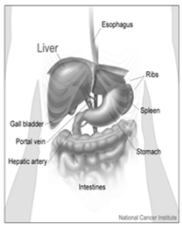
Liver and Biliary Tract



December 2, 2010

NAACCR 2010-2011 Webinar Series

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Fabulous Prizes!!

2

Agenda

- Update
- Coding Moment
- Overview
- CS v2
- Treatment

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Coding Moment-Sequence

- Indicates the sequence of malignant and nonmalignant neoplasms over the lifetime of the patient.

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Sequence

- Codes 00–59 and 99 indicate neoplasms of *in situ* or malignant behavior.
- Code 00 only if the patient has a single malignant primary.
- Code 60 only if the patient has a single nonmalignant primary.
- If two or more malignant or *in situ* neoplasms are diagnosed at the same time, assign the lowest sequence number to the diagnosis with the worst prognosis.
  - If no difference in prognosis is evident, the decision is arbitrary.

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Question

- A patient with history of a benign meningioma, now presents with a malignancy of the colon. Is the meningioma sequenced? Is colon sequence "00" or "02?"

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Answer

- FORDS instructs to use sequence codes 00-59 and 99 for reportable in situ and malignant neoplasms and use sequence codes 60-88 for benign or borderline neoplasms. The malignant colon sequence would be 00 that indicate one malignant primary only in the patient's lifetime.

(*Nancy Kawesch, CTR*)
45767
8/10/2009

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Question

- If we collect prostate PIN M-8148/2, is the sequence number 60?

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Answer

- If this case is reportable by agreement, use sequence 00-59 to indicate neoplasms of insitu or malignant behavior (behavior equals 2 or 3).

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Question

- When sequencing primary sites, if a patient has had a previous non reportable skin malignancy, is this included in the sequencing?
  - For instance a patient was diagnosed in 2007 with basal cell carcinoma of the face. In 2009 the patient was diagnosed diagnosis with colon cancer. Is the colon cancer sequence 02?

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Answer

- Revised 10/22/09 (vc). Confirmed by Jerri Linn Phillips: The sequence number for the colon cancer would be (00) since the basal cell carcinoma was diagnosed in 2005 and was not reportable to the CoC or anywhere else at that time. If the basal cell carcinoma was reportable-by-agreement at your facility in 2005 or was abstracted, then the basal cell carcinoma would be sequenced as (01) and the colon cancer would be (02).

  46055
  9/21/2009
  (*Karla Savoie, CTR*)

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Liver and Biliary Tract

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Overview

- Estimated new cases and deaths from liver and intrahepatic bile duct cancer in the United States in 2010:
  - New cases: 24,120
  - Deaths: 18,910

Source: http://www.cancer.gov/cancertopics/types/liver/

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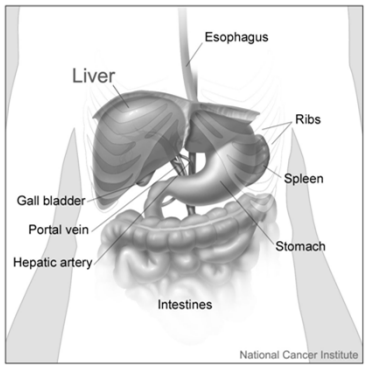
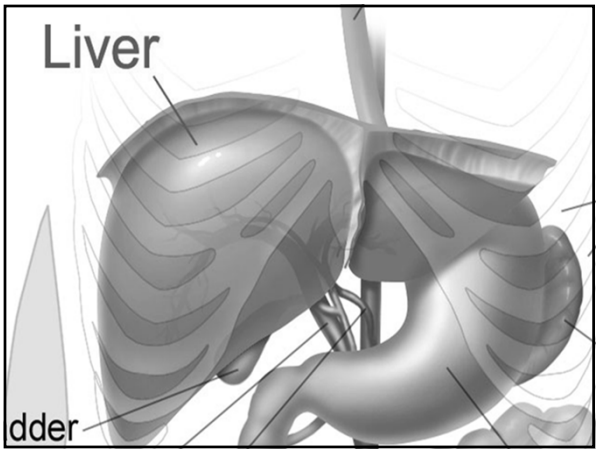
Liver and Biliary Tract





