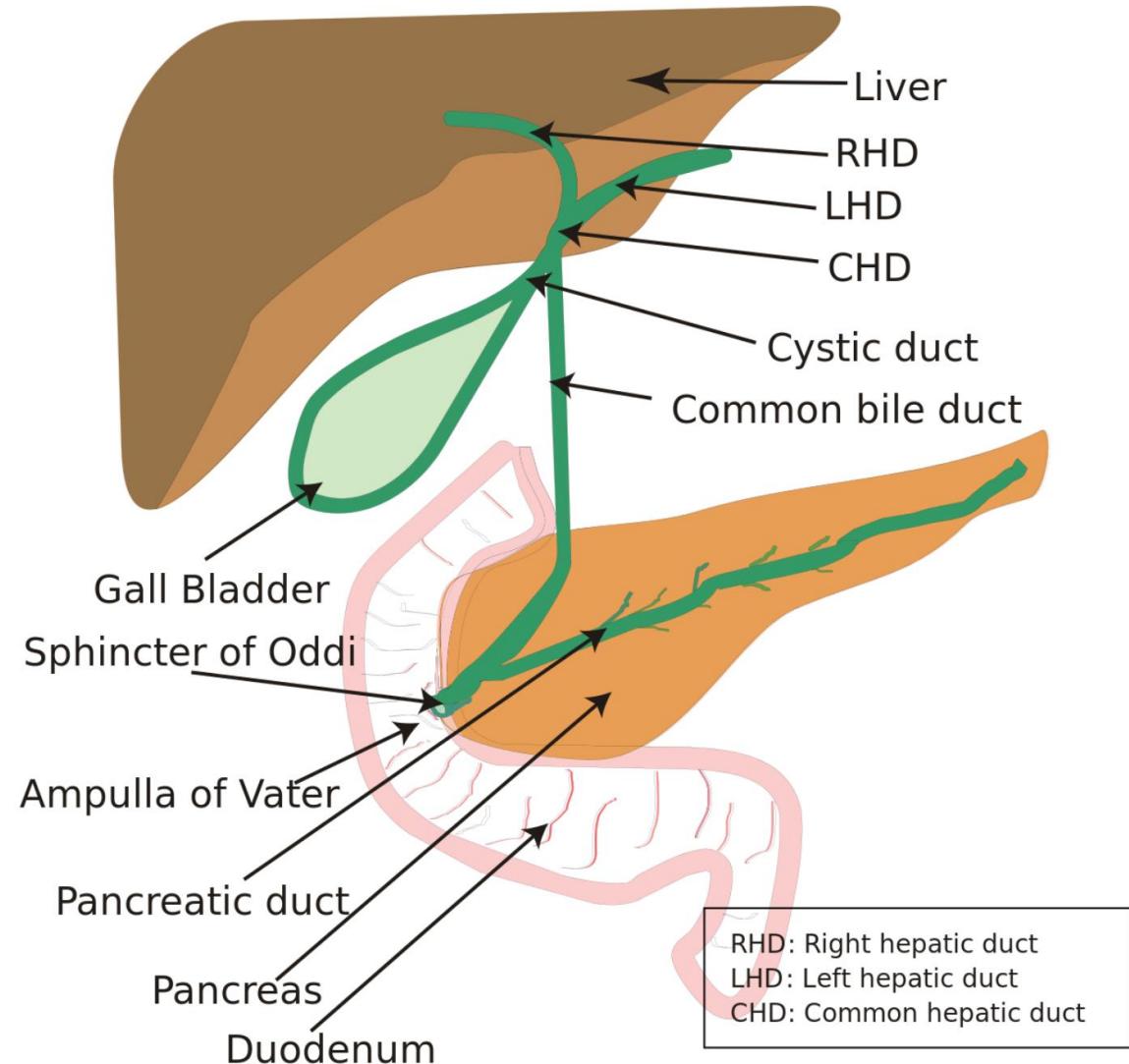
Lamon Willis

# Anatomy Involved



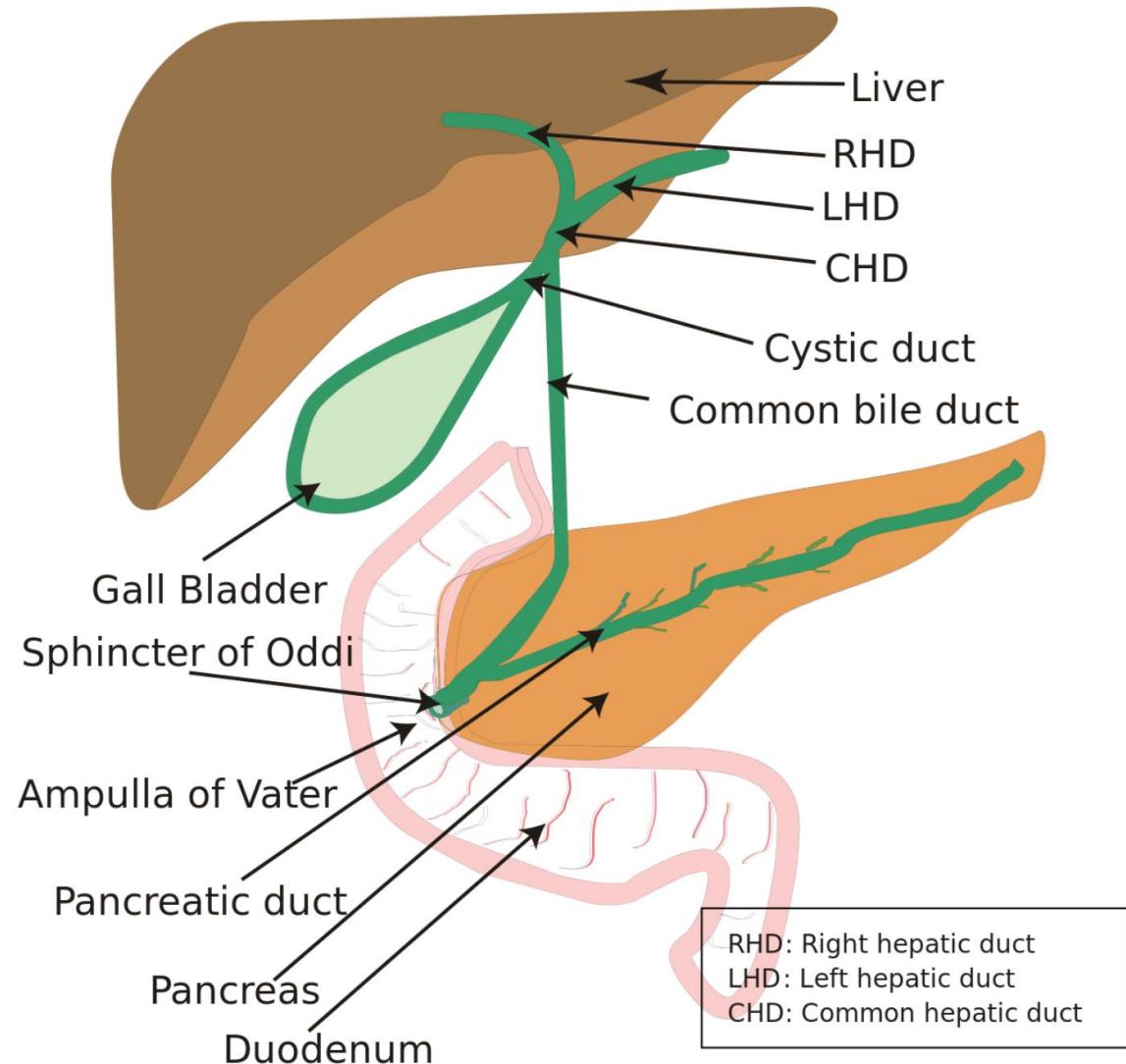
# Anatomy Involved

- The common bile duct drains all bile produced in the liver into the duodenum, which is the first part of the small bowel.
- The major and accessory pancreatic ducts drain all of the pancreatic secretions into the small bowel at the same point, through a structure known as the ampulla of Vater.



