

ICD-O-3

Carcinoma, infiltrating duct, nos 8500/3

Site: breast, nos C50.9

5/23/11

Criteria	5/23/11	Yes	No
Diagnosis Discrepancy			
Primary Tumor Site Discrepancy			
HIFAA Discrepancy			
Prior Malignancy History			
Dual/Synchronous Primary Noted	Bilateral		
Case is (circle):	QUALIFIED	DISQUALIFIED	
Reviewer Initials	MG	Date Reviewed:	5/14/11

*bilateral*  
LEFT BREAST

A) LEFT BREAST, TOTAL MASTECTOMY:

INVASIVE DUCTAL CARCINOMA, MODIFIED BLACK'S NUCLEAR GRADE 3 (POORLY DIFFERENTIATED). (SEE COMMENT)  
DUCTAL CARCINOMA IN SITU (DCIS), MODIFIED BLACK'S NUCLEAR GRADE 3 (HIGH GRADE), SOLID AND CRIBRIFORM PATTERNS WITH COMEDONECROSIS.  
INVASIVE CARCINOMA MEASURES 1.2 X 1.0 X 1.0 CM.  
MARGINS WIDELY FREE, INVASIVE CARCINOMA IS PRESENT 2.2 CM FROM CLOSEST INFERIOR MARGIN.

No lymphovascular identified.

Nipple, no tumor present.

(B) LEFT AXILLARY SENTINEL LYMPH NODE #1, EXCISIONAL BIOPSY:

One lymph node, no tumor present (0/1).

Immunohistochemistry for cytokeratin is negative for carcinoma.

(C) LEFT AXILLARY SENTINEL LYMPH NODE #2, EXCISIONAL BIOPSY:

One lymph node, no tumor present (0/1).

Immunohistochemistry for cytokeratin is negative for carcinoma.

(D) RIGHT BREAST, TOTAL MASTECTOMY:

INVASIVE DUCTAL CARCINOMA, MODIFIED BLACK'S NUCLEAR GRADE 3 (POORLY DIFFERENTIATED). (SEE COMMENT)  
DUCTAL CARCINOMA IN SITU (DCIS), MODIFIED BLACK'S NUCLEAR GRADE 3 (HIGH GRADE), SOLID CRIBRIFORM PATTERNS WITH COMEDONECROSIS AND MICROCALCIFICATIONS.

INVASIVE CARCINOMA MEASURES 1.4 CM IN GREATEST SLIDE DIMENSION.

DCIS PRESENT 0.35 CM FROM LATERAL ANTERIOR MARGIN.

INVASIVE CARCINOMA IS PRESENT 0.4 CM FROM LATERAL ANTERIOR MARGIN.

FOCAL LYMPHOVASCULAR INVASION PRESENT.

Nipple, no tumor present.

(E) RIGHT SENTINEL LYMPH NODE #1, EXCISIONAL BIOPSY:

One lymph node, no tumor present (0/1).

Immunohistochemistry for cytokeratin are negative for carcinoma.

(F) RIGHT SENTINEL LYMPH NODE #2, EXCISIONAL BIOPSY:

One lymph node, no tumor present (0/1).

Immunohistochemistry for cytokeratin are negative for carcinoma.

Entire report and diagnosis completed by

COMMENT

In specimen A, LEFT BREAST, the invasive carcinoma has areas of lymphocytic infiltration but also has infiltrating borders. Immunohistochemical studies demonstrate that the invasive carcinoma is positive for CK903, CK5/6 and vimentin.

This report is issued to give immunohistochemistry results. Immunohistochemical staining is performed on a representative formalin-fixed, paraffin-embedded section of INVASIVE DUCTAL CARCINOMA, left breast, block A3.

MARKER	RESULTS	% POSITIVE	SCORE
Estrogen Receptor	Low Positive (1-9%)	1 %	N/A
Progesterone Receptor	Negative	0 %	N/A
HER-2/neuoverexpression	Negative	0 %	0

UUID:E7B75FEC-1706-42C1-8906-B17FE4440161  
TCGA-GM-A2DD-01A-PR

Redacted

This report is issued to give immunohistochemistry results. Immunohistochemical staining is performed on a representative formalin-fixed, paraffin-embedded section of INVASIVE DUCTAL CARCINOMA, right breast, block D6.

MARKER	RESULTS	% POSITIVE	SCORE
Estrogen Receptor	Low Positive (1-9%)	1 %	N/A
Progesterone Receptor	Negative	0 %	N/A
HER-2/neu overexpression	Negative	focal 5 %	2+

Due to the above HER-2/neu immunohistochemical staining result, gene copy level (HER-2/neu: CEP17 signal ratio) will be evaluated by FISH and a separate report will be issued.

#### FOOTNOTE

Estrogen receptor was assessed by immunohistochemistry using antibody 6F11

Progesterone receptor was assessed by immunohistochemistry using antibody PgR1294

HER-2/neu was assessed by immunohistochemistry using antibody AB8

#### GROSS DESCRIPTION

(A) LEFT BREAST, SHORT STITCH SUPERIOR, LONG LATERAL FOR IMMEDIATE CONSULTATION - Received is a 16 x 13 x 3.0 cm breast with attached ellipse of tan grossly unremarkable skin measuring 6.0 x 3.2 cm. The 1.2 x 1.0 cm nipple is everted. Surgical margin is inked. Sectioned from lateral-to-medial aspect into eleven slices. Slice #8 contains nipple. Cut surface of slice #6 shows an ill-defined, firm pink gray tumor measuring 1.2 x 1.0 x 1.0 cm. It is 2.2 cm away from inferior margin, 2.0 cm from deep margin, 2.5 cm from the skin. Superior, lateral and medial margins are widely free. Representative sections are submitted.

