Challenging Cases in Breast Cancer

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Case 1

- A healthy 49 y/o premenopausal woman undergoes right lumpectomy and sentinel lymph node (SLN) biopsy.
- Pathology reveals a 2.2 cm, grade 2 infiltrating ductal carcinoma (IDC) with negative margins. 2 SLNs are negative. The tumor is estrogen receptor (ER) positive, progesterone receptor (PgR) positive and HER2 negative

Case 1

- The patient has an anatomic stage IIA, T2 N0, prognostic stage IB, right breast cancer.

AJCC 8th Edition

When TNM is…	And Grade is…	And HER2 Status is…	And ER Status is…	And PR Status is…	Then the Clinical Prognostic Stage Group is…
T0 N1** M0 T1* N1** M0 T2 N0 M0	G1	Positive	Positive	Positive	IB
				Negative	IIA
			Negative	Positive	IIA
				Negative	IIA
		Negative	Positive	Positive	IB
				Negative	IIA
			Negative	Positive	IIA
				Negative	IIA
	G2	Positive	Positive	Positive	IB
				Negative	IIA
			Negative	Positive	IIA
				Negative	IIA
		Negative	Positive	Positive	IB
				Negative	IIA
			Negative	Positive	IIA
				Negative	IIB
	G3	Positive	Positive	Positive	IB
				Negative	IIA
			Negative	Positive	IIA
				Negative	IIA
		Negative	Positive	Positive	IIA
				Negative	IIB
			Negative	Positive	IIB
				Negative	IIB

Case 1

What do you advise next?

1. Endocrine therapy

2. Adjuvant chemotherapy followed by endocrine therapy

3. Gene expression profile (Oncotype Dx, Mammaprint, etc.)

Case 1

- An Oncotype Dx assay reveals a recurrence score of 24, corresponding to a 10-year risk of distant recurrence of 14%.

Case 1

What do you recommend next?

1. Endocrine therapy

2. Adjuvant chemotherapy followed by endocrine therapy

Case 1

If you recommend chemotherapy, what regimen?

1. Docetaxel and cyclophosphamide (TC) x 4
2. TC x 6
3. Dose dense doxorubicin and cyclophosphamide followed by paclitaxel (AC→T)
4. Other

Case 1

What type of endocrine therapy do you advise?

1. Tamoxifen x 5 years
2. Tamoxifen x 10 years
3. LHRH agonist + Tamoxifen x 5 years
4. LHRH agonist + Aromatase Inhibitor (AI) x 5 years
5. LHRH agonist + AI x 10 years

Case 2

- A 65 y/o woman with hypertension is diagnosed with a 1.8 cm, node negative, grade 2, ER positive, PgR negative, HER2 negative invasive lobular carcinoma.
- She has a T1c N0, anatomic stage IA, prognostic stage IA breast cancer.

Case 2

- An Oncotype Dx assay reveals a recurrence score of 29, corresponding to a 10-year risk of distant recurrence of 20%.

Case 2

What do you recommend next?

1. Aromatase inhibitor (AI)

2. Adjuvant chemotherapy followed by an AI

Case 2

If you recommend chemotherapy, what regimen?

1. Docetaxel and cyclophosphamide (TC) x 4
2. TC x 6
3. Dose dense doxorubicin and cyclophosphamide followed by paclitaxel (AC→T)
4. Other

Case 2

What duration of AI do you recommend?

1. 5 years

2. 10 years

Cases 1 and 2: Take Home Points

- AJCC 8th edition includes anatomic and clinical prognostic staging.
- Gene expression profiles can provide prognostic and predictive data in early stage breast cancer.
- TAILORx suggests chemotherapy benefit in women <50 y/o with Oncotype Dx RS of 16-25.
- RS >25 were not randomized, but treated with adjuvant chemotherapy.

Case 3

- A 67 y/o woman has an abnormal screening mammogram revealing a suspicious 1.5 cm left breast mass and level 1 axillary lymph nodes.
- Biopsy of her left breast reveals a high grade IDC with apocrine features. Her tumor stains 70% for ER, 3% PgR and is HER2 non-amplified.

Case 3

- On exam, you palpate a mobile 1-2 cm left breast mass and no axillary adenopathy.

Case 3

What do you recommend next?

1. Sentinel lymph node biopsy then neoadjuvant chemotherapy (NAC)

2. Ultrasound-guided fine needle aspiration or core biopsy of the lymph node then NAC

3. Breast surgery and SLN biopsy

4. Breast surgery and axillary lymph node dissection (ALND)

Case 3

- The patient undergoes core biopsy of a left axillary lymph node, which confirms metastatic disease.

- She is referred for neoadjuvant chemotherapy for her clinical T1C N1 left breast cancer.

Case 3

What do you recommend for NAC?

1. TC x 4
2. TC x 6
3. Dose dense AC→T
4. Other

Case 3

- The patient receives dose dense AC→T, which she tolerates well. The left breast mass becomes indistinct.
- She would like breast conservation therapy.

