Neoplasms of the Breast

2015-2016 FCDS EDUCATIONAL WEBCAST SERIES
STEVEN PEACE, BS, CTR
JANUARY 21, 2016

2016 Focus
- Anatomy
- SS 2000
- AJCC TNM
- MPH Rules

CDC & Florida DOH Attribution

“We acknowledge the Centers for Disease Control and Prevention, for its support of the Florida Cancer Data System, and the printing and distribution of the materials for the 2015-2016 FCDS Webcast Series under cooperative agreement DP003872-03 awarded to the Florida Department of Health. The findings and conclusions in this series are those of the author(s) and do not necessarily represent the official position of the Centers for Disease Control and Prevention”.

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Presentation Outline

• Introduction to Neoplasms of the Breast
• Anatomy of the Breast
• Diagnostic Workup
• Critical Breast MPH Rules
• 2016 - New Use of “c” and “p” Prefix
• 2016 - New T, N, M Category Codes
• Anatomic Staging (AJCC TNM / SS2000)
• Text Documentation
• Staging Practice
• Questions

Presentation Outline

• What we will not be discussing today – not enuf time.
  • Risk Factors
  • Signs & Symptoms
  • Screening Guidelines
  • Details of Breast MPH Rules
  • Every Histologic Type of Breast Cancer
  • AJCC TNM General Instructions and Rules
  • Conflicts between MPH Rules and TNM Chapters
  • ER/PR or HER2 Site Specific Factor Coding
  • Biologic, Molecular, Single or Multi-Gene Testing
  • NCCN or Other Treatment Guidelines
Introduction

Breast Cancer is not a single disease.
Breast Cancer has 21+ histologic subtypes.
Breast Cancer has 4+ molecular subtypes.
Two main breast cancer histologic types:
- Lobular carcinoma starts in parts of the breast called lobules which produce milk.
- Ductal carcinoma starts in the ducts that move milk from the lobules to the nipple.
Most breast cancers are ductal type.
Breast cancer can start in other areas of the breast (fatty, connective, or lymphatic tissues), but these occurrences are rare.

Lobular Carcinoma In Situ (LCIS)
Ductal Carcinoma In Situ (DCIS)
Invasive Lobular Carcinoma
Invasive Ductal Carcinoma
Mixed Ductal and Lobular Carcinoma
Mixed In situ and Invasive Cancers


Source: SEER Training Modules

U.S. 2015 New Cases = 292,130
- 231,840 invasive cancers
- 60,290 in-situ cancers
  - 83% DCIS
  - 13% LCIS
U.S. 2015 Deaths = 40,290

Table 1. Estimated New Female Breast Cancer Cases and Deaths by Age, US, 2015*

<table>
<thead>
<tr>
<th>Age</th>
<th>In Situ Cases</th>
<th>Invasive Cases</th>
<th>Deaths</th>
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<tr>
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<td>1,650</td>
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<td>70-79</td>
<td>9,650</td>
<td>42,480</td>
<td>8,040</td>
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<tr>
<td>80+</td>
<td>3,860</td>
<td>26,960</td>
<td>10,860</td>
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<tr>
<td>All ages</td>
<td>60,290</td>
<td>231,840</td>
<td>40,290</td>
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</table>

*Rounded to the nearest 10.

2015-2016 Breast Cancer Facts & Figures
Anatomy of the Breast

Clinical quadrants of the breast with the percentage of all cancers of the breast found in each.

Source: oncolink.org/resources

Anatomy of the Breast

Figure 6. Trends in Female Breast Cancer Incidence Rates* by Tumor Size, US, 1992-2012

*Rates are age-adjusted to the 2000 US Standard population and adjusted for reporting delay.
Source: SEER Registry, National Cancer Institute, American Cancer Society, Inc., Surveillance Research, 2015
Lymphatics of the Breast

A blue dye in lumpectomy site
B axillary lymph nodes: levels I
C axillary lymph nodes: levels II
D axillary lymph nodes: levels III
E large lymphatic channels
F small lymphatic channels
G sentinel lymph nodes taking up dye

http://www.breastcancer.org
Lymphatics of the Breast

- **Isolated Tumor Cells (ITCs)** - very small deposits of tumor cells, no larger than 0.2 mm or no more than 200 cells, found in sentinel lymph node(s).
  - Presence of ITCs is NOT considered positive lymph node(s)
  - Usually identified using immunohistochemistry test on SLN
    - Cytokeratin Antigen Test or CK Test
    - Epithelial Membrane Antigen or EMA Test

- **Micrometastasis** - tumor deposits greater than 0.2mm but not greater than 2.0mm in largest dimension.