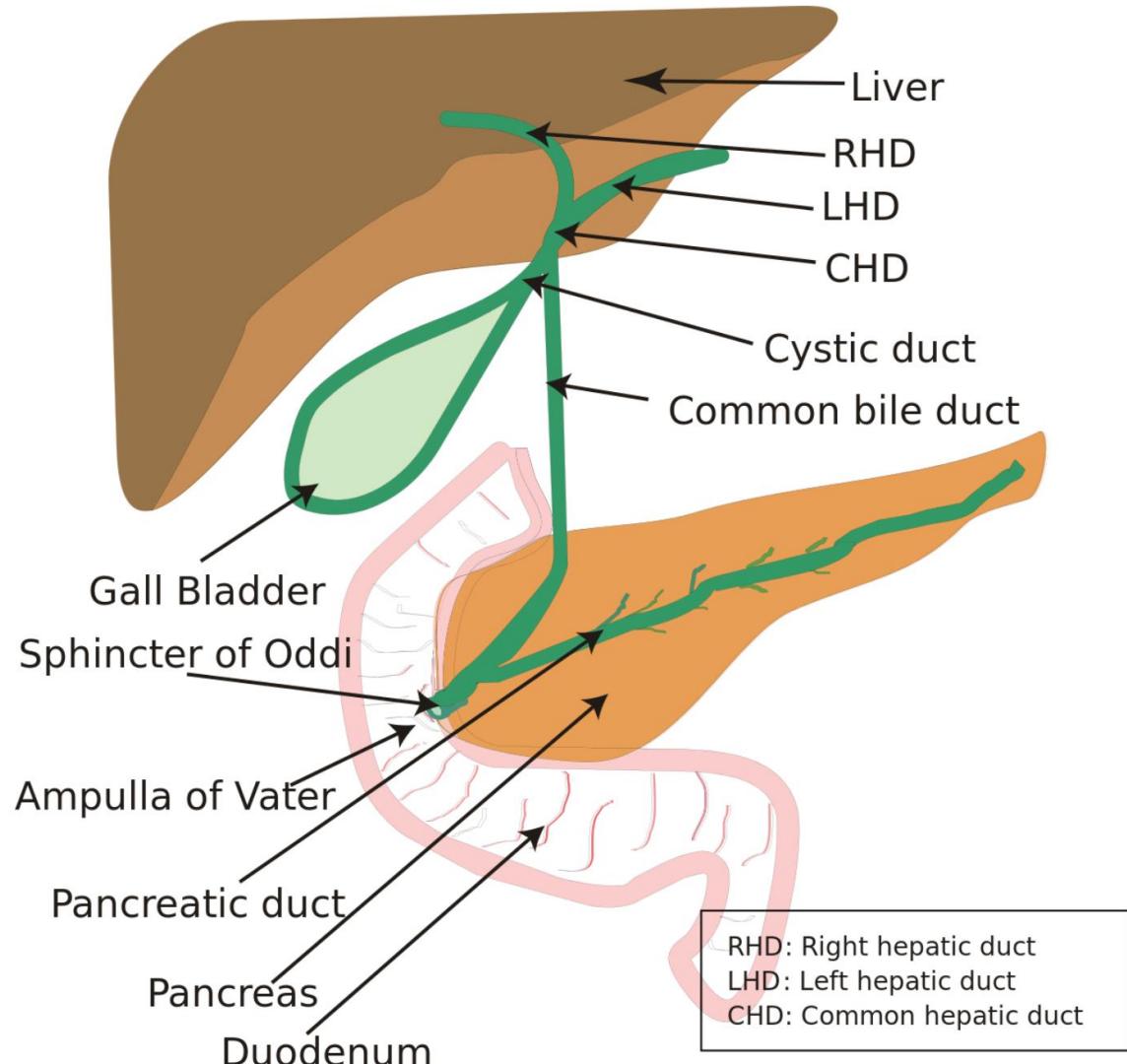
# Anatomy Involved

- ERCP is a procedure where an Endoscope is passed down the esophagus into the stomach, and then into the duodenum, from which the exit point of the ampulla can be seen.



# Anatomy Involved

- A tiny catheter is then inserted through the ampulla in a "retrograde" direction, meaning against the normal direction of flow of the biliary and pancreatic secretions.
- Contrast may be injected to outline these ducts, or tiny tools maybe inserted to remove gallstones.



