NAACCR Administers NPCR-Education Contract for the Centers for Disease Control and Prevention (CDC)

Awarded in _____2001

Contract Number: #200-2001-00044
Breast Anatomy
Breast Anatomy

• Breast
  – Made up of milk-producing glands
  – Supported and attached to the chest wall by ligaments
  – Rests on pectoralis major muscle
• Three major hormones affect the breast
  – Estrogen, progesterone, and prolactin

The breast is made up of milk-producing glands (lobules), that are surrounded by a layer of fat. The breast contains no muscle tissue. The breasts are supported and attached to the chest wall by ligaments. The breast tissue rests on the muscle of the chest, the pectoralis major. Hormones that cause changes in the breast during the menstrual cycle are estrogen, progesterone, and prolactin. The hormones also cause breast tissue to develop, enlarge, and produce milk.
Each breast contains 15 to 20 lobes. The lobes are covered and supported by connective tissue or fat. The fat gives the breast its size and shape. Each lobe contains lobules. At the end of the lobules are the sacs that produce milk. The milk is delivered to the nipple by ducts that convey it from the lobules. The breast tissue, which includes the lobes and connective tissue (fat), is covered by skin. The nipple is located on the skin of the breast. Its function is expression of milk produced by the lobules. The pigmented area that surrounds the nipple is the areola.
Breast Clock and Quadrants

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

The diagram on this slide shows the right and left breasts as if the physician was looking at the patient. Each breast is divided into horizontal halves, upper and lower, and vertical halves, inner and outer. If the primary site is described as upper, lower, inner, or outer, the ICD-O-3 primary site code is C50.8, overlapping lesion of breast, because a more specific subsite cannot be determined with that description alone.

The breast halves are divided into quarters or quadrants. The ICD-O-3 code for upper-inner quadrant is C50.2, lower-inner quadrant is C50.3, upper-outer quadrant is C50.4, and lower-outer quadrant is C50.5.

The ICD-O-3 code for nipple and areola is C50.0. If the primary site is the central portion of the breast, subareolar, or beneath the areola, use primary site code C50.1.

Physicians sometimes describe the location of a breast tumor using clock positions. Again, the physician is looking at the patient and assigns the clock times from that view. So, the upper inner quadrant of the right breast is between 12 and 3 o’clock; the lower inner quadrant is between 3 and 6 o’clock; the lower outer quadrant is between 6 and 9 o’clock; and the upper outer quadrant is between 9 and 12 o’clock. When looking at the left breast, the upper outer quadrant is between 12 and 3 o’clock; the lower outer quadrant is between 3 and 6 o’clock; the lower inner quadrant is between 6 and 9 o’clock; and the upper inner quadrant is between 9 and 12 o’clock.
Breast Quadrants

Example 1: Malignant tumor, 3 o’clock, right breast
Answer: C50.8 Overlapping lesion of breast

Example 2: Malignant tumor, 7 o’clock, left breast
Answer: C50.3 Lower-inner quadrant

The following are examples for assigning breast subsite code. The first example is a malignant breast tumor at the 3 o’clock position on the right breast. If you look at the breast clock diagram on the previous slide, you will see that 3 o’clock on the right breast is at the midline of the breast. Tumors on the midline are assigned subsite C50.8, overlapping lesion of the breast. 3 o’clock overlaps the upper and lower quadrants. Example 2 is a malignant tumor of the left breast located at the 7 o’clock position. Again, look at the breast clock diagram. 7 o’clock on the left breast is the lower-inner quadrant and the site code is C50.3.
Regional Lymph Nodes for Breast

- Axillary lymph nodes
  - Located in the underarm to the collarbone
  - Include interpectoral or Rotter nodes
- Internal mammary (parasternal) lymph nodes
  - Tucked under the sternum

The next two slides describe regional lymph nodes for the breast. Lymph drainage from the breast begins with the axillary lymph nodes, which are located from the underarm to the collarbone. The interpectoral or Rotter nodes are classified as axillary lymph nodes. The axillary lymph nodes are sometimes described as level I, II, or III. The lowest level nodes are closest to the breast, and distance from the breast increases as the level number increases. The internal mammary lymph nodes are located under the sternum. They may also be called parasternal lymph nodes. The prefix “para” indicates that they are located around the sternum. The internal mammary lymph nodes are rarely excised in current treatment protocols.
Regional Lymph Nodes for Breast

- Infracavicular (subclavicular) lymph nodes
  - In the deltopectoral groove
- Supraclavicular lymph nodes
  - Above the collarbone

The infraclavicular or subclavicular lymph nodes are found in the deltopectoral groove. That is an area between the clavicle and the chest where the deltoid and pectoral muscles meet. The supraclavicular lymph nodes are located above the collarbone and are the regional lymph nodes located farthest from the breast.
Points B, C, and D on this diagram are axillary lymph nodes. The level I nodes at point B are closest to the breast; the level II nodes at point C are further from the breast near the upper arm; and the level III nodes at point D are the axillary nodes furthest from the breast approaching the collarbone. Point E is the supraclavicular nodes, which are above the collarbone. Point F is the internal mammary nodes located near the sternum or breast bone.
ICD-O-3 Histology Coding

Breast
Caution!!

