Case Scenario 1

History and Physical

3/15/13

The patient is an 84 year old white female who presented with an abnormal mammogram. The patient has a five year history of refractory anemia with ringed sideroblasts (RARS). She was treated for a uterine malignancy 15 years ago.

The patient presented for a routine mammogram in mid-January and was found to have irregularities in both breasts. A core biopsy of the left breast revealed DCIS. Core biopsies of the right breast revealed invasive ductal carcinoma. The patient is not a candidate for mastectomy due to her RARS and poor health. She is here today for a lumpectomy of her left breast and lumpectomy and sentinel node biopsy of her right breast.

Physical exam of the breast revealed that the nipple and areolar complex appear normal. Skin of both breasts appears normal. Biopsy sites in the mid-superior aspect of both breasts are apparent. There is no redness. Examination of the right breast reveals some induration at the biopsy site. There is an area of nodularity present in the upper outer quadrant that is associated with the previous open biopsy procedure. There are no discrete lumps. No palpable nodes in the axilla. Examination of the left breast was negative for any discrete lumps. The breast is mildly tender towards the axilla. There are no palpable nodes in the axilla.

Imaging

1/19/13 Mammogram: Calcification collection in the 1 o'clock left breast for which magnification imaging is recommended.

1/31/13 Breast ultrasound: Confirmation of suspicious calcification collection in the 1 o'clock left breast and stereotactic biopsy recommended to evaluate for potential malignancy. Persistence of a new irregular-appearing nodular opacity in the right breast at the 12 o'clock location. No corresponding ultrasound abnormality. Suggest additional stereotactic biopsy of both breasts for further assessment.

Pathology

2/10/13

Left breast at 12:00 stereotactic core bx:

- Ductal carcinoma in situ, intermediate nuclear grade with focal central luminal necrosis, cribriform pattern, associated with microcalcifications
- ER/PR positive

Right breast at 12:00, stereotactic core bx:

- Invasive ductal carcinoma, grade 1
- Nottingham score 5
- ER/PR positive
- HER/2 negative 1+ by IHC

Operative Report-3/15/13

- Right lumpectomy with needle localization and sentinel lymph node biopsy and left lumpectomy with needle localization

Pathology-3/15/13

- Right lumpectomy with needle localization and sentinel lymph node biopsy.
- Left lumpectomy with needle localization.
    - Right sentinel lymph node (1):
        - Metastatic ductal carcinoma. The carcinoma demonstrates focal extension into adipose tissue and measures approximately 0.8 cm.
    - Right lumpectomy:
        - Invasive ductal carcinoma measuring 0.8 cm
        - DCIS is focally present.
        - Nottingham grade 1, Nottingham score 5
        - Lymphvascular invasion not identified
        - Margins negative
        - pT1bN1 (sn+)
    - Left lumpectomy:
        - Focal ductal carcinoma in situ, cribriform type with focal central necrosis.
        - DCIS approaches to within 0.5 cm of the 9:00 margin. Remaining margins are widely negative.

Radiation Oncology

The patient presents with a pT1bN1 (sn+) invasive ductal carcinoma of the right breast and a DCIS of the left breast. She is a not a candidate for mastectomy or chemotherapy due to underlying medical conditions and poor overall health. She started on Arimidex 5/25/13.

Radiation Summary:

- Right Breast and axillary lymph nodes: mixture of 6 mv and 15 mv photons, 5040 cGy in 28 fractions from in 6/20/13 to 8/1/13, electron boost to tumor bed, 1080 cGy in 6 fractions from 8/3/13 to 8/10/13
- Left breast: mixture of 6 mv and 15 mv photons, 5040 cGy in 28 fractions from 7/5/13 to 8/16/13, electron boost, 1080 cGy in 6 fractions from 8/17/13 to 8/24/13

• **How many primaries are present in this case scenario?** • **How would we code the histology of the primary you are currently abstracting?**	• **What is the diagnosis date?** • **What is the sequence?**

Stage/ Prognostic Factors

CS Tumor Size		CS SSF 9	
CS Extension		CS SSF 10	
CS Tumor Size/Ext Eval		CS SSF 11	
CS Lymph Nodes		CS SSF 12	
CS Lymph Nodes Eval		CS SSF 13	
Regional Nodes Positive		CS SSF 14	
Regional Nodes Examined		CS SSF 15	
CS Mets at Dx		CS SSF 16	
CS Mets Eval		CS SSF 17	988
CS SSF 1		CS SSF 18	988
CS SSF 2		CS SSF 19	988
CS SSF 3		CS SSF 20	988
CS SSF 4		CS SSF 21	
CS SSF 5		CS SSF 22	
CS SSF 6		CS SSF 23	
CS SSF 7		CS SSF 24	988
CS SSF 8		CS SSF 25	988

