GALLBLADDER DISEASE

Includes Cholecystitis, Cholelithiasis, Other Diseases of the Gallbladder and Biliary Tract and Cholecystectomy

Background

This case definition was developed by the Armed Forces Health Surveillance Branch (AFHSB) for the purpose of epidemiological surveillance of gallbladder disease and cholecystectomies.

Clinical Description

Irritation and inflammation of the gallbladder is known as cholecystitis. The most common cause of cholecystitis is cholelithiasis (gallstones). Gallstones impede the release of bile from the gallbladder which may trigger an acute "gallbladder attack" characterized by abdominal pain, bloating, nausea and vomiting. When individual symptoms become frequent, recurrent, or severe, laparoscopic cholecystectomy (i.e., surgical removal of the gallbladder) is usually indicated. Common non-modifiable risk factors for gallstone development include female gender, age over 40, family history and Native American or Mexican-American decent. Modifiable risk factors include obesity, high fat or high-cholesterol diet, and diabetes.[1]

Case Definition and Incidence Rules

For surveillance purposes, a case of *gallbladder disease* (cholecystitis, cholelithiasis and other diseases of the gallbladder and biliary tract) is defined as:

- *One hospitalization* with a case defining diagnosis of gallbladder disease (see ICD9 and ICD10 code lists below) in the *primary* diagnostic position; or

- *Two outpatient medical encounters* with a case defining diagnosis of gallbladder disease (see ICD9 and ICD10 code lists below) in the *primary* diagnostic position.

For surveillance purposes, a case of *cholecystectomy* defined as:

- *One hospitalization* with a procedure (PR) code for cholecystectomy (see ICD9 and ICD10 code lists below) in *any* position; or

- *One outpatient* medical encounter with a Current Procedure Terminology (CPT) code for cholecystectomy (see CPT code list below) in *any* position.
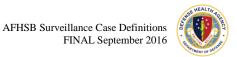
Incidence rules:

For individuals who meet the case definition:

- For gallbladder disease and cholecystectomy, the incidence date is considered the date of the first hospitalization or outpatient medical encounter that includes the defining diagnosis or procedure code.

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[1] Armed Forces Health Surveillance Branch. Gallbladder Disease and Cholecystectomies, Active Component, U.S. Armed Forces, 2004-2013. *Medical Surveillance Monthly Report (MSMR);* 2014 Jun; Vol 21(6): 8-11.

> **Case Definition and Incidence Rules** *(continued)*
>
> - For gallbladder disease and cholecystectomy, an individual may be considered an incident case only *once per surveillance period.*
>
> *Exclusions:*
>
> - None

Codes

The following ICD9 and ICD10 codes are included in the case definition:

Condition	ICD-10-CM Codes	ICD-9-CM Codes
Cholelithiasis *(gallstones)*	*K80 (cholelithiasis)*	*574 (cholelithiasis)*
	K80.0 (calculus of gallbladder with acute cholecystitis)	*574.0 (calculus of gallbladder with acute cholecystitis)*
	- K80.00 (calculus of gallbladder with acute cholecystitis *without* obstruction	- 574.00 (calculus of gallbladder with acute cholecystitis, *without* mention of obstruction)
	- K80.01 (calculus of gallbladder with acute cholecystitis *with* obstruction	- 574.01 (calculus of gallbladder with acute cholecystitis, *with* obstruction)
	K80.1 (calculus of gallbladder and other cholecystitis)	-- *574.10 (calculus of gallbladder with other cholecystitis)*
	- K80.10 (calculus of gallbladder with chronic cholecystitis *without* obstruction)	- 574.10 (calculus of gallbladder with other cholecystitis, *without* mention of obstruction)
	- K80.11 (calculus of gallbladder with chronic cholecystitis *with* obstruction)	- 574.11 (calculus of gallbladder with other cholecystitis, *with* obstruction)
	- K80.12 (calculus of gallbladder with acute and chronic cholecystitis *without* obstruction)	
	- K80.13 (calculus of gallbladder with acute and chronic cholecystitis *with* obstruction)	
	- K80.18 (calculus of gallbladder with other cholecystitis *without* obstruction)	
	- K80.19 (calculus of gallbladder with other cholecystitis *with* obstruction)	
	K80.2 (calculus of gallbladder without cholecystitis)	*574.2 (calculus of gallbladder without mention of cholecystitis)*
		(continued on next page)