Pre-2007

Multiple Primary and Histology Rules used in the following slides are based on 2006 rules.
The majority of breast cancers are infiltrating duct carcinoma. The next most common histology is lobular carcinoma. Other cancers seen less frequently include tubular, medullary, papillary, and mucinous carcinoma. The prognosis for infiltrating duct and lobular is similar, but the prognosis is better for medullary, papillary, and mucinous carcinoma of the breast according to the American Cancer Society’s *Clinical Oncology* (2001).
Histogram Coding Rules: Breast

- Rules are a hierarchy
- Use rules in priority order with rule 1 having the highest priority
- Use the first rule that applies
- Rules from SEER Program Coding and Staging Manual (PCSM) 2004, pages 86–87
  - Additional coding information for breast in Appendix C, pages C-471 and C-472

The histology coding rules are a hierarchy. They are listed in priority order and rule 1 has the highest priority. When determining the correct code to record for histology, begin with rule 1 and stop when you get to the first rule that applies. If rule 1 applies, there is no need to go any further. The rules for coding histology are found in the SEER Program Coding and Staging Manual 2004, pages 86–87. Additional information on coding histology for breast tumors is found in Appendix C, pages C471–472, of the SEER Program Coding and Staging Manual.
Histology Coding Rules: Breast

Single Tumor

1. Code the histology if only one type is mentioned in the pathology report

Example: Comedocarcinoma, UOQ right breast

Answer: 8501/3 Comedocarcinoma

The first set of rules is for single tumors.

Rule 1: Code the histology if only one type is mentioned in the pathology report.

Example: The patient has 1 lesion in the upper outer quadrant of the breast described as comedocarcinoma. The histology code is 8501/3, comedocarcinoma.
Histology Coding Rules: Breast

2. Code the **invasive histology** when tumor is both invasive and in situ

*Example 1:* Right breast tumor, tubular carcinoma with lobular carcinoma in situ

- Tubular carcinoma 8211/3
- Lobular carcinoma in situ 8520/2

**Answer:** 8211/3 Tubular carcinoma

**Rule 2:** Code the invasive histology when tumor is both invasive and in situ.

**Example 1:** The single breast tumor contains both tubular carcinoma and lobular carcinoma in situ. The tubular carcinoma is recorded because it is invasive and the lobular carcinoma is in situ. The correct code is 8211/3.
2. (Continued)

*Example 2:* Ductal carcinoma in situ, 6 mm focus of invasive pure mucinous carcinoma, that appears to have arisen in intraductal papillary carcinoma of left breast

- Ductal carcinoma in situ 8500/2
- Invasive mucinous carcinoma 8480/3
- Intraductal papillary carcinoma 8503/2

**Answer:** 8480/3 Mucinous carcinoma

*Example 2:* This tumor includes ductal carcinoma in situ with a focus of invasive pure mucinous carcinoma that appears to have arisen in an intraductal papillary carcinoma. There are three histologic types in this tumor. Rule 2 instructs us to record the histology for the invasive portion of the tumor. The only portion of the tumor that is invasive is the mucinous carcinoma. The ductal and papillary are both in situ tumors. The histology that should be recorded is mucinous carcinoma, 8480/3, because it is invasive.
Histology Coding Rules: Breast

2. (Continued)

*Exception:* If the histology of the invasive component is an NOS term (e.g., carcinoma, adenocarcinoma), then code the histology of the specific term associated with the in situ component and an invasive behavior.

*Exception to rule 2:* If the histology of the invasive component is an NOS term (e.g., carcinoma, adenocarcinoma), then code the histology of the specific term associated with the in situ component and an invasive behavior.
Example 3: The single breast lesion contains carcinoma, a malignant NOS histology, and in situ ductal carcinoma, a specific histology with in situ behavior. The exception to rule 2 tells us to code the specific histology, in this case ductal carcinoma, and to code the malignant behavior from the NOS histology. The correct code is 8500/3, infiltrating duct carcinoma.
Histology Coding Rules: Breast

3. **Use a mixed histology code if one exists**
4. **Use a combination code if one exists**

The next two rules pertain to mixed and combination codes.