# Ampulla of Vater



- The ampulla of Vater, also known as the hepatopancreatic ampulla or the hepatopancreatic duct, is formed by the union of the pancreatic duct and the common bile duct. The ampulla is specifically located at the major duodenal papilla.
- The ampulla of Vater is an important landmark halfway along the second part of the duodenum that marks the anatomical transition from foregut to midgut, and hence the point where the celiac trunk stops supplying the gut and the superior mesenteric artery takes over.

# Ampulla of Vater



- Structure
  - The cystic duct leaves the gallbladder and joins with the common hepatic duct to form the common bile duct. This duct subsequently joins with the pancreatic duct; this junction is known as the ampulla of Vater. The pancreatic duct delivers substances such as bicarbonate and digestive enzymes to the duodenum. The bile from the gallbladder contains salts which emulsify large fat droplets into much smaller units. This provides a large surface area for the lipase enzymes to act on. The bicarbonate neutralizes the acidic chyme, creating alkaline conditions for enzymes such as chymotrypsin and amylase to function optimally.

# Ampulla of Vater

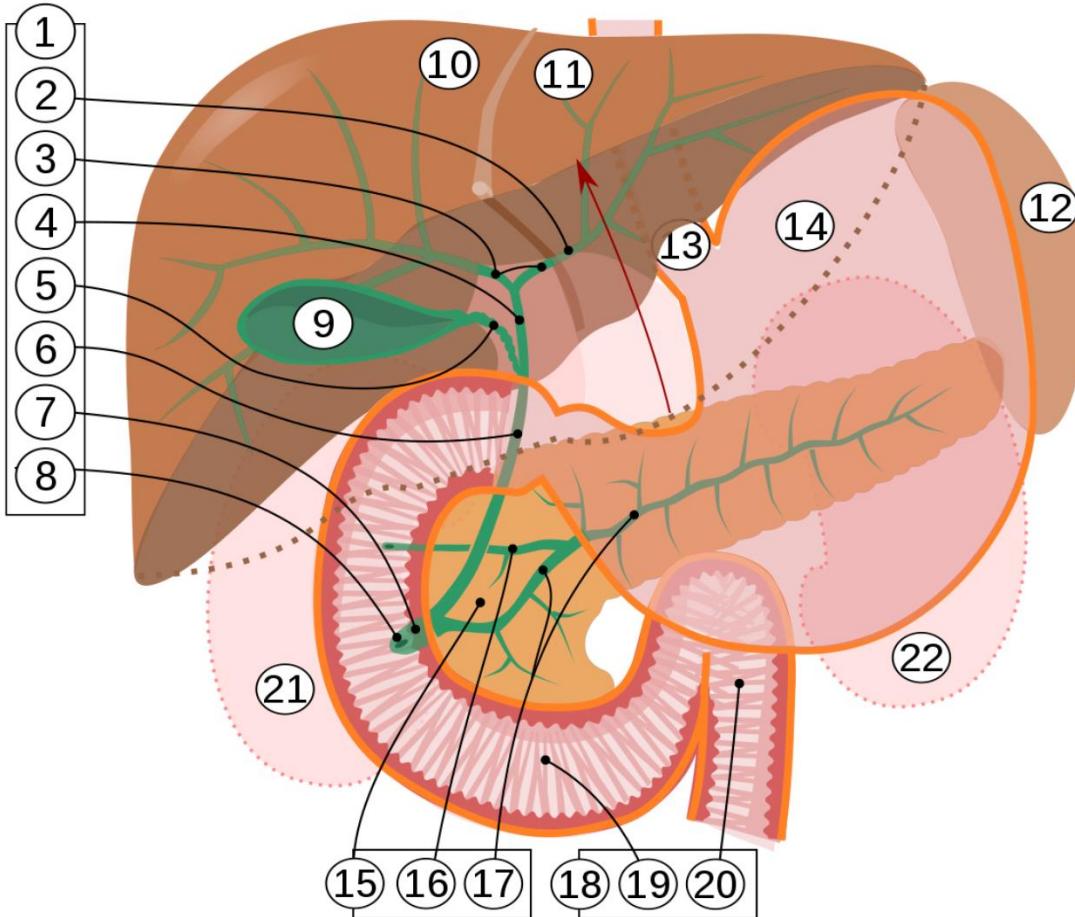


- Function
  - Various smooth muscle sphincters regulate the flow of bile and pancreatic juice through the ampulla: the sphincter of the pancreatic duct, the sphincter of the bile duct, and the sphincter of Oddi.
  - The sphincter of Oddi controls the introduction of bile and pancreatic secretions into the duodenum, as well as preventing the entry of duodenal contents into the ampulla.