- **Macrometastasis** - resected lymph nodes greater than 2.0mm in largest dimension OR any clinically positive lymph nodes

- **Macrometastasis** – any nodal metastases detected by FNA or core biopsy regardless of the size of the tumor focus

Distant Metastasis

Stage IV Cancer

## Distant Metastasis

- **Chest Wall**
  - Ribs
  - Intercostal muscle
  - Serratus anterior muscle
  - Pectoral muscle is NOT chest wall invasion
- **Lymph Nodes**
  - Contralateral axillary lymph nodes
  - Contralateral internal mammary or
  - Supraclavicular lymph nodes
  - Cervical lymph nodes
- **Distant Metastasis**
  - Bone
  - Lung
  - Brain
  - Liver
- Disseminated tumor cells (DTCs) – Bone Marrow
- Circulating tumor cells (CTCs) – Blood Stream

Source: [http://www.scripps.edu/felding/images/metastasis.jpg](http://www.scripps.edu/felding/images/metastasis.jpg)

## Diagnostic Workup

- **Mammography**
- **Other Breast Imaging**
- **Confirmation of Disease**
  - Core Biopsy or FNA of primary tumor
  - Excisional Biopsy of primary tumor
  - Lumpectomy or Mastectomy
- **Lymph Node Assessment**
  - Core Biopsy or FNA of Lymph Node
  - Sentinel Lymph Node Biopsy
  - Sentinel Lymph Node Removal
  - Axillary Node Dissection
- **ER/PR/HER2**
- 21-Gene Recurrence Score Assay (Oncotype DX)
- Metastatic Workup as Indicated
# Breast Imaging - Screening vs. Diagnostic

- **Screening** – looking for cancer before a person has any symptoms to find cancer at early/treatable stage

- **Risks of Screening** – False Negative, False Positive, Radiation Exposure, Anxiety, Pain, Discomfort, Screening may not alter patient outcomes (survival and/or mortality)

- **Diagnostic** – patient already had one or more screening procedure(s) or has obvious clinical evidence of cancer (palpable tumor mass or palpable nodes) and is now being seen to confirm the diagnosis using image-guided FNA, stereotactic core biopsy, tissue biopsy, excisional biopsy, etc.

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# Understanding Results of Breast Imaging

- **Breast Imaging Reporting and Database System (BI-RADS)**

  - BI-RADS® serves as a classification system for mammography, ultrasound, and magnetic resonance imaging (MRI) of the breast.

  - BI-RADS® serves as a comprehensive guide providing standardized breast imaging terminology, report organization and assessment structure by category

  - BI-RADS® is a quality assurance guide designed to standardize breast imaging reporting and facilitate outcome monitoring.

*Source: American College of Radiology (ACR)*
Understanding Results of Breast Imaging

TABLE 4: BI-RAD classification of mammographic lesions

<table>
<thead>
<tr>
<th>BI-RAD class</th>
<th>Description</th>
<th>Probability of malignancy (%)</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Needs additional evaluation</td>
<td></td>
<td>Diagnostic mammogram, ultrasonographic image</td>
</tr>
<tr>
<td>1</td>
<td>Normal mammogram</td>
<td>0</td>
<td>Yearly screening</td>
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<tr>
<td>2</td>
<td>Benign lesion</td>
<td>0</td>
<td>Yearly screening</td>
</tr>
<tr>
<td>3</td>
<td>Probably benign lesion</td>
<td>&lt; 2</td>
<td>Short interval followup</td>
</tr>
<tr>
<td>4*</td>
<td>Suspicious for malignancy</td>
<td>20</td>
<td>Biopsy</td>
</tr>
<tr>
<td>5</td>
<td>Highly suspicious for malignancy</td>
<td>90</td>
<td>Biopsy</td>
</tr>
<tr>
<td>6</td>
<td>Biopsy-proven malignancy</td>
<td>100</td>
<td>Treatment</td>
</tr>
</tbody>
</table>

BI-RAD = Breast Imaging Reporting Data System

* The ACR recommends that each site be divided into three subcategories: 4A, low suspicion; 4B, intermediate suspicion; and 4C, moderate concern but not classic for malignancy.