Hepatitis C

- 4 million Americans
  - 1.3% of the US population
- 170 million worldwide
  - 3% of the worldwide population
- Chronic Hepatitis C can progress to:
  - Liver failure
  - Cirrhosis
  - Liver Cancer

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Cirrhosis

- Healthy liver tissue is replaced with scar tissue
- Scar tissue blocks the flow of blood through the liver
- Slows the processing of nutrients, hormones, drugs and naturally produced toxins

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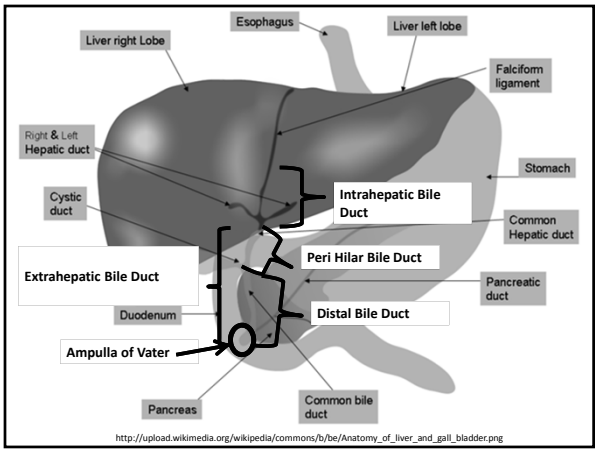
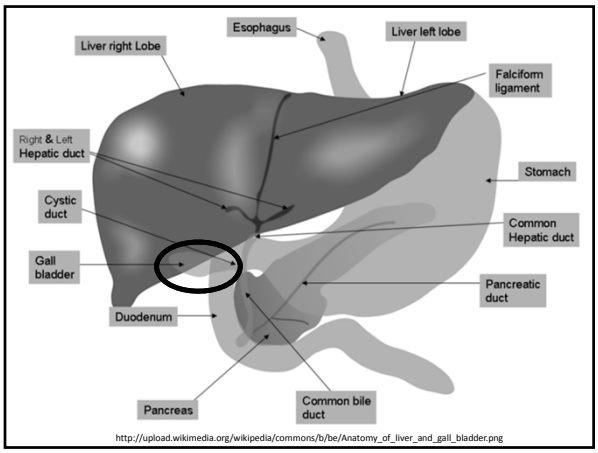


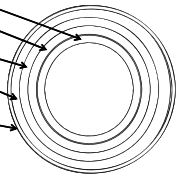
http://upload.wikimedia.org/wikipedia/commons/b/be/Anatomy_of_liver_and_gall_bladder.png



http://upload.wikimedia.org/wikipedia/commons/b/be/Anatomy_of_liver_and_gall_bladder.png

Layers of the Gallbladder

- Epithelium
- Lamina propria
- Muscle layer
- Perimuscular tissue
- Serosa



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Primary Site

- C22.0
  - Liver
  - Hepatic, NOS
- C22.1
  - Intrahepatic bile duct
- C24.0
  - Extrahepatic bile duct
    - Bile duct NOS
    - Choledochal duct
    - Common bile duct
    - Cystic bile duct
    - Hepatic bile duct
    - Sphincter of Oddi
- C24.1
  - Ampulla of Vater
    - Periampullary

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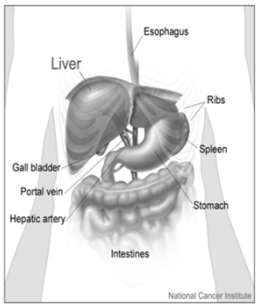
Lymph Nodes

- Liver
  - Hilar
  - Hepatoduodenal ligament lymph nodes
  - Hepatic artery
  - Portal vein



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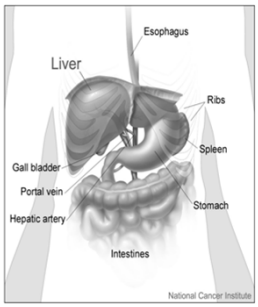
Lymph Nodes

