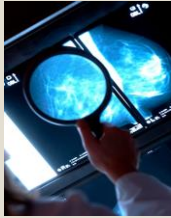


FCDS 2013 EDUCATION WEBCAST SERIES: BREAST CANCER

OVERVIEW, RISK FACTORS, ANATOMY, SCREENING, MPH
RULES, STAGING, TUMOR MARKERS, TREATMENT



Presented by:
Steven Peace, BS, CTR
Gema Midence, MBA, CTR
Mayra Espino, BA, RHIT, CTR

November 21, 2013



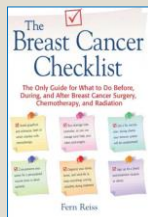
The North Portico exterior of the White House is illuminated pink in honor of Breast Cancer Awareness Month, Oct. 24, 2013 (Official White House Photo by Sonya N. Hebert)

2

Outline

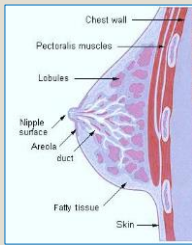
3

- Overview
- Signs and Symptoms
- Anatomy of the Breast
- Screening Recommendations
- Understanding Screening Results
- Breast Cancer Multiple Primary Rules
- Breast Cancer Histology Rules
- Genetic and Biologic Tumor Markers
- Breast Cancer Staging
- Treatment Planning
- Coding Treatment Correctly
- NCCN Treatment Guidelines
- Text Documentation



Overview

4



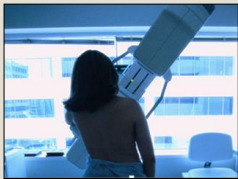
Source: SEER Training Modules

<http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001911>

- Breast cancer is cancer that starts in the tissues of the breast. There are two main types of breast cancer:
- Ductal carcinoma starts in the tubes (ducts) that move milk from the breast to the nipple. Most breast cancers are of this type.
- Lobular carcinoma starts in the parts of the breast, called lobules, which produce milk.
- In rare cases, breast cancer can start in other areas of the breast.

Overview

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Breast Cancer Ranks Second as a cause of cancer death in women (after lung cancer)

U.S. 2013 New Cases = 296,980

- 234,580 invasive cancers
 - 2,240 men
- 64,640 in-situ cancers
 - 85% DCIS
 - 15% LCIS

U.S. 2013 Deaths = 40,030

- 410 men

Florida New Cases = 19,911

- 15,710 invasive cancers
 - 161 men
- 4,201 in-situ cancers

Florida Deaths = 2,660

- 27 men

Source: ACS 2013 Cancer Facts & Figures

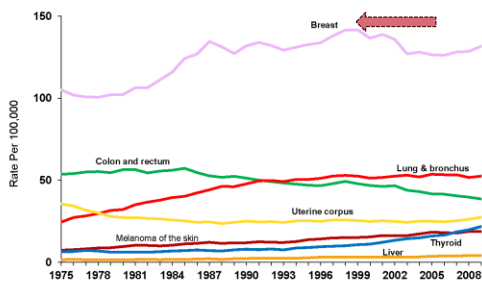
Cancer Facts & Figures 2013



Special Section
Breast Cancer
see page 23



Cancer Incidence Rates* Among Women, US, 1975-2009



*Age-adjusted to the 2000 US standard population and adjusted for delays in reporting.
Source: Surveillance, Epidemiology, and End Results Program, Delay-adjusted incidence database: SEER Incidence Delay-adjusted Rates, 9 Registries, 1975-2009, National Cancer Institute, 2012.



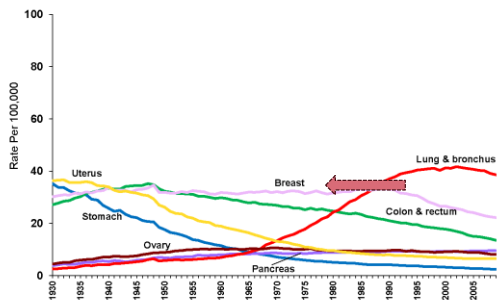
Trends in Five-year Relative Cancer Survival Rates (%), 1975-2008

Site	1975-1977	1987-1989	2002-2008
All sites	49	56	68
Breast (female)	75	84	90
Colon	51	61	65
Leukemia	34	43	58
Lung & bronchus	12	13	17
Melanoma	82	88	93
Non-Hodgkin lymphoma	47	51	71
Ovary	36	38	43
Pancreas	2	4	6
Prostate	68	83	100
Rectum	48	58	68
Urinary bladder	73	79	80

5-year relative survival rates based on patients diagnosed from 2002 to 2008, all followed through 2009.
Source: SEER Cancer Statistics Review 1975-2009 (SEER 9 registries), National Cancer Institute, 2012.



Cancer Death Rates* Among Women, US, 1930-2009



*Age-adjusted to the 2000 US standard population.
Source: US Mortality Data 1960-2006, US Mortality Volumes 1930-1959, National Center for Health Statistics, Centers for Disease Control and Prevention.



Risk Factors

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- Gender
- Family Hx
- Personal Hx
- Birth Control
- Increasing Age
- Race/Ethnicity
- Age of Menarche
- Age of Menopause
- Physical Inactivity
- Overweight/Obesity
- Alcohol Consumption
- Certain Breast Conditions
- Hormone Replacement Therapy



Source: <http://beyondbrac.med.nyu.edu>

Risk Factors

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- BRCA1
- BRCA2
- ATM
- P53 or TP53
- CHEK2
- PTEN
- CDH1
- STK11

Locus	Associated syndrome
BRCA1	Familial breast/ovarian cancer
BRCA2	Familial breast/ovarian cancer
p53	Brain, uterine, sarcomas, ovary, breast
PTEN	Thyroid, breast, uterine
MSH2, MLH1	Colon, uterine, ovary, gastric, bile duct
STK11	Breast, jejunum

<http://cancer.org/breastcancerriskfactors>

	BRCA1 Mutation	BRCA2 Mutation
Breast cancer	50-85%	50-84%
Ovarian cancer	20-63%	10-27%
Another primary breast cancer that follows first diagnosis	40-50%	30-50%

Genetic Difference in Breast Tissue Among Races

12



<http://www.medindia.net/news/Genetic-Differences-in-Breast-Tissue-Among-Races-83343-1.htm>

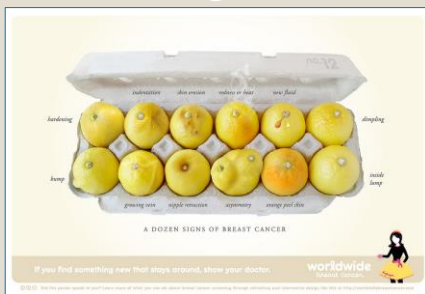
Signs and Symptoms

13

- There are no usual symptoms for small tumors which are often treatable at an early stage.
- Larger tumors may become evident as palpable breast masses.
- Less common symptoms include persistent changes to the breast such as: thickening, swelling, distortion, tenderness, skin irritation, redness, scaliness, and nipple abnormalities.

Signs and Symptoms

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Signs and Symptoms

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- Hardening
- Indentation
- Skin erosion
- Redness or heat
- New fluid
- Dimpling
- Bump
- Growing vein
- Nipple retraction
- Asymmetry
- 'Orange peel' skin
- Inside lump (a lump you can feel, but cannot see)



Source: <http://worldwidebreastcancer.com>

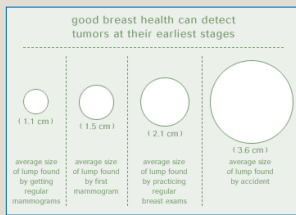
Screening for Breast Cancer

16



Screening for Breast Cancer

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Source: www.mammotome.com/images

Screening for Breast Cancer

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- Breast Self Exam
- Clinical Breast Exam
- Mammography (digital or standard radiography)
- Magnetic Resonance Imaging
- Breast Ultrasound
- Thermography
- Tissue Sampling
- Cancer Screening Trials



ACS Screening Recommendations

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- Breast self-exam is an option for women starting in their 20s. Women should report any breast changes to their health professional right away.
- **Women in their 20s and 30s should have a clinical breast exam by a qualified health professional at least once every 3 years.**
- After age 40, women should have a clinical breast exam by a qualified health professional every year.
- **Women age 40 and older should have a screening mammogram every year and should continue to do so for as long as they are in good health.**
- Women at high risk for breast cancer based on certain factors should get an MRI and a mammogram every year.
- The American Cancer Society recommends against MRI screening for women whose lifetime risk of breast cancer is less than 15%.
- The American Cancer Society states there is not enough evidence to make a recommendation for or against yearly MRI screening for women who have a moderately increased risk of breast cancer (lifetime risk 15% - 20%)

Breast Self Exam and Clinical Breast Exam

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Screening versus Diagnostic Procedure