Treatment

Diagnostic Staging Procedure			
Surgery Codes		**Radiation Codes**	
Surgical Procedure of Primary Site		Radiation Treatment Volume	
Scope of Regional Lymph Node Surgery		Regional Treatment Modality	
Surgical Procedure/ Other Site		Regional Dose	
		Boost Treatment Modality	
Systemic Therapy Codes		Boost Dose	
Chemotherapy		Number of Treatments to Volume	
Hormone Therapy		Reason No Radiation	
Immunotherapy			
Hematologic Transplant/Endocrine Procedure			

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Scope of Regional Lymph Node Surgery		Regional Treatment Modality	
Surgical Procedure/ Other Site		Regional Dose	
		Boost Treatment Modality	
Systemic Therapy Codes		Boost Dose	
Chemotherapy		Number of Treatments to Volume	
Hormone Therapy		Reason No Radiation	
Immunotherapy			
Hematologic Transplant/Endocrine Procedure			

Case Scenario 2

A 59 year old white female presents for partial mastectomy and sentinel lymph node biopsy. Approximately six months ago, she was found to have a complicated cyst in her left breast. She returned on 3/1/12 for a follow-up mammogram and was found to have new area of architectural distortion with a suggestion calcification. She returned on 3/4/12 for a targeted ultrasound and biopsy. The ultrasound showed an ill-defined hypoechoic shadowing nodule in the left breast at the 3:00 position/zone 2/posterior depth measuring 9 x 7 mm. The nodule has a maximum diameter estimated at 2.0 cm x 2.5 cm. An evaluation of the axilla demonstrated fatty-replaced lymph nodes which were not enlarged. A biopsy of the nodule revealed an invasive lobular carcinoma, ER/PR positive, HER/2 negative 1+ by IHC. Additional testing showed that the BRCA1 and BRCA2 were negative, Oncotype Dx score = 15.

Physical exam:
The right breast is negative for discrete palpable mass. There is no skin dimpling, retraction, or peau' d orange appearance. There is no nipple discharge or inversion. The left breast shows resolving ecchymosis at the 4 o'clock position related to the biopsy. Gentle palpation of these areas did not reveal any identified lump; however, a full-exam was difficult due to residual tenderness and discomfort. The remaining breast tissue shows no discrete palpable mass. No skin dimpling, retraction, or peau' d orange. No nipple discharge or inversion. Evaluation of the axilla demonstrates fatty-replaced lymph nodes which are not enlarged. No areas of irregular cortical thickening are identified.

Pathology
3/4/12 Left breast needle core biopsy at 3:00: Invasive lobular carcinoma, ER/PR positive, HER/2 negative 1+ by IHC

Operative Report
3/29/12 Left breast needle-directed partial mastectomy and left sentinel lymph node biopsy

Pathology

- Left SLN Bx: A single LN, negative for carcinoma, IHC stains for keratin confirm the above impression.
- Left Breast Partial Mastectomy: Invasive lobular carcinoma, tumor forms multiple (4) masses within the specimen, the largest of which measures 1.4 cm. Nottingham grade 1, Nottingham score 5, lobular carcinoma in situ is present within the tumor and multi-focally within the specimen submitted. An area of ductal carcinoma in situ is also present. Lymph-vascular invasion is not appreciated. Final margins are within 0.1 cm.

4/27/12 Bilateral skin sparing mastectomy with bilateral tissue expander placement of the allomax. (Patient had implants placed 8/9)

Adjuvant Treatment: Radiation not recommended. Patient started on letrozole 5/25.

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Treatment

Diagnostic Staging Procedure			
Surgery Codes		**Radiation Codes**	
Surgical Procedure of Primary Site		Radiation Treatment Volume	
Scope of Regional Lymph Node Surgery		Regional Treatment Modality	
Surgical Procedure/ Other Site		Regional Dose	
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Systemic Therapy Codes		Boost Dose	
Chemotherapy		Number of Treatments to Volume	
Hormone Therapy		Reason No Radiation	
Immunotherapy			
Hematologic Transplant/Endocrine Procedure			

Case Scenario 3

A 64 year old white female presents with an abnormal screening mammogram. She has a history of left breast cancer status post left partial mastectomy, axillary lymph node dissection and adjuvant radiation 20 years ago.