**Rule 3:** Use a **mixed** histology code if one exists.

**Rule 4:** Use a **combination** code if one exists. Mixed or combination codes usually include the words “and” or “mixed” in the diagnosis.
Example 1: Invasive ductal carcinoma, mucinous type, and invasive lobular carcinoma; left breast single lesion

- Ductal carcinoma 8500/3
- Lobular carcinoma 8520/3

**Answer:** 8522/3 Infiltrating duct and lobular carcinoma

Example 1: The histology is invasive ductal carcinoma and invasive lobular carcinoma. There is a combination code for infiltrating duct and lobular carcinoma, and it is 8522/3. The mucinous type is ignored because there is a combination code to use. Type indicates majority of tumor, but tumor majority is addressed in a later rule. The histology coding rules are a hierarchy. When you get to a rule that fits, you don’t go any further. So, use the combination code as stated in rule 4 and ignore the mucinous type.
Example 2: There is a single lesion with duct carcinoma and tubular carcinoma. The combination code for these histologies in one lesion is 8523/3, infiltrating duct mixed with other types of carcinoma. The alphabetic index of the ICD-O-3 Coding Manual directs you to this combination code. Infiltrating duct mixed with other types of carcinoma is the preferred term, but infiltrating duct and tubular carcinoma is an equivalent term and uses the same code.
Histology Coding Rules: Breast

5. Code the more specific term when one of the terms is NOS and the other is a more specific description of the same histology.

Example: Breast lesion, adenocarcinoma and mucinous adenocarcinoma

- Adenocarcinoma, NOS 8140/3
- Mucinous adenocarcinoma 8480/3

Answer: 8480/3 Mucinous adenocarcinoma

Rule 5: Code the more specific term when one of the terms is NOS and the other is a more specific description of the same histology.

Example: The single breast lesion contains adenocarcinoma and mucinous adenocarcinoma. Adenocarcinoma is an NOS histology and mucinous adenocarcinoma is a more specific description of the same histology. Code the more specific description as instructed in rule 5. In this case mucinous adenocarcinoma is the histology to record because it is more specific.
6. Code the **majority** of the tumor
   - Terms that mean majority of tumor:
     - Predominantly; with features of; major; type (eff. 1/1/99); with….differentiation (eff. 1/1/99); pattern and architecture (if in CAP protocol; eff. 1/1/2003)
   - Terms documented in *SEER PCSM 2004*, page 85

**Rule 6:** Code the **majority** of the tumor. Terms that indicate tumor **majority** include “predominantly,” “with features of,” “major,” “type” (effective January 1, 1999), “with…differentiation” (effective January 1, 1999), and “pattern and architecture” (if in College of American Pathologists protocol, effective January 1, 2003). The list of “majority” terms is found on page 85 of the *SEER Program Coding and Staging Manual 2004*. 
Histology Coding Rules: Breast

6. (Continued)

Example 1: Breast tumor, duct adenocarcinoma with apocrine features

Duct adenocarcinoma 8500/3
Apocrine adenocarcinoma 8401/3

Answer: 8401/3 Apocrine adenocarcinoma

Example 1: The breast tumor is described as duct adenocarcinoma with apocrine features. “Features” is a term that indicates majority of the tumor. Record the majority of the tumor as instructed in rule 6. The correct code is 8401/3, apocrine adenocarcinoma, because it is the majority of the tumor. If this tumor would have been described as duct adenocarcinoma and apocrine adenocarcinoma, the combination code, 8523/3 (infiltrating duct mixed with other types of carcinoma) would have been recorded. The use of the term “and” with the two histologies leads to a mixed or combination code.
Histology Coding Rules: Breast

6. (continued)
   • Terms that DO NOT mean majority of tumor
     – With foci of; focus of/focal; areas of; elements of; component (eff. 1/1/99)
   • Terms documented in SEER PCSM 2004, page 85

Terms that do not mean majority of tumor are “with foci of,” “focus of/focal,” “areas of,” “elements of,” and “component” (effective January 1, 1999). They are documented on page 85 of the SEER Program Coding and Staging Manual 2004.
Example 2: The single breast tumor is described as lobular carcinoma in situ with areas of cribriform carcinoma in situ. “With areas of” does not indicate majority of tumor. The lobular carcinoma in situ is considered the majority and would be recorded for histology. The correct code is 8520/2.
Histology Coding Rules: Breast

7. Code the **numerically higher** ICD-O-3 code

*Example:* Left breast, apocrine and mucinous adenocarcinoma

- Apocrine adenocarcinoma 8401/3
- Mucinous adenocarcinoma 8480/3

*Answer:* 8480/3 Mucinous adenocarcinoma

**Rule 7:** Code the **numerically higher** ICD-O-3 code. This is the last rule for single tumors. This rule should be used infrequently.

**Example:** The single left breast tumor contains apocrine and mucinous adenocarcinoma. None of the previous rules applies, so the histology recorded is that with the higher ICD-O-3 code. In this case the higher code is 8480/3, mucinous adenocarcinoma.
Histology Coding Rules: Breast

Multiple Tumors with Different Behaviors in Same Organ Reported as Single Primary

Code the histology of the invasive tumor when one lesion is in situ and the other is invasive.

Example: 2 lesions, right breast:
1) LOQ, invasive lobular CA 8520/3
2) UIQ, noninfiltrating lobular CA 8520/2

Answer: 8520/3 Lobular carcinoma, NOS

This rule is used when there are multiple tumors with different behaviors in the same organ reported as a single primary. Code the histology of the invasive tumor when one lesion is in situ and the other is invasive.