Source: American College of Radiology (ACR)

Critical Breast MPH Rules

- Stay Tuned
- 2017 Updates
- Text Only Rules
- New MPH Database
MP Rules - Abbreviated

Unknown number
• M1. Unknown if single or multiple tumors = single

One tumor
• M2. Inflammatory carcinoma = single
• M3. A single tumor = single

Source: AFritz and Associates, LLC

MP Rules - Abbreviated

Multiple Tumors
• M4. Different topography = multiple
• M5. Diagnosis dates > 5 years apart = multiple
• M6. Inflammatory carcinoma = single
• M7. Tumors on both sides = multiple
• M8. Invasive after in situ > 60 days = multiple
• M9. (Intra)ductal and Paget disease = single
• M10. Lobular and (intra)ductal = single
• M11. Multiple intraductal and/or ductal = single
• M12. Histology different = multiple
• M13. All other = single

Source: AFritz and Associates, LLC
Breast Cancer Histology

- **Adenocarcinoma, NOS (8140/3)**
  - Not a preferred term for breast cancer
  - Sometimes this is all the pathologist can characterize
- **Ductal or Duct Carcinoma (850_/2 or 850_/3)**
  - 80% of all invasive breast cancers
  - 85% of all non-invasive breast cancers
  - Numerous Subtypes (Table 1 & Table 2 - MPH Rules)
- **Papillary Subtype (8503 NOT 8050)**
- **Lobular Carcinoma (852_/2 or 852_/3)**
  - 10% of all invasive breast cancers
  - 15% of all non-invasive breast cancers
- **Other Breast Cancers – 10%**
  - Mucinous or colloid (848_/3) – 3-5%
  - Inflammatory (8530/3) – 1-3%
  - Paget Disease (8540/3) – 1%
  - Phyllodes Tumor (9020/3) – 1%
  - Medullary (851_/3) – 1%
  - Tubular (8211/3) – 1%
- **Ductular Carcinoma (8521/3) is NOT ductal carcinoma**
- **Many Mixed Histologies Have Special Codes – Use Them**
- **Many Mixed Histologies Have Special Rules – Use Them**
Inflammatory Carcinoma of Breast

- Combined Clinical and Pathological Diagnosis
  - Clinical
    - Symptoms resembling breast inflammation
    - Resembles acute mastitis of breast
    - Diffuse involvement of breast
    - Nipple retraction common
    - No primary tumor mass
    - Warm and reddened
    - Firm and swollen
    - Peau d’orange
    - Itching
  - Pathological
    - Dermal lymphatic invasion proven on biopsy
    - Assign histology code 8530/3 only when final dx on path states ICB
    - Record dermal lymphatic invasion in stage [CS TS, CS Ext, “T” (TNM)]

Paget’s Disease of the Nipple

- AJCC TNM 8th ed. Statements about Paget’s Disease
  - ICD-O-3 Rules
  - MPH Rules
  - AJCC Instruction
  - Resolution: It Depends on the evidence for each case
Mixed In-Situ CA and Invasive CA

**ONLY CODE THE CHARACTERISTICS OF THE INVASIVE CARCINOMA**

**IGNORE ALL IN-SITU COMPONENTS**

**DO NOT CODE COMBINATION HISTOLOGY**

**REPEAT CODE HISTOLOGY BASED ONLY ON THE INVASIVE CANCER CHARACTERISTICS**

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**Table 3—Combination Codes for Breast Cancer**