# Ampulla of Vater



- Clinical Relevance
  - Pancreatitis can result from a failure of pancreatic secretions to drain properly. One possible cause of impaired drainage of pancreatic juice is blockage of the sphincter of Oddi. A common cause of blockage is a gallstone in the common bile duct.
  - Thomas' sign is the production of silver stools and can be indicative of cancer of the Ampulla of Vater. The silver colored stool is a combination of the white stool of obstructive jaundice combined with black stool of melena or bleeding. It was first described in the British Medical Journal by Dr. H. Ogilvie in 1955.



1. Bile ducts:
2. Intrahepatic bile ducts
3. Left and right hepatic ducts
4. Common hepatic duct
5. Cystic duct
6. Common bile duct
7. Sphincter of Oddi
8. Major duodenal papilla
9. Gallbladder
- 10-11. Right and left lobes of liver
12. Spleen
13. Esophagus
14. Stomach
15. Pancreas:
16. Accessory pancreatic duct
17. Pancreatic duct
18. Small intestine
19. Duodenum
20. Jejunum
- 21-22: Right and left kidneys

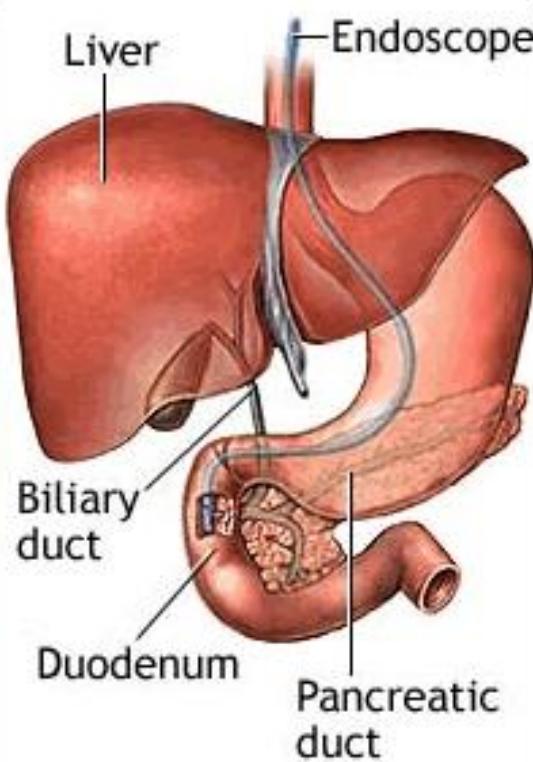
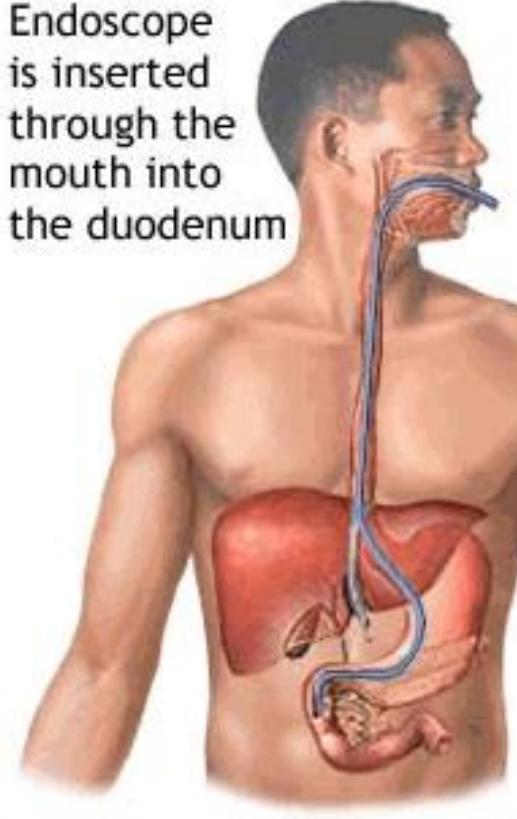