21

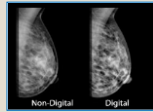
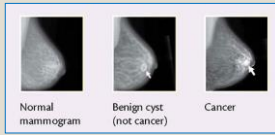
- Screening – looking for cancer before a person has any symptoms to find cancer at early/treatable stage
- Risks of Screening – False Negative, False Positive, Radiation Exposure, Anxiety, Pain, Discomfort
- Early Treatment may not impact survival/mortality
- Diagnostic – patient has already had one or more screening procedure(s) and is now being seen to establish a diagnosis using FNA, tissue biopsy, excision

Mammography

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Source: www.pl999.net/images



Source: www.cancer.gov

Mammography

23

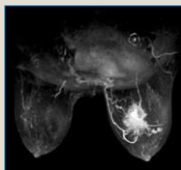
- Calcifications
 - Macrocalcifications
 - Microcalcifications
- Mass – can be with or without calcifications
 - Cyst(s) – follow with ultrasound
 - Simple Cyst – fluid filled – no biopsy
 - Complex Cyst – partially solid cyst - biopsy
 - Non-Cancerous Solid Tumors (fibroadenoma) - biopsy
 - Cancerous Solid Tumor – biopsy/resection
- Assessment of Mass/Tumor
 - Size
 - Shape
 - Margins (edges)
 - Watchful Waiting
- Computer Aided or Computer Assisted Diagnosis (CAD)

Breast MRI

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www.boobisaweekendword.com



www.jekotbreastimaging.com

Breast Ultrasound

25



www.gpsmed.com

www.mayoclinic.com

Understanding the Results of Breast Imaging

26

- **Breast Imaging Reporting and Database System**
- BI-RADS® is a quality assurance guide designed to standardize breast imaging reporting and facilitate outcome monitoring.
- BI-RADS® serves as a comprehensive guide providing standardized breast imaging terminology, report organization and assessment structure by category
- BI-RADS® serves as a classification system for mammography, ultrasound, and magnetic resonance imaging (MRI) of the breast.

Source: American College of Radiology (ACR)

Understanding the Results of Breast Imaging

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TABLE 4: BI-RAD classification of mammographic lesions

BI-RAD class	Description	Probability of malignancy (%)	Follow-up
0	Needs additional evaluation		Diagnostic mammogram, ultrasonographic image
1	Normal mammogram	0	Yearly screening
2	Benign lesion	0	Yearly screening
3	Probably benign lesion	< 2	Short interval follow-up
4*	Suspicious for malignancy	20	Biopsy
5	Highly suspicious for malignancy	90	Biopsy
6	Biopsy proven malignancy	100	Treatment

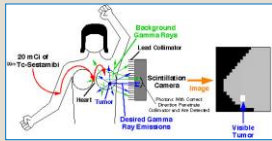
BI-RAD = Breast Imaging Reporting Data System
 *The ACR recommends that each site be divided into three subcategories: 4A, low suspicion; 4B, intermediate suspicion; and 4C, moderate concern but not classic for malignancy.

Source: American College of Radiology (ACR)

Other Imaging

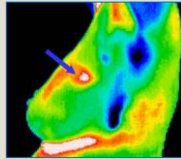
28

Scintimammography



www.cfi.lbl.gov/instrumentation

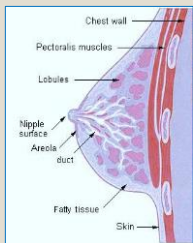
Thermography



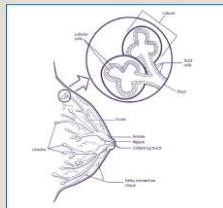
www.swfhealthandwellness.com

Anatomy of the Breast

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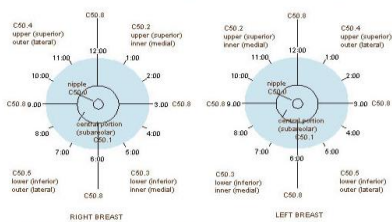
Source: SEER Training Modules



Source: <http://cancer.org/breastcancer>

Quadrants of the Breast

"Clock" Positions, Quadrants and ICD-O Codes of the Breast



Source: SEER Training Modules

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

Source: oncolink.org/resources

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ICD-O-3	Term
C50.0	Nipple Paget disease without underlying tumor
Central → C50.1	Central portion of breast (subareolar) area extending 1 cm around areolar complex Retroareolar Intraareolar Next to areola, NOS Paget disease with underlying tumor Lower central
C50.2	Upper-inner quadrant of breast (UIQ) Superior medial Upper medial Superior inner
C50.3	Lower inner quadrant (LIQ) of breast Inferior medial Lower medial Inferior inner
C50.4	Upper outer quadrant (UOQ) of breast Superior lateral Superior outer Upper lateral

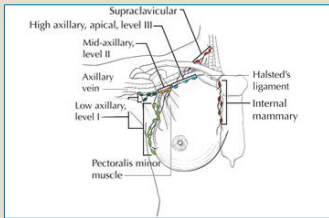
32

ICD-O-3	Term
C50.5	Lower outer quadrant (LOQ) of breast Inferior lateral Inferior outer Lower lateral
C50.6	Asillary tail of breast Tail of breast, NOS Tail of Spence
Overlapping → C50.8	Overlapping lesion of breast Inferior breast, NOS Inner breast, NOS Lateral breast, NOS Lower breast, NOS Medial breast, NOS Midline breast NOS Outer breast NOS Superior breast, NOS Upper breast, NOS 3:00, 6:00, 9:00, 12:00 o'clock
Multiple → Inflammatory → C50.9	Breast, NOS Entire breast Multiple tumors in different subsites within breast Inflammatory without palpable mass ¾ or more of breast involved with tumor Diffuse (tumor size 998)

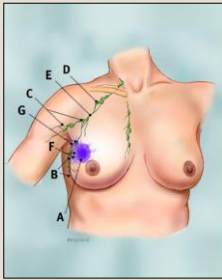
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Lymphatics of the Breast

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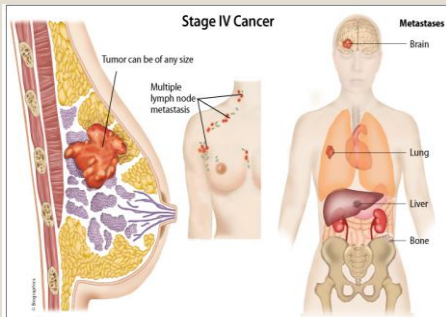
AJCC Cancer Staging Atlas – Chapter 32



- 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

www.breastcancer.org

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<http://mediconweb.com/cancer/recurrent-and-metastatic-breast-cancer/>

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Metastatic Sites

- Chestwall
 - Ribs
 - Intercostal muscles
 - Serratus anterior muscle
 - Pectoral muscle doesn't constitute chest wall invasion
- Lymph nodes
 - Cervical lymph nodes or contralateral internal mammary or contralateral axillary lymph nodes
- Distant Metastasis
 - Bone
 - Lung
 - Brain
 - Liver
- Disseminated tumor cells (DTCs) – Bone Marrow
- Circulating tumor cells (CTCs) – Blood Stream

MPH Rules Terms and Definitions



- 2014-2015 Updates
- New MPH Database
- Text Only Rules
- Stay Tuned

Breast Equivalent Terms, Definitions, Tables and Illustrations C500 C509 (Excludes lymphoma and leukemia M9590-9989 and Kaposi sarcoma M0140)

Equivalent or Equal Terms

- And, with (used in histology rules, i.e. duct and lobular is equivalent to duct with lobular)
- Duct, ductal
- Mammary, breast
- Micronecrosis, colloid
- NOS, NST
- Tumor, mass, lesion, neoplasm

Synonyms for "in situ"

- Behavior code '2'
- DCIS
- Intracytic
- Intraductal
- Noninfiltrating
- Noninvasive

Definitions

- Carcinoma with osteoclast-like giant cells (803F): This is a specific type of duct carcinoma. The circumferential part of the lesion is most commonly an infiltrating duct carcinoma.
- Ductular carcinoma (8021): A malignancy that is infrequently found in the breast and may be found with greater frequency in other organs such as pancreas or prostate. Code 8021 is seldom, if ever, applied to the breast. Although the ICD-O-3 suggests that 8021 is a site-associated code, the addition of (C50_) after this code may be misleading. The WHO Histological Classification of Tumours of the Breast does not list 8021, ductular carcinoma.
- Duct carcinoma, NOS (8060): The largest group of breast cancers. Duct carcinoma, NOS is not a specific histologic type because it lacks specific features that can be used to better classify the tumor. See Table 1 and Table 2 for intraductal and duct types.

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Breast Terms and Definitions
Breast Equivalent Terms, Definitions, Tables and Illustrations
C500-C509
(Excludes lymphoma and leukemia M9590-9989 and Kaposi sarcoma M9140)

Inflammatory breast carcinoma (IBC): A breast cancer with a distinctive clinical presentation believed to be due to lymphatic obstruction from underlying invasive adenocarcinoma. The vast majority of cases have a prominent dermal lymphatic infiltration by tumor. Dermal lymphatic infiltration without the characteristic clinical picture is insufficient to qualify as inflammatory carcinoma.