<table>
<thead>
<tr>
<th>Column 1: Required Histology</th>
<th>Column 2: Combined with Histology</th>
<th>Column 3: Combination Term</th>
<th>Column 4: Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infiltrating duct and lobular carcinoma in situ</td>
<td>Lobular carcinoma in situ</td>
<td>Infiltrating duct and lobular carcinoma</td>
<td>$232/2$</td>
</tr>
<tr>
<td>Infiltrating duct and</td>
<td>Infiltrating lobular carcinoma</td>
<td>Infiltrating duct and lobular carcinoma</td>
<td>$532/2$</td>
</tr>
<tr>
<td>Column 2 OR</td>
<td>Column 2 OR</td>
<td>Column 2 OR</td>
<td>Column 2 OR</td>
</tr>
<tr>
<td>Column 1: Required Histology</td>
<td>Column 2: Combined with Histology</td>
<td>Column 3: Combination Term</td>
<td>Column 4: Code</td>
</tr>
<tr>
<td>Column 1: Required Histology</td>
<td>Column 2: Combined with Histology</td>
<td>Column 3: Combination Term</td>
<td>Column 4: Code</td>
</tr>
</tbody>
</table>

Table 3 continues on the next page.
Breast Cancer Staging

Combination Codes

Breast Equivalent Terms, Definitions, Tables, and Illustrations
C501-C509
(Excludes lymphoma and leukemia M9590-9999 and Kaposi sarcoma M2410)

<table>
<thead>
<tr>
<th>Column 1: Tumor Histology</th>
<th>Column 2: Combined with Histology</th>
<th>Column 3: Combination Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infiltrating lobular carcinoma and medullary, superficial neoplasms...</td>
<td>Tubular, medullary</td>
<td>Infiltrating lobular mixed with medullary, superficial neoplasms...</td>
</tr>
<tr>
<td>Infiltrating duct carcinoma and medullary, superficial neoplasms...</td>
<td>Medullary</td>
<td>Infiltrating duct carcinoma and medullary, superficial neoplasms...</td>
</tr>
<tr>
<td>Paget disease and medullary</td>
<td>Medullary</td>
<td>Paget disease and medullary</td>
</tr>
</tbody>
</table>

*Combination codes are used for breast cancer.

Breast Cancer Staging

- Supraclavicular
- Axillary
- Intercostal
- Intercostal
- Intercostal
- Pectoralis major

- pNOG (+) 100-1000 cells
- pN1m1 100-1000 cells
- pN1m2 1000-100000 cells
- pN1m3 >100000 cells
SEER Summary Stage

Purpose of Staging
- Biochemical Tumor Markers
- Molecular Tumor Markers
- Genetic Mutations/Variations
- Risk Stratification

Regional Stages
A. Direct extension
B. To regional lymph nodes
C. Combination of A and B

Breast Cancer Stage Distribution

http://ww5.komen.org/images
“c” and “p” and “yp”

- **Clinical (c)**

  Clinical Stage is determined before any type of definitive therapy is started and is used as a guide to determine what the first steps used to establish the diagnosis of breast cancer should be and to decide upon approach and intent of 1st treatment – should 1st treatment include lumpectomy, SLN, mastectomy, neoadjuvant chemo, or palliative care.

- **Clinical Stage** – includes physical exam with inspection and palpation of the skin, breast, and lymph nodes (axillary, supraclavicular, and cervical), breast imaging and other imaging studies, and pathologic examination of the breast or other tissue(s) used to establish/confirm the diagnosis.

- **Pathologic (p)**

  Pathologic Stage is assigned following complete resection of the primary tumor and must include microscopic examination of the primary, regional lymph nodes and/or other suspect tissues.

  Pathologic Stage is used to guide anatomic stage specific adjuvant therapy decisions and to estimate prognosis.

  Pathologic Stage includes all information in the clinical setting PLUS all information obtained from surgical reports and pathology reports related to the extent of cancer spread through the completion of definitive surgery performed as a part of the 1st course of treatment or within 4 months of initial diagnosis of cancer in the absence of disease progression.
“c” and “p” and “yp”

- Post Neoadjuvant Treatment (yp)

- **Post Neoadjuvant Treatment Stage** is assigned following a prescribed “course” of neoadjuvant therapy (chemo, biologics, radiation, etc.).

