

NAACCR-Breast Cancer-October 6, 2022

Case #1:

73 y/o w/m w/ h/o CKDIII, HTN, HLD, hypothyroidism, who presented w/ screen-detected right breast cancer.

Imaging:

5/21/22 @ XXX Imaging: Bilat MMG/RT US= 6 mm hypoechoic, nonpalpable nodule @ 2:00 axis of RT breast. Adjacent smaller 3 mm nodule @ 4:00 axis. BIRADS 5: Highly suggestive of malignancy.

Pathology:

7/1/22 @ YYY Hospital: RT breast @ 2:00 axis bx= Moderately differentiated invasive ductal carcinoma. No LVI. Maximum length= 4 mm. DCIS, solid and cribriform, w/ central comedonecrosis. Grade II.

7/11/22 @ YYY Hospital: RT breast radiofrequency seed localized lumpectomy with sentinel lymph node dissection= Multifocal (7 mm & 4 mm) invasive ductal carcinoma. Nottingham score= 7/9. Grade 2. LVI negative. DCIS, solid and cribriform. Intermediate grade. Margins negative for invasive/DCIS. Closest @ 3mm, Anterior(DCIS). SLNs= 0/3 negative. Stage pT1b(m), pN0.

ER= 70-80%, 2-3+. PR= 90%, 3+. HER2 IHC= 1+, negative. Ki-67= 35%. Oncotype DX RS= 21 & 24.

Genetic Testing:

- a. Mammaprint: Low-risk luminal type A
- b. Invitae Genetic Panel: Negative

Radiation Therapy Treatment Summary

SUMMARY OF RADIATION FIELDS

Course: 1 @ YYY Hospital

| Site | Ref. ID | Energy | Dose/Fx (cGy) | #Fx | Total Dose (cGy) | Start Date | End Date | Elapsed Days |
|-----------------|-----------------|--------|---------------|-------|------------------|------------|----------|--------------|
| Partial Brst_RT | Partial Brst_RT | 6X | 600 | 5 / 5 | 3,000 | 7/25/2022 | 8/3/2022 | 9 |

Course: 1

Treatment Site: Prtial Brst_RT

Ref. ID: Prtial Brst_RT

Energy: 6X

Dose/Fx (cGy): 600

#Fx: 5 / 5

Total Dose (cGy): 3,000

Start Date: 7/25/2022

End Date: 8/3/2022

Elapsed Days: 9

SUMMARY OF RADIATION TREATMENTS: The patient was treated to the right breast using a **3D Conformal (3D CRT) technique**. The patient tolerated treatments quite well.

The patient received the prescribed dose without any complications and was advised to return for follow up in 1 month. In the interim, the patient was informed to call if any questions arise.

8/15/22 @ YYY Hospital: patient started on Letrozole x 5 yrs.

| Case 1 Answer sheet | | | |
|---|---|----|-----|
| Dx Staging and Surgery | | | |
| Diagnostic Staging Procedure | | | |
| Date of First Course Treatment | | | |
| Surgery of Primary Site (03-2022) | | | |
| Surg Breast | | | |
| Recon Breast | | | |
| Scope of Regional Lymph Nodes | | | |
| Sentinel Lymph Nodes Positive | | | |
| Sentinel Lymph Nodes Examined | | | |
| Regional Nodes Positive | | | |
| Regional Nodes Examined | | | |
| Surgical Procedure/Other Site | | | |
| Radiation | | | |
| Phases | I | II | III |
| Primary Treatment Volume | | | |
| Draining Lymph Nodes | | | |
| Treatment Modality | | | |
| External Beam Planning Technique | | | |
| Dose Per Fraction (cGy) | | | |
| Number of Fractions | | | |
| Total Dose (cGy) | | | |
| Date RT Started | | | |
| Date RT Ended | | | |
| # of Phases of RT to this Volume | | | |
| RT Discontinued Early | | | |
| Total Dose | | | |
| Radiation/Surgery Sequence | | | |
| Reason for No Radiation | | | |
| Systemic Therapy | | | |
| Date Systemic Therapy Started | | | |
| Chemotherapy | | | |
| Hormone Therapy | | | |
| Immunotherapy | | | |
| Hematologic Transplant and Endocrine Procedures | | | |
| Systemic/Surgery Sequence | | | |

Case #2:

69 y/o w/f w/f, G3P3, w/ h/o HLD, CAD, A-fibrillation, who presented w/ a palpable mass on LT breast. Pt denies nipple discharge or inversion. Nonsmoker. Social etoh. +fhx: mother w/ breast cancer @ 65. Brother w/ prostate cancer.