Example: There are 2 lesions in the right breast. The lesion in the lower outer quadrant contains invasive lobular carcinoma, histology with malignant behavior, and the lesion in the upper inner quadrant contains noninfiltrating lobular carcinoma, the same histology with in situ behavior. This is one primary, and the malignant histology, 8520/3 lobular carcinoma, is recorded.
Histology Coding Rules: Breast

Multiple Tumors in Same Organ Reported as Single Primary

1. Code the histology when multiple tumors have the same histology

   Example: Left breast
   1) UOQ tumor, medullary CA 8510/3
   2) UIQ tumor, medullary CA 8510/3

   Answer: 8510/3 Medullary carcinoma

The rules for multiple tumors in the same organ reported as a single primary follow.

Rule 1: Code the histology when multiple tumors have the same histology.

Example: The tumors in the upper outer quadrant and upper inner quadrant of the left breast both contain the same histology, medullary carcinoma. Record the histology, 8510/3 medullary carcinoma. Histology coding rules 2 and 3 as well as 4a and 4d for multiple tumors in the same organ reported as a single primary are not applicable to breast and will not be reviewed at this time.
Histology Coding Rules: Breast

4. Use a combination code for
   b. Breast: Paget disease and duct carcinoma (8541)

*Example 1: Right breast*
   1) Paget disease of nipple 8540/3
   2) LIQ, ductal carcinoma 8500/3

*Answer: 8541/3 Paget disease and infiltrating duct carcinoma of breast*

**Rule 4B:** Use a combination code when a patient has Paget disease of the breast and a separate duct carcinoma in the same breast. In example 1, the patient has Paget disease of the nipple of the right breast and ductal carcinoma in the lower inner quadrant of the right breast. These two lesions are considered one primary and assigned code 8541/3, Paget disease and infiltrating duct carcinoma of the breast.
Histology Coding Rules: Breast

4. Use a combination code for
   c. Breast: Duct carcinoma and lobular carcinoma (8522)

   Example 2: left breast
   1) UOQ, ductal CA in situ 8500/2
   2) LOQ, lobular CA in situ 8520/2

   Answer: 8522/2 Intraductal carcinoma and lobular carcinoma in situ

Rule 4C: Use the combination code, 8522, if the patient has two tumors in the same breast and one is ductal carcinoma and the other is lobular carcinoma. In example 2, the patient has ductal carcinoma in situ in the upper outer quadrant of the left breast and lobular carcinoma in situ in the lower outer quadrant of the left breast. This is one primary, and the histology code is 8522/2, intraductal carcinoma and lobular carcinoma in situ.
Histology Coding Rules: Breast

5. Code the more specific term when one of the terms is NOS and the other is a more specific description of the same histology.

*Example:* Right breast

1) UIQ, carcinoma 8010/3
2) LIQ, cribriform carcinoma 8201/3

*Answer:* 8201/3 Cribriform carcinoma

**Rule 5:** Code the more specific term when one of the terms is NOS and the other is a more specific description of the same histology.

**Example:** The patient has two lesions in the right breast. The lesion in the upper inner quadrant is carcinoma, an NOS histology. The lesion in the lower inner quadrant is cribriform carcinoma, a more specific description of carcinoma. The more specific histology, cribriform carcinoma, 8201/3, is recorded.
Rule 6: Code all other multiple tumors with different histologies as multiple primaries. If there are two lesions in the same breast, they are considered two primaries if the histology in each lesion is different. If none of the previous five rules applies to the situation, the histology is different and the two lesions are considered separate primaries.

Example: There are two lesions in the left breast. The upper outer quadrant lesion is lobular carcinoma, and the lower inner quadrant lesion is mucinous carcinoma. None of the previous five rules applies, and the histologies are different. The two lesions of the left breast are considered separate primaries and two abstracts are completed.
### Coding Behavior for Breast

**Synonyms for in situ, behavior code 2**

- Confined to epithelium
- Intracystic
- Intraductal
- Intraepidermal
- Intraepithelial
- No stromal invasion
- Noninfiltrating
- Noninvasive
- Stage 0

We have completed the discussion of histology coding rules and will now discuss coding behavior for breast cancer. In situ breast tumors, behavior code 2, and malignant breast tumors, behavior code 3, are reportable. Synonyms for in situ for breast cancer include confined to epithelium, intracystic, intraductal, intraepidermal, intraepithelial, no stromal invasion, noninfiltrating, noninvasive, and stage 0. When these descriptions are used and there is no documentation of any invasive disease, the ICD-O-3 behavior code is 2.
Coding Grade for Breast

- Histologic grade, differentiation, codes
  1 = well differentiated
  2 = moderately differentiated
  3 = poorly differentiated
  4 = undifferentiated

Grade is the measurement of how closely cancer cells resemble the cells of the organ in which the cancer originated. Code 1 indicates that the cancer cells closely resemble those of the organ of origin. As the grade number increases, the resemblance of cancer cells to those of the organ of origin decreases. Grade 4 cancers have little or no resemblance to the cells of the organ of origin. The general code definitions for grade are shown on this slide; 1 is well differentiated, 2 is moderately differentiated, 3 is poorly differentiated, and 4 is undifferentiated.
Bloom-Richardson (BR) is the grading system used most often for breast cancer. A score between 1 and 3 is assigned to three categories. The sum of the three scores is the BR score. The range for BR scores is between 3 and 9. The score for the first category is based on the frequency of cell mitosis or cell division. The second category is tubule formation, and the score is based on the percentage of cancer composed of tubular structures. The third category is nuclear pleomorphism, and the score is based on the change in cell size and uniformity.