Case 3

What axillary surgery do you recommend?

1. SLN Bx

2. ALND

Case 3

- The patient undergoes left lumpectomy and SLN biopsy. Intraoperatively, the SLN is grossly positive and she proceeds to ALND.
- Pathology reveals a residual 1.6 cm, high grade IDC with apocrine features. 2/2 SLN and 10/11 axillary lymph nodes contain metastatic disease with extranodal extension for a yT1c N3 tumor, stage IIIC tumor.

Case 3

In addition to postlumpectomy radiation, what do you recommend next?

1. Aromatase inhibitor (AI)

2. 6-8 cycles of capecitabine per CREATE-X and AI therapy

3. Adjuvant cyclin 4/6 kinase inhibitor trial

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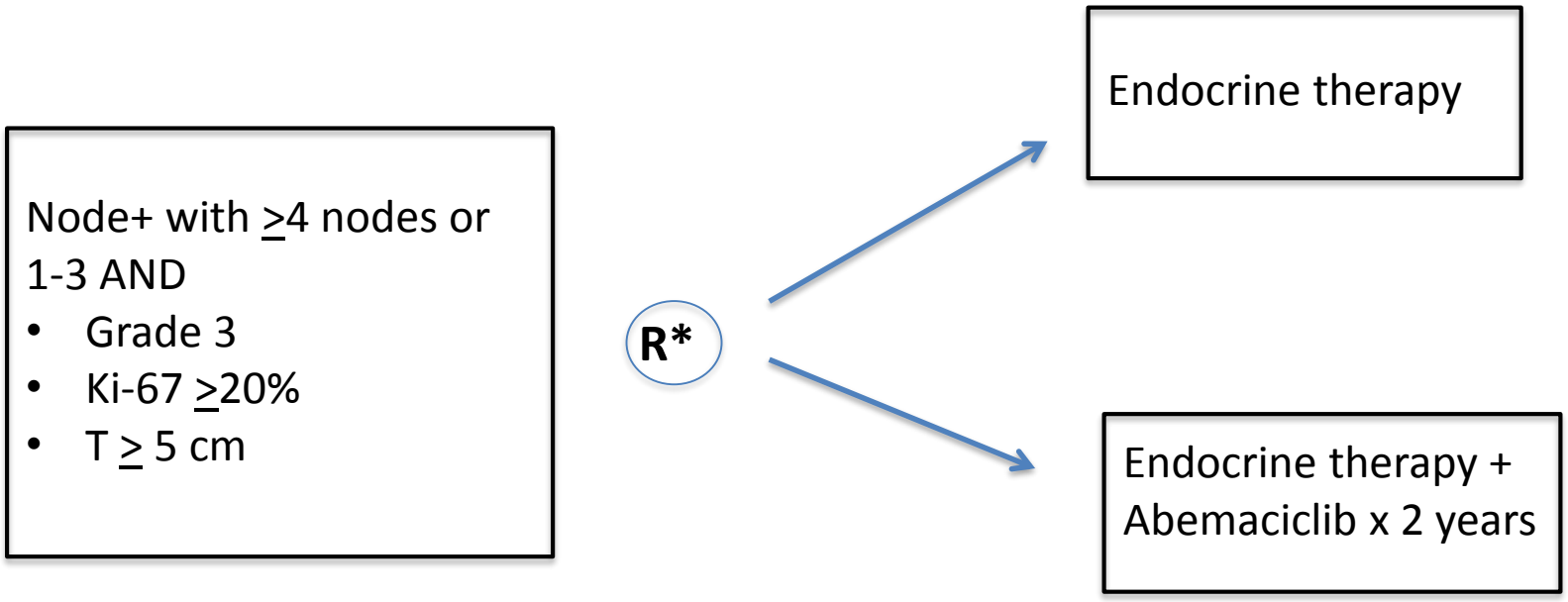


*Up to 12 weeks of endocrine therapy;
All non-endocrine therapy must be completed

Case 3: Take Home Points

- There are surgical options for managing clinically suspicious ALNs prior to NAC.
- In patients with significant residual disease after NAC, adjuvant capecitabine is an option.
- Consider clinical trials with adjuvant cyclin 4/6 kinase inhibitors.

Case 4

- A 58 y/o woman with hypertension and osteoarthritis has an abnormal screening mammogram, revealing a 2.5 cm left breast mass.
- On exam, she has a mobile left breast mass and no suspicious axillary adenopathy.
- Biopsy reveals a grade 2, hormone receptor positive and HER2 amplified IDC.

Case 4

Would you offer NAC and HER2-directed therapy for this clinical stage IIA, T2 N0, tumor?

1. Yes

2. No, adjuvant therapy

Case 4

If NAC, would you first perform SLN biopsy?

1. Yes

2. No

Case 4

SLN biopsy reveals 2 negative SLNs.