INK CODE: Superior - blue; inferior - orange; deep - black.

SECTION CODE: A1, A2, nipple; A3, A4, slice #6, superior aspect of the tumor; A5, A6, slice #6 inferior aspect of the tumor; A7, inferior surgical margin slice #6; A8, tissue superiorly to the tumor slice #6; A9, deep surgical margin slice #6; A10, A11, tissue laterally to the tumor slice #5; A12, A13, slice #7 tissue immediately to the tumor slice #7; A14, A15, upper outer quadrant; A16, A17, lower outer quadrant; A18, A19, upper inner quadrant; A20, lower inner quadrant; A21, mid lower portion. Fragment of tumor and normal tissue are submitted to tumor bank.

(B) LEFT AXILLARY SENTINEL LYMPH NODE #1 FOR FROZEN SECTION IN VIVO 83, EX VIVO 153 - Received is a single lymph node embedded into fatty tissue measuring 1.2 x 1.0 x 0.4

cm. Cut surface is light tan. The section is entirely submitted for frozen section in cassette B.

\*FS/DX: NO TUMOR PRESENT.

(C) LEFT AXILLARY SENTINEL LYMPH NODE #2 FOR FROZEN SECTION, IN VIVO 253, EX VIVO 281 - Received is a single lymph node measuring 1.0 x 0.8 x 0.4 cm. For frozen section received is a single lymph node measuring 1.3 x 0.9 x 0.5 cm. Cut surface is light tan. Section entirely submitted for frozen section in cassette C.

\*FS/DX: NO TUMOR PRESENT.

(D) RIGHT BREAST, SHORT STITCH SUPERIOR, LONG STITCH LATERAL FOR IMMEDIATE CONSULTATION - Received is a 14 x 13 x 5.5 cm breast with a 6.5 x 2.5 cm ellipse of tan-skin. The 1.2 x 1.0 cm nipple is everted. Surgical margin is inked. Sectioned from the medial-to-lateral aspect into ten slices. Slice #7 contains nipple, slice #9 contains an ill-defined, infiltrating, indurated tumor measuring 1.2 x 1.3 x 1.1 cm. Radiological clip is present within the mass. The lesion is 0.7 cm from the closest lateral surgical margin, 1.5 cm from deep, 5.0 cm away from the superior surgical margin, 4.9 cm from the inferior and 2.5 cm away from the skin. Tissue toward the medial aspect of the breast shows dense fibrous tissue. Representative sections are submitted.

INK CODE: Superior - blue; inferior - orange; deep - black.

SECTION CODE: D1, D2, nipple; D3, D4, D5, slice #9 superior aspect of the tumor; D6, D7, D8, slice #9 inferior aspect of the tumor; D9, slice #9, tissue inferiorly to the tumor; D10, slice #9 tissue superiorly to the tumor; D11, deep margin slice #9; D12, slice #9 inferior margin; D13, D14, perpendicular sections of the lateral surgical margin; D15, D16, slice #8, tissue medially to the tumor; D17, D18, upper inner quadrant; D19, D20, lower inner quadrant.

(E) RIGHT SENTINEL LYMPH NODE #1 IN VIVO 130, EX VIVO 170 - Received for frozen section is a single lymph node embedded in fatty tissue measuring 2.0 x 1.0 x 0.7 cm. Cut surface is light tan. Section is entirely submitted for frozen section in cassettes E1, E2.

\*FS/DX: NO TUMOR PRESENT.

(F) RIGHT SENTINEL LYMPH NODE #2 FOR FROZEN SECTION IN VIVO 38, EX VIVO 108 - Received a single lymph node embedded in fatty tissue measuring 2.0 x 0.9 x 0.8 cm. Cut surface is white-tan. Section entirely submitted for frozen section in blocks F1, F2.

\*FS/DX: NO TUMOR PRESENT.

## CLINICAL HISTORY

Breast cancer.

## SNOMED CODES

T-04050, M-85003

"Some tests reported here may have been developed and performance characteristics determined by These tests have not been specifically cleared or approved by the U.S. Food and Drug Administration."

Released by:

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Start of ADDENDUM

## ADDENDUM

This modified report is being issued to report the results of HER-2/neu FISH

Addendum completed by: ..

## SPECIMEN SOURCE

Right breast

## SUMMARY

Tissue section of the invasive carcinoma: was evaluated for HER-2/neu gene amplification by interphase fluorescence in situ hybridization technique using the HER-2/neu DNA Probe Kit (LSI HER-2/neu SpectrumOrange/CEP17

Slide adequacy is satisfactory. Sixty tumor nuclei were counted and showed an average of 1.62 copies of LSI HER-2/neu gene per nucleus and an average of 1.45 copies of CEP17 per nucleus.

Negative and positive controls (established by ) with this batch are appropriate.

Two representative images have been archived.

## INTERPRETATION

The tumor cells demonstrated no amplification of the HER-2/neu gene copy levels (HER-2/neu: CEP17 signal ratio: 1.11 )

*The following guideline has been established for HER-2/neu testing:  
Normal HER-2/neu levels: < 1.80; equivocal HER-2/neu levels: 1.80 – 2.20; amplified HER-2/neu levels: > 2.20  
(Ref: Arch Pathol Lab Med. 2007; 131:18-43)*

## NOTES

The LSI HER-2/neu probe is specific for the HER-2/neu gene Locus (17q 11.2-q12) and the CEP 17 DNA probe is specific for the alpha satellite DNA sequence at the centromeric region of Chromosome 17 (17 p11.1 -q11.2).

This test has been cleared and approved for specific uses by the U.S. Food and Drug Administration. Its system is operating within the performance specifications stated in the product insert.

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