Imaging

3/17/12 Mammogram:

Postsurgical changes of the left breast. A potential area of developing density in the upper central portion of the left mid-breast was identified. Recommend diagnostic imaging for further assessment.

3/21/12 Left Breast Ultrasound:

In the left breast superiorly at the 12 to 1:00 position/zone 3/mid to posterior depth postsurgical scarring is noted. In the left breast 12:00 position/zone 2/mid-depth an irregular hypoechoic vascular mass with irregular and micro-lobulated borders is identified, measuring 13 x 9 x 8 mm. This is considered highly suspicious for malignancy. Evaluation of the axilla demonstrates no suspicious appearing lymph nodes.

1. Highly suspicious mass in the left breast at 12:00. Biopsy is recommended for tissue diagnosis.
2. Left breast 1 to 2:00 far superior stable appearing post treatment changes.

- *Assessment:* BIRADS 5 - highly suggestive of malignancy appropriate action should be taken.

4/8/12 MRI Breasts:

Focal area of abnormal irregular enhancement surrounding the biopsy site in the upper-outer left breast at the junction of the middle and posterior one-third. This corresponds to the biopsy-proven invasive lobular carcinoma. The area of abnormal enhancement has a maximum diameter approximately 4 x 3 cm. No other abnormal enhancement and left breast. No significant abnormality demonstrated in the right breast.

4/8/12 Bone scan:

No scintigraphic findings to suggest skeletal metastases.

Operative Procedure

3/29/12 Ultrasound guided needle core biopsy

Pathology

3/29/12 Left breast at 12:00 needle bx: Invasive lobular carcinoma, solid variant. Grade 2, Nottingham score 6, perineural invasion is identified. Features suspicious for lymph vascular invasion. ER/PR positive, HER/2 negative 1+ by IHC

Operative Procedure

4/15/12 Left Total Mastectomy

Pathology

Final Diagnosis:

A) BREAST, LEFT ANTERIOR MARGIN AT 11:00, EXCISION:
   - NEGATIVE FOR MALIGNANCY.

B) BREAST, LEFT, TOTAL MASTECTOMY:
   - HISTOLOGIC TUMOR TYPE: INVASIVE LOBULAR CARCINOMA, SOLID VARIANT.
   - SIZE OF INVASIVE CARCINOMA: 1.3 X 1.2 X 1.0 CM.
   - COMPOSITE HISTOLOGIC GRADE: NOTTINGHAM GRADE II (OF III).
     - Tubule formation score: 3
     - Nuclear pleomorphism score: 2
     - Mitotic count score: 1
     - Total Nottingham score: 6
   - ANCILLARY STUDIES (PERFORMED ON CORE BIOPSY 3/29/2012):
     - Estrogen Receptor: POSITIVE
     - Progesterone Receptor: POSITIVE.
     - HER2 Result: NEGATIVE.
     - Oncotype Dx score = 4
   - DUCTAL CARCINOMA IN-SITU: NOT IDENTIFIED.
   - LYMPH-VASCULAR INVASION: NOT IDENTIFIED.
   - MARGINS: THE SURGICAL MARGINS ARE NEGATIVE BY GREATER THAN 1.0 CM.
   - LYMPH NODES: NO LYMPH NODES ARE IDENTIFIED.
   - ADDITIONAL FINDINGS: TWO ADDITIONAL MICROSCOPIC FOCI OF INVASIVE LOBULAR CARCINOMA, NOTTINGHAM GRADE I (OF III), ARE IDENTIFIED SEPARATE FROM THE MAIN TUMOR MASS MEASURING 0.3 CM. AND 0.1 CM.
   - A MASS OF DENSE COLLAGENOUS TISSUE COMPATIBLE WITH SCAR FROM PRIOR SURGICAL EXCISION IS IDENTIFIED.
   - PATHOLOGIC TNM STAGE: AJCC pT1c NX

C) SKIN, LEFT BREAST, EXCISION: NEGATIVE FOR MALIGNANCY.

Adjuvant Treatment Summary

Patient was started on a regimen of Arimidex beginning 4/28/12.

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