Case 4

What is your choice of (neo) adjuvant therapy?

1. Docetaxel, carboplatin, trastuzumab and pertuzumab (TCHP) x 6

2. dd AC→T (paclitaxel) + H

3. AC→THP

4. Weekly paclitaxel x12 and H

Case 4

- She receives neoadjuvant TCHP x 6 with an excellent clinical response.
- She undergoes lumpectomy, revealing a residual 1 cm grade 2 tumor.

Case 4

What do you recommend next?

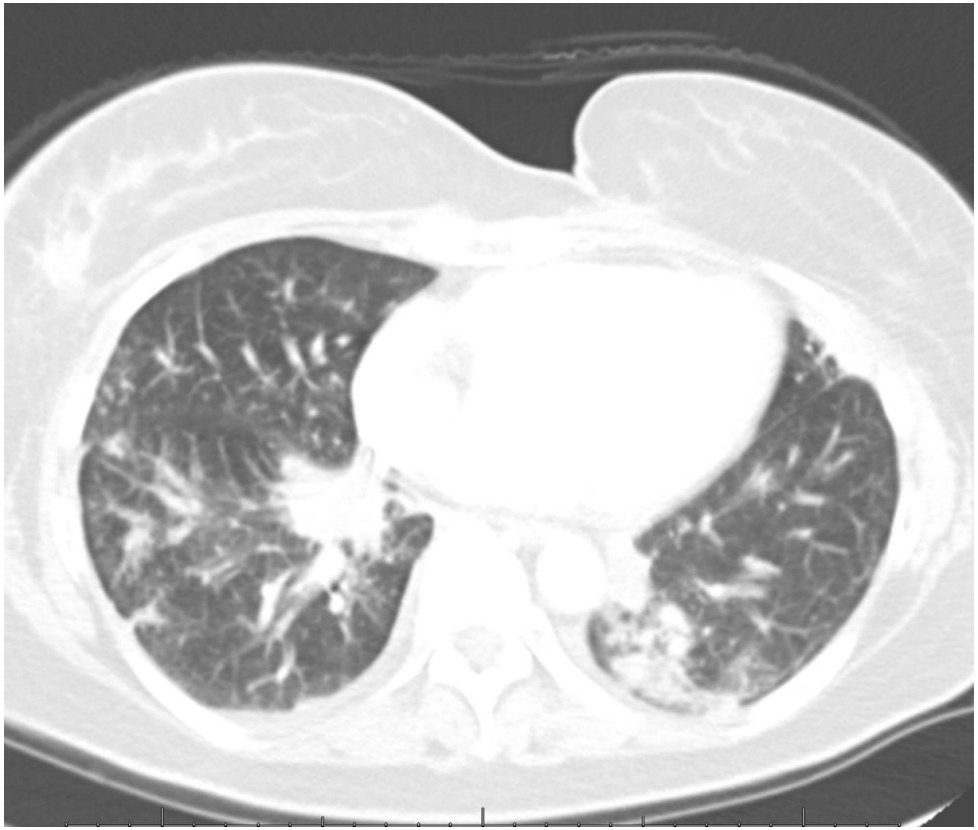
1. Trastuzumab (T) to complete a year
2. T to complete 6 months
3. T + pertuzumab (P) to complete a year
4. T to complete a year followed by neratinib (N) x 1 year
5. T + P to complete a year followed by N x 1 year

Case 4

- She receives T and P to complete the year.
- She receives post-lumpectomy radiation and is placed on an AI.

Case 4

- 3 years after completing radiation, she complains of a “cough that won’t go away”.
- Imaging reveals bilateral pulmonary nodules, lymphangititc spread and liver lesions.



Case 4

- Liver biopsy confirms hormone receptor positive and HER2 positive metastatic disease.

Case 4

What do you recommend?

1. Taxane + HP

2. Trastuzumab emtansine (TDM-1)

3. Endocrine therapy + HP

Case 4: Take Home Points

- Surgical management of clinically node-negative axilla prior to NAC may influence type of NAC.
- Role of adjuvant pertuzumab for “high-risk” disease not well defined.
- Neratinib approved after 1 year of adjuvant trastuzumab, but no data when patients have also received pertuzumab.

Case 4

- Multiple approaches to advanced HER2 positive breast cancer

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ASCO SPECIAL ARTICLE

Systemic Therapy for Patients With Advanced Human Epidermal Growth Factor Receptor 2–Positive Breast Cancer: ASCO Clinical Practice Guideline Update

Sharon H. Giordano, Sarah Temin, Sarat Chandarlapaty, Jennie R. Crews, Francisco J. Esteva, Jeffrey J. Kirshner, Ian E. Krop, Jennifer Levinson, Nancy U. Lin, Shanu Modi, Debra A. Patt, Jane Perlmutter, Naren Ramakrishna, Eric P. Winer, and Nancy E. Davidson

Thanks.
Questions?