FINAL DIAGNOSIS:

PART 1: SENTINEL LYMPH NODE #1, LEFT AXILLA, BIOPSY –
ISOLATED TUMOR CELLS IDENTIFIED IN ONE OF ONE LYMPH NODE (1/1) (See comment).

PART 2: SENTINEL LYMPH NODE #2, LEFT AXILLA, BIOPSY –
ONE BENIGN LYMPH NODE (0/1).

PART 3: BREAST, LEFT, TOTAL MASTECTOMY (380.8 GRAMS) –

A. INVASIVE LOBULAR CARCINOMA, CLASSICAL TYPE, NOTTINGHAM GRADE II (TUBULE FORMATION 3, NUCLEAR PLEOMORPHISM 2, MITOTIC ACTIVITY 2; TOTAL SCORE: 7/9).
B. THE INVASIVE TUMOR MEASURES 2.8 CM IN GREATEST DIMENSION.
C. LOBULAR CARCINOMA IN SITU (LCIS), CLASSICAL TYPE, IS ALSO IDENTIFIED IN THE UPPER OUTER QUADRANT, LOWER OUTER QUADRANT, AND LOWER INNER QUADRANT, WITH PAGETOID EXTENSION INTO DUCTS.
D. LYMPHOVASCULAR SPACE INVASION IS IDENTIFIED.
E. RESECTION MARGINS ARE NEGATIVE FOR CARCINOMA; INVASIVE CARCINOMA IS 0.25 CM FROM THE NEAREST POSTERIOR MARGIN.
F. THE INVASIVE CARCINOMA IS LOCATED IN THE UPPER OUTER QUADRANT.
G. NIPPLE IS NEGATIVE FOR TUMOR.
H. THE RETICULAR DERMIS OF THE SKIN IS INVOLVED BY INVASIVE CARCINOMA BY DIRECT EXTENSION.
I. THE SKIN SHOWS A CAPILLARY HEMANGIOMA.
J. ATYPICAL LOBULAR HYPERPLASIA.
K. CALCIFICATIONS ARE ASSOCIATED WITH BENIGN BREAST PARENCHYMA.
L. THE NON-NEOPLASTIC BREAST SHOWS FIBROCYSTIC CHANG WITH APOCRINE METAPLASIA AND DUCTAL EPITHELIAL HYPERPLASIA.
M. PREVIOUS BIOPSY SITE CHANGES ARE IDENTIFIED.
N. THE INVASIVE TUMOR CELLS ARE POSITIVE FOR ESTROGEN AND PROGESTERONE RECEPTORS AND EQUIVOCAL FOR HER-2, AS PER PREVIOUS PATHOLOGY REPORT-[redacted] (see comment).

COMMENT:

Part 1: On the AE1/AE3 immunohistochemical stain, rare subcapsular positive cells are identified, which could not be identified on H&E stain. Less than 10 scattered positive subcapsular cells are identified.
Part 3: HER-2 studies will be repeated with an addendum to follow.

Blocks 1FS1, 1FS2, 2FS1, 2FS2:

Antibody/Antigen	Result
AE1/AE3	Negative.

CASE SYNOPSIS:

SYNOPTIC - PRIMARY INVASIVE CARCINOMA OF BREAST

LATERALITY:	Left
PROCEDURE:	Simple mastectomy
LOCATION:	Upper outer quadrant
SIZE OF TUMOR:	Maximum dimension invasive component: 28 mm
MULTICENTRICITY/MULTIFOCALITY OF INVASIVE FOCI:	No
TUMOR TYPE (Invasive component):	Infiltrating lobular carcinoma
HISTOLOGIC TYPE:	Classical
NOTTINGHAM SCORE:	Nuclear grade: 2 Tubule formation: 3 Mitotic activity score: 2 Total Nottingham score: 7 Nottingham grade (1, 2, 3): 2
ANGIOLYMPHATIC INVASION:	Yes
DERMAL LYMPHATIC INVASION:	No
CALCIFICATION:	Yes, benign zones
TUMOR TYPE, IN SITU:	LCIS
SURGICAL MARGINS INVOLVED BY INVASIVE COMPONENT:	No Distance of invasive tumor to closest margin: 2.5 mm
PAGET'S DISEASE OF NIPPLE:	No
LYMPH NODES POSITIVE:	1
LYMPH NODES EXAMINED:	2
METHOD(S) OF LYMPH NODE EXAMINATION:	H/E stain, Keratin stain
SKIN INVOLVED (ULCERATION):	No
NON-NEOPLASTIC BREAST TISSUE:	ALH, FCD
T STAGE, PATHOLOGIC:	pT2
N STAGE MODIFIER:	(sn)
N STAGE, PATHOLOGIC:	pN0(i+)
M STAGE:	Not applicable
ESTROGEN RECEPTORS:	positive
PROGESTERONE RECEPTORS:	positive
HER2/NEU:	2+
HER2/NEU (FISH):	Equivocal

ICD-O-3
carcinoma, lobular, infiltrating, NOS
85203
site: breast, NOS
C50.9
9/11/12 RD

criteria	Yes	No
Diagnosis Discrepancy		X
Primary Tumor Site Discrepancy		X
IPAA Discrepancy		X
Prior Malignancy History		X
Dual/Synchronous Primary Noted		X

Case is (circle): QUALIFIED / DISQUALIFIED Date Reviewed: 9/14/12 8/12/12
Reviewer Initials MG

UUID:3FFD87C3-1E75-4A8E-AA26-BF7995E42245
TCGA-BH-A42T-01A-PR Redacted

Addendum

**** BREAST TUMOR IMMUNOHISTOLOGY RESULTS****

HER-2/NEU IMMUNOHISTOCHEMISTRY [NEGATIVE:0,1+; EQUIVOCAL: 2+; POSITIVE: 3+]

	RESULT	SCORE
HER-2/NEU	Equivocal	2+

NOTE (for 2+ cases): HER2 FISH is being performed and the results will be subsequently reported in an addendum.

SPECIAL PROCEDURES:

FISH (PCL)

Interpretation

nuc ish(D17Z1x2~3,ERBB2x2~6)[40]

Interphase FISH analysis is equivocal for HER-2/NEU gene amplification.

RESULTS:

Fluorescence in situ hybridization (FISH) analysis was performed on a formalin-fixed Block 3A (left breast total mastectomy) using the DNA probe for the HER-2/NEU gene (An adequate number of invasive tumor cells were present and evaluated by two independent observers. The ratio of HER-2/NEU signals (ERBB2) to chromosome 17 centromere signals (D17Z1) was determined to be 1.93. A ratio of greater than 2.2 is considered to be amplified with ratios of 1.80 to 2.20 in the equivocal range; therefore, **this specimen is equivocal for HER2/NEU gene amplification.** The average number of HER-2/NEU signals per cell was 4.25. The average number of signals for the chromosome 17 centromere was 2.20. Concurrent positive and negative control specimens showed the expected results.

This FISH test is performed using a modification of the Vysis FDA approved PathVysion HER-2 DNA Probe Kit (1:2 LSI HER-2/neu / CEP17 probe : T-denhyb-2 buffer). This FISH test was developed and its performance determined by the Pursuant to the requirements of CLIA '88, this laboratory has established and verified the test's accuracy and precision.