## Duodenal Papilla

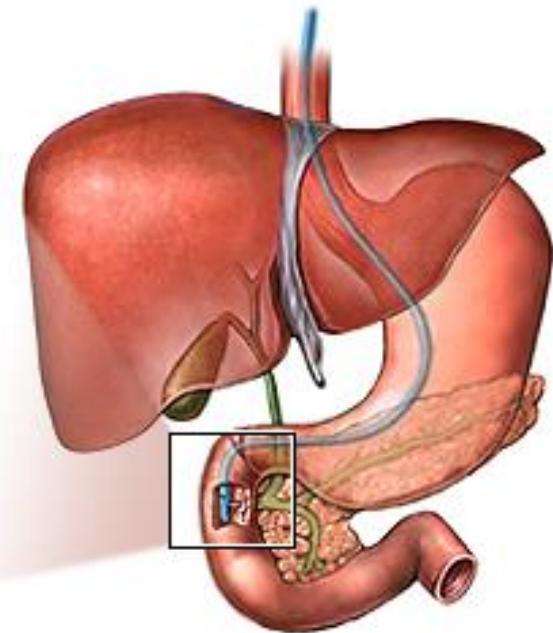
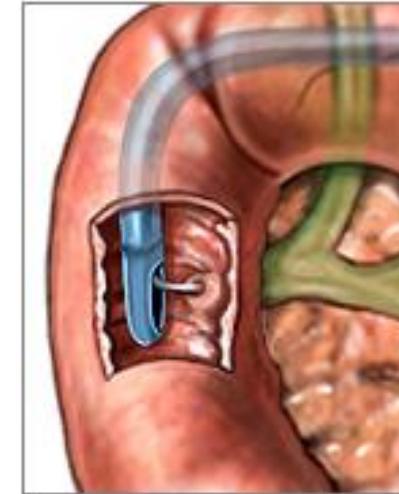
- The major duodenal papilla, seen on duodenoscopy at the time of ERCP.
- This is the protrusion of the ampulla of Vater into the duodenum.