Imaging:

3/5/22 @ XXX Hospital: LT MMG/US: 1.4 spiculated mass @ 2:00-3:00 axis w/ mammogram correlate. No lymphadenopathy noted. BIRADS 4: suspicious.

3/18/22 @ XXX Hospital: MRI Breast bilateral= Biopsy proven invasive ductal carcinoma, 1.5 cm, and DCI in upper outer quadrant of left breast w/ enhancement. No suspicious enhancement on right breast. No lymphadenopathy bilateral. BIRADS 6.

Pathology:

3/10/22 @ XXX Hospital: LT breast @ 2:00 axis bx= Intraductal carcinoma w/ solid papillary features. Nottingham score: 6/9. Grade 2. Max length 9 mm in a single core. DCIS, solid & cribriform w/ calcifications and comedo type necrosis.

ER+ 91-100%, 3+. PR= 81-90%, 2-3+. HER2 IHC: 2+, equivocal. HER@ FISH: not amplified. Ki-67= 30-40%.

4/8/2022 @ XXX Hospital: Left magseed localized partial mastectomy with sentinel lymph node biopsy= 1.8 cm invasive ductal carcinoma @ 2:00 axis. DCIS, cribriform/solid. Grade III w/ central necrosis. Margins negative. LVI-. SLNs= 0/2 negative. Stage pT1c, pN0(sn).

ER= 95%, 3+. PR= 81%, 2-3+. HER2 IHC= 1+, negative. Ki-67= 30-40%.

Genetic Testing:

Invitae Genetic Panel: Negative.

Oncotype DX Recurrent Score= 32, high.

4/22/22 @ YYY Hospital: Cyclophosphamide + Docetaxel (TC) chemotherapy

Radiation Therapy Treatment Summary:

SUMMARY OF RADIATION FIELDS

Course: C1 LT BREAST @ XXX Hospital

| Treatment Site | Ref. ID | Energy | Dose/Fx (cGy) | #Fx | Total Dose (cGy) | Start Date | End Date | Elapsed Days |
|----------------|---------------|--------|---------------|---------|------------------|------------|----------|--------------|
| LT BREAST | Breast_L | 6X | 265 | 16 / 16 | 4,240 | 8/11/2022 | 9/3/2022 | 23 |
| LT Brst Boost | LT Brst Boost | 9E | 250 | 4 / 4 | 1,000 | 9/4/2022 | 9/9/2022 | 5 |

Course: C1 LT BREAST

Treatment Site: LT BREAST

Ref. ID: Breast_L

Energy: 6X

Dose/Fx (cGy): 265
#Fx: 16 / 16
Total Dose (cGy): 4,240
Start Date: 8/11/2022
End Date: 9/3/2022
Elapsed Days: 23

Course: C1 LT BREAST
Treatment Site: LT Brst Boost
Ref. ID: LT Brst Boost
Energy: 9E
Dose/Fx (cGy): 250
#Fx: 4 / 4
Total Dose (cGy): 1,000
Start Date: 9/4/2022
End Date: 9/9/2022
Elapsed Days: 5

SUMMARY OF RADIATION TREATMENTS: The patient was treated to the left breast using a 3D Conformal (3D CRT) and **En Face** technique. The patient tolerated treatments quite well. The patient had the expected side effects of dermatitis.

9/12/22 @ XXX Hospital:

Med onc consult. Letrozole recommended. Pt still reluctant to start due to concerns for side effects.