- **Post Neoadjuvant Treatment Stage** includes microscopic examination of the primary, regional lymph nodes and/or other suspect tissues.

- **Response to Neoadjuvant Therapy** is determined by comparison of pre-treatment Clinical Stage to post-treatment Pathologic Stage and is qualified by the presence or absence of cancer in the primary tumor, regional lymph nodes, etc. or T, N, or M Category Differences.
  - Pathologically Confirmed Complete Response (CR)
  - Pathologically Confirmed Partial Response (PR)
  - Pathologically Confirmed No Response (NRL)

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2016 Prefix Requirements / Physician Stage

- **2016 Requirements for “c” and “p” prefix use**
  - Now must include “c” or “p” prefix for each T, N, M Category
  - New Codes for T, N, and M will be available in software soon
  - Use of Allowable Codes will be Strictly Enforced in 2016
  - Clinical Stage now includes cT, pTis, cN and either c or pM
  - Pathologic Stage now includes pT, pN and either c or pM
  - Convert Roman Numerals (I, II, III) to Arabic (1, 2, 3)

- **Physician Stage** can be difficult to qualify as it may be a mixed clinical and pathologic stage, especially when the AJCC Stage is provided per history. Always check the Physician Stage to validate use of prefix and the correct T, N, and M Category Codes that best reflect the case.
AJCC Self Instruction - Updates

AJCC T, N, and M Category Options for Registry Data Items in 2016

Diana M. Gross, RHIT, CTR

https://cancerstaging.org/CSE/Registrar/Pages/AJCC-Curriculum.aspx

AJCC Self Instruction - Updates

In Situ Neoplasm

- CIS definition
  - Has not involved any structures in primary organ that
  - Allows tumor cells to spread to regional nodes or distant sites

- CIS exception to stage group guidelines
  - Clinical stage
    - pTis cN0 cM0 clinical stage 0
  - Pathologic stage
    - pTis cN0 cM0 pathologic stage 0

- Caution for pathologic stage
  - Cannot use CIS rule in isolation
  - Must also meet pathologic stage resection criteria
  - Avoids sampling error when resection might show invasion
  - Example: TURB

https://cancerstaging.org/CSE/Registrar/Pages/AJCC-Curriculum.aspx
2016 New Category Code Format - EXAMPLE

Table 1. TNM Clin T [940]

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
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</thead>
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<td>cX</td>
<td>cTX</td>
</tr>
<tr>
<td>c1</td>
<td>c1a</td>
</tr>
<tr>
<td>c1a</td>
<td>c1a1</td>
</tr>
<tr>
<td>c1a2</td>
<td>c1a2c</td>
</tr>
</tbody>
</table>

Deleted codes: A [Ta], IS [Tis], ISPU [Tisp], ISPD [Tispd]

Added codes: pA [pTa], pIS [pTis], pISU [pTisu], pISD [pTisd]

AJCC Self Instruction - Updates

Explaining Blanks and X, Ambiguous Terminology and Support for AJCC Staging

Donna M. Gress, RHIT, CTR

https://cancerstaging.org/CSE/Registrar/Pages/AJCC-Curriculum.aspx
**T Category – tumor size and extension**

- Non-Invasive or In Situ – not always measurable
- Microinvasive Neoplasm – less than 1mm in size
- Mixed Non-Invasive (In Situ) and Invasive - RULE
- Invasive Only – Tumor Size is Measured
- The Primary Tumor Extends Beyond Breast Tissue

**Non-Invasive/Minimally Invasive/Invasive**

- Non-Invasive Includes:
  - Ductal Carcinoma In Situ (DCIS)
  - Lobular Carcinoma In Situ (LCIS)
  - Paget’s Disease of Nipple with No Associated In Situ or Invasive Cancer (ductal or lobular)

- Minimally Invasive Includes:
  - Tumor is = or < 1mm in Greatest Dimension

- Invasive Includes:
  - Infiltrating Duct Carcinoma (IDC)
  - Infiltrating Lobular Carcinoma (ILC)
  - Invasive Plus Non-Invasive Cancer in Same Breast
  - Paget’s Disease of Nipple with Invasive or In Situ Cancer
  - Other Invasive Neoplasm and Inflammatory Carcinoma
Tumor Size and “T” in TNM