- Intrahepatic bile duct
  - Different for the left and right lobe
  - Hilar
  - Gastrohepatic (left lobe)
  - Periduodenal (right lobe)
  - Peripancreatic (right lobe)
  - Inferior phrenic nodes



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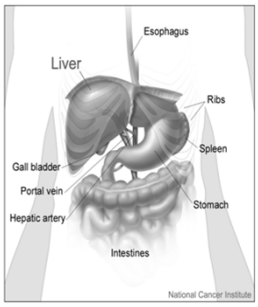
Lymph Nodes

- Extrahepatic bile duct
  - Hilar
  - Hepatoduodenal ligament lymph nodes
  - Hepatic artery
  - Portal vein
- Gallbladder
  - Hepatic hilus



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Hepatocellular Carcinoma

- Hepatocellular carcinoma, NOS (8170/3)
  - Liver cell carcinoma
  - Hepatocarcinoma
  - Hepatoma, malignant
  - Hepatoma, NOS
- Hepatocellular carcinoma, fibrolamellar (8171/3)
- Hepatocellular carcinoma, scirrhous (8172/3)
- Hepatocellular carcinoma, sarcomatoid variant (8173/3)
- Hepatocellular carcinoma, Clear Cell Type (8174/3)
- Hepatocellular carcinoma, pleomorphic type (8175/3)

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Cholangiocarcinoma

- Cholangiocarcinoma (8160/3)
  - Bile duct carcinoma
  - Bile duct adenocarcinoma
- Bile duct cystadenocarcinoma (8161/3)
- Klatskin tumor (8162/3)

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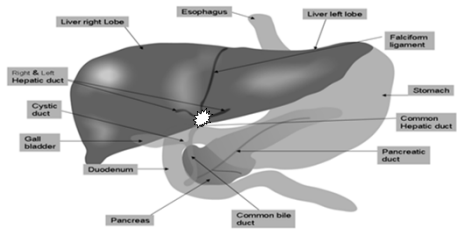
Klatskin Tumor



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http://upload.wikimedia.org/wikipedia/commons/b/be/Anatomy_of_liver_and_gall_bladder.png

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Diagnosis

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Hepatocarcinoma

- Often asymptomatic
- Imaging
  - CT
  - MRI
- Alpha Feta Protein (AFP) Test
- Biopsy
- Hepatitis panel
- Hepatic function test

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Cholangiocarcinoma

Intrahepatic

- Presentation
  - Asymptomatic
  - May be detected incidentally
- Workup
  - Liver function tests
  - Imaging

Extrahepatic

- Presentation
  - Jaundice
  - Evidence of biliary obstruction
- Workup
  - Liver function tests
  - Imaging
  - Cholangiography (MRCP)

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Gallbladder

- Late stage or incidental findings common
- High quality imaging necessary for staging

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Collaborative Stage Data Collection System (CSv2)

Hepatobiliary Schemas

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CSv2 Hepatobiliary Schemas

Schema Name	Site Code
Liver	C22.0, C22.1
BileDuctsIntrahepat	C22.0, C22.1
Gallbladder	C23.9
BileDuctsPerihilar	C24.0
CysticDuct	C24.0
BileDuctsDistal	C24.0
AmpullaVater	C24.1

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Liver Schema

- Primary site = C22.0 (liver)
  - Histology includes only 8000-8157, 8162-8175, 8190-9136, 9141-9582, and 9700-9701
- Primary site = C22.1 (intrahepatic bile duct)
  - Histology includes only 8170-8175
- AJCC 7th Edition staging of liver cancer includes only 8170-8175 (hepatocellular carcinoma)

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CS Tumor Size: Liver

- Tumor size plays a role in mapping the T category

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CS Extension: Liver

- Presence or absence of vascular invasion
  - Major vascular invasion
    - Invasion of branches of main portal vein or invasion of one or more of the 3 hepatic veins
- Number of tumor nodules
  - Single vs. multiple
    - Multiple nodules/tumors includes satellitosis, multifocal tumors, and intrahepatic metastases
- Size of largest tumor
  - Less than or equal to 5 cm vs. greater than 5 cm