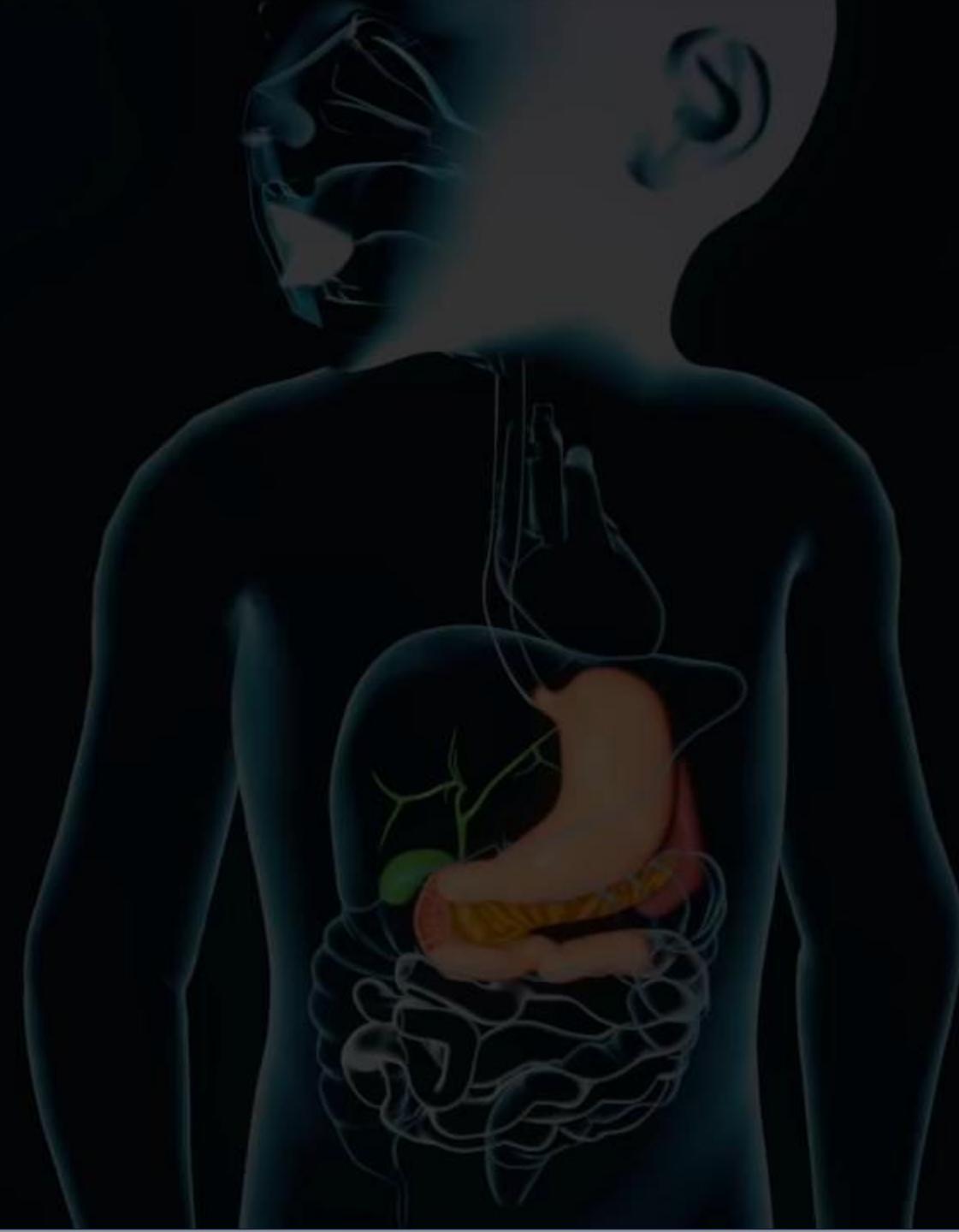
# ERCP Procedure

Endoscope is inserted through the mouth into the duodenum



Catheter







# ERCP



- CPT codes 43260–43278
  - These all use a combination of endoscopy and fluoroscopy to diagnose and/or treat the biliary or pancreatic ductal systems for problems such as:
    - gallstones that form in your gallbladder and become stuck in your common bile duct
    - inflammatory strictures (scars),
    - acute pancreatitis
    - chronic pancreatitis
    - trauma or surgical complications (leaks) in your bile or pancreatic ducts
    - pancreatic pseudocysts
    - tumors or cancers of the bile ducts
    - tumors or cancers of the pancreas

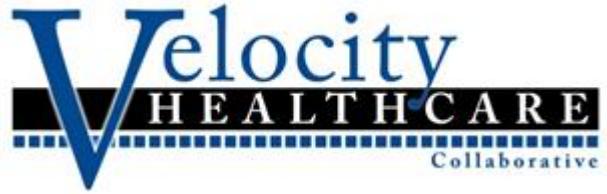
# ERCP Code Set



CPT® Code	Code Description
<b>Diagnostic</b>	
43260	Endoscopic retrograde cholangiopancreatography (ERCP); diagnostic, including collection of specimen(s) by brushing or washing, when performed (separate procedure)
<b>Therapeutic</b>	
43261	Endoscopic retrograde cholangiopancreatography (ERCP); with biopsy, single or multiple
43262	Endoscopic retrograde cholangiopancreatography (ERCP); with sphincterotomy/papillotomy
43263	Endoscopic retrograde cholangiopancreatography (ERCP); with pressure measurement of sphincter of Oddi
43264	Endoscopic retrograde cholangiopancreatography (ERCP); with removal of calculi/debris from biliary/pancreatic duct(s)
43265	Endoscopic retrograde cholangiopancreatography (ERCP); with destruction of calculi, any method (eg, mechanical, electrohydraulic, lithotripsy)
43277	Endoscopic retrograde cholangiopancreatography (ERCP); with trans-endoscopic balloon dilation of biliary/pancreatic duct(s) or of ampulla (sphincteroplasty), including sphincterotomy, when performed, each duct
43278	Endoscopic retrograde cholangiopancreatography (ERCP); with ablation of tumor(s), polyp(s), or other lesion(s), including pre- and post-dilation and guide wire passage, when performed

CPT® Code	Code Description
<b>Stenting</b>	
43274	Endoscopic retrograde cholangiopancreatography (ERCP); with placement of endoscopic stent into biliary or pancreatic duct, including pre- and post-dilation and guide wire passage, when performed, including sphincterotomy, when performed, each stent
<b>43275</b>	
43275	Endoscopic retrograde cholangiopancreatography (ERCP); with removal of foreign body(s) or stent(s) from biliary/pancreatic duct(s)
43276	Endoscopic retrograde cholangiopancreatography (ERCP); with removal and exchange of stent(s), biliary or pancreatic duct, including pre- and post-dilation and guide wire passage, when performed, including sphincterotomy, when performed, each stent exchanged