BR may also be called modified Bloom-Richardson, Scarff-Bloom-Richardson, SBR grading, BR grading, Elston-Ellis modification of Bloom Richardson score, the Nottingham modification of Bloom Richardson score, Nottingham-Tenovus, or Nottingham grade. BR may also be expressed as a grade. BR score of 3–5 is low grade and is recorded as grade 1; BR score of 6 or 7 is intermediate grade and is recorded as grade 2; and BR score of 8 or 9 is high grade and is recorded as grade 3.
Coding Grade for Breast

- Code grade for breast cancer in the following priority order per FORDS, page 13, and SEER PCSM 2004, page 94:
  1. Bloom-Richardson scores converted to grade
  2. Bloom-Richardson grade
  3. Nuclear grade
  4. Terminology
  5. Histologic grade

Some pathology reports include multiple grading systems for the same breast cancer. If different grading systems are used to describe the same cancer, code grade in the following priority order: 1) Bloom-Richardson scores; 2) Bloom-Richardson grade; 3) nuclear grade; 4) terminology; and 5) histologic grade. This is documented in FORDS, page 13, and in SEER Program Coding and Staging Manual 2004, page 94.
The table shown on this slide is a conversion table for breast grade. It is used to convert the documented grade to the appropriate code. The first five columns list the description for a specific grading system used for breast cancer, and the last column lists the code that matches the description. The columns are in priority of use order as described on the previous slide. So, if the BR score is 4, the grade code is 1. If there is no BR score or grade but nuclear grade is documented as 2/3, then the code is 2. If the only description of grade is poorly differentiated, the grade code is 3. If the BR score is documented as 7 and the tumor is also described as poorly differentiated, code 2 is assigned because the BR score takes priority over terminology.
Abstracting Breast Cases
Date of Diagnosis
Breast

• Review all sources for first date of diagnosis
  – Physical exams
  – Imaging reports
    • Mammography, ultrasound of breast
  – Pathologic confirmation
  – Physicians’ and nurses’ notes
  – Consultation reports

Review the patient’s health record carefully to identify the date of first cancer diagnosis. Documentation may be found in the physical exam, imaging reports including mammography and/or ultrasound of the breast, pathology reports, physicians’ and nurses’ notes, and consultation reports. If a patient is receiving treatment at your facility and was diagnosed elsewhere, the date of diagnosis may be found in copies of reports forwarded from the diagnosing facility or in consultation reports. When determining diagnosis date, remember the ambiguous terms that constitute a cancer diagnosis and the terms that do not.
Ambiguous Diagnostic Terms That Constitute Cancer Diagnosis

- Apparent(ly)
- Appears
- Comparable with
- Compatible with
- Consistent with
- Favors
- Malignant appearing
- Most likely
- Presumed
- Probable
- Suspect(ed)
- Suspicious (for)
- Typical of

The terms shown on this slide are ambiguous terms that constitute a cancer diagnosis. If the diagnosis includes ambiguous terms listed on this slide and is the first diagnosis of breast cancer documented, then the date it was made is the date of diagnosis. The list of terms is documented in FORDS, page 3, and SEER Program Coding and Staging Manual 2004, page 3.
Ambiguous Diagnostic Terms That **Do Not** Constitute Cancer Diagnosis

- Cannot be ruled out
- Equivocal
- Possible
- Potentially malignant
- Questionable
- Rule out
- Suggests
- Worrisome

If the terms on this slide are included in a diagnosis, they do not constitute a diagnosis of cancer. The date the information was discovered would not be the date of diagnosis. The list of terms is documented in *FORDS*, page 4, and *SEER Program Coding and Staging Manual 2004*, page 3.
Breast Cancer Work-up

- Physical examination
  - Breast exam
  - Evaluation of lymph nodes

- Imaging studies
  - Mammography
  - Breast ultrasound
  - Bone scan
  - Chest X-ray

Work-up for breast cancer begins with the physical examination. The breast should be examined and palpated for a mass. Lymph nodes should be evaluated for swelling or adenopathy. Mammography is used to identify location and other characteristics of a palpable breast mass. It is also used as a screening tool to identify possible breast malignancies before a mass is palpable. Breast ultrasound may also be used to identify characteristics of a breast mass including size and location. Bone scan and chest X-ray both help in identification of metastasis.
Breast Cancer Work-up