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CS Extension: Liver

Code	Description	TNM 7 Map	TNM 6 Map	SS77 Map	SS2000 Map
100	Single lesion (1 lobe) WITHOUT intrahepatic vascular invasion, including vascular invasion not stated	T1	T1	L	L
250	Single lesion WITH involvement of 1 or more lobes of liver or extension within liver not stated WITH extension to gallbladder WITHOUT vascular invasion including vascular invasion not stated	T1	T1	RE	RE

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CS Extension: Liver

Code	Description	TNM 7 Map	TNM 6 Map	SS77 Map	SS2000 Map
350	Single lesion (1 lobe) WITH intrahepatic vascular invasion	T2	T2	L	L
390	Multiple (satellite) nodules/tumors (1 lobe) WITHOUT intrahepatic vascular invasion including vascular invasion not stated	^	*	L	L

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CS Extension: Liver

Code	Description	TNM 7 Map	TNM 6 Map	SS77 Map	SS2000 Map
630	Single or multiple tumor(s) WITH major vascular invasion: major branch(es) of portal or hepatic vein(s)	T3b	T3	RE	RE
660	Extension to hepatic artery or vena cava	T4	T4	RE	RE

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CS Tumor Size/Ext Eval: Liver

- Code 1
  - Does not follow general rules
  - Meets criteria for pathologic staging
    - Endoscopic examination
    - Diagnostic biopsy
    - Surgical observation without biopsy

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CS Lymph Nodes: Liver

- Code regional nodes and nodes, NOS, in this field
  - Regional nodes defined in CS Lymph Nodes codes
    - Inferior phrenic nodes
      - Classified as regional nodes for AJCC 7th staging
  - Lymph nodes, NOS

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CS Mets at DX: Liver

- Code distant site(s) of metastatic involvement at time of diagnosis
  - Distant lymph nodes
  - Distant metastasis
    - Most common: lungs and bones

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SSF1: Alpha Fetoprotein (AFP) Interpretation

- Record interpretation of highest AFP test result prior to treatment
  - 010: Positive/elevated
  - 020: Negative/normal; within normal limits
  - 030: Borderline; undetermined if positive or negative
- Use the same lab test to record information in SSF1 and SSF3

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SSF2: Fibrosis Score

- Code the fibrosis or Ishak score
  - 000: F0
    - Fibrosis score 0-4 (none to moderate fibrosis)
  - 001: F1
    - Fibrosis score 5-6 (severe fibrosis or cirrhosis)

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SSF3: Alpha Fetoprotein (AFP) Lab Value

- Use the same lab test to record information in SSF1 and SSF3
- Record range for highest AFP lab value prior to treatment in nanograms/milliliter (ng/ml)
  - *Example:*
    - AFP value is 45 ng/ml
    - Code 004
  - Lab value expressed in micrograms per liter (ug/l) is equivalent to same value expressed in ng/ml

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SSF4 – SSF8

- Model for end-stage liver disease (MELD) score
  - Serum creatinine
  - Serum bilirubin
  - International normalized ratio (INR) for prothrombin time

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SSF4: Creatinine Value

- Record the highest blood or serum creatinine value prior to treatment
  - Exact value to nearest tenth in mg/dl or umol/l
  - *Examples:*
    - Creatinine value is 0.62 mg/dl
      - Code 006
    - Creatinine value is 50.2 umol/l
      - Code 502
- Use the same lab test to record information in SSF4 and SSF5

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SSF5: Creatinine Unit of Measure

- Record the creatinine unit of measure used by the laboratory
  - 010
    - Milligrams/deciliter (mg/dl)
  - 020
    - Micromoles/liter (umol/l)
- Use the same lab test to record information in SSF4 and SSF5

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SSF6: Total Bilirubin Value

- Record the total bilirubin value
  - Exact value to nearest tenth in mg/dl or umol/l
  - Total bilirubin includes conjugated (direct) and unconjugated (indirect) bilirubin
  - *Examples:*
    - Total bilirubin value is 0.71 mg/dl
      - Code 007
    - Total bilirubin value is 4.2 umol/l
      - Code 042
- Use the same lab test to record information in SSF4 and SSF5

