Clinical Diagnosis & History: year old female with stage IV breast carcinoma, debulking surgery.

Specimens Submitted: 1: SP: Right breast and axillary contents level 1

DIAGNOSIS:

- BREAST, RIGHT; MODIFIED RADICAL MASTECTOMY:
- INVASIVE CARCINOMA, HISTOLOGIC GRADE II/III (MODERATE TUBULE FORMATION) TO HISTOLOGIC GRADE III/III (SLIGHT OR NO TUBULE FORMATION) NUCLEAR GRADE III/III (MARKED VARIATION IN SIZE AND SHAPE), MEASURING AT LEAST 10 CM IN LARGEST DIMENSION GROSSLY. INVASIVE CARCINOMA SHOWS MICROPAPILLARY FEATURES. FOCAL EXTRACELLULAR MUCIN IS ALSO NOTED. - DUCTAL CARCINOMA IN SITU (DCIS) IS ALSO IDENTIFIED, SOLID CRIBRIFORM
- MICROPAPILLARY AND FLAT TYPES, WITH HIGH NUCLEAR GRADE, AND EXTENSIVE
- LOBULAR INVOLVEMENT BY DCIS IS PRESENT.
- THE DCIS CONSTITUTES LESS THAN OR EQUAL TO 25% OF THE TOTAL TUMOR MASS, AND IS PRESENT ADMIXED WITH AND AWAY FROM THE INVASIVE COMPONENT.
- THE INVASIVE CARCINOMA IS LOCATED IN ALL FOUR QUADRANTS.
- THE DCIS IS LOCATED IN ALL FOUR QUADRANTS.
- THE NIPPLE IS INVOLVED BY INVASIVE CARCINOMA.
- CALCIFICATIONS ARE PRESENT IN BOTH THE IN SITU AND INVASIVE CARCINOMA.
- VASCULAR INVASION IS PRESENT.
- THE SKIN IS INVOLVED BY INVASIVE CARCINOMA BY DIRECT EXTENSION INTO THE DERMIS.
- THE ATTACHED SKELETAL MUSCLE IS EXTENSIVELY INVOLVED BY INVASIVE CARCINOMA BY DIRECT EXTENSION.
- INVASIVE CARCINOMA IS CLOSE (LESS THAN 0.1 CM) FROM THE NEAREST DEEP MARGIN.
- THE NON-NEOPLASTIC BREAST TISSUE IS UNREMARKABLE.
- FOCAL CHANGES OF PRIOR PROCEDURE ARE NOTED IN THE AXILLARY TAIL.
- METASTATIC CARCINOMA IS PRESENT IN TWO OUT OF TWO LEVEL I LYMPH NODES (2/2). ADDITIONAL SECTIONS OF THE AXILLARY TISSUE HAVE BEEN SUBMITTED AND THE FINDINGS WILL BE REPORTED IN AN ADDENDUM.
- NUMEROUS FOCI OF METASTATIC CARCINOMA ARE NOTED IN THE AXILLARY SOFT TISSUE, WITH THE LARGEST MEASURING AT LEAST 1.4 CM.

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Carcinoma, infiltrating duct mixed whother types 8523/3
Site: breat, NOS C50.9 lu 10/24/11

Mal/Synchronous Primary Motori As & Electels: Seviewer Initials: Date Seviewed: A 9424444



Immunohistochemical stains were performed on formalin-fixed tissue with the following results for invasive carcinoma (block 1-8): ESTROGEN RECEPTOR intensity PROGESTERONE PROFESTOR 90% nuclear staining with strong HER2 HERA

(5% of invasive tumor cells exhibit Complete membranous staining; Equivocal (focal 2+). FISH will be performed. Uniformity of staining: absent; Homogeneous, dark circumferential pattern: absent) The Carcinoma is positive for E-cadherin, supporting lobular differentiation. Comment:

Controls are satisfactory. Ventana's PATHWAY anti-HER-2/neu is an FDA-approved rabbit monoclonal primary antibody (clone 4B5) directed an FUA-approved rappit monocional primary antipody (cione 485) directions the internal domain of the C-erbB-2 oncoprotein (HER2) for against the internal domain or the C-erbs-2 oncoprotein (HENA) for immunohistochemical detection of HER2 protein overexpression in breast the upps to the upper to the upps to the upper to the upps to the upper to the upps to the upps to the upper to the upper to the upp immunoniscocnemical detection or nkk4 protein overexpression in preast cancer tissue routinely processed for histologic evaluation. The HER2 test cancer tissue routinery processed for historogic evaluation. It results are reported in accordance with the ASCO/CAP guideline results are reported in accordance with the ASCU/CAP guideline recommendations for HER2 testing in breast cancer (J Clin Oncol 2007; 25(1):118-145). The ER and PR rabbit monoclonal antibodies are also FDA approved. approved.