- K80.20 (calculus of gallbladder without cholecystitis *without* obstruction)	- 574.20 (calculus of gallbladder without mention of cholecystitis, *without* mention of obstruction)
- K80.21 (calculus of gallbladder without cholecystitis *with* obstruction)	- 574.21 (calculus of gallbladder without mention of cholecystitis, *with* obstruction)
K80.3 (calculus of bile duct with cholangitis)	**No comparable ICD9 codes; translation requires multiple codes.*
- K80.30 (calculus of bile duct with cholangitis, unspecified, *without* obstruction)	574.50 (calculus of bile duct without mention of cholecystitis, *without* mention of obstruction); *with* 576.1 (cholangitis)
- K80.31 (calculus of bile duct with cholangitis, unspecified, *with* obstruction)	
- K80.32 (calculus of bile duct with cholangitis, *without* obstruction)	
- K80.33 (calculus of bile duct with cholangitis, *with* obstruction)	
- K80.34 (calculus of bile duct with chronic cholangitis, *without* obstruction)	
- K80.35 (calculus of bile duct with chronic cholangitis, *with* obstruction)	
- K80.36 (calculus of bile duct with acute and chronic cholangitis, *without* obstruction)	
- K80.37 (calculus of bile duct with acute and chronic cholangitis, *with* obstruction)	
K80.4 (calculus of bile duct with cholecystis)	*574.3 (calculus of bile duct with acute cholecystitis)*
- K80.40 (calculus of bile duct with cholecystitis, unspsecified *without* obstruction)	- 574.30 (calculus of bile duct with acute cholecystitis, *without* mention of obstruction)
- K80.41 (calculus of bile duct with cholecystitis, unspecified, *with* obstruction)	- 574.31 (calculus of bile duct with acute cholecystitis, *with* obstruction) --
- K80.42 (calculus of bile duct with acute cholecystitis *without* obstruction)	- 574.40 (calculus of bile duct with other cholecystitis, *without* mention of obstruction)
- K80.43 (calculus of bile duct with acute cholecystitis *with* obstruction)	- 574.41 (calculus of bile duct with other cholecystitis, *with* obstruction)
- K80.44 (calculus of bile duct with chronic cholecystitis *without* obstruction)	
- K80.45 (calculus of bile duct with chronic cholecystitis *with* obstruction)	*(continued on next page)*

- K80.46 (calculus of bile duct with acute and chronic cholecystitis *without* obstruction)	
- K80.47 (calculus of bile duct with acute and chronic cholecystitis *with* obstruction)	
K80.5 *(calculus of bile duct without cholangitis or cholecystitis)*	574.5 *(calculus of bile duct without mention of cholecystitis)*
- K80.50 (calculus of bile duct without cholangitis or cholecystitis *without* obstruction)	- 574.50 (calculus of bile duct without mention of cholecystitis, *without* mention of obstruction)
- K80.51 (calculus of bile duct without cholangitis or cholecystitis *with* obstruction)	- 574.51 (calculus of bile duct without mention of cholecystitis, *with* obstruction)
K80.6 *(calculus of gallbladder and bile duct with cholecystitis)*	574.6 *(calculus of gallbladder and bile duct with acute cholecystitis)*
- K80.60 (calculus of gallbladder and bile duct with cholecystitis, unspecified, *without* obstruction)	- 574.60 (calculus of gallbladder and bile duct with acute cholecystitis, *without* mention of obstruction)
- K80.61 (calculus of gallbladder and bile duct with cholecystitis, unspecified, *with* obstruction)	- 574.61 (calculus of gallbladder and bile duct with acute cholecystitis, *with* obstruction) --
- K80.62 (calculus of gallbladder and bile duct with acute cholecystitis *without* obstruction)	- 574.70 (calculus of gallbladder with other cholecystitis, *without* mention of obstruction)
- K80.63 (calculus of gallbladder and bile duct with acute cholecystitis *with* obstruction)	- 574.71 (calculus of gallbladder and bile duct with other cholecystitis, *with* obstruction)
- K80.64 (calculus of gallbladder and bile duct with chronic cholecystitis *without* obstruction)	
- K80.65 (calculus of gallbladder and bile duct with chronic cholecystitis *with* obstruction)	
- K80.66 (calculus of gallbladder and bile duct with acute and chronic cholecystitis *without* obstruction)	574.8 *(calculus of gallbladder and bile duct with acute and chronic cholecystitis)* - 574.80 (calculus of gallbladder with acute and chronic cholecystitis, *without* mention of obstruction)
- K80.67 (calculus of gallbladder and bile duct *with* acute and chronic cholecystitis with obstruction)	- 574.81 (calculus of gallbladder and bile duct with acute and chronic cholecystitis, *with* obstruction)
K80.7 *(calculus of gallbladder and bile duct without cholecystitis)*	574.9 *(calculus of gallbladder and bile duct with other cholecystitis)* *(continued on next page)*

