



## LABORATORY MEDICINE PROC.

ICD-O-3

Carcinoma, Adrenal Cortical  
8370/3

Site: <sup>(R)</sup>Adrenal Gland, cortex  
C74.0

gW 1/8/13

## Surgical Pathology Consultation Report

Patient Name:

MRN:

DOB:

Gender:

HCN:

Ordering MD:

Copy To:

Service:

Visit #:

Location:

Facility:

Accession #:

Collected:

Received:

Reported:

### Specimen(s) Received

1. Lymph-Node: right iliac lymph nodes
2. Surgical Waste
3. Gallbladder
4. Liver: Segment 1, 5, 6, 7, 8, liver, retro-hepatic cava, right adrenal, right kidney

### Diagnosis

1. No pathological diagnosis: Lymph nodes, 2, site listed as "right iliac lymph nodes", excisional biopsies.
2. No pathological diagnosis, gross description only: Fibroadipose tissue, site listed as "Surgical Waste", excisional biopsy. See Comment.
3. No pathological diagnosis: Gall bladder  
No pathological diagnosis: Lymph node, 1  
-Cholecystectomy specimen.
4. Angioinvasive adrenal cortical carcinoma, with extension into vena cava, and involvement of vascular margin from a branching vessel: Adrenal  
Mild to moderate arteriosclerosis: Kidney  
Mildly active steatohepatitis (30% steatosis); no significant fibrosis: Liver  
No pathological diagnosis: Gall bladder  
-Right adrenalectomy, right nephrectomy, IVC resection, right hepatectomy with caudate lobe resection. See Comment

### Comment

2. THIS SPECIMEN HAS BEEN EXAMINED BY GROSS VISUAL EXAMINATION ONLY. NO MICROSCOPIC EXAMINATION HAS BEEN PERFORMED. IF THERE IS A CLINICAL INDICATION OR SUSPICION OF AN ABNORMALITY THAT WOULD REQUIRE ADDITIONAL STUDIES THEN THE SIGNING PATHOLOGIST (BELOW) SHOULD BE CONTACTED WITHIN ONE MONTH OF THE ISSUING OF THIS REPORT."

4. The tumor is a 12.5 cm adrenal cortical carcinoma invading into the vena cava. The ureteric and renal vessel margins, as well as all soft tissue margins, are negative. The surgical margin of the large vessel itself (vena cava) is negative; however a small branch associated with this vein shows tumor extending to its margin (slide 4B). There is no evidence of direct invasion of tumor into the kidney, gall bladder or liver, and no evidence of distant metastases into these organs.

This case has been seen in consultation with

and he agrees with the interpretation and diagnosis.

### Synoptic Data

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Non-Pathology Findings: Hormone production, Cushing syndrome  
Neoadjuvant Therapy: No  
Tumor Site: Adrenal structure  
Adrenal Gland Received: Fresh  
Procedure: Other: Right adrenalectomy, right nephrectomy, IVC resection, right hepatectomy  
Specimen Integrity: Intact  
Specimen Size: Greatest dimension: 23.5 cm  
Additional dimension: 15.0 cm  
Additional dimension: 10.0 cm  
Specimen L laterality: Right  
Tumor Size: Greatest dimension: 12.5 cm  
Additional dimension: 11.0 cm  
Additional dimension: 9.0 cm  
Tumor gland weight: 2220 g  
Histologic Type: Adrenal cortical carcinoma  
Margins: Margin(s) involved by tumor  
Distance from closest margin: 0 mm  
Involved margins: vascular margin, branch of IVC.  
Treatment Effect: Not identified  
Tumor Description: Necrotic  
Invasion, Capsule  
Invasion, Vessels  
Present, large vessel (venous)  
Lymph-Vascular Invasion: Not identified  
Perineural Invasion: Not applicable  
TNM Descriptors: pT4: Tumor of any size with invasion of adjacent organs  
Primary Tumor (pT): pN0: No regional lymph node metastasis  
Regional Lymph Nodes (pN): Number of Nodes examined: 3  
Number of Nodes involved: 0  
Distant Metastasis (pM): Not applicable  
Additional Pathologic Findings: Other: The weight of the synoptic is the weight of the entire resection, including mass, kidney and liver.