Case 2 Answer sheet

Dx Staging and Surgery

| | |
|-----------------------------------|--|
| Diagnostic Staging Procedure | |
| Date of First Course Treatment | |
| Surgery of Primary Site (03-2022) | |
| Surg Breast | |
| Recon Breast | |
| Scope of Regional Lymph Nodes | |
| Sentinel Lymph Nodes Positive | |
| Sentinel Lymph Nodes Examined | |
| Regional Nodes Positive | |
| Regional Nodes Examined | |
| Surgical Procedure/Other Site | |

Radiation

| Phases | I | II | III |
|----------------------------------|---|----|-----|
| Primary Treatment Volume | | | |
| Draining Lymph Nodes | | | |
| Treatment Modality | | | |
| External Beam Planning Technique | | | |
| Dose Per Fraction (cGy) | | | |
| Number of Fractions | | | |
| Total Dose (cGy) | | | |
| Date RT Started | | | |
| Date RT Ended | | | |
| # of Phases of RT to this Volume | | | |
| RT Discontinued Early | | | |
| Total Dose | | | |
| Radiation/Surgery Sequence | | | |
| Reason for No Radiation | | | |

Systemic Therapy

| | |
|---|--|
| Date Systemic Therapy Started | |
| Chemotherapy | |
| Hormone Therapy | |
| Immunotherapy | |
| Hematologic Transplant and Endocrine Procedures | |
| Systemic/Surgery Sequence | |

Case #3:

51-year-old African-American female, G2P2, w/ h/o anemia, who presented w/ some dimpling of her right breast. Patient denies breast pain or nipple discharge. Nonsmoker. -etoh. +fhx: sister died of breast cancer @ 54. M-grandmother w/ lung cancer.

Imaging:

2/12/21 @ XYZ Radiology: RT MMG: On right breast, 1.7 cm well circumscribed oval UOQ nodule. BIRADS 4: suspicious.

3/10/21 @ XYZ Radiology: MR breast bilat: on right breast, multiple abnormally enhanced lesions, largest @ 1.9 CM @ 8:00 axis. Enlarged right axillary lymph node, 2.0 cm. No suspicious MRI enhancement on left breast. BIRADS 6.

4/2/21 @ XYZ Radiology: CT CAP= no evidence of metastatic dz.

4/8/21 @ XYZ Radiology: NM Bone scan= no scintigraphic evidence of osseous metastatic disease.

Pathology:

2/25/21 @ ZZZ Hospital: RT breast 11:00 axis bx= invasive carcinoma with dominant mucinous features. Nottingham: 6/9. Grade 2. LVI-. DCIS, solid/papillary GII. ER= >95%, 3+. PR= >90%, 3+. HER2 IHC= 1+, negative. Ki-67= 14%.

10/26/21 @ ZZZ Hospital: RT breast skin-sparing mastectomy (nipple and areola not removed) & SLN dissection, w/ immediate reconstruction. TE/Alloderm

- 19 mm mucinous carcinoma (84803). Nottingham= 8/9. Grade 3. LVI-. Margins negative.
- Lymph nodes examined= 4.
- Lymph nodes with macromets= 1 (11 mm tumor deposit, 3 mm extra nodal extension).
- Lymph nodes with micromets= 0.
- Number of nodes with isolated tumor cells (ITCs)= 0.
- SLNs examine= 4.
- Stage ypT1c, ypN1(sn). ER+ >90%, 3+. PR= 80%, 2+. HER

Genetic Testing:

Genetic testing, NOS, negative.

Neoadjuvant chemotherapy:

4/9/21 @ YYY Hospital: ddAC x 4 cycles + Taxol x 12 cycles.

Radiation Therapy Completion Summary:

12/12/21-1/22/22 @ YYY Hospital: RT Chest wall/S'clav, 6X/IMRT, 1.8 Gy x 28 fx= 50.4 Gy in 41 days.

Hormone Therapy:

2/1/22 @ ZZZ Hospital: Tamoxifen.

Case 3 Answer sheet (preferred)

| Dx Staging and Surgery | | | |
|---|----------|-----------|------------|
| Diagnostic Staging Procedure | | | |
| Date of First Course Treatment | | | |
| Surgery of Primary Site (03-2022) | | | |
| Surg Breast | | | |
| Recon Breast | | | |
| Scope of Regional Lymph Nodes | | | |
| Sentinel Lymph Nodes Positive | | | |
| Sentinel Lymph Nodes Examined | | | |
| Regional Nodes Positive | | | |
| Regional Nodes Examined | | | |
| Surgical Procedure/Other Site | | | |
| Radiation | | | |
| Phases | I | II | III |
| Primary Treatment Volume | | | |
| Draining Lymph Nodes | | | |
| Treatment Modality | | | |
| External Beam Planning Technique | | | |
| Dose Per Fraction (cGy) | | | |
| Number of Fractions | | | |
| Total Dose (cGy) | | | |
| Date RT Started | | | |
| Date RT Ended | | | |
| # of Phases of RT to this Volume | | | |
| RT Discontinued Early | | | |
| Total Dose | | | |
| Radiation/Surgery Sequence | | | |
| Reason for No Radiation | | | |
| Systemic Therapy | | | |
| Date Systemic Therapy Started | | | |
| Chemotherapy | | | |
| Hormone Therapy | | | |
| Immunotherapy | | | |
| Hematologic Transplant and Endocrine Procedures | | | |
| Systemic/Surgery Sequence | | | |