Invasive carcinoma/intracystic papillary carcinoma: Variant of intraductal carcinoma used to describe recurrent forms of papillary carcinoma. Code intracystic carcinoma in site 2 unless the histology is described as invasive intracystic carcinoma.

In Situ: A tumor that is confined to the duct system (ductal or lobular) and does not invade surrounding stroma.

Invasive: A tumor that penetrates beyond the ductal basement membrane into the adjacent stroma of the breast parenchyma.

Lobular Carcinoma: Lobular carcinoma includes solid and alveolar patterns. About 5 to 10% of breast cancers are lobular. There is about a 20% chance that the opposite breast will also be involved, and many of them arise multicentrically in the same breast.

Page Bleeder: Paget disease of the nipple is a condition where the epidermis of the nipple is infiltrated with neoplastic cells. ICD-O-3 classifies all invasive Paget disease as a malignant process with a malignant behavior (3). Under the matrix system, only if the Paget disease is explicitly specified as in situ or non-invasive by the pathologist, code the behavior in site (2).

Phyllodes tumor (cystosarcoma phyllodes): A rare tumor with incidence ranging from 0.3% to 0.8% of all breast cancers. These tumors have a natural history and clinical behavior different from carcinomas of the breast. Criteria to classify benign, borderline and malignant cystosarcoma phyllodes utilize histologic parameters such as cellular atypia, mitotic activity and tumor margins. The reported incidence of malignant cystosarcoma phyllodes is approximately 2% of all phyllodes tumors.

Pleomorphic carcinoma (8022): This is a specific duct carcinoma type. A rare variant of high grade ductal carcinoma, NOS.

Sarcoma of breast: Primary sarcomas of the breast are rare accounting for less than 0.1% of all malignant tumors of the breast. Diagnoses may include fibrosarcoma, angiosarcoma, pleomorphic sarcoma, leiomyosarcoma, myxofibrosarcoma, hemangio-epithelioma, and osteosarcoma (extra-osseous osteosarcoma of breast).

Scirrhous Carcinoma: An adenocarcinoma with a firm-hard nodule associated with a dense connective tissue in the stroma.

Scirrhous carcinoma is descriptive term, not a specific type of ductal carcinoma.

January 1, 2007

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Breast Equivalent Terms, Definitions, Tables and Illustrations
C500-C509
(Excludes lymphoma and leukemia M9590-9989 and Kaposi sarcoma M9140)

Table 1 – Intraductal (8500-2) and Specific Intraductal Carcinomas
Note: These are the most common specific intraductal carcinomas. This is not intended to be a complete list of all possible intraductal types. If a histology appears only in table 1, it does not mean that it is impossible for that histology to occur with an in situ behavior (2).

Code	Type
8500	Cobblestone
8502	Foetal
8492	Apocrine
8500	Intraductal, NOS
8501	Comedo
8503	Papillary
8504	Intracystic carcinoma
8507	Micropapillary/Clinging

Table 2 – Duct (8500-3) and Specific Duct Carcinomas
Note: These are the most common specific duct carcinomas. This is not intended to be a complete list of all possible duct types. If a histology appears only on table 2, it does not mean that it is impossible for that histology to occur with an in situ behavior (2).

Code	Type
8022	Pleomorphic carcinoma
8025	Carcinoma with concentric-like giant cells
8500	Duct, NOS
8501	Comedocarcinoma
8502	Secretory carcinoma of breast
8503	Intraductal papillary adenocarcinoma with invasion
8508	Cystic hyperplasia carcinoma

Breast Terms and Definitions
January 1, 2007
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Breast Equivalent Terms, Definitions, Tables and Illustrations
C500-C509
(Excludes lymphoma and leukemia M9590-9989 and Kaposi sarcoma M9140)

Table 3 – Combination Codes for Breast Cancers
Use this two-page table with rules H5, H6, H7, H8, H16, H17, H18, H19, H24, H25, H26, H28 and H29 to select combination histology codes. Compare the terms in the diagnosis to the terms in Column 1 and 2. If the terms match, code the case using the ICD-O-3 histology code in column 4. Use the combination codes listed in this table only when the histologies in the tumor match the histologies listed below.

Column 1: Required Histology	Column 2: Combined with Histology	Column 3: Combination Term	Column 4: Code
Any combination including lobular and duct histologies from Tables 1 and 2	Other than ductal and lobular	Adenocarcinoma with mixed subtypes*	8255.3*
Intraductal carcinoma and infiltrating duct and	Lobular carcinoma in situ	Intraductal carcinoma and lobular carcinoma in situ	8523.2
Intraductal and two or more of the histologies in Column 2 OR two or more of the histologies in Column 2	Infiltrating lobular carcinoma	Infiltrating duct and lobular carcinoma	8523.3
	Cobblestone	Intraductal mixed with other types of carcinoma	8523.2
	Foetal		
	Apocrine		
	Papillary		
	Intracystic		
	Clinging		
	Tubular	Infiltrating duct mixed with other types of carcinoma	8523.3
	Microglandular		
	Mucinous		
	Secretory carcinoma		
	Intraductal papillary adenocarcinoma with invasion		
	Intracystic carcinoma NOS		
	Melanoid		

Table 3 continues on the next page.

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Breast Equivalent Terms, Definitions, Tables and Illustrations
C500-C509
(Excludes lymphoma and leukemia M9900-9999 and Kaposi sarcoma M9140)

Column 1: Required Histology Table 1 continued	Column 2: Combined with Histology	Column 3: Combination Term	Column 4:
Infiltrating lobular carcinoma not otherwise specified	Tubular Apocrine Microcystic Secondary carcinoma Intraductal papillary solid carcinoma with carcinoma Inflammatory carcinoma, NOS Medullary Paget disease (NOS and invasive)	Infiltrating lobular mixed with other types of carcinoma Note: Invasive carcinomas only. Do not use this code for in situ.	E1243
Paget disease not otherwise specified	Infiltrating duct carcinoma (includes any specific duct type listed in Table 1)	Paget disease and infiltrating duct carcinoma	E5413
Paget disease not otherwise specified	Intraductal carcinoma (includes any specific intraductal type in Table 1)	Paget disease and intraductal carcinoma	E5433



**Always used for breast cancer*

Combination Codes

MPH Rules

Multiple Primary Rules

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- 2014-2015 Updates
- New MPH Database
- Text Only Rules
- Stay Tuned

MP Rules - Abbreviated

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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

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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

MPH Rules Histology Coding Rules

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- 2014-2015 Updates
- New MPH Database
- Text Only Rules
- Stay Tuned

Breast Cancer Histology

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- **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 (see Table 1 and Table 2 of MPH Terms and Definitions)
 - Papillary Subtype (8503/2 or 8503/3 – DO NOT CODE 8050/2 - 8050/3)
- **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/_) – 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**

Breast Cancer Behavior & DCIS Subtypes

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Column 1: Code	Column 2: Type
8201	Cribriform
8230	Solid
8401	Apocrine
8500	Intraductal, NOS
8501	Comedo
8503	Papillary
8504	Intracystic carcinoma
8507	Micropapillary/Clinging

Breast Cancer Behavior & Ductal Subtypes

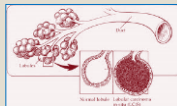
50

Column 1: Code	Column 2: Type
8022	Pleomorphic carcinoma
8035	Carcinoma with osteoclast-like giant cells
8500	Duct, NOS
8501	Comedocarcinoma
8502	Secretory carcinoma of breast
8503	Intraductal papillary adenocarcinoma with invasion
8508	Cystic hypersecretory carcinoma

LCIS and Invasive Lobular Carcinoma

51

- **LCIS – Cancer Confined to Lobules**
 - Is it a true cancer or pre-cancer?
 - Controversial Classification
 - Controversial Treatment
 - Often Bilateral (mirror)
 - What is “cancerization of lobules”?