\*Pathologic Staging is based on AJCC/UICC TNM, 7th Edition

Electronically verified by:

### Clinical History

Adrenocortical ca

### Gross Description

1. The specimen container is labeled with the patient's name and as "Lymph node: Right iliac lymph nodes". The specimen consists of a piece of fibrofatty tissue measuring 2.0 x 1.2 x 0.3 cm. Within the tissue are 2 firm yellow-tan nodules measuring 0.1 and 0.3 cm.  
1A submitted in toto
2. The specimen container is labeled with the patient's name and as "Surgical waste". The specimen consists of a lobulated piece of fibroadipose tissue, with peritoneum one surface that measures 15.0 x 8.5 x 2.5 cm. Serial cuts show a portion of ligament measuring 3.0 x 0.5 cm.  
No sections are taken
3. The specimen container is labeled with the patient's name and as "Gallbladder". The specimen consists of an intact cholecystectomy specimen that measures 8.6 cm in length with a maximum diameter of 3.2 cm. The serosa is green

**Surgical Pathology Consultation Report**

stained and smooth. The adventitial surface has a roughened appearance. A possible lymph node is identified measuring 0.3 cm in diameter. The gallbladder contains green bile with no stones. The gallbladder wall measures 0.2 cm uniformly. This mucosa has a velvety green appearance with no excrescences. Representative sections:

3A cystic duct margin en face, cystic duct lymph node and gallbladder wall

4. The specimen container is labeled with the patient's name and as "Segment 1, 5, 6, 7, 8 liver retro-hepatic cava, right adrenal and right kidney". The specimen consists of an en bloc resection of right nephrectomy with right adrenalectomy extended right hepatectomy (includes caudate lobe), retrohepatic vena cava and associated soft tissues and vessels. The specimen measures 23.5 cm SI x 15.0 cm ML x 10.0 cm AP. The nephrectomy measures 10.0 cm SI x 9.2 cm ML by 3.7 cm AP. The ureter measures 8.5 cm in length with a diameter of 0.3 cm. The adrenal gland is distorted by tumor. The liver measures 17.0 cm SI x 11.5 cm ML x 7.0 cm AP. The vena cava measures 4.2 cm in length with a diameter of 1.7 cm.

The adrenal gland is almost completely replaced by a well circumscribed, non-encapsulated mass that measures 12.5 cm SI by 11.0 cm ML by 9.0 cm AP. The cut surface of the mass has a fleshy yellow and pink-tan appearance with focal areas of necrosis. Grossly the mass appears to extend to within 0.1 cm of the superior, medial, lateral and posterior soft tissue limits. On the anterior aspect the mass is covered by the liver and on the inferior aspect abuts the kidney. Between the mass and the inferior vena cava is a cut surface of vessel which demonstrates tumor in the lumen. Further sectioning of this shows extension of the tumor along the vessel into the vena cava with attachment of the tumor to the vessel wall at the opening of the small vessel into the vena cava. The adherent portion of the tumor is 2.2 cm from the superior vena cava resection margin and 0.7 cm from the inferior vena cava margin. The mass does not grossly appear to involve either the liver or the kidney. The kidney parenchyma is red-brown and unremarkable. The liver parenchyma is yellow-brown and unremarkable. A single possible lymph node is identified at the hilum of the kidney. Photographs are taken of the specimen. Tissue is stored frozen. A small portion of the tumor is submitted for electron microscopy.

Representative sections:

- 4A ureter and renal vessel margins, en face
- 4B cut surface of vessel with tumor between main tumor and vena cava
- 4C vena cava inferior resection margin, en face
- 4D vena cava superior resection margin, en face
- 4E right hepatic vein margin, en face
- 4F-4G tumor extending along small vessel into vena cava, in toto
- 4H-4I tumor with residual adrenal gland
- 4J tumor with superior soft tissue margin
- 4K tumor with medial soft tissue margin
- 4L tumor with lateral soft tissue margin
- 4M tumor with posterior soft tissue margin
- 4N tumor with kidney
- 4O-4P tumor with liver
- 4Q-4S tumor
- 4T- 4W liver, segments 5, 6, 7 and 8
- 4X caudate lobe with vena cava
- 4Y possible lymph node
- 4Z unininvolved kidney

**Microscopic Description**

4. The tumor shows abundant necrosis, high grade nuclear features, diffuse architecture and evidence of large vessel vascular invasion. Single cell apoptosis, as well as abundant mitoses (up to 19/50) are seen, including atypical mitoses. The tumor stains positive for SF-1, synaptophysin and vimentin, and very focally for Melan A. Staining for SF-1 was performed on several blocks and shows areas that are variably positive due to fixation artifact. Stains for calretinin, low molecular weight cytokeratin, EMA, and HepPar-1 are negative. The combined morphological and immunohistochemical features are that of an adrenal cortical carcinoma.

The background nontumorous adrenal cortex shows cortical nodular disease with fibrosis and areas of mild atrophic change.

Criteria	lw 1/4/13	Yes	No
Diagnosis Discrepancy		<input checked="" type="checkbox"/>	
Primary Tumor Site Discrepancy		<input checked="" type="checkbox"/>	
HIPAA Discrepancy		<input checked="" type="checkbox"/>	
Prior Malignancy History		<input checked="" type="checkbox"/>	
Dual/Synchronous Primary Tumor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Case ID (check)	104141	DISQUALIFIED	
Reviewer Initials	LM	Date Reviewed	1/28/12