Primary Tumor Extension and “T” in TNM
"T" Codes and Description

| Clinical and Pathologic “T” Codes and Description - Identical |

| TX | Primary tumor cannot be assessed |
| Tis | No evidence of primary tumor |
| Ti | Carcinoma in situ |
| Ti1 (ECCS) | Ductal carcinoma in situ |
| Ti (ECC) | Lobular carcinoma in situ |
| Ti (Pag) | Paget’s disease of the nipple NOT associated with invasive carcinoma and/or carcinoma in situ (ECCS) and/or (ECC)] in the underlying breast parenchyma. Carcinomas in the breast parenchyma associated with Paget’s disease are categorized based on the size and characteristics of the invasive lesion, although the presence of Paget’s disease should be noted. |
| T1 | Tumor ≤5 mm in greatest dimension |
| T1a | Tumor >5 mm but ≤5 mm in greatest dimension |
| T1b | Tumor >5 mm but ≤10 mm in greatest dimension |
| T1c | Tumor >10 mm but ≤20 mm in greatest dimension |

2016 Valid Codes for “T” Category

**Table 1. TNM Clin T [940]**

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**Deleted codes:** A [Ta], B [Tis], ISPU [Tisp], ISPD [Tispd]

**Added codes:** pA [pTa], pIS [pTis], pISPU [pTisp], pISPD [pTispd]
# 2016 Valid Codes for “T” Category

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<td>pT2b</td>
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*Added codes: pSU [pTsru], pSD [pTsdp]*

---

# N Category - Regional Lymph Nodes

*Source: See AJCC Breast Cancer Staging Form Sample*
Lymphatics of the Breast

- **Isolated Tumor Cells (ITCs)** - very small deposits of tumor cells, no larger than 0.2 mm or no more than 200 cells, found in sentinel lymph node(s).
  - Presence of ITCs is NOT considered positive lymph node(s)
  - Usually identified using immunohistochemistry test on SLN
    - Cytokeratin Antigen Test or CK Test
    - Epithelial Membrane Antigen or EMA Test

- **Micrometastasis** - tumor deposits greater than 0.2mm but not greater than 2.0mm in largest dimension.

- **Macrometastasis** - resected lymph nodes greater than 2.0mm in largest dimension OR any clinically positive lymph nodes

- **Macrometastasis** – any nodal metastases detected by FNA or core biopsy regardless of the size of the tumor focus

Breast Lymph Nodes and “N” in TNM

ACS and AJCC Breast Cancer Staging Poster
"N" Codes and Description

Regional Lymph Nodes (N)

N0: No regional lymph node metastasis
N1: Metastases to movable subaortic, subclavian, or axillary lymph node(s)
N2: Metastases to fixed or non-movable subaortic, subclavian, or axillary lymph node(s)

N2a: Metastases to fixed or non-movable subaortic, subclavian, or axillary lymph node(s) in the absence of clinically evident axillary lymph node metastases
N2b: Metastases only in clinically evident subaortic, subclavian, or axillary lymph node(s) and in the absence of clinically evident axillary lymph node metastases
N3: Metastases to lymph nodes in the suprapericardial, mediastinal, or retrocrural area

Notes:
"Clinically detected" is defined as detected by imaging studies (including lymphangiography) or by clinical examination and having characteristics highly suspicious for malignancy or a presumed pathologic macrometastasis based on fine-needle aspiration.

Pathologic (pN)*

pN0: Regional lymph nodes cannot be assessed (e.g., previously removed, or not removed for pathologic study)

pN1: Metastases to movable subaortic, subclavian, or axillary lymph node(s)

pN2: Metastases to fixed or non-movable subaortic, subclavian, or axillary lymph node(s)

pN2a: Metastases to fixed or non-movable subaortic, subclavian, or axillary lymph node(s) in the absence of clinically evident axillary lymph node metastases
pN2b: Metastases only in clinically evident subaortic, subclavian, or axillary lymph node(s) and in the absence of clinically evident axillary lymph node metastases
pN3: Metastases to lymph nodes in the suprapericardial, mediastinal, or retrocrural area

Notes:
Pathologic classification (pN) is used for exclusion or sentinel lymph node biopsy only in conjunction with a pathologic assessment.