- **Invasive (infiltrating) Lobular Carcinoma**
 - Treated like invasive ductal carcinoma
 - Often mixed with ductal carcinoma
 - Often Bilateral (mirror)



Mixed In-Situ CA and Invasive CA

52

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

IGNORE ALL IN-SITU TERMS IN REPORT

Mixed Duct and Lobular

53

- 8522/2 – DCIS and LCIS only
- 8522/3 – Invasive Duct and Invasive Lobular

- 8523/2 – Mixed DCIS Subtypes (Table 1)
- 8523/3 – Invasive Duct with Invasive Non-Duct CA
 - Cribriform
 - Mucinous
 - Tubular
 - Colloid

- 8524/2 – LCIS with non-DCIS (Table 1) other in-situ carcinoma
- 8524/3 – Invasive Lobular with Invasive Non-Duct CA (Table 2)

Inflammatory Carcinoma of Breast

54

- **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)]



Mixed/Combination/Multiple Histology

55



**GO DIRECTLY TO
TABLE 3 – BREAST MPH TERMS AND DEFINITIONS
USE HISTOLOGY CODING RULES**

**DO NOT GUESS
DO NOT USE DROP DOWN MENU
DO NOT AUTOMATICALLY CODE 8523**

Histology Coding Rules - Abbreviated

56

Single tumor, all in situ

- H1. If no tissue, code physician's statement
- H2. Single histology
- H3. Most specific term
- H4. Comedocarcinoma, non-infiltrating with any other intraductal carcinoma
- H5. Intraductal and in situ lobular
- H6. Intraductal mixed with other in situ ca
- H7. In situ lobular mixed with other in situ ca
- H8. 8255 for mixed subtypes when no mention of intraductal or in situ lobular

Source: AFritz and Associates, LLC

Histology Coding Rules - Abbreviated

57

Single tumor – mixed in situ and invasive

- H9. Code invasive histology

Single tumor – all invasive

- H10. If no tissue, code physician's statement
- H11. Metastatic site histology
- H12. Most specific term
- H13. 8530 Inflammatory carcinoma
- H14. Single histology
- H15. Highest duct carcinoma code
- H16. 8522 duct and lobular
- H17. 8523 duct mixed with other duct ca
- H18. 8524 lobular mixed with other ca
- H19. 8255 adenoca with mixed subtypes

Source: AFritz and Associates, LLC

Histology Coding Rules - Abbreviated

58

Multiple tumors as single primary

- H20. If no tissue, code physician's statement
- H21. If no primary tissue, code metastasis
- H22. 8530 Inflammatory carcinoma
- H23. Single histology
- H24. Paget disease in situ and intraductal ca
- H25. Paget disease and intraductal ca
- H26. Paget and infiltrating duct carcinoma
- H27. Invasive histology
- H28. 8522 Duct and lobular
- H29. Higher code

Source: AFritz and Associates, LLC

Coding Grade for Invasive Tumors

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NOTTINGHAM OR BLOOM-RICHARDSON (BR) SCORE / GRADE		
DESCRIPTION	CS CODE	GRADE CODE
SCORE OF 3	030	1
SCORE OF 4	040	1
SCORE OF 5	050	1
SCORE OF 6	060	2
SCORE OF 7	070	2
SCORE OF 8	080	3
SCORE OF 9	090	3
LOW GRADE, BLOOM-RICHARDSON (BR) GRADE 1, SCORE NOT GIVEN	110	1
MEDIUM (INTERMEDIATE) GRADE, BLOOM-RICHARDSON (BR) GRADE 2, SCORE NOT GIVEN	120	2
HIGH GRADE, BLOOM-RICHARDSON (BR) GRADE 3, SCORE NOT GIVEN	130	3

Are there grades of in situ? Do we code them?

60

- What does it mean if my ductal carcinoma in-situ is described as being "low grade", "intermediate grade", or "high grade"; or "nuclear grade 1", "nuclear grade 2", or "nuclear grade 3"; or "low mitotic rate", "intermediate mitotic rate", or "high mitotic rate"?
- *These are all different ways of describing the microscopic appearance of ductal carcinoma in-situ (DCIS). DCIS which is high grade, nuclear grade 3, or high mitotic rate (as compared to low grade, nuclear grade 1, or low mitotic rate) is associated with an increased risk of coming back (recurring) following local excision and this may affect subsequent therapy.*
- **COMING SOON - 2014 REVISED Coding Instructions for Grade**

Breast Cancer Tumor Markers

**ESTROGEN RECEPTOR (ER)
 PROGESTERONE RECEPTOR (PR)
 HER2 RECEPTOR (HER2)
 OTHER BIO-MARKER TESTING**

What do Biomarkers do?

62

- Prognostic – clinical outcome
- Predictive – response to therapy
- Can a marker be both prognostic and predictive?
- Are biomarkers the same as genetic testing?
- What do I need to know as a cancer registrar?

FCDS DAM – Appendix C

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APPENDIX C C-1

When and Why are ER, PR, HER2 Test(s) Performed as Part of Creating Individual Breast Cancer Profile?

- > **Estrogen Receptor (ER)**
 - o Test routinely performed on invasive cancers
 - o Test may be performed on non-invasive (in-situ) cancers
 - o Result used to determine whether or not Hormonal Therapy should be considered in 1st course treatment plan
- > **Progesterone Receptor (PR)**
 - o Test routinely performed on invasive cancers
 - o Test may be performed on non-invasive (in-situ) cancers
 - o Result used to determine whether or not Hormonal Therapy should be considered in 1st course treatment plan
- > **Human Epidermal growth factor Receptor 2 (HER2)**
 - o Test frequently but not always performed on invasive cancers
 - o Test rarely performed on non-invasive (in-situ) cancers at this time
 - o Test may be performed using one or more methods (IHC, FISH, CISH, Other)
 - o An equivocal or borderline result from IHC/HER2 Test may trigger additional testing using FISH or CISH
 - o Some facilities bypass IHC/HER2 Test and perform FISH/HER2 Test as part of routine Breast Cancer Profile
 - o Result used to determine whether or not Herceptin (trastuzumab) or Tykerb (lapatinib) should be included in 1st course treatment plan

FCDS DAM – Appendix C

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Favorable Prognostic Factors: ER, PR, HER2

- ✓ Estrogen Receptor (ER) **positive** is a favorable prognostic factor.
 - Hormonal Therapy should be considered in 1st course treatment planning.
- ✓ Progesterone Receptor (PR) **positive** is a favorable prognostic factor.
 - Hormonal Therapy should be considered in 1st course treatment planning.
- ✓ Single Receptor positive tumors (ER+ only or PR+ only) do exist but are rare with an unfavorable prognosis.
 - These tumors are often large in size, are of high grade, are often HER2+, and are often lymph node+.
 - Single Receptor positive tumors are usually not treated with Hormonal Therapy.
- ✓ Human Epidermal growth factor Receptor 2 (HER2) **negative** is a favorable prognostic factor.
 - Receptor (trastuzumab) or Tykesh (lapatinib) should be included as part of 1st course treatment plan.

FCDS DAM – Appendix C

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Unfavorable Prognostic Factors: ER, PR, HER2

- Estrogen Receptor (ER) **negative** is an unfavorable prognostic factor.
 - Hormonal Therapy usually not included as part of 1st course treatment plan.
- Progesterone Receptor (PR) **negative** is an unfavorable prognostic factor.
 - Hormonal Therapy usually not included as part of 1st course treatment plan.
- Single Receptor **negative** tumors (ER- only or PR- only) do exist but are rare with an unfavorable prognosis.
 - These tumors are often large in size, are of high grade, are often HER2+, and are often lymph node+.
 - Single Receptor negative tumors are usually not treated with Hormonal Therapy.
- Human Epidermal growth factor Receptor 2 (HER2) **positive** is an unfavorable prognostic factor.
 - Receptor (trastuzumab) or Tykesh (lapatinib) usually not included as part of 1st course treatment plan.
- Triple Negative Breast Cancer (ER neg/PR neg/HER2 neg) is a **very unfavorable** prognostic combination.

FCDS DAM – Appendix C

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Test	Value Range	Negative	Borderline	Positive
ER Proportion Score	0%-100%	<5%	5% - 10%	>=20%
ER Intensity Score	None, weak, intermediate, strong	None, weak	intermediate	Strong
PR Proportion Score	0%-100%	<5%	5% - 19%	>=20%
PR Intensity Score	None, weak, intermediate, strong	None, weak	intermediate	Strong
HER2 by IHC	0, 1+, 2+, 3+	0, 1+	2+	3+
HER2 by FISH	Ratio 1.00-0.79 (note decimal point)	<= 1.9	1.90-2.20	>= 2.00
HER2 by CISH	Ratio 1.00-0.79 (note decimal point)	<= 1.9	1.90-2.20	>= 2.00
HER2 by unknown	No value given	Stated by MD	Stated by MD	Stated by MD
Test Not Mentioned in Medical Record - Code as Not Done (998) or Unknown if Done (999)				

Other Marker Testing

67

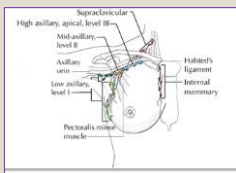
- Multi-Signature Gene Testing
- Oncotype DX Breast Cancer Assay
- HERmark Breast Cancer Assay
- MammaPrint
- Axela Breast Cancer Xpres Chip



Breast Cancer Staging

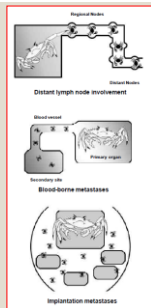
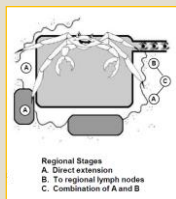
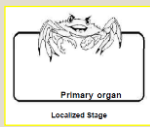
CS COLLABORATIVE STAGE DATA COLLECTION SYSTEM

