



# FINAL PATHOLOGIC DIAGNOSIS

## A. Breast, right, modified radical mastectomy:

- Invasive ductal carcinoma, grade III/III, 5.0 cm in greatest dimension,  
 present 1.0 mm from posterior inked surgical margin, other margins widely free  
 (see pathologic parameters and comment below)

- Ductal carcinoma in-situ, high grade, solid type with associated central  
 necrosis and calcifications, surgical margins negative

- Previous biopsy site identified

- Metastatic carcinoma involving two of twelve lymph nodes (2/12)

## B. Breast, right, deep margin re-excision:

- Skeletal muscle and fibroadipose tissue, negative for carcinoma

## C. Breast, right 'additional tissue under superiomedial skin flap,' excision:

- Breast and fibroadipose tissue, negative for carcinoma

## D. Skin, right 'chest wall at corner of incision,' excision:

- Skin and fibroadipose tissue, negative for carcinoma

ICD-O-3  
 Carcinoma, Infiltrating Ductal NOS  
 8500/3  
 Site: @ Breast NOS C50.9  
 JN 2/18/13

## Breast Pathologic Parameters

### 1. Invasive carcinoma:

A. Gross measurement: 5.0 cm

B. Composite histologic (modified SBR) grade: III/III

C. Associated intraductal carcinoma in situ (DCIS)

- High grade, solid type with associated central necrosis and  
 calcifications

- Within main mass

2. Surgical margins: Free of tumor

- DCIS 3.0 mm from closest margin (posterior)
- Invasive carcinoma 1.0 mm from closest margin (posterior) on mastectomy, separately submitted deep margin re-excision (specimen B) negative for carcinoma
- Additional margins widely free

3. Blood vessel and lymphatic invasion: Present

4. Nipple: Uninvolved

5. Skin: Uninvolved

6. Skeletal muscle: Focally involved

7. Axillary lymph nodes: Metastatic carcinoma involving two of twelve lymph nodes (2/12)

- Size of largest metastatic deposit: 1.1 cm
- Extranodal extension: Present (2.0 mm)

8. Special studies ,

- ER: Weak expression in 30% of invasive tumor nuclei
- PR: No expression in invasive tumor nuclei
- Ki-67: 50% proliferation rate
- Her2/neu antigen (FISH): Amplified (ratio: 3.8)

9. pTNM (AJCC, 7th edition, 2010): pT2, N1a, MX

Clinical History:

The patient is a     year-old female with right breast invasive ductal carcinoma with axillary nodal metastases who undergoes right modified radical mastectomy.

#### Comment

The 5.0 cm mass identified on gross examination is comprised of both invasive and in-situ carcinoma with extensive necrosis and calcifications.

#### Specimens Received:

A: Right breast and axillary contents

B: Additional deep margin

C: Additional tissue under superiomedial skin flap

D: Skin at corner of incision; r chest wall

#### Gross Description:

The specimens are received in four containers each labeled with the patient's name and medical record number.

A. The first container is additionally identified as, 'right breast and axillary contents'. Received fresh and placed in formalin is a 730 g simple mastectomy specimen. The specimen is oriented with a double short suture designating the superior aspect and a double long suture designating the lateral

aspect. The breast measures 23 cm from medial to lateral, 21 cm from superior to inferior, and 4.5 cm from anterior to posterior. On the anterior surface is 20 x 8.5 cm ellipse of skin with a 4.2 x 4.0 cm areola and a 1.3 x 1.3 x 0.5 cm nipple. The nipple-areolar complex reveals no evidence of ulceration or retraction. There is an attached 6.5 x 5.5 x 1.5 cm portion of apparent axillary tail on the lateral aspect of the specimen. There is an attached 4.5 x 1.8 x 0.2 cm skeletal muscle consisting of pectoralis at the deep margin at junction of upper-outer quadrant and lower-outer quadrant in slice 3-5. The specimen is inked as follows:

anterior-superior - blue;

anterior-inferior - green;

posterior - black.

The specimen is serially sectioned from lateral (slice #1) to medial (slice #11) to reveal a 5.0 x 3.8 x 3.5 cm pink-tan, firm mass (lesion #1) extending from upper-outer quadrant to lower-outer quadrant in slices 3-7. The mass is 1.6 cm from the anterior-inferior margin and abuts the posterior margin. Surrounding the mass is a 10 x 7 x 4 cm ill-defined, pink area composing of dilated ducts and fibrotic tissue in slices 4-9 and the most prominent in slice 7-8. The ill-defined area (lesion #2) extends towards anterior aspect and is 0.6 cm from the closest anterior margin and 2.0 cm from the closest posterior margin. The remainder of the specimen consists of approximately 10% dense gray-white fibrous breast parenchyma and 90% lobulated yellow adipose tissue. No additional masses or nodules are grossly identified. Within the axillary tail are identified

several lymph node candidates measuring from 0.3-2.5 cm in greatest dimension.

Block summary:

A1: Lesion #1, slice 3

A2: Lesion #1, slice 4

A3: Lesion #1 abutting posterior margin, slice 5

A4: Lesion #1, slice 6

A5: Lesion #1, slice 7

A6: Lesion #2, slice 4

A7: Lesion #2, slice 5

A8: Lesion #2, slice 6

A9: Lesion #2, slice 7

A10: Lesion #2, slice 8

A11: Lesion #2, slice 9

A12: Representative adjacent medial to lesion #2, slice 10

A13: Representative adjacent lateral to lesion #2, slice 3

A14: upper-outer quadrant slice 2

A15: lower-outer quadrant slice 1

A16: upper-inner quadrant slice 11

A17: lower-inner quadrant slice 10

A18: nipple

A19: skin

A20: One lymph node

A21-A23: 4 lymph node candidates, each cassette

A24-A26: One lymph node, serial section

B. The second container is additionally identified as, 'additional deep margin; underlying palpable tumor '. Received in formalin is a 3.9 g, 4.2 x 2.2 x 0.8 cm yellow-tan, soft tissue fragment with one short stitch designating as new true deep margin (inked blue) and attached clips on original margin (inked black). The specimen is serially sectioned and entirely submitted as B1-B5.

C. The third container is additionally identified as, 'additional tissue under superiomedial skin flap'. Received in formalin is an unoriented 2.3 g, 4.8 x 1.2 x 1.1 cm portion of yellow-tan fibroadipose tissue, which is serially sectioned and entirely submitted C1-C2.

D. The fourth container is additionally identified as, 'skin at corner of incision; right chest wall'. Received fresh and placed in formalin is an unoriented V-shaped ellipse of wrinkled, tan-brown skin measuring 4.5 x 1.5 cm adjunct with 3.2 x 1.5 cm excised to a depth of 1.3 cm. The specimen is serial sectioned and review grossly unremarkable parenchyma. The representative section is submitted as D1.

Tissue fixed for at least 6 hours in 10% NBF and no more than 72 hours.

Criteria	Yes	No
Diagnosis Discrepancy		✓
Primary Tumor Site Discrepancy		✓
IIIPAA Discrepancy		✓
Prior Malignancy History		✓
Dual/Synchronous Primary		✓
Case (Circle):	QUALIFIED	DISQUALIFIED
Reviewed By: <u>ML</u>	Date Reviewed: <u>2/9/13</u>	