- Biopsy
  - Fine needle aspiration
  - Core needle
  - Excisional

A biopsy of the breast is performed when other work-up indicates possible breast cancer. Fine needle aspiration biopsy and core needle biopsy will remove part of a mass to evaluate for cancer. An excisional biopsy may be performed to diagnose the cancer, but is also considered treatment. Pathology from biopsy will identify the histology, behavior, and grade of the tumor.
Coding Primary Site

- Review health record to determine subsite of breast
- Priority order for coding subsite per SEER PCSM 2004, Appendix C, page C-470
  1. Pathology report
  2. Operative report
  3. Physical examination
  4. Mammogram, ultrasound

When assigning the primary site, record the most specific breast subsite information documented in the patient’s health record. If there is conflicting information in the record, use reports in the following order to code the subsite: 1) pathology report; 2) operative report; 3) physical exam; and 4) mammogram, ultrasound. This is documented in site-specific coding instructions for the breast in the SEER Program Coding and Staging Manual 2004, Appendix C, page C-470.
Laterality for Breast

• Code the laterality for the breast in which the tumor originated
• Count cancer in both breasts as separate primaries unless metastasis from one side to the other is documented
• Code laterality for all breast subsites

Laterality describes the side of a paired organ or side of the body on which a tumor originates. The breasts are paired organs. If both sides of a paired organ contain cancer, they are counted as separate primaries unless one side is described as metastatic from the other. Laterality must be coded for all breast subsites.
Collaborative Staging: Breast

Presentation developed by Collaborative Staging Steering Committee
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2005 Update
CS Breast Cancer

- Collaborative Staging (CS) data items submitted to NPCR
  - CS Extension
  - CS Lymph Nodes
  - CS Mets at Dx

The collaborative staging data items discussed in this presentation are those required to be submitted to NPCR. For breast they include CS extension, CS lymph nodes, and CS mets at dx. The complete CS data set is required to be collected by Commission on Cancer approved cancer programs.
CS Breast Cancer

- **August 2004 changes**
  - CS Extension
    - Inflammatory Breast Cancer
    - One code made “Obsolete”
- **March 2005 changes**
  - CS Lymph Nodes
    - Change in code description-clarification

In August 2004 there was a change in use of CS extension codes for inflammatory breast cancer. In March 2005 there was a change in the code description for CS lymph nodes. These changes will be discussed in detail later in the presentation.
CS Extension Breast: Notes

1. Changes such as dimpling of the skin, tethering, and nipple retraction do not alter the classification

2. Consider adherence, attachment, fixation, induration, and thickening as clinical evidence of extension to skin or subcutaneous tissue; code to 20

Presented here are the coding notes that proceed the CS extension codes for breast in the *Collaborative Staging Manual*.

**Note 1:** The extension classification is not altered by changes to the breast such as dimpling of the skin, tethering, and nipple retraction because these changes are caused by tension on Cooper’s ligament and not by actual skin involvement.

**Note 2:** If there is adherence, attachment, fixation, induration, and/or thickening of the skin of the breast, it is considered clinical evidence of extension to the skin and code 20 is assigned.
3. Consider "fixation, NOS" as involvement of pectoralis muscle; code to 30.

4. If extension code is ..., then behavior code must be ...

<table>
<thead>
<tr>
<th>Extension</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>2</td>
</tr>
<tr>
<td>05, 07</td>
<td>2 or 3</td>
</tr>
<tr>
<td>10 (or higher)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Note 3:** Fixation, NOS, is considered involvement of the pectoral muscle and assigned code 30.

**Note 4:** If the extension code is 00, in situ, then the behavior code in the ICD-O-3 code must be 2, in situ. If the extension code is 05, Paget disease of the nipple without underlying tumor, or 07, Paget disease of the nipple without underlying invasive carcinoma pathologically, then the behavior code of the ICD-O-3 histology may be 2, in situ, or 3, malignant. If the extension code is 10 or higher, the ICD-O-3 behavior code must be 3, malignant.
5. Inflammatory carcinoma

- Clinical AND pathologic entity
- Characterized by presence of diffuse erythema and edema (peau d'orange) of breast
- Often occurs without an underlying palpable mass
- Clinical findings should involve the majority of the skin of the breast

Note 5: Inflammatory carcinoma of the breast is a clinical entity as well as a pathologic diagnosis. Clinically it presents with diffuse erythema and edema of the breast and it does not always include an underlying palpable breast mass. The clinical findings such as erythema and edema should involve the majority of the skin of the breast for a diagnosis of inflammatory carcinoma.
5. Inflammatory carcinoma (continued)

- Skin changes arise quickly in the affected breast
- Neglected locally advanced breast cancer is not inflammatory carcinoma
- Mass and thickening of the skin over the breast may be detectable on imaging
  - Due to tumor emboli within dermal lymphatics that may or may not be apparent on skin biopsy