Some of the immunohistochemistry and ISH tests were developed and their performance characteristics were determined by the Department of Pathology. They have not been cleared or approved by the US FOOD and Drug
Administration. The FDA has determined that such clearance or approval is Administration. The FDA has determined that such distance or approval is not necessary. These tests are used for clinical purposes. They should not 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 (CLTA : 88) as De regarded as investigational or for research. This laboratory is certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA , 88) as under the Clinical Daporatory improvement Amendments or 1988 (Chin qualified to perform high complexity clinical laboratory testing.

2

I ATTEST THAT THE ABOVE DIAGNOSIS IS BASED UPON MY PERSONAL EXAMINATION OF I ATTEST THAT THE ABOVE DIAGNOSIS IS BASED UPON MY PERSONAL EXAMINATION OF THE SLIDES (AND/OR OTHER MATERIAL), AND THAT I HAVE REVIEWED AND APPROVED

*** Report Electronically Signed Out *** Gross Description:

1) The specimen is received fresh labeled, "right breast and axillary contents level 1., axillary contents. The breast measures 20 x 15 x 5 cm with overlying skin axillary contents. The preast measures AU X 15 X 5 cm with overlying skin ellipse measuring 18 X 7 X 0.2 cm. Situated centrally on the skin surface is a fixed, and retracted nipple measuring 1.5 x 1.0 x 1.0 cm. The surrounding a rixed, and retracted hippie measuring 1.5 x 1.0 x 1.0 cm. The surrounding skin is markedly thickened (up to 0.6 cm). A suture demarcates the axillary skin is markedly inickened (up to 0.0 cm). A suture demarcates the axiliary contents which measures 7 x 5 x 2 cm. The posterior surface of the breast is

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inked black and the anterior blue. Part of the posterior surface of the breast is covered by dark red skeletal muscle, measuring 11 x 4 x 0.5 cm. The specimen is serially sectioned to reveal an irregular tumor bed (10 \times $8.3 \times 5.1 \text{ cm}$) with poorly defined white, firm and tan areas. The tumor bed occupies almost the entire breast volume, extending throughout all four quadrants. The tumor bed is located 0.2 cm from the posterior margin, 0.3 cm from the anterior margin, and 0.5 cm from the skeletal muscle. The remaining breast tissue shows yellow fatty areas with foci of fibrosis. The axillary

tissue is dissected to reveal 13 possible lymph nodes, ranging in size from 0.4 cm to 1.2 cm. Representative sections are submitted. All dissected lymph nodes are entirely submitted. The specimen is photographed. Tissue is submitted to TPS.

Summary of sections:

N - nipple, nipple base and tumor

S - thickened skin

PM - posterior margin

AM - anterior margin

DSM - deep skeletal muscle

T - tumor central region and closest margins, continuous cross sections,

taken from medial to lateral

UIQ - upper inner quadrant

LIQ - lower inner quadrant

UOQ - upper outer quadrant

LOQ - lower outer quadrant

L1 - axilla, level one lymph nodes

AX axillary tail, entirely submitted

Summary of Sections:

Part 1: SP: Right breast and axillary contents level 1

Block	Sect. Site	PCs
1	AM	1
11	ax	11
1	DSM	1
9	Ll	9
2	LIQ	2
2	LOQ	2
3	N	3
1	PM	1
1	S	1
10	T	10
2	DID	2
2	TOO	2

Procedures/Addenda: Addendum

Date Ordered:

Status: Signed Out

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Date Complete: Date Reported:

By: 1

Addendum Diagnosis

PART #1

RIGHT BREAST AND AXILLARY CONTENTS:

THE REMAINING AXILLARY TISSUE IS ENTIRELY SUBMITTED. NO ADDITIONAL LYMPH NODES ARE IDENTIFIED.

, MD

** End of Report **