68



SEER Summary Stage

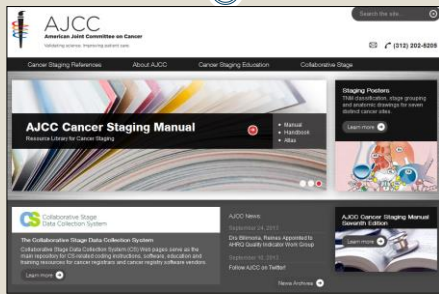
69



Source: SEER Summary Staging Manual 2000

AJCC Cancer Staging - TNM

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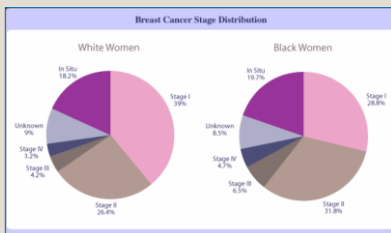
AJCC Cancer Staging - TNM

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Breast Cancer Stage Distribution

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<http://ww5.komen.org/images>

Collaborative Stage Data Collection

73

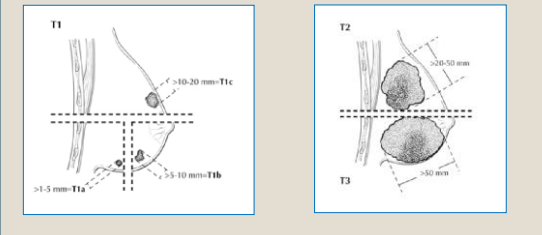
Collaborative Stage Data Collection

74

CS Tumor Size	CS Site-Specific Factor 7
CS Calibration	Heterogeneity of Gene Mutation (HG) Score/Grade
CS Tumor Size/Et Est	CS Site-Specific Factor 8
CS Tumor Nodes	HER2: Immunohistochemistry (IHC) Lab Value
CS Tumor Nodes/Et	CS Site-Specific Factor 9
Regional Nodes Counts	HER2: Immunohistochemistry (IHC) Test Interpretation
Systemic Nodes Examined	CS Site-Specific Factor 10
CS Node at Site	HER2: Fluorescence In Situ Hybridization (FISH) Lab Value
CS Node Count	CS Site-Specific Factor 11
CS Site-Specific Factor 1	HER2: Fluorescence In Situ Hybridization (FISH) Test Interpretation
Estrogen Receptor (ER) Assay	CS Site-Specific Factor 12
CS Site-Specific Factor 2	HER2: Chromosome In Situ Hybridization (CISH) Lab Value
Progesterone Receptor (PR) Assay	CS Site-Specific Factor 13
CS Site-Specific Factor 3	HER2: Chromosome In Situ Hybridization (CISH) Test Interpretation
Number of Positive Nodes/Lymph Nodes	CS Site-Specific Factor 14
CS Site-Specific Factor 4	HER2: Result of Other or Unknown Test
Immunohistochemistry (IHC) of Regional Lymph Nodes	CS Site-Specific Factor 15
CS Site-Specific Factor 5	HER2: Summary Report of Testing
Immunohistochemistry (IHC) of Regional Lymph Nodes	CS Site-Specific Factor 16
CS Site-Specific Factor 6	Combinations of ER, PR, and HER2 Results
Site of Tumor-invasive Component	CS Site-Specific Factor 17
	CS Site-Specific Factor 18
	Classifying Lymph Cells (LC) and Method of Collection
	CS Site-Specific Factor 19
	Determining the Size of Tumor
	CS Site-Specific Factor 20
	Assessment of Tumor Invasive Anterior Lymph Nodes
	CS Site-Specific Factor 21
	Assessment of Positive Tumor Metastases
	CS Site-Specific Factor 22
	Response to Neoadjuvant Therapy
	CS Site-Specific Factor 23
	Multiple Signatures Method
	CS Site-Specific Factor 24
	Multiple Signatures Results
	CS Site-Specific Factor 25
	Page Overview
	CS Site-Specific Factor 26 ~ 309

CS Tumor Size and “T” in TNM

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AJCC Cancer Staging Atlas – Chapter 32

Special Codes for Tumor Size

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990	Microinvasion Microscopic focus or foci only and no size given Described as "less than 1 mm" Stated as T1mi with no other information on tumor size
991	Described as "less than 1 centimeter (cm)" Stated as T1b with no other information on tumor size
992	Described as "less than 2 cm," or "greater than 1 cm," or "between 1 cm and 2 cm" Stated as T1 [NOS] or T1c [NOS] with no other information on tumor size
993	Described as "less than 3 cm," or "greater than 2 cm," or "between 2 cm and 3 cm"
994	Described as "less than 4 cm," or "greater than 3 cm," or "between 3 cm and 4 cm"
995	Described as "less than 5 cm," or "greater than 4 cm," or "between 4 cm and 5 cm" Stated as T2 with no other information on tumor size
996	Mammographic/serographic diagnosis only, no size given; clinically not palpable
997	Paget disease of nipple with no demonstrable tumor
998	Diffuse

CS Extension and "T" in TNM

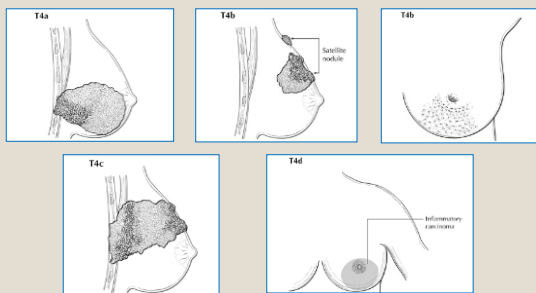
77

CS Extension

- Note 1. Changes such as dimpling of the skin, tethering, and nipple retraction are caused by tension on Cooper's ligament (s), not by actual skin involvement. They do not alter the classification.
- Note 2. Consider adherence, attachment, fixation, induration, and thickening as clinical evidence of extension to skin or subcutaneous tissue, code 200.
- Note 3. Consider fixation, NOS as involvement of pectoralis muscle, code 300.
- Note 4. If CS Extension code is 000, then Behavior code must be 2; if CS Extension code is 050 or 070, then Behavior code may be 2 or 3, and if CS Extension code is 100, then Behavior code must be 3.
- Note 5. Inflammatory Carcinoma. AJCC includes the following text in the Cancer Staging Manual 7th Edition: "Inflammatory carcinoma is a clinicopathologic entity characterized by diffuse erythema and edema (peau d'orange) of the breast, often without an underlying palpable mass. These clinical findings should invoke the majority of the skin of the breast. Classically, the skin changes arise quickly in the affected breast. Thus the term of inflammatory carcinoma should not be applied to a patient with neglected locally advanced cancer of the breast presenting late in the course of her disease. On imaging, there may be a detectable mass and characteristic thickening of the skin over the breast. This clinical presentation is due to tumor emboli within dermal lymphatics, which may or may not be apparent on skin biopsy. The tumor of inflammatory carcinoma is classified T4d. It is important to remember that inflammatory carcinoma is primarily a clinical diagnosis. Involvement of the dermal lymphatics alone does not indicate inflammatory carcinoma in the absence of clinical findings. In addition to the clinical picture, however, a biopsy is still necessary to demonstrate cancer either within the dermal lymphatics or in the breast parenchyma itself."
- Note 6. For CS coding, the abstractor should record a stated diagnosis of inflammatory carcinoma, and also record any clinical statement of the character and extent of skin involvement in the text area. Code 000 should be used if there is a stated diagnosis of inflammatory carcinoma and a clinical description of the skin involvement is less than one third (33%) of the skin of the breast. Code 725 should be used if there is a stated diagnosis of inflammatory carcinoma and a clinical description of the skin involvement is greater than or equal to one third (33%) and less than or equal to one-half (50%) of the skin of the breast. Code 730 should be used if there is a stated diagnosis of inflammatory carcinoma and a clinical description of the skin involvement is more than one-half (50%) (majority or offset) of the skin of the breast. Cases with a stated diagnosis of inflammatory carcinoma but no such clinical description should be coded 750. A clinical description of inflammation, erythema, edema, peau d'orange, or other terms describing skin changes without a stated diagnosis of inflammatory carcinoma should be coded 512-585 depending on described extent of the condition.