# ERCP



- ERCP is primarily used for therapeutic reasons; however, it can be applied for diagnostic purposes.
- There has been development of other safer and relatively non-invasive investigations, such as magnetic resonance cholangiopancreatography (MRCP) and endoscopic ultrasound.
- Multiple techniques are reported without the 59 modifier.
  - An exception to this is when more than one stent is inserted, removed, replaced or exchanged during the same operative session as reported with codes 43274 and 43276. It is appropriate to add modifier 59 to codes 43274 and 43276 for each additional stent procedure.

# ERCP



- Add-on code +43273 is reported only once, whether the bile duct(s) and/or pancreatic duct(s) are examined. Note that the code is always reported in conjunction with one or more ERCP procedure codes.
- The most common clinical scenarios are
  - biopsy,
  - stent, or
  - other therapeutic procedures that are performed via ERCP during the same session as cholangioscopy or pancreatoscopy.

# Example Procedure



## Description of Procedure:

Informed consent was obtained with the nature, benefits, risks, and alternatives to ERCP explained, including the risk of bleeding, perforation, and pancreatitis, and the patient agreed to proceed. No contraindications were noted on physical exam. MAC per anesthesia. The procedure was performed with the patient in the semi-prone position. The patient tolerated the procedure well. There were no complications.

# Example Procedure



## Findings:

MAJOR PAPILLA: There was an old biliary stent seen emanating from major papilla. This was removed with a snare. There was spontaneous drainage of debris and small stones.

ERCP: The bile duct was freely cannulated. The balloon occlusion cholangiogram revealed tight stricture at the bifurcation to right hepatic duct. A 0.035 guidewire was cannulated through the strictured area. But neither sphinctertome nor Soehendra dilator could not be traversed through the stricture due to angulation.



# Example Procedure

A 10 Fr, 12 cm biliary stent was placed to a branch of left hepatic duct. There was drainage of contrast and bile. Of note, the patient was given Zosyn due to stricture in right hepatic duct with delay in contrast drainage.

Impression: Persistent stricture at the right main hepatic duct. Unable to palliate due to severe angulation. A biliary stent placement at a branch of left hepatic duct.

Recommendation: Repeat ERCP in 8 to 10 weeks.

# Example Procedure



Procedure CPT Code(s):

- 43276 ERCP with stent insertion Endoscopic
- 43273 Cannulation of papilla

# CPT Assistant Guidance



- CPT includes two codes to report ERCP with stenting procedures:
  - 43268 Endoscopic retrograde cholangiopancreatography (ERCP); with endoscopic retrograde insertion of tube or stent into bile or pancreatic duct and
  - 43269 Endoscopic retrograde cholangiopancreatography (ERCP); with endoscopic retrograde removal of foreign body and/or change of tube or stent.
- Updated instructions direct that:
  - when a stent is placed in both the common bile duct and the pancreatic duct, 43268 may be reported twice, with modifier 59 Distinct procedural service appended to the second code. This tells the payer the additional stent was placed at a different site.

# CPT Assistant Guidance



- CPT Assistant specifies that when a stent is placed in the common bile duct extending into the right hepatic duct, and another stent is placed in the common bile duct extending into the left hepatic duct, it is again permissible to report 43268 twice with modifier 59 appended.
  - Physician documentation should include information regarding the location of the proximal end of the stent.
- Conversely, if multiple stents are placed in one duct (either side-by-side or overlapping), 43268 may be reported only once.

# CPT Assistant Guidance



- For the endoscopic removal and replacement of ductal stents, the guidelines are the same.
  - Code 43269 would be reported twice if multiple stents in separate ducts are both removed and replaced during the same operative session.
  - Only one code would be reported for removal of two stents in the same duct.
- CPT Assistant directs that when two stents are removed and only one stent is replaced, 43269 would be reported only once.
- As always, clear and accurate physician documentation is the key to accurate code assignment and appropriate reimbursement.