	ICD-10-CM	ICD-9-CM
	- K80.70 (calculus of gallbladder and bile duct without cholecystitis *without* obstruction)	- 574.90 (calculus of gallbladder with acute *without* cholecystitis, *without* mention of obstruction)
	- K80.71 (calculus of gallbladder and bile duct without cholecystitis *with* obstruction)	- 574.91 (calculus of gallbladder and bile duct without cholecystitis, *with* obstruction)
	K80.8 (other cholelithiasis)	--
	- K80.80 (other cholelithiasis *without* obstruction)	- 574.20 (above)
	- K80.81 other cholelithiasis *with* obstruction)	- 574.41 (above)

Condition	ICD-10-CM Codes	ICD-9-CM Codes
Cholecystitis	*K81 (cholecystitis)*	*575 (other disorders of gallbladder)*
	- K81.0 (acute cholecystitis)	575.0 (acute cholecystitis)
	- K81.1 (chronic cholecystitis)	*575.1 (other cholecystitis.)* - 575.11 (chronic cholecystitis)
	- K81.2 (acute cholecystitis with chronic cholecystitis)	- 575.12 (acute and chronic cholecystitis)
	- K81.9 (cholecystitis, unspecified)	- 575.10 (other cholecystitis)

Condition	ICD-10-CM Codes	ICD-9-CM Codes
Other diseases of the gallbladder and biliary tract	*K82 (other diseases of gallbladder)*	--
	- K82.0 (obstruction of gallbladder)	- 575.2 (obstruction of gallbladder)
	- K82.1 (hydrops of gallbladder)	- 575.3 (hydrops of gallbladder)
	- K82.2 (perforation of gallbladder)	- 575.4 (perforation of gallbladder)
	- K82.3 (fistula of gallbladder)	- 575.5 (fistula of gallbladder)
	- K82.4 (cholesterolosis of gallbladder)	- 575.6 (cholesterolosis of gallbladder)
	- K82.8 (other specified diseases of gallbladder)	- 575.8 (other specified disorders of gallbladder)
	- K82.9 (disease of gallbladder, unspecified)	- 575.9 (unspecified disorder of gallbladder)
	K83 (other diseases of biliary tract)	*576 (other disorders of biliary tract)*
	- K83.0 (cholangitis)	- 576.1 (cholangitis)
	- K83.1 (obstruction of bile duct)	- 576.2 (obstruction of bile duct)
	- K83.2 (perforation of bile duct)	- 576.3 (perforation of bile duct)
		(continued on next page)

	- K83.3 (fistula of bile duct)	- 576.4 (fistula of bile duct)
	- K83.4 (spasm of sphincter of Oddi)	- 576.5 (spasm of sphincter of Oddi)
	- K83.5 (biliary cyst)	576.8 (other specified disorders of biliary tract)
	- K83.8 (other specified diseases of biliary tract)	
	- K83.9 (disease of biliary tract, unspecified)	576.9 (unspecified disorder of biliary tract)
Post procedure complications	- K91.5 (postcholecystectomy syndrome)	576.0 (postcholecystectomy syndrome)

Procedure	ICD-10-CM (PR) Codes	ICD-9-CM (PR) Codes
Cholecystectomy *(inpatient)*	*OFB40 (gallbladder, open, excision)*	*51.2 (cholecystectomy)*
	- OFB40ZZ (excision of gallbladder, open approach)	- 51.21 (other partial cholecystectomy)
	- OFB43ZZ (excision of gallbladder, percutaneous approach)	- 51.24 (laparoscopic partial cholecystectomy)
	- OFB44ZZ (excision of gallbladder, percutaneous endoscopic approach)	
	OFC90 (common bile duct, open)	- 51.41 (common duct exploration for removal of calculus)
	- OFC90ZZ (extirpation of matter from common bile duct, open approach)	
	OFT4 (gallbladder, open, resection)	- 51.22 (cholecystectomy)
	- OFT40ZZ (resection of gallbladder, open approach)	- 51.23 (laparoscopic cholecystectomy)
	- OFT44ZZ (resection of gallbladder, percutaneous endoscopic approach)	