CS Extension and "T" in TNM

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CS Extension and “T” in TNM

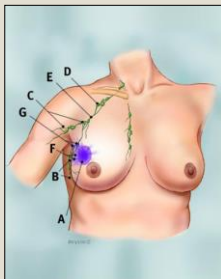
79

170	Stated as T1 (N0) with no other information on extension or size	T1N0	T1N0	L	L
180	Stated as T2 with no other information on extension or size	T2	T2	L	L
190	Stated as T3 with no other information on extension or size	T3	T3	L	L
200	Invasion of subcutaneous tissue Local infiltration of dermal lymphatics adjacent to primary tumor involving skin by direct extension Skin infiltration of primary breast including skin of nipple and/or areola	*	*	RE	RE
300	Attachment or fixation to pectoral muscle(s) or underlying tissue Deep fixation Invasion of (or fixation to) pectoral fascia or muscle	*	*	RE	RE
300	OBSCLETE DATA CONVERTED V2003 See code 700 Stated as T4 (N0) with no other information on extension	ERROR	ERROR	ERROR	ERROR
300	OBSCLETE DATA CONVERTED V2003 See code 410 Stated as T4x with no other information on extension	ERROR	ERROR	ERROR	ERROR
400	Invasion of (or fixation to) Chest wall Intercostal or serratus anterior muscle(s) RIB(s) See codes 610 (obsclete), 612-615, and 620 (obsclete) for combinations with this code	T4a	T4a	RE	RE
410	Stated as T4x with no other information on extension	T4x	T4x	RE	RE

CS Extension and “T” in TNM

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512	Extension skin involvement, including satellite nodules to skin of primary breast (Duration of skin of breast)	T4b	T4b	RE	RE
514	Any of the following conditions described as involving less than one-third (33%) of the breast WITHOUT a stated diagnosis of inflammatory carcinoma WITH or WITHOUT dermal lymphatic infiltration Edema of skin Erythema Inflammation of skin Peau d'orange ("peppier")	T4b	T4b	RE	RE
516	514 + 512	T4b	T4b	RE	RE
518	Any of the following conditions described as involving one-third (33%) or more but less than or equal to half (50%) of the breast WITHOUT a stated diagnosis of inflammatory carcinoma WITH or WITHOUT dermal lymphatic infiltration Edema of skin Erythema Inflammation of skin Peau d'orange ("peppier")	T4b	T4b	RE	RE
519	518 + 512	T4b	T4b	RE	RE
520	Any of the following conditions described as involving more than 50% of the breast WITHOUT a stated diagnosis of inflammatory carcinoma WITH or WITHOUT dermal lymphatic infiltration Edema of skin Erythema Inflammation of skin Peau d'orange ("peppier")	T4b	T4b	RE	RE



- 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

Source: <http://www.breastcancer.org>

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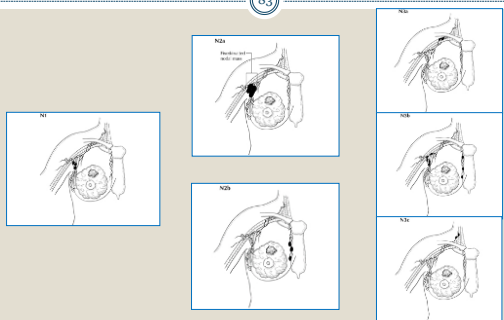
Breast Regional Lymph Nodes (N)

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- Level I (low-axilla): lymph nodes lateral to the lateral border of pectoralis minor muscle
- Level II (mid-axilla): lymph nodes between the medial and lateral borders of the pectoralis minor muscle and the interpectoral (Rotter's) lymph nodes
- Level III (apical axilla): lymph nodes medial to the medial margin of the pectoralis minor muscle and inferior clavicle (apical or infraclavicular nodes) worse prognosis

CS Lymph Nodes and "N" in TNM

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CS Lymph Nodes and "N" in TNM

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710	Evaluated pathologically Internal mammary nodes), ipsilateral, positive on sentinel nodes but not clinically apparent (No positive imaging or clinical exam) WITHOUT axillary lymph nodes), ipsilateral	N1b	N1b	RN	RN
720	Evaluated pathologically Internal mammary nodes), ipsilateral, positive on sentinel nodes but not clinically apparent (No positive imaging or clinical exam) WITH axillary lymph nodes), ipsilateral	RN	RN
730	Evaluated pathologically Internal mammary nodes), ipsilateral, positive on sentinel nodes but not clinically apparent (No positive imaging or clinical exam) UNKNOWN if positive axillary lymph nodes), ipsilateral	N1b	N1b	RN	RN
735	Evaluated clinically Internal mammary nodes), ipsilateral, positive on sentinel nodes but primary not resected WITHOUT axillary lymph nodes), ipsilateral OR UNKNOWN if positive axillary lymph nodes)	N2b	N2b	RN	RN
740	Internal mammary nodes), ipsilateral, clinically apparent (On imaging or clinical exam) WITHOUT axillary lymph nodes), ipsilateral	N2b	N2b	RN	RN
745	Internal mammary nodes), ipsilateral, clinically apparent (On imaging or clinical exam) UNKNOWN if positive axillary lymph nodes), ipsilateral	N2b	N2b	RN	RN

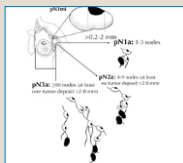
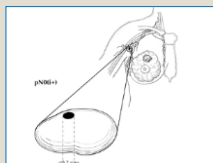
CS Lymph Nodes and “N” in TNM

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750	Intra-axillary lymph node(s) (subclavicular) (level II axillary nodes) (apical), ipsilateral WITH or WITHOUT axillary node(s) WITHOUT internal mammary node(s)	N2a	N2a	D	FN
750	Stated as N2a with no other information on regional lymph nodes	N2a	N2a	D	FN
DISCRETE DATA RETAINED AND REVERSED VIEWS See codes 752 and 753					
750	Internal mammary node(s), ipsilateral, clinically apparent (on imaging or clinical exam) WITH axillary lymph node(s), ipsilateral, codes 150 to 500 WITH or WITHOUT intra-axillary (level II axillary nodes) (apical) lymph nodes	N2b	N2b	FN	FN
753	Internal mammary node(s), ipsilateral, clinically apparent (On imaging or clinical exam) WITH axillary lymph node(s), ipsilateral, codes 150 to 500 WITHOUT intra-axillary (level II axillary nodes) (apical) lymph nodes or otherwise if intra-axillary (level II axillary nodes) (apical) lymph nodes involved	N2b	N2b	FN	FN
754	Internal mammary node(s), ipsilateral, clinically apparent (On imaging or clinical exam) WITHOUT axillary lymph node(s), ipsilateral WITH intra-axillary (level II axillary nodes) (apical) lymph nodes involved	N2b	N2b	D	FN
755	Internal mammary node(s), ipsilateral, clinically apparent (On imaging or clinical exam) WITH axillary lymph node(s), ipsilateral WITHOUT intra-axillary (level II axillary nodes) (apical) lymph nodes involved	N2b	N2b	D	FN
756	Stated as N2b with no other information on regional lymph nodes	N2b	N2b	FN	FN

Special Codes for CS Lymph Nodes

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AJCC Cancer Staging Atlas – Chapter 32

Special Codes for CS Lymph Nodes

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050	Evaluated pathologically None, no regional lymph node involvement ISLETs detected on routine hematoxylin and eosin (H and E) stains. (See Note 7)	N0(+)	N0(+)	NONE	NONE
130	Evaluated pathologically Axillary lymph node(s), ipsilateral, micrometastasis ONLY detected by IHC ONLY (At least one micrometastasis greater than 0.2 mm, or more than 200 cells AND all micrometastases less than or equal to 2 mm)	N1mi	N1mi	FN	FN
150	Evaluated pathologically Axillary lymph node(s), ipsilateral, micrometastasis ONLY detected or verified on IHC (At least one micrometastasis greater than 0.2 mm or more than 200 cells AND all micrometastases less than or equal to 2 mm) Micrometastasis, N03	N1mi	N1mi	FN	FN
155	Evaluated pathologically Stated as N1mi with no other information on regional lymph nodes	N1mi	N1mi	FN	FN

Stage IV Cancer

Tumor can be of any size

Multiple lymph node metastasis

Metastases

- Brain
- Lung
- Liver
- Bone

<http://mediconweb.com/cancer/recurrent-and-metastatic-breast-cancer/>

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CS Mets at DX

- Note 1: Involvement of supraclavicular (transverse cervical) lymph nodes is coded in CS Lymph Nodes.
- Note 2: Cases in which there are no distant metastases as determined by clinical and/or radiographic methods are designated M0 (see code 00). Cases in which one or more distant metastases are identified by clinical and/or radiographic methods are designated M1. A case is classified as clinically free of metastasis (CM0) unless there is documented evidence of metastasis by clinical means or by biopsy of a metastatic site (pathologic). Use code 00 if there is no documentation available for any staging assessment, or if there is reasonable doubt that the tumor is no longer localized and there is no documentation of distant metastasis.