Skin changes usually arise quickly in the breast affected by inflammatory carcinoma. Inflammatory carcinoma should not be used as a diagnosis for those patients who present with a neglected locally advanced cancer. The presentation is similar but it is not inflammatory carcinoma. On imaging of a breast with inflammatory carcinoma, a detectable mass and thickening of the skin over the breast may be identified due to tumor emboli within the dermal lymphatics. The tumor emboli may or may not be apparent on skin biopsy.
5. Inflammatory carcinoma (continued)

- Pathologic involvement of the dermal lymphatics alone does not indicate inflammatory carcinoma
- Biopsy is needed to demonstrate dermal lymphatic or breast parenchyma involvement

Because inflammatory carcinoma is primarily a clinical diagnosis, involvement of dermal lymphatics alone without clinical findings is not a diagnosis of inflammatory carcinoma. Along with clinical findings, however, a biopsy is necessary to demonstrate involvement of dermal lymphatics or breast parenchyma.
6. Recording inflammatory carcinoma

- Revised August 2004
- Record in a text field
  - Stated diagnosis of inflammatory carcinoma
  - Extent and character of skin involvement

Extension codes and notes for coding inflammatory carcinoma were revised in August 2004.

**Note 6:** The stated diagnosis of inflammatory carcinoma as well as the clinical statement describing the character and extent of skin involvement should be recorded in a text field on the abstract.
CS Extension Breast

• Code 00
  – In situ
• Code 05
  – Paget disease of nipple (WITHOUT underlying tumor)
• Code 07
  – Paget disease of nipple (WITHOUT underlying invasive carcinoma pathologically)

Assign code 00 if the breast tumor is in situ or noninvasive. If any of the synonyms for in situ presented previously are used, assign CS extension to in situ. However, if the tumor is in situ with microinvasion, CS extension cannot be coded as in situ. CS extension also cannot be coded as in situ if the tumor is in situ but there is regional lymph node involvement or distant metastasis. Code 05 is assigned for CS extension when the diagnosis is Paget disease of the nipple without underlying tumor. The Paget disease may be in situ or invasive. Code 07 is assigned for CS extension when the diagnosis is Paget disease of the nipple without underlying invasive carcinoma pathologically. Code 07 may be assigned if the diagnosis is Paget disease of the nipple with in situ carcinoma. The Paget disease may be in situ or invasive.
CS Extension Breast

• Code 20
  – 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

Use code 20 when the tumor invades the subcutaneous tissue or fat that surrounds the lobes in the breast. If there is direct extension of the tumor to the skin from the dermal lymphatics adjacent to the primary tumor, use code 20. Involvement of the skin of the primary breast including skin of the nipple or the areola is also assigned code 20.
Code 30 is assigned when the tumor is attached or fixated to the pectoral muscle or underlying tissue of the breast. The pectoral muscle lies underneath the breast. Underlying tissue is located beneath the breast and does not include the subcutaneous tissue that surrounds the breast lobes. Invasion of the pectoral fascia or muscle is also assigned code 30. The pectoral fascia is a band of fibrous tissue that covers or envelops the pectoral muscle. Code 40 is assigned when the tumor directly invades or fixates the chest wall, the intercostal or serratus anterior muscle, or the rib. The intercostal or serratus anterior muscle begins at the rib.
This diagram shows tumors assigned CS extension codes 10, 20, or 30. The three tumors assigned code 10 all are confined to the breast tissue even though the tumor size differs. The tumor assigned extension code 20 infiltrates the skin of the breast. The tumor assigned extension code 30 invades tissue underlying the breast but does not extend to the chest wall.
The CS extension code for this tumor that is 3.1 cm in size is 10 because it is confined to the breast.
The extension code for this tumor is 20 because of the involvement of the skin of the nipple.
This diagram shows a CS extension code 40 tumor that invades the chest wall. Tumors coded to 40 may also involve the ribs and/or intercostal or serratus anterior muscle.
Use code 51 when the farthest extension is satellite skin nodules of the primary breast; ulceration of the skin of the primary breast; or the following conditions involving 50% or less of the breast or percent involved is NOS: edema of skin, en cuirasse, erythema, inflammation of the skin, and peau d’orange. All of these skin conditions indicate that the skin of the breast is involved extensively by tumor. These skin conditions alone are not a diagnosis of inflammatory carcinoma.
CS Extension Breast

• Code 52
  – Any of the following involving more than 50% of the breast: edema of skin; en cuirasse, erythema, inflammation of skin; peau d’orange

Code 52 is used if the following conditions involve more than 50% of the breast without a diagnosis of inflammatory carcinoma: edema of skin, en cuirasse, erythema, inflammation of the skin, and peau d’orange.
This diagram shows examples of conditions assigned CS extension code 51. It shows both a satellite skin nodule and ulceration of the skin of the breast by tumor. Both conditions are assigned code 51.
When tumor invades the chest wall (40) and involves the skin extensively (51, 52), assign code 61 or 62. The diagram shows a tumor involving the chest wall and ulcerating the skin. Code 61 is assigned if the chest wall is involved and the skin involvement is edema, en cuirasse, erythema, inflammation, or peau d’orange in 50% or less of the skin or percent of skin involved not stated, skin conditions defined in code 51. If there is chest wall involvement as well as any of the skin conditions just described in more than 50% of the breast, skin conditions defined in code 52, assign code 62.
CS Extension Breast