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SSF7: Total Bilirubin Unit of Measure

- Record the total bilirubin unit of measure used by the laboratory
  - 010
    - Milligrams/deciliter (mg/dl)
  - 020
    - Micromoles/liter (umol/l)
- Use the same lab test to record information in SSF6 and SSF7

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SSF8: International Normalized Ratio for Prothrombin Time (INR)

- Record the highest INR level prior to treatment
  - Exact level to nearest tenth
  - *Examples:*
    - INR level is 0.6
      - Code 006
    - INR level is 2.5
      - Code 025

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BileDuctsIntraHepat Schema

- Primary site = C22.0 (liver)
  - Histology includes only 8160, 8161, and 8180
- Primary site = C22.1 (intrahepatic bile duct)
  - Histology includes only 8000-8162, 8180-9136, 9141-9582, and 9700-9701
- Intrahepatic bile duct was separated from liver schema in CSv2

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CS Extension: Intrahepatic Bile Ducts

- Number of tumors
  - Single vs. multiple
    - Multiple nodules/tumors includes satellitosis, multifocal tumors, and intrahepatic metastases
- Absence or presence of vascular invasion
  - Major vascular invasion
    - Invasion of branches of main portal vein or invasion of one or more of the 3 hepatic veins
  - Microscopic invasion of smaller intraparenchymal vascular structures
- Direct extrahepatic tumor extension
  - Extension to gallbladder is not considered in AJCC staging but does affect Summary Stage

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CS Extension: Intrahepatic Bile Ducts

Code	Description	TNM 7 Map	TNM 6 Map	SS77 Map	SS2000 Map
100	Single lesion in 1 lobe of liver WITHOUT intrahepatic vascular invasion, including vascular invasion not stated	T1	T1	L	L
400	Multiple (satellite) nodules/tumors in 1 lobe of liver WITH intrahepatic vascular invasion	T2b	*	L	L

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CS Tumor Size/Ext Eval:
Intrahepatic Bile Ducts

- Code 1
  - Does not follow general rules
  - Meets criteria for pathologic staging
    - Endoscopic examination
    - Diagnostic biopsy
    - Surgical observation without biopsy

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CS Lymph Nodes: Intrahepatic Bile Ducts

- Code regional nodes and nodes, NOS, in this field
  - Regional nodes defined in CS Lymph Nodes codes
    - Inferior phrenic nodes
      - Classified as regional nodes for AJCC 7th staging
  - Lymph nodes, NOS

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CS Mets at DX: Intrahepatic Bile Ducts

- Code distant site(s) of metastatic involvement at time of diagnosis
  - Distant lymph nodes
  - Distant metastasis
    - Most common: lungs and pleura

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SSF: Intrahepatic Bile Ducts

- SSF1: Alpha Fetoprotein Interpretation
- SSF2: Fibrosis Score
- SSF3: Alpha Fetoprotein Lab Value

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SSF10: Tumor Growth Pattern

- Tumor growth patterns of intrahepatic cholangiocarcinoma
  - Mass forming type
  - Periductal infiltrating type
  - Mixed type
- Record the presence or absence of periductal component
  - 000: Absence of periductal component
  - 010: Presence of periductal component

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SSF11: Primary Sclerosing Cholangitis

- Record the absence or presence of primary sclerosing cholangitis
  - 000: Absence of primary sclerosing cholangitis
  - 010: Presence of primary sclerosing cholangitis
- Assign code 000 if medical history and/or path report is available and primary sclerosing cholangitis is not mentioned
  - Assign code 999 (unknown) if medical history and path report are not available

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SSF12:
Carbohydrate Antigen 19-9 (CA 19-9) Lab Value

- Record the highest CA 19-9 lab value prior to treatment
  - Exact value to nearest tenth in U/ml
  - *Example:*
    - Pretreatment CA 19-9 value is 50.2 U/ml
      - Code 502
- Code any value less than or equal to 0.1 as 001
  - *Example:*
    - Pretreatment CA 19-9 value is 0.09 U/ml
      - Code 001

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Gallbladder Schema

- Gallbladder cancer
  - Begins in innermost layer of tissue and spreads through outer layers
  - Includes cholelithiasis in the majority of cases
  - Undergoes definitive resection at 2nd operation in as many as 50% of cases with gallbladder having been removed previously for presumed benign disease
  - Is carcinoma in more than 98% of the cases

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CS Extension: Gallbladder

- Depth of invasion into the gallbladder wall
- Extent of spread to surrounding structures
  - Ignore extension from gallbladder to cystic duct
  - Ignore extension to extrahepatic bile ducts or ampulla of Vater (code 618) when structures with a code higher than 618 are involved

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CS Lymph Nodes: Gallbladder

- Code regional nodes and nodes, NOS, in this field
  - Regional nodes defined in CS Lymph Nodes codes
    - Celiac and superior mesenteric nodes
      - Classified as regional nodes for AJCC staging
    - Para-aortic and pericaval nodes
      - Classified as regional nodes in AJCC 7th staging
  - Lymph nodes, NOS

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CS Mets at DX: Gallbladder

- Code distant site(s) of metastatic involvement at time of diagnosis
  - Distant lymph nodes
  - Distant metastasis
    - Most common: peritoneum and liver
    - Occasionally: lungs and pleura

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SSF15: Extent of Liver Resection

- Record type of liver resection performed
  - 010: Partial hepatectomy
  - 020: Wedge resection
  - 030: Right or left hepatectomy
  - 040: Extended hepatectomy
  - 050: Liver resection NOS
  - 998: No liver resection

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SSF16:

Primary Tumor Location within Gallbladder

- Record the location of the primary tumor within the gallbladder at the time of cholecystectomy
  - 010: Tumor located on free peritoneal side of gallbladder
  - 020: Tumor located on hepatic side of gallbladder
  - 998: No cholecystectomy performed; no primary tumor resected

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BileDuctsPerihilar Schema

- AJCC 6th Ed. had a single chapter for extrahepatic bile ducts
- AJCC 7th Ed. divided extrahepatic bile ducts into 2 chapters
  - Perihilar bile ducts and distal bile ducts
- CSv2 includes 2 schemas for extrahepatic bile ducts:
  - BileDuctsPerihilar and BileDuctsDistal

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CS Extension: Perihilar Bile Ducts

- Confined to the bile duct
- Invasion beyond the wall of the bile duct including the adjacent hepatic parenchyma
- Unilateral vascular invasion
- Bilateral biliary and/or vascular invasion
  - Give priority to coding blood vessel and biliary radical invasion over named structures in codes 605, 651, 700, 760, and 800

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CS Lymph Nodes: Perihilar Bile Ducts

- Code regional nodes and nodes, NOS, in this field
  - Regional nodes defined in CS Lymph Nodes codes
    - Para-aortic and pericaval nodes
      - Classified as regional nodes for AJCC 7th staging
  - Lymph nodes, NOS

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CS Mets at DX: Perihilar Bile Ducts

- Code distant site(s) of metastatic involvement at time of diagnosis
  - Distant lymph nodes
  - Distant metastasis
    - Most common: liver
    - Occasionally: peritoneal cavity, lung, brain, and bone

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SSF: Perihilar Bile Ducts

- SSF10: Tumor Growth Pattern
- SSF11: Primary Sclerosing Cholangitis (PSC)
- SSF12: CA 19-9 Lab Value

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SSF13: Carcinoembryonic Antigen (CEA)

- Record interpretation of highest CEA test result prior to treatment
  - 010: Positive/elevated
  - 020: Negative/normal; within normal limits
  - 030: Borderline; undetermined if positive or negative
- Use the same lab test to record information in SSF13 and SSF14

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SSF14: CEA Lab Value

- Record the highest CEA lab value prior to treatment
  - Exact value to nearest tenth in ng/ml
  - *Examples:*
    - CEA value is 8.23 ng/ml
      - Code 082
- Use the same lab test to record information in SSF13 and SSF14

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SSF25: Schema Discriminator

BileDuctsDistal, BileDuctsPerihilar, CysticDuct

- Code subsite in which tumor arose for cases coded to primary site C24.0 (extrahepatic bile duct)
  - Schema discriminator will determine which CS schema will be used to assign T, N, M, and AJCC stage group

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SSF25: Schema Discriminator
BileDuctsDistal, BileDuctsPerihilar, CysticDuct

Code	Description	Schema
010	Perihilar bile duct; proximal hepatic bile duct; hepatic duct	BileDuctsPerihilar
020	Stated as Klatskin tumor	BileDuctsPerihilar
030	Cystic bile duct; cystic duct	CysticDuct
040	Common bile duct; common duct, NOS	BileDuctsDistal
050	Diffuse involvement; more than 1 subsite involved, subsite of origin not stated	BileDuctsPerihilar
060	Subsite of extrahepatic bile ducts not stated, but treated with combined hepatic and hilar resection	BileDuctsPerihilar
070	Subsite of extrahepatic bile ducts not stated, but treated with pancreaticoduodenectomy	BileDuctsDistal

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CysticDuct Schema

- In the AJCC 7th Ed.
  - Cystic duct was removed from the extrahepatic bile duct staging chapter and added to the gallbladder staging chapter
- In CSv2
  - Cystic duct has its own schema because of differences between bile duct and gallbladder

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CS Extension: Cystic Duct

- Depth of invasion into wall of the cystic duct
- Extent of spread to surrounding tissues and structures
  - Beyond the wall of the cystic duct
  - Involvement of 1 stated organ or structure
  - Involvement of more than 1 stated organ or structure

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CS Lymph Nodes: Cystic Duct

- Code regional nodes and nodes, NOS, in this field
  - Regional nodes defined in CS Lymph Nodes codes
  - Lymph nodes, NOS

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CS Mets at DX: Cystic Duct

- Code distant site(s) of metastatic involvement at time of diagnosis
  - Distant lymph nodes
  - Distant metastasis
    - Most common: peritoneum and liver
    - Occasionally: lungs and pleura

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SSF25: Schema Discriminator

BileDuctsDistal, BileDuctsPerihilar, CysticDuct

- Code subsite in which tumor arose for cases coded to primary site C24.0 (extrahepatic bile duct)
  - Schema discriminator will determine which CS schemas will be used to assign T, N, M, and AJCC stage group

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BileDuctsDistal Schema

- AJCC 6th Ed. had a single chapter for extrahepatic bile ducts
- AJCC 7th Ed. divided extrahepatic bile ducts into 2 chapters:
  - Distal bile ducts and perihilar bile duct
- CSv2 includes 2 schemas for extrahepatic bile ducts:
  - BileDuctsDistal and BileDuctsPerihilar

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CS Extension: Distal Bile Ducts

- Confined to the bile duct
- Invasion beyond the wall of the bile duct including adventitial adipose tissue
- Invasion into surrounding structures

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CS Lymph Nodes: Distal Bile Ducts

- Code regional nodes and nodes, NOS, in this field
  - Regional nodes defined in CS Lymph Nodes codes
  - Lymph nodes, NOS

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CS Mets at DX: Distal Bile Ducts

- Code distant site(s) of metastatic involvement at time of diagnosis
  - Distant lymph nodes
  - Distant metastasis
    - Most common: liver, lungs, and peritoneum

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SSF: Distal Bile Ducts

- SSF12: CA 19-9 Lab Value
- SSF13: CEA
- SSF14: CEA Lab Value
- SSF25: Schema Discriminator

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AmpullaVater Schema

- Malignancies of the ampulla of Vater
  - May often obstruct the common bile duct
  - May be difficult to differentiate between those arising in the head of the pancreas or in the distal segment of the common bile duct
  - Are often associated with familial polyposis coli

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CS Extension: Ampulla of Vater

- Confined or limited to ampulla of Vater including extension to Sphincter of Oddi
- Extent of spread to surrounding tissues and structures

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CS Lymph Nodes: Ampulla of Vater

- Code regional nodes and nodes, NOS, in this field
  - Regional nodes defined in CS Lymph Nodes codes
  - Lymph nodes, NOS

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CS Mets at DX: Ampulla of Vater

- Code distant site(s) of metastatic involvement at time of diagnosis
  - Distant lymph nodes
    - Splenic nodes
    - Nodes at tail of pancreas
    - Para-aortic nodes
  - Distant metastasis
    - Most common: liver and peritoneum
    - Less common: lungs and pleura

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SSF: Ampulla of Vater

- SSF1: CA 19-9 Lab Value
- SSF2: CEA
- SSF3: CEA Lab Value

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Treatment

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Hepatocellular

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Treatment Overview

- Partial hepatectomy
- Liver tranplantation
  - Bridge therapy
- Ablation
  - Radiofrequency ablation (RFA)
  - Percutaneous ethanol injection (PEI)
- Embolization
  - Transarterial chemoembolization (TACE)
  - Radioembolization
- Radiation Therapy
- Systemic therapy
  - Doxorubicin
  - Sorafenib

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Surgery

- 10 Local tumor destruction, NOS
  - 11 Photodynamic therapy (PDT)
  - 12 Electrocautery; fulguration (includes use of hot forceps for tumor destruction)
  - 13 Cryosurgery

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Surgery

- 14 Laser
- 15 Alcohol (Percutaneous Ethanol Injection-PEI)
- 16 Heat-Radio-frequency ablation (RFA)
- 17 Other (ultrasound, acetic acid)

No specimen sent to pathology from surgical events 10–17.

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Surgery

- 20 Wedge or segmental resection, NOS
  - 21 Wedge resection
  - 22 Segmental resection, NOS
    - 23 One
    - 24 Two
    - 25 Three
  - 26 Segmental resection AND local tumor destruction

Specimen sent to pathology from surgical events 20–26.

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Surgery

- 30 Lobectomy, NOS
  - 36 Right lobectomy
  - 37 Left lobectomy
  - 38 Lobectomy AND local tumor destruction

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Surgery

- 50 Extended lobectomy, NOS (extended: resection of a single lobe plus a segment of another lobe)
  - 51 Right lobectomy
  - 52 Left lobectomy
  - 59 Extended lobectomy AND local tumor destruction

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Surgery

- 60 Hepatectomy, NOS
  - 61 Total hepatectomy and transplant
- 65 Excision of a bile duct (for an intra-hepatic bile duct primary only)
  - 66 Excision of a bile duct PLUS partial hepatectomy
- 75 Bile duct and hepatectomy WITH transplant

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Chemotherapy

- Intra Arterial Chemotherapy
- Chemoembolization
  - Blocks small blood vessels within the tumor.
  - Exposes tumor to high concentrations of chemotherapy.
  - Deprives blood supply to the tumor
- Systemic therapy
  - Doxorubicin
  - Sorafenib

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Radiation

- Beam Radiation
  - Limited use for liver primaries
- Brachytherapy
  - Micro-Sphere Therapy
  - Code 50

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Cholangiocarcinoma

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Intrahepatic

- Resectable disease
  - Complete resection
    - Removal of the bile duct and the involved hepatic lobe
  - Adjuvant chemotherapy if residual disease
- Unresectable disease
  - Clinical trial
  - Chemotherapy or chemoradiation

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Extrahepatic

- Liver transplant
- Resectable disease
  - Hilar primary includes resection of tumor with lymphadenctomy and en bloc liver resection.
  - Mid and distal primaries include major bile duct excision with lymphadenectomy, pancreaticoduodenectomy with lymphadenectomy.
- Unresectable disease
  - Clinical trial
  - Chemo
  - Chemoradiation

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Gallbladder

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Surgery

- 40 Total surgical removal of primary site; enucleation
- 50 Surgery stated to be "debulking"
- 60 Radical surgery
  - Partial or total removal of the primary site WITH a resection in continuity (partial or total removal) with other organs

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Chemo/Radiation

- Adjuvant
  - For patients with resectable tumors that show regional spread, 5 fu and radiation is often recommended.
- Primary Treatment
  - Combined 5 fu and radiation are also recommended for patients with unresectable disease.

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Questions?

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Next Month:

- Collecting Cancer Data: Brain and Central Nervous System
  - 1/6/11

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