*Classification is based on axillary lymph node dissection with or without sentinel lymph node biopsy. Classification based solely on sentinel lymph node biopsy without subsequent axillary lymph node dissection is designated (x) for "sentinel node," for example, (pN)(x).
**RT-PCR: reverse transcriptase/polymerase chain reaction.
“N” Codes and Description

Pathologic (pN) (continued)

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<td>Micrometastases; or metastases in 1–3 axillary lymph nodes, and/or in internal mammary nodes with metastases detected by sentinel lymph node biopsy, but not clinically detected***</td>
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<td>pN1b</td>
<td>Metastases in internal mammary nodes with micrometastases or micrometastases detected by sentinel lymph node biopsy but not clinically detected***</td>
</tr>
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<td>Metastases in 1–3 axillary lymph nodes and in internal mammary lymph nodes with micrometastases or micrometastases detected by sentinel lymph node biopsy but not clinically detected</td>
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<td>Metastases in 4–9 axillary lymph nodes, or in clinically detected*** internal mammary lymph nodes in the absence of axillary lymph node metastases</td>
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<td>Metastases in 4–9 axillary lymph nodes (at least one tumor deposit greater than 2.0 mm)</td>
</tr>
<tr>
<td>pN2b</td>
<td>Metastases in clinically detected*** internal mammary lymph nodes in the absence of axillary lymph node metastases</td>
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**pN3** Metastases in ten or more axillary lymph nodes, or in intrathoracic (level II axillary) lymph nodes, or in clinically detected*** ipsilateral internal mammary lymph nodes in the presence of one or more positive level I, II axillary lymph nodes, or in more than three axillary lymph nodes, and in internal mammary lymph nodes with micrometastases or micrometastases detected by sentinel lymph node biopsy but not clinically detected***, or in ipsilateral supraventricular lymph nodes.

*** “Not clinically detected” is defined as not detected by imaging studies (excluding lymphangiography) or not detected by clinical examination.

2016 Valid Codes for “N” Category

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Table 3. TNM Clin N [950]
2016 Valid Codes for “N” Category

Table 4. TNM Path N [890]

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Added code: of c0 [cN0]

M Category - Metastasis

"M" Codes and Description

Distant Metastasis (M)
M0 No clinical or radiographic evidence of distant metastases
m0(-) No clinical or radiographic evidence of distant metastases, but deposits of molecularly or microscopically detected tumor cells in circulating blood, bone marrow, or other nonregional nodal tissue that are not larger than 0.2 mm in a patient without symptoms or signs of metastases
M1 Distant detectable metastases as determined by classic clinical and radiographic means and/or histologically proven larger than 0.2 mm

2016 Valid Codes for “M” Category

Table 5, THM Clinic M (060)

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Added codes: p1, p1A, p1B, p1C, p1D, and p1E (pM1, pM1a, pM1b, pM1c, pM1d, pM1e, respectively)

Deleted code: 0 [M0]
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### NOTE: No Biologic or Molecular SSF Results Change the Stage Group

---

Source: NCRA Informational Abstracts – Improving Text
Staging Practice

Case 1 – Case Vignette

- HISTORY: 62 year old Asian female admitted for biopsy and biopsy of 1cm irregularity/abnormality noted on mammography. No mass left breast, right axilla WNL.
- CT CHEST: no abnormalities noted
- MAMMOGRAPHY: 1cm abnormality in left UOQ, possible malignancy. Recommend biopsy.
- PATHOLOGY Excision: Left UOQ Breast biopsy – low grade DCIS (solid, cribriform and papillary subtypes) 6mm area of involvement. ER/PR pos, HER2 not stated
- PATHOLOGY Wide Excision and SNL Biopsy: No residual carcinoma. 1 sentinel lymph nodes negative for carcinoma 0/1. IHC stain for Cytokeratin is negative.
Case 2 – Case Vignette