Procedures	CPT Codes
Cholecystectomy *(outpatient)*	47562 (laparoscopic cholecystectomy without cholangiography)
	47563 (laparoscopic cholecystectomy with cholangiography)
	47564 (laparoscopic cholecystectomy with exploration of the common bile duct)
	47600 (cholecystectomy without cholangiography)
	47605 (cholecystectomy with cholangiography)
	47610 (cholecystectomy with exploration of the common bile duct)
	47612 (cholecystectomy with exploration of common bile duct; with choledochoenterostomy)
	47620 (cholecystectomy with exploration of common duct; with transduodenal sphincterotomy or sphincteroplasty, with or without cholangiography)

Development and Revisions

- In September of 2016 the case definition was updated to include ICD10 codes.

- This case definition was developed in June of 2014 by the *Medical Surveillance Monthly Report (MSMR)* staff for use in a MSMR article on gallbladder disease.[1] The case definition was developed based on reviews of the ICD9 codes, the scientific literature, and previous AFHSC analyses.

Case Definition and Incidence Rule Rationale

- This case definition includes case finding criteria for confirmed, probable and suspected viral meningitis.

Code Set Determination and Rationale

- The code set includes ICD9 codes 575.2-575.9 (other and unspecified disorders of the gallbladder) and ICD9 576.x (other disorders of the biliary tract) for the purpose of reporting on gallbladder disease. Investigators may wish to eliminate these codes for more specific reports on cholelithiasis.

Reports

AFHSB reports on gallbladder disease the following reports:

- None.

Review

Sep 2016	Case definition reviewed and adopted by the AFHSB Surveillance Methods and Standards (SMS) working group.
Jun 2014	Case definition developed by AFHSB *MSMR* staff.

Comments

- The following codes were removed from the original code set used for the 2014 MSMR analyses on gallbladder disease. While these procedure codes may be related to cholecystectomy, they do not specifically reference the procedure or cholelithiasis. ICD9 51.51 (exploration of the common duct) was also considered to be too broad for inclusion.

Procedure	ICD-10-CM (PR) Codes	ICD-9-CM (PR) Codes
Procedure codes that may be related to gallbladder disease) *(inpatient)*	*OF19O (common bile duct, open)*	51.36 (choledochoenterostomy)
	- OF190D3 (bypass common bile duct to duodenum with intraluminal device, open approach)	
	- OF190Z3 (bypass common bile duct to duodenum, open approach)	
	OF194 (common bile duct, percutaneous endoscopic)	*(continued on next page)*

	- OF194D3 (bypass common bile duct to duodenum with intraluminal device, percutaneous endoscopic approach)	
	- OF194Z3 (bypass common bile duct to duodenum, percutaneous endoscopic approach)	
	- PCS 0F9900Z (drainage of common bile duct with drainage device, open approach)	- 51.51 (exploration of common duct)
	- PCS 0F990ZZ (drainage of common bile duct, open approach)	
	- PCS 0F9930Z (drainage of common bile duct with drainage device, percutaneous approach)	
	- PCS 0F9940Z (drainage of common bile duct with drainage device, percutaneous endoscopic)	
	- PCS 0FJB0ZZ (inspection of hepatobiliary duct, open approach)	
	- PCS 0FJB3ZZ (inspection of hepatobiliary duct, percutaneous approach)	
	- PCS 0FJB4ZZ (inspection of hepatobiliary duct, percutaneous endoscopic approach)	
	- PCS 0FJB7ZZ (inspection of hepatobiliary duct, via natural or artificial opening)	
	- PCS 0FJB8ZZ (inspection of hepatobiliary duct, via natural or artificial opening endoscopic)	

- Investigators may wish to consider the following ICD10 procedure codes that may or may not be related to gallbladder disease.