• Code 71
  – Diagnosis of inflammatory carcinoma
    • WITH a clinical description of inflammation, erythema, edema, peau d’orange, involving less than 50% of skin of breast, or percent of involvement not stated
    • WITH or WITHOUT dermal lymphatic infiltration
  – Inflammatory carcinoma, NOS

As stated earlier in the presentation, the extension codes for inflammatory carcinoma were revised in August 2004. Code 71 is assigned to cases with a diagnosis of inflammatory carcinoma and a clinical description of inflammation, erythema, edema, and/or peau d’orange in 50% or less of the skin of the breast or percent involved not stated. If the diagnosis is inflammatory carcinoma, NOS, code 71 is used. It is important to remember if the skin conditions listed on the slide are present but there is no diagnosis of inflammatory carcinoma, the correct extension code is 51 for the skin conditions alone or 61 for the skin conditions as well as involvement of the chest wall.
CS Extension Breast

- Code 72
  - OBSOLETE August 2004

- Code 73
  - Diagnosis of inflammatory carcinoma
    - WITH a clinical description of inflammation, erythema, edema, peau d’orange, of more than 50% of breast
    - WITH or WITHOUT dermal lymphatic infiltration

Code 72 was made obsolete in August 2004. Codes 71 and 72 were combined. All cases assigned code 72 should be reviewed and recoded to 71. Code 73 is assigned when a patient has a diagnosis of inflammatory carcinoma with a clinical description of inflammation, erythema, edema, and/or peau d’orange in more than 50% of the breast with or without dermal lymphatic infiltration. If the skin conditions are present and there is no diagnosis of inflammatory carcinoma, use code 52 for the skin conditions alone or code 62 for the skin conditions and involvement of the chest wall.
This diagram illustrates inflammatory carcinoma of the breast. As discussed previously, inflammatory carcinoma is both a clinical and pathologic entity. To assign the CS extension codes for inflammatory carcinoma, 71 and 73, there must be both clinical and pathologic evidence of the condition. Inflammatory carcinoma of the breast is an advanced and accelerated breast cancer that requires immediate aggressive treatment. This usually is chemotherapy followed by surgery. Inflammatory carcinoma has a higher risk of recurrence than other forms of breast cancer.
CS Extension Breast

- Enhanced MRIs of inflammatory breast cancer showing dermal lymphatic invasion

Image source: www.vci.org/inficase2.htm

This slide shows a MRI view of inflammatory carcinoma. The slide on the left shows less than 50% skin involvement and is assigned code 71. The slide on the right shows more than 50% involvement and is assigned code 73.
These are the coding notes that proceed the CS lymph nodes codes in the CS Manual.

**Note 1:** Only regional lymph node involvement is coded in CS lymph nodes. Involvement of distant lymph nodes is coded in CS mets at dx.

**Note 2:** If the nodes are positive but the size of involvement is not stated, assume the size of metastasis is greater than 0.2 mm and code as lymph node involvement. The difference in definition between lymph node involvement and isolated tumor cells is based on the size of the involvement and the biologic activity. Metastasis in the lymph region of the breast greater than 0.2 mm in size is defined as lymph node involvement. When there is lymph node involvement but the specific lymph node region is not documented, assign CS lymph nodes code 60. The definition for code 60 is axillary/regional lymph nodes, NOS or lymph nodes, NOS.
3. If no lymph nodes were surgically removed, use only these codes for clinical evaluation of axillary nodes:
   00 - Clinically negative
   50 - Fixed/matted nodes
   60 - Clinically positive axillary nodes
   99 - Unknown/not stated

**Note 3:** If lymph nodes were not surgically removed, use clinical information to code CS lymph nodes. The codes that are applicable to describe the clinical evaluation of the axillary nodes are: 00, clinically negative; 50, fixed/matted nodes; 60, clinically positive axillary nodes; and 99, unknown/not stated. The other codes for CS lymph nodes are not applicable in this situation.
CS Lymph Nodes Breast: Notes

4. If pre-surgical therapy is given and there is clinical evaluation of nodes, use only the following for clinical evaluation of axillary nodes AND code a '5' in “CS Reg Nodes Eval” field:

- 00 - Clinically negative
- 50 - Fixed/matted nodes
- 60 - Clinically positive axillary nodes

If there is no clinical evaluation of nodes, use information from path evaluation and code a '6' in “CS Reg Nodes Eval” field

Note 4: If the patient receives adjuvant therapy such as radiation or chemotherapy prior to surgical removal of lymph nodes, the clinical evaluation of the regional nodes should be used to code CS lymph nodes. The applicable codes in this situation are: 00, clinically negative; 50, fixed/matted nodes; