[redacted]

Results **Surgical Pathology Specimen Source (enter 1 per line): #1 gallbladder (Order**

Result Information

Status (Last updated Date/Time)
Final result

Accession #
[redacted]

Result Impression

ICD-O-3
Cholangiocarcinoma 8160/3
Site Intrahepatic bile duct C22.1
JD 4/14/14

SURGICAL PATHOLOGY REPORT

Patient Name: [redacted]
Med. Rec.# [redacted]
DOB: [redacted] (Age:
Sex: Female
Soc. Sec. #: [redacted]
Accession #: [redacted]
Visit #:
Service Date:
Received:
Location:
Client:
Physician(s):

FINAL PATHOLOGIC DIAGNOSIS

A. Left main bile duct, biopsy: Invasive adenocarcinoma.

B. Right bile duct, biopsy: Bile duct epithelium with no significant pathologic abnormality.

C. Liver, left hepatectomy with caudate en bloc resection: Cholangiocarcinoma extending to left main bile duct margin with extensive perineural and intraneural involvement; see comment.

D. Extrahepatic bile duct, resection: No high-grade dysplasia or carcinoma identified; see comment.

E. Gallbladder, cholecystectomy:
1. Chronic cholecystitis.
2. Two benign lymph nodes (0/2).

F. Right hepatic artery lymph node, biopsy: One benign lymph node (0/1).

COMMENT:
Liver Tumor, Including Intrahepatic Bile Duct, Synoptic Comment

- Tumor type: Cholangiocarcinoma.

[redacted]

- Histologic grade: Moderately differentiated.
- Tumor size (maximum diameter of largest lesion): 3.3 cm.
- Tumor necrosis: Less than 30%.
- Multifocality (more than one tumor separated by nontumorous liver parenchyma): Absent.
- Vascular invasion: None.
- Hepatic capsule: Tumor abuts capsule.
- Local extension of tumor: Malignant glands are present in the wall of the left main bile duct, but not in the surrounding adipose soft tissue.

- Hepatic surgical margins: Negative; tumor is 1.5 cm from margin.
- Bile duct margin (for cholangiocarcinoma): Positive on slide C1. See additional comments below.
- Non-neoplastic liver: Mass effect (portal-based inflammation, scant lobular hepatocyte necrosis, enlargement of some intrahepatic bile ducts, and periductal fibrosis; small portal tracts show mild ductular proliferation).
- Lymph node status:
- Negative for tumor; total number of nodes examined: 3.
- AJCC Stage: pT1N0.

In part A (left main bile duct) atypical glands are seen invading periductal nerve tissue. Level sections and immunohistochemistry for keratin cocktail and S100 were performed and evaluated on block A1 to further assess the atypical glands. The keratin cocktail shows diffuse strong nuclear staining in the atypical glands. The S100 highlights the nerves but does not stain the atypical cells involving the nerve tissue. This supports a diagnosis of invasive adenocarcinoma.

In Part C (left hepatic resection) the hepatic parenchymal resection margin is negative. Tumor is present in the left main bile duct margin. However, surgical correlation is required for final margin status as additional tissue is submitted in Part D and the new common bile duct margin in the additional tissue is negative.

In Part C, sections of the hepatic mass show moderately differentiated cholangiocarcinoma invading hepatic parenchyma and nerve tissue. One area of the adenocarcinoma is better differentiated and has dilated, angulated ducts closely resembling a large von Meyenburg complex. Immunohistochemical stains for p53, MIB-1, DPC-4, and glypican-3 were performed on block C3 and compared in both areas. Both areas show weak scattered nuclear p53 staining, no loss of DPC-4, and negative Glypican-3. The moderately-differentiated area shows MIB-1 staining in 30% of tumor nuclei and focally up to 50%, while the lower grade area shows less than 5% MIB-1 nuclear staining. The morphologic appearance and immunoprofile are most consistent with both areas being part of the same lesion. It is possible that the higher-grade area of the tumor arose from this more well-differentiated component at some point in time.

For part D, level sections were performed and evaluated on blocks D2 and D5 (the extrahepatic bile duct). The levels do not show any high-grade dysplasia or carcinoma.

Dr. has reviewed parts A and D including additional immunostains and levels and agrees with the above diagnosis for these parts. Dr. has reviewed C3 and the MIB-1 immunostain and concurs with its interpretation.

[redacted]

Specimen(s) Received
A:Left main bile duct (FS)
B:Right bile duct
C:Extended left hepatic resection with caudate and tumor
D:Extra hepatic bile duct (FS)
E:Gallbladder
F:Right hepatic artery lymph node

Intraoperative Diagnosis
FS1 (A) Left main bile duct, biopsy: Atypical glands, most consistent with invasive carcinoma. (Dr.

FS2 (B) Right bile duct, biopsy: No in situ or invasive carcinoma. Epithelium predominantly denuded. (Dr.

FS3 (D) Extrahepatic bile duct, biopsy: No in situ or invasive carcinoma. (Dr.

Clinical History
Collection Date::
Collection Time:
Relevant History:liver mass
Copy to Physician(s)

The patient is a -year-old woman with a history of hepatic adenocarcinoma (outside slides reviewed at in consultation, on biopsy of the left liver lobe. She undergoes a left hepatic resection.

Gross Description
The case is received in six parts, labeled with the patient's name and medical record number.

Part A is received fresh and additionally labeled "left main bile duct," and consists of a single, donut-shaped fragment of white-tan soft tissue (0.8 x 0.5 x 0.2 cm) with a 0.3 cm lumen and one inked surface. Per discussion with the surgeon, the inked surface is the most proximal aspect, and the non-inked surface is the true margin and most distal surface. The entire specimen is frozen for frozen section diagnosis 1 (inked surface side up), and subsequently submitted in cassette A1.

Part B is received fresh and additionally labeled "right bile duct, up is distal," and consists of an oriented, tubular segment of red-pink soft tissue (0.5 x 0.3 x 0.2 cm in length). The specimen is submitted for frozen section evaluation FS2 (cutting toward true margin), with the frozen section remnant submitted in full in cassette B1.

Part C is received fresh and additionally labeled "extended left hepatic resection, caudate plus tumor, blue = bile duct, black = portal vein," and consists of a partial hepatectomy (434 gm; 18.5 cm from right to left x 5.3 cm from anterior to posterior x 12.8 cm from superior to inferior; caudate lobe 6.2 x 3.7 x 3.1 cm).

GROSS ABNORMALITIES: A white, circumscribed, firm mass with pushing borders (3.3 x 3.1 x 4.5 cm) is present in the central portion of the

[redacted]

specimen and abuts the capsule on the visceral/posterior side. The mass invades into the left main bile duct, extends to the bile duct margin grossly, and is located 1.5 cm from the inked hepatic resection margin. The mass also surrounds intraparenchymal blood vessels but does not grossly invade into them. The intimal surfaces of these vessels and of the portal vein are smooth and white. The uninvolved right liver lobe is homogeneously red-brown and spongy-firm. The left lobe is attenuated with dilated vessels. No gallbladder is present and no lymph nodes are identified.

ORIENTED BY: Surgeon's suture: Blue suture = left main bile duct, black suture = portal vein.
Also, per discussion with Dr. : The specimen contains caudate lobe and segment 8.
INKING:
- Liver capsule overlying mass: Blue.
- Hepatic resection margin: Black.
POTENTIAL STUDIES: Fresh tumor and uninvolved hepatic parenchyma are submitted to the tissue bank.

CASSETTES: Representative sections are submitted as follows:
C1: Left main bile duct margin and neighboring portal vein, en face.
C2: Mass and left main bile duct.
C3: Mass, portal vein and resection margin.
C4-C5: Mass and overlying capsule.
C6: Mass and large intraparenchymal vessels.
C7: Uninvolved hepatic left lobe.
C8-C9: Uninvolved hepatic right lobe.
C10: Soft tissue near bile duct margin.

Part D is received fresh and additionally labeled "extrahepatic bile duct," and consists of an oriented, branching, tubular structure (4 cm in length x 1 cm in maximum diameter). The specimen is oriented by the surgeon with multiple stitches as follows: The cystic duct is tagged with a double stitch, the right bile duct is tagged with a single black stitch, and the left bile duct is tagged with a blue stitch. The common bile duct is inked by the surgeon. Frozen section evaluation is requested for the common bile duct margin. The common bile duct contains a double-lumen structure (0.3 cm and 0.5 cm in diameter). The cystic duct is 0.4 cm in length x 0.4 cm in diameter, the left bile duct is 0.3 cm in length x 0.2 cm in diameter, and the right bile duct is 0.5 cm in length x 0.4 cm in diameter. Extending from the hepatic duct, adjacent to the right bile duct, is a fragment of soft tissue measuring 0.7 x 0.5 x 0.4 cm. No masses or lesions are noted.

INKING:
- Area adjacent to common bile duct surgical margin: Yellow, after the frozen section has been removed.
- Cystic duct resection margin: Blue.
- Left bile duct resection margin: Black.
- Right bile duct resection margin: Green.

The surgeon designated common bile duct margin is submitted for frozen section evaluation FS3 (designated extrahepatic bile duct biopsy).

CASSETTES: The specimen is entirely submitted as follows:
D1: Frozen section remnant (FS3).
D2: Right bile duct margin (inked) and adjacent slice.
D3: Common bile duct adjacent to FS3 and remaining common

[redacted]

bile duct.
D4: Cystic duct (inked) and adjacent cystic duct.
D5: Left bile duct (inked).
D6: Hepatic duct at level of cystic duct.
D7: Remainder of hepatic duct.
D8: Attached soft tissue.

Part E is received fresh and additionally labeled "gallbladder," and consists of a gallbladder (6.2 x 3 x 2.6 cm). The serosal surface is tan-green, smooth and glistening. The surface opposed to the liver is ragged and green-brown. The cystic duct is patent to the probe with a diameter of 0.3 cm. Two firm, ovoid, red lymph node candidates (0.8 x 0.5 x 0.4 cm and 0.5 x 0.3 x 0.3 cm) are identified near the cystic duct. The gallbladder contains viscous green bile and its mucosa is green and reticulated with numerous scattered punctate yellow spots (up to 0.1 cm). No stones are identified. The gallbladder wall thickness averages 0.1-0.2 cm. The cystic duct and surface opposed to the liver are inked blue. Representative cassettes are submitted as follows:
E1: Cystic duct margin and two intact lymph nodes.
E2: Sections of body and fundus.

Part F is received fresh and additionally labeled "RT hepatic artery lymph node," and consists of two unoriented, irregular, tan-white tissue fragments with metal clips (1.9 x 1.3 x 0.5 cm and 0.7 x 0.6 x 0.2 cm). The specimen is submitted intact in cassette F1.

The immunoperoxidase stain(s) reported above were developed and their performance characteristics determined by the Department of Pathology. They have not been cleared or approved by the U. S. Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. These tests are used for clinical purposes. They should not be regarded as investigational or for research. This laboratory is certified under the Clinical Laboratory Improvement Amendments of 1988 ("CLIA") as qualified to perform high-complexity clinical testing.

Diagnosis based on gross and microscopic examinations. Final diagnosis made by attending pathologist following review of all pathology slides. The attending pathologist has reviewed all dictations and preliminary interpretations performed by any resident involved in the case and performed all necessary edits before signing the final report.

Pathology Resident
/Pathologist
Electronically signed out on

Pathology PDF Report

Show images for Surgical Pathology Specimen Source (enter 1 per line): #1 gallbladder

Authorizing Provider Information

Name: **Fax:**

Phone: **Pager:**

Signed by

Signed Date/Time Phone Pager

Result History

SURGICAL PATHOLOGY (Order Order Result History Report.

[redacted]

Surgical Pathology Specimen Source (enter 1 per line): #1 gallbladder (Order#

This is NOT a Requisition. Requisition hyperlink below.

Surgical Pathology Specimen Source (enter 1 per line): #1 gallbladder (Order

Pathology and Cytology

Authorizing Department:

Date Released:

By:

Images

Show images for Surgical Pathology Specimen Source (enter 1 per line): #1 gallbladder

Order Information

Order Date/Time	Release Date/Time	Start Date/Time	End Date/Time

Release Information

Released On	Released By

Order Details

Frequency	Duration	Priority	Order Class
Once	1 occurrence	Routine	Unit Collect

Order Questions

Question	Answer	Comment
COLLDATE		
COLLTIME		
COPYTOMD		
Specimen Source (enter 1 per line)	**#1 gallbladder liver mass**	

Lab Collection and Receipt Information

Collect Date	Collect Time	Collected By	Lab Receipt Date	Lab Receipt Time

Collection Information

Resulting Agency

Order Provider Info

	Office phone	Pager/beeper	E-mail
Ordering User	-	--	--
Authorizing Provider	-		--
Billing Provider			--

Electronically Signed By:

Electronically Authorized By	Electronically Ordered By

[redacted]

Acknowledgement Info

For	At	Acknowledged By	Acknowledged On
Placing Order			

Order Status for: SURGICAL PATHOLOGY

Parent Status: Completed

Child Orders

(This order does not yet have any children)

Order Requisition

Surgical Pathology Specimen Source (enter 1 per line): #1 gallbladder (Order#

Criteria	LW 12/26/13	Yes	No
Diagnosis Discrepancy			✓
Primary Tumor Site Discrepancy			✓
HIPAA Discrepancy			✓
Prior Malignancy History			✓
Dual/Synchronous Primary Needed			✓
Case is (circle):	QUALIFIED / DISQUALIFIED		
Reviewer Initials	BTF	Date Reviewed:	12/26/2013

[redacted]