1.0 Gallbladder 0F14

▶ 0F14 Gallbladder
   ▶ 0F140 Open
      ▶ 0F140D Intraluminal Device >
         ▶ 0F140D3 Bypass Gallbladder to Duodenum with Intraluminal Device, Open Approach
         ▶ 0F140D4 Bypass Gallbladder to Stomach with Intraluminal Device, Open Approach
         ▶ 0F140D5 Bypass Gallbladder to Right Hepatic Duct with Intraluminal Device, Open Approach
         ▶ 0F140D6 Bypass Gallbladder to Left Hepatic Duct with Intraluminal Device, Open Approach
         ▶ 0F140D7 Bypass Gallbladder to Caudate Hepatic Duct with Intraluminal Device, Open Approach
         ▶ 0F140D8 Bypass Gallbladder to Cystic Duct with Intraluminal Device, Open Approach
         ▶ 0F140D9 Bypass Gallbladder to Common Bile Duct with Intraluminal Device, Open Approach
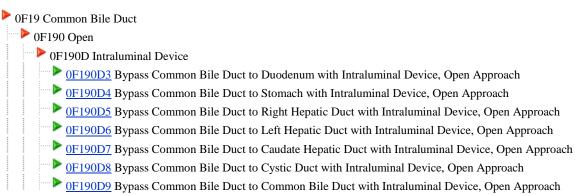
     ▶ 0F140DB Bypass Gallbladder to Small Intestine with Intraluminal Device, Open Approach

   ▶ 0F140Z No Device

     ▶ 0F140Z3 Bypass Gallbladder to Duodenum, Open Approach

     ▶ 0F140Z4 Bypass Gallbladder to Stomach, Open Approach

     ▶ 0F140Z5 Bypass Gallbladder to Right Hepatic Duct, Open Approach

     ▶ 0F140Z6 Bypass Gallbladder to Left Hepatic Duct, Open Approach

     ▶ 0F140Z7 Bypass Gallbladder to Caudate Hepatic Duct, Open Approach

     ▶ 0F140Z8 Bypass Gallbladder to Cystic Duct, Open Approach

     ▶ 0F140Z9 Bypass Gallbladder to Common Bile Duct, Open Approach

     ▶ 0F140ZB Bypass Gallbladder to Small Intestine, Open Approach

▶ 0F144 Percutaneous Endoscopic

  ▶ 0F144D Intraluminal Device

    ▶ 0F144D3 Bypass Gallbladder to Duodenum with Intraluminal Device, Percutaneous Endoscopic Approach

    ▶ 0F144D4 Bypass Gallbladder to Stomach with Intraluminal Device, Percutaneous Endoscopic Approach

    ▶ 0F144D5 Bypass Gallbladder to Right Hepatic Duct with Intraluminal Device, Percutaneous Endoscopic Approach

    ▶ 0F144D6 Bypass Gallbladder to Left Hepatic Duct with Intraluminal Device, Percutaneous Endoscopic Approach

    ▶ 0F144D7 Bypass Gallbladder to Caudate Hepatic Duct with Intraluminal Device, Percutaneous Endoscopic Approach

    ▶ 0F144D8 Bypass Gallbladder to Cystic Duct with Intraluminal Device, Percutaneous Endoscopic Approach

    ▶ 0F144D9 Bypass Gallbladder to Common Bile Duct with Intraluminal Device, Percutaneous Endoscopic Approach

    ▶ 0F144DB Bypass Gallbladder to Small Intestine with Intraluminal Device, Percutaneous Endoscopic Approach

  ▶ 0F144Z No Device

    ▶ 0F144Z3 Bypass Gallbladder to Duodenum, Percutaneous Endoscopic Approach

    ▶ 0F144Z4 Bypass Gallbladder to Stomach, Percutaneous Endoscopic Approach

    ▶ 0F144Z5 Bypass Gallbladder to Right Hepatic Duct, Percutaneous Endoscopic Approach

    ▶ 0F144Z6 Bypass Gallbladder to Left Hepatic Duct, Percutaneous Endoscopic Approach

    ▶ 0F144Z7 Bypass Gallbladder to Caudate Hepatic Duct, Percutaneous Endoscopic Approach

    ▶ 0F144Z8 Bypass Gallbladder to Cystic Duct, Percutaneous Endoscopic Approach

    ▶ 0F144Z9 Bypass Gallbladder to Common Bile Duct, Percutaneous Endoscopic Approach

      ▶ 0F144ZB Bypass Gallbladder to Small Intestine, Percutaneous Endoscopic Approach