- HISTORY: 65 year old black female admitted for biopsy and resection of 2cm mass noted on mammography. Palpable mass in UOQ right breast, right axilla WNL.
- CT CHEST: no abnormalities noted
- MAMMOGRAPHY: 2cm stellate mass in right UOQ, suspicious for malignancy. Recommend biopsy.
- PATHOLOGY Excision: Right UOQ Breast biopsy – infiltrating duct carcinoma, 1.6cm in greatest dimension, Nottingham Grade 2. ER/PR neg, HER2 +
- PATHOLOGY Wide Excision and SNL Biopsy: No residual carcinoma. 2 sentinel lymph nodes negative for carcinoma 0/2. IHC stain for Cytokeratin is positive.

Case 3 – Case Vignette

- HISTORY: 57 year-old Hispanic female with 2.5cm mass at 10:00 in right breast and prominent axillary node noted on screening mammography and on PE.
- CT CHEST: few small (<1cm) nonspecific hilar lymph nodes noted in chest. Exam otherwise negative.
- PROCEDURE: Lumpectomy, right breast with core biopsy of sentinel axillary lymph nodes (2) – Level I
- PATHOLOGY: Moderately differentiated infiltrating duct carcinoma with extensive associated DCIS, high nuclear grade; cribriform, papillary and solid types. Invasive component 1.5cm in greatest linear dimension, Nottingham Grade 2 (3+2+1=6), core biopsies (3) of suspected axillary lymph node showing tumor present in all core fragments (3/3).
Case 4 – Case Vignette

- HISTORY: 61 yr old white female, lifelong smoker, with multiple medical problems including recent suspicious result on routine screening mammography. PE negative.
- CT CHEST: Negative
- STEREOTACTIC NEEDLE BIOPSY UIQ LEFT BREAST: Infiltrating duct carcinoma, Nottingham Grade 1. DCIS, low grade (less than 0.1cm focus)
- SIMPLE MASTECTOMY: Infiltrating duct carcinoma, Nottingham Grade 2 (1.3cm) arising from an encapsulated (intracystic) papillary carcinoma, 0.9 x 0.7cm, DCIS, intermediate grade (1.0 x 0.7cm), solid type. All margins negative. Hormone receptor and immunohistochemical stains ordered and results will be reported in supplemental report.

Case 5 – Case Vignette

- HISTORY: 57 year old obese white female with hard left subareolar solid mass noted by patient and confirmed on imaging. Mass measures 3 x 4 x 2cm. PE shows no enlarged lymph nodes in left axilla but one prominent supraclavicular node is noted on physical examination.
- FNA Left Breast Mass: adenocarcinoma
- Left Modified Mastectomy: Left Breast with a 5cm area of intraductal carcinoma (solid, cribriform and papillary subtypes) surrounding a 3.8cm area of invasive ductal carcinoma noted. 4 of 6 Level I nodes +, 1/8 Level II nodes +. Supraclavicular node - core bx – positive.
- ER/PR negative, HER2 negative (triple negative)
Case 6 – Case Vignette

- HISTORY: 49 yr old white female, non-smoker, with large central breast mass on right and multiple suspicious large nodes in right axilla. Patient complains of redness, skin thickening and edema over past 6-12 months, still evident. Recommend pre-surgical treatment.
- CT CHEST: Negative
- BONE SCAN: Abn uptake L4-L5 concerning for metastatic disease
- PLAIN FILM XRAY L-SPINE: osseous mets L4-L5
- FNA BREAST MASS: adenocarcinoma
- RIGHT MODIFIED RADICAL MASTECTOMY: poorly differentiated infiltrating duct carcinoma. Tumor extends to pectoralis muscle and deep margin with involvement of dermal lymphatics. 10/15 axillary lymph nodes involved with largest node measuring 2.8cm in size.
- Biopsy L4 – metastatic adenocarcinoma c/w breast primary
- ER/PR +, HER2 –
- Patient refused pre-operative therapy – mastectomy only

Questions

![Image of a person with question marks]