Case #4:

61-year-old Caucasian female, G3P3, w/ h/o depression, hypothyroidism, HTN, HLD, who presented w/ screen-detected RT breast cancer. 40 PK-YR, quit last week. Social etoh. +fhx: M-aunt w/ breast cancer @ 58. M-grandmother w/ breast cancer in her 70s.

Imaging:

1/14/22 @ XXX Medical Ctr: Bilat MMG/US= 0.9 cm right 2:00 nodule highly suggestive of a breast carcinoma. BIRADS 5.

2/9/22 @ XXX Medical Ctr: Bilateral breast MRI= Biopsy-proven 1.1 cm malignancy in right 2:00 axis breast. Nonmass enhancement spanning 3.5 cm in right upper inner breast. No lymphadenopathy bilaterally.

Pathology:

1/20/22 @ YYY Hospital: Right breast, 2:00, core biopsy= Classical type invasive lobular carcinoma. Maximum length in a single core is 6 mm. Nottingham: 5/9. G1.

2/14/22 @ YYY Hospital: Right breast radiofrequency seed localized lumpectomy, UIQ, with right axillary sentinel lymph node dissection= 1.0 cm classic type invasive lobular carcinoma.

Tumor site: 2:00 axis, 5 cm FN

Histologic Grade (Nottingham Histologic Score): Grade 1 (Total score 5/9)

- Tubular differentiation: 2
- Nuclear Pleomorphism: 2
- Mitotic Rate: 1.

LCIS+. Pleomorphic and classical type. DCIS not identified. Lymphovascular invasion not identified.

Number of lymph nodes examined: 3

Number of sentinel lymph nodes examined: 3

Number of lymph nodes with macromets: 0

Number of lymph nodes with micromets: 0

Breast Biomarker Results: ER= 80-90%, 3+. PR= 40-50%, 2-3+. HER2 IHC= 0, negative. Ki-67= Low <5%.

Pathologic Stage Classification (AJCC 8th ed.): pT1b, pN0(sn).

Genetic Testing:

Recommended by medical oncologist, but patient refused at this time.

Radiation Therapy Completion Summary:

2/14/22 @ YYY Hospital: Right breast IORT, via XOFT Axxent electronic brachytherapy at 50 kV. Total dose= 20 Gy.

Hormone Therapy:

3/8/22 @ YYY Hospital: Anastrozole X 5 years.

Case 4 Answer sheet

Dx Staging and Surgery

| | |
|-----------------------------------|--|
| Diagnostic Staging Procedure | |
| Date of First Course Treatment | |
| Surgery of Primary Site (03-2022) | |
| Surg Breast | |
| Recon Breast | |
| Scope of Regional Lymph Nodes | |
| Sentinel Lymph Nodes Positive | |
| Sentinel Lymph Nodes Examined | |
| Regional Nodes Positive | |
| Regional Nodes Examined | |
| Surgical Procedure/Other Site | |

Radiation

| Phases | I | II | III |
|----------------------------------|---|----|-----|
| Primary Treatment Volume | | | |
| Draining Lymph Nodes | | | |
| Treatment Modality | | | |
| External Beam Planning Technique | | | |
| Dose Per Fraction (cGy) | | | |
| Number of Fractions | | | |
| Total Dose (cGy) | | | |
| Date RT Started | | | |
| Date RT Ended | | | |
| # of Phases of RT to this Volume | | | |
| RT Discontinued Early | | | |
| Total Dose | | | |
| Radiation/Surgery Sequence | | | |
| Reason for No Radiation | | | |

Systemic Therapy

| | |
|---|--|
| Date Systemic Therapy Started | |
| Chemotherapy | |
| Hormone Therapy | |
| Immunotherapy | |
| Hematologic Transplant and Endocrine Procedures | |
| Systemic/Surgery Sequence | |