2.0 Common Bile Duct 0F19

▶ 0F19 Common Bile Duct

  ▶ 0F190 Open

   ▶ 0F190D Intraluminal Device

    ▶ 0F190D3 Bypass Common Bile Duct to Duodenum with Intraluminal Device, Open Approach

    ▶ 0F190D4 Bypass Common Bile Duct to Stomach with Intraluminal Device, Open Approach

    ▶ 0F190D5 Bypass Common Bile Duct to Right Hepatic Duct with Intraluminal Device, Open Approach

    ▶ 0F190D6 Bypass Common Bile Duct to Left Hepatic Duct with Intraluminal Device, Open Approach

    ▶ 0F190D7 Bypass Common Bile Duct to Caudate Hepatic Duct with Intraluminal Device, Open Approach

    ▶ 0F190D8 Bypass Common Bile Duct to Cystic Duct with Intraluminal Device, Open Approach

    ▶ 0F190D9 Bypass Common Bile Duct to Common Bile Duct with Intraluminal Device, Open Approach

▶ 0F190DB Bypass Common Bile Duct to Small Intestine with Intraluminal Device, Open Approach
▶ 0F190Z No Device
   ▶ 0F190Z3 Bypass Common Bile Duct to Duodenum, Open Approach
   ▶ 0F190Z4 Bypass Common Bile Duct to Stomach, Open Approach
   ▶ 0F190Z5 Bypass Common Bile Duct to Right Hepatic Duct, Open Approach
   ▶ 0F190Z6 Bypass Common Bile Duct to Left Hepatic Duct, Open Approach
   ▶ 0F190Z7 Bypass Common Bile Duct to Caudate Hepatic Duct, Open Approach
   ▶ 0F190Z8 Bypass Common Bile Duct to Cystic Duct, Open Approach
▶ 0F190Z9 Bypass Common Bile Duct to Common Bile Duct, Open Approach
▶ 0F190ZB Bypass Common Bile Duct to Small Intestine, Open Approach
▶ 0F194 Percutaneous Endoscopic
  ▶ 0F194D Intraluminal Device
   ▶ 0F194D3 Bypass Common Bile Duct to Duodenum with Intraluminal Device, Percutaneous Endoscopic Approach
   ▶ 0F194D4 Bypass Common Bile Duct to Stomach with Intraluminal Device, Percutaneous Endoscopic Approach
   ▶ 0F194D5 Bypass Common Bile Duct to Right Hepatic Duct with Intraluminal Device, Percutaneous Endoscopic Approach
   ▶ 0F194D6 Bypass Common Bile Duct to Left Hepatic Duct with Intraluminal Device, Percutaneous Endoscopic Approach
   ▶ 0F194D7 Bypass Common Bile Duct to Caudate Hepatic Duct with Intraluminal Device, Percutaneous Endoscopic Approach
   ▶ 0F194D8 Bypass Common Bile Duct to Cystic Duct with Intraluminal Device, Percutaneous Endoscopic Approach
   ▶ 0F194D9 Bypass Common Bile Duct to Common Bile Duct with Intraluminal Device, Percutaneous Endoscopic Approach
   ▶ 0F194DB Bypass Common Bile Duct to Small Intestine with Intraluminal Device, Percutaneous Endoscopic Approach
  ▶ 0F194Z No Device
   ▶ 0F194Z3 Bypass Common Bile Duct to Duodenum, Percutaneous Endoscopic Approach
   ▶ 0F194Z4 Bypass Common Bile Duct to Stomach, Percutaneous Endoscopic Approach
   ▶ 0F194Z5 Bypass Common Bile Duct to Right Hepatic Duct, Percutaneous Endoscopic Approach
   ▶ 0F194Z6 Bypass Common Bile Duct to Left Hepatic Duct, Percutaneous Endoscopic Approach
   ▶ 0F194Z7 Bypass Common Bile Duct to Caudate Hepatic Duct, Percutaneous Endoscopic Approach
   ▶ 0F194Z8 Bypass Common Bile Duct to Cystic Duct, Percutaneous Endoscopic Approach
   ▶ 0F194Z9 Bypass Common Bile Duct to Common Bile Duct, Percutaneous Endoscopic Approach
   ▶ 0F194ZB Bypass Common Bile Duct to Small Intestine, Percutaneous Endoscopic Approach