Code	Description	TNM 7 Map	TNM 8 Map	SS17 Map	SS2000 Map
00	No distant metastasis	M0	M0	NONE	NONE
05	No clinical or radiographic evidence of distant metastasis, but deposits of molecularly or microscopically detected tumor cells in circulating blood, bone marrow or other non-regional nodal tissues that are 1.2 millimeters (mm) or less in a patient without symptoms or signs of metastasis	M0(+)	M0	NONE	NONE
07	Stated as M0(+)	M0(+)	M0	NONE	NONE
10	Distant lymph nodes: Cervical, NOS Contralateral/subclavicular axillary and/or internal mammary Other than above Distant lymph nodes), NOS	M1	M1	D	D
40	Distant metastasis except distant lymph nodes) (code 10) Carcinomatosis	M1	M1	D	D
42	Further contiguous extension: Skin, eye Axilla Contralateral (opposite) breast Sternum Upper abdomen	M1	M1	D	D
44	Metastases: Adrenal (suprarenal) gland Blow, other than adjacent to Contralateral (opposite) breast - if stated as metastatic Lung Ovary Sentinel node(s) in skin other than primary breast	M1	M1	D	D

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CS Site Specific Factors

○

IMPORTANT NOTE

NONE OF THE BREAST SITE SPECIFIC FACTORS ARE REQUIRED TO STAGE BREAST CANCER.

HOWEVER, EACH IS FELT TO HOLD PROGNOSTIC SIGNIFICANCE.

MOST ARE USED TO GUIDE TREATMENT PLANNING.

THEREFORE, FCDS DOES REQUIRE MOST OF THE BREAST SSFS.

FCDS REQUIRES SSF 1-16 AND SSF 21-23

ER – PR – Her2 (IHC/FISH/CISH)

91

Test	Value Range	Negative	Borderline	Positive
ER Proportion Score	0%-100%	<5%	5% - 19%	>=20%
ER Intensity Score	None, weak, intermediate, strong	None, weak	intermediate	Strong
PR Proportion Score	0%-100%	<5%	5% - 19%	>=20%
PR Intensity Score	None, weak, intermediate, strong	None, weak	intermediate	Strong
HER2 by IHC	0, 1+, 2+, 3+	0, 1+	2+	3+
HER2 by FISH	Ratio 1.00-0.79 (note decimal point)	<= 1.9	1.90-2.20	>= 2.00
HER2 by CISH	Ratio 1.00-0.79 (note decimal point)	<= 1.9	1.90-2.20	>= 2.00
HER2 by unknown	No value given	Stated by MD	Stated by MD	Stated by MD

Test Not Mentioned in Medical Record - Code as Not Done (999) or Unknown if Done (999)

Treatment Guidelines

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Review Definition – 1st Course Treatment

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The first course of treatment includes
 all methods of treatment
 recorded in the treatment plan
 and administered to the patient
 before disease progression or recurrence.

First course of treatment includes all types of therapy
 whether the intent is to cure the patient,
 for symptom control (palliation),
 or to slow disease progression.

Treatment Planning

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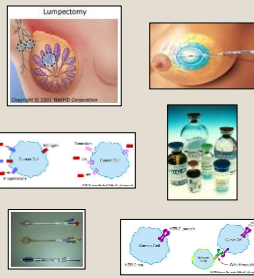
Patient Characteristics			
✓ Sex	✓ Personal Choice	Performance Status	
✓ Age	✓ Family Choice	✓ Cardiac Clearance	✓ Weight
✓ Family History	✓ Convenience	✓ Renal Function	✓ Symptoms
✓ Personal History	✓ Insurance	✓ Liver Function	✓ Comorbidities
✓ Inherited Gene Profile	Other Clinical Factors		

Tumor Characteristics			
Clinical	Pathological	Molecular	Genetic
✓ Size of Breast	✓ Size of Tumor	✓ ER Status	✓ Tumor Gene Profile
✓ Size of Tumor	✓ Surgical Margins	✓ PR Status	✓ Multi-Gene Signature
✓ Location of Tumor	✓ Histology	✓ Her2 Status	
✓ Extension of Tumor	✓ Behavior	✓ Her2/HER	
✓ Clinical Node Status	✓ Grade	✓ Her2 FISH/CISH	
✓ Distant Metastasis	✓ Extension of Tumor	Other Considerations	
✓ Clinical Stage Group	✓ Path Node Status	✓ Circulating Tumor Cells	
✓ Volume of Disease	✓ # Nodes Positive	✓ Isolated Tumor Cells	
	✓ Level Nodes Positive	✓ Disseminated Tumor Cells	
	✓ Distant Metastasis	✓ Tumor Diversity	
✓ Neoadjuvant Tx (Y/N)	✓ Pathological Stage	✓ Inflammatory Carcinoma	
	✓ Post-Neoadjuvant	✓ Mixed Duct and Lobular	
	✓ Reseal	✓ Mixed Other Histology	

Treatment Options

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- Surgery
- Chemotherapy
- Hormone Therapy
- Radiation Therapy
- Biologic Therapy
- Target Therapies

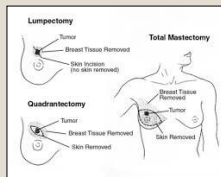


<http://www.all-cancer-treatments.com>

When is a "biopsy" coded "surgery"?

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- Types of Breast Biopsy and Primary Breast Surgery
 - FNA (fine needle aspiration biopsy)
 - Core Needle Biopsy
 - Incisional Biopsy
 - Excisional Biopsy
 - Local Excision
 - Lumpectomy
 - Radical Mastectomy
 - Modified Radical Mastectomy
 - Mastectomy, NOS



www.cancer.org/illustrations

SEER*Rx

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Surveillance, Epidemiology, and End Results Program
Turning Cancer Data into Discovery

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Statistical Summaries Interactive Tools Publications Databases and Software Coding Rates, Training and Support Our Registries and Research

1. Registrars - SEER*Rx Interactive Antineoplastic Drugs Database

SEER*Rx Interactive Antineoplastic Drugs Database

Trastuzumab

Drug ID: Trastuzumab

Regimens ID: TIC

TIC

TIC

TIC

Regimen Information

Name: TIC

Drug #1 Carboplatin code as: Chemotherapy

Drug #2 Trastuzumab code as: Biologic therapy (BRM, immunotherapy)

Drug #3 Docetaxel code as: Chemotherapy

Code this regimen in each of the treatment fields shown above.
If two or more drugs are coded as Chemotherapy, use code 03, combination of Chemotherapy.

Generic Name: Carboplatin

Brand Name:

PM ID: PAR-5

PAR: PAR5

Parent(s): Paraplatin

<http://seer.cancer.gov/seertools/seerrx>

SEER*Rx Updates

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January 2013 Update

Drug Name(s)	Previous Category	New Category	Effective Date
Alentuzumab/Campath	Chemotherapy	BRM/Immunology	1/1/2013
Bevacizumab/Avastin	Chemotherapy	BRM/Immunology	1/1/2013
Rituximab	Chemotherapy	BRM/Immunology	1/1/2013
Trastuzumab/Herceptin	Chemotherapy	BRM/Immunology	1/1/2013
Pertuzumab/Perjeta	Chemotherapy	BRM/Immunology	1/1/2013
Cetuximab/Erlotinib	Chemotherapy	BRM/Immunology	1/1/2013

August 2013 Update

Drug Name	Category
Ado-trastuzumab emtansine	BRM/Immunotherapy
Dabrafenib	Chemotherapy
Gilotrif	Chemotherapy
Ibrutinib	Chemotherapy
Palbociclib	Chemotherapy
Pomalidomide	BRM/Immunotherapy
TACE procedure	Definition/coding instructions
Trametinib	Chemotherapy
Xorfigo	Radiation/radio-therapeutic drug

<http://seer.cancer.gov/seertools/seerrx>

Breast Cancer Antineoplastic Agents

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Breast Cancer Commonly Used Chemotherapy & Targeted Therapy Drugs

Generic Name	Brand Name	Abbreviations	NSC
Doxorubicin	Adriamycin®	ADM, ADR, ADRI	123121
Bevacizumab	Avastin®		704885
Cyclophosphamid	Cytosar®	CPH, CTX, CP, CTY, CYC, CYT,	006271
		CYTOX, CYTX	
Doxorubicin Liposomal Injection	Doxil®	ADM, ADR, ADRI	123127
Epirubicin	Ellence®	EPI	256825
Fluorouracil	5-FU	5-FU, FU, 3FU	019893
Gemcitabine	Gemzar®		613327
Trastuzumab	Herceptin®		688097
Ixabopone	Yonque®		710428
Vincristine	Navelbine®	YNB	608210
Carboplatin	Paraplatin®	CBDCA	241200
Cisplatin	Platinol®	CACP, CPPD, CIS, DDP, CPD, CPDC, CPDD, DDP, CDDP	119875
Paclitaxel	Taxol®	TEP	999998
Docetaxel	Tacotone®		628503
Egintinib	Vizion®		999998
Etoposide	V-Penic®		141540
Vinorelbine	Valbazine®	VBL, VELB, VLB	049842
Capecitabine	Xeloda®		118207

Breast Cancer Multi-Drug Regimens

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Breast Cancer (HER2-Negative Tumors)		
Regimen	Generic Name	NSC
TAC	Docetaxel	625303
	Docosonecin	123127
	Cyclophosphamide with filgrastim support	123127
AC	Docosonecin	123127
	Cyclophosphamide	026271
	Fluorouracil	999998
AC+T (Dose-dense AC followed by paclitaxel q3 wks)	Docosonecin	123127
	Cyclophosphamide	026271
	Paclitaxel every 2 weeks	999998
AC followed by weekly paclitaxel	Docosonecin	123127
	Cyclophosphamide followed by weekly Paclitaxel	999998
	Docosonecin	625303
TAC	Docosonecin	123127
	Cyclophosphamide	026271
	Fluorouracil	999998
FAC/CAF	Docosonecin	123127
	Cyclophosphamide	026271
	Fluorouracil	999998
FEC/CEF	Docosonecin	123127
	Cyclophosphamide	026271
	Fluorouracil	999998
CMF	Docosonecin	123127
	Cyclophosphamide	026271
	Fluorouracil	999998
AC followed by Docosonecin every 3 wks	Docosonecin	123127
	Cyclophosphamide followed by Docosonecin every 3 weeks	999998
	Docosonecin	625303
EC	Docosonecin	123127
	Cyclophosphamide	026271
	Epinephrine	256942
A followed by T followed by C every 2 weeks with filgrastim support	Docosonecin followed by Paclitaxel followed by Cyclophosphamide every 2 weeks	999998
	Cyclophosphamide	026271
	Fluorouracil	999998
FEC followed by T	Docosonecin	123127
	Cyclophosphamide	026271
	Fluorouracil	999998
FEC followed by weekly Paclitaxel	Docosonecin	123127
	Cyclophosphamide	026271
	Fluorouracil followed by weekly Paclitaxel	999998

More Breast Cancer Regimens

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Breast Cancer (HER2-Positive Tumors)		
Regimen	Generic Name	NSC
AC	Docosonecin	123127
	Cyclophosphamide	026271
TCH	Paclitaxel	999998
	Carboplatin	241240
Docosonecin + trastuzumab followed by FEC	Trastuzumab	688097
	Docosonecin	625303
	Trastuzumab followed by Cyclophosphamide	688097
	Epinephrine	026271
	Fluorouracil	256942
Chemotherapy followed by trastuzumab	Trastuzumab	688097
	Docosonecin	123127
AC followed by docosonecin + trastuzumab	Cyclophosphamide	026271
	Docosonecin	625303
	Trastuzumab	688097
Breast Cancer: Common Regimen of Neoadjuvant Chemotherapy Drugs		
T - Trastuzumab followed by CEF - Trastuzumab	Paclitaxel	999998
	Trastuzumab	688097
	Cyclophosphamide	026271
	Epinephrine	256942
	Fluorouracil	019893

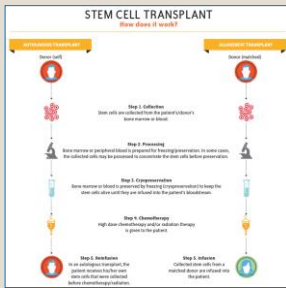
Chemo Given for 1 Primary or More Than 1

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- When a patient has chemo for one type of cancer (i.e. colon cancer), you do not code the chemo as treatment for other cancers (i.e. breast cancer).
- However, if a patient has multiple breast primaries (both breasts) and chemotherapy is first course treatment for one primary – it should also be coded as first course treatment for the patient’s other breast cancer if it was dx’d at same time.
- It is up to the registrar to sort out which chemo goes with which primary (e.g. colon versus breast versus lung).
- Use SEER®Rx to check which regimens and agents are standard therapy for which cancer(s).

Stem Cell and Bone Marrow Transplant

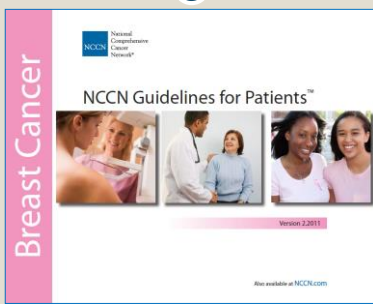
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<http://www.vanderbilt.edu/magazines/momentum>

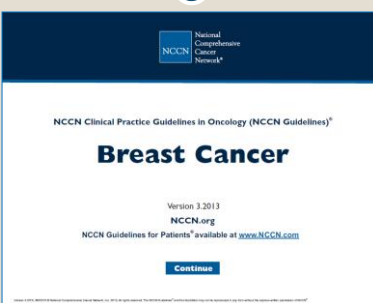
NCCN Treatment Guidelines

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NCCN Treatment Guidelines

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NCCN Sample - DCIS

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NCCN Guidelines Version 3.2013
NCCN Comprehensive Cancer Network
Ductal Carcinoma in Situ

NCCN Guidelines Index
Breast Cancer Table of Contents
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DIAGNOSIS		WORKUP		PRIMARY TREATMENT	
DCIS Stage 0 T1s, N0, M0 ^a		<ul style="list-style-type: none"> History and physical exam Diagnostic bilateral mammogram Pathology review^b Determination of tumor estrogen receptor (ER) status Genetic counseling if patient is high risk for hereditary breast cancer^c Breast MRI^d (optional) 	<ul style="list-style-type: none"> Lumpectomy^{e,f} without lymph node surgery^g + whole breast radiation therapy^{h,i,j,k} (category 1) or Total mastectomy with or without sentinel node biopsy^l ± reconstruction^m or Lumpectomy^{e,f} without lymph node surgery^g without radiation therapy^{h,i,j,k} (category 2B) 		See Postoperative Treatment (DCIS-2)
DCIS POSTSURGICAL TREATMENT		SURVEILLANCE/FOLLOW-UP			
<p>Risk reduction therapy for ipsilateral breast following breast-conserving surgery^e. Consider tamoxifenⁿ for 5 years for:</p> <ul style="list-style-type: none"> Patients treated with breast-conserving therapy (lumpectomy) and radiation therapy^h (category 1), especially for those with ER-positive DCIS. The benefit of tamoxifen for ER-negative DCIS is uncertain. Patients treated with excision alone^e. <p>Risk reduction therapy for contralateral breast:</p> <ul style="list-style-type: none"> Consider tamoxifenⁿ for 5 years. Consider prophylactic mastectomy^o. <p>See NCCN Guidelines for Breast Cancer Risk Reduction</p>		<p>Interval history and physical exam every 6-12 mo for 5 y, then annually</p> <ul style="list-style-type: none"> Mammogram every 12 mo (and 6-12 mo postradiation therapy if breast conserved) (category 2B) If treated with tamoxifen, monitor per NCCN Guidelines for Breast Cancer Risk Reduction 			

NCCN Sample – Invasive Duct (stage)

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NCCN Guidelines Version 3.2013
NCCN Comprehensive Cancer Network
Invasive Breast Cancer

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LOCOREGIONAL TREATMENT OF CLINICAL STAGE I, IA, OR IB DISEASE OR T3, N1, M0

<p>Total mastectomy with surgical axillary staging^a (category 1) ± reconstruction^b</p>	>4 positive axillary nodes ^c	Postchemotherapy radiation therapy to chest wall (category 1) ± infraclavicular and supraclavicular areas. ^d Strongly consider radiation therapy ^{e,f} to internal mammary nodes (category 2B).	See BINV-4
	1-3 positive axillary nodes	Strongly consider postchemotherapy radiation therapy to chest wall ± infraclavicular and supraclavicular areas. ^d Strongly consider radiation therapy ^{e,f} to internal mammary nodes (category 2B).	
	Negative axillary nodes and tumor >5 cm or margins positive	Consider radiation therapy to chest wall ± infraclavicular and supraclavicular nodes. Strongly consider radiation therapy ^{e,f} to internal mammary nodes (category 2B).	
	Negative axillary nodes and tumor ≤5 cm and close margins (<1 mm)	Consider postchemotherapy radiation therapy ^g to chest wall.	
	Negative axillary nodes and tumor ≤5 cm and margins ≥1 mm	No radiation therapy	

NCCN Sample – Invasive Duct (ER/PR/Her2)

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NCCN Guidelines Version 3.2013
NCCN Comprehensive Cancer Network
Invasive Breast Cancer

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HISTOLOGY	HORMONE RECEPTOR STATUS	HER2 STATUS	SYSTEMIC ADJUVANT TREATMENT
<ul style="list-style-type: none"> Ductal^a Lobular Mixed Metaplastic 	ER positive and/or PR positive	HER2-positive ^b	See Systemic Adjuvant Treatment - Hormone Receptor Positive - HER2-Positive Disease (BINV-5)
		HER2-negative ^b	See Systemic Adjuvant Treatment - Hormone Receptor Positive - HER2-Negative Disease (BINV-6)
	ER negative and PR negative	HER2-positive ^b	See Systemic Adjuvant Treatment - Hormone Receptor Negative - HER2-Positive Disease (BINV-7)
		HER2-negative ^b	See Systemic Adjuvant Treatment - Hormone Receptor Negative - HER2-Negative Disease (BINV-8)
<ul style="list-style-type: none"> Tubular Mucinous 	ER positive and/or PR positive		See Systemic Adjuvant Treatment - Favorable Histologies (BINV-9)
	ER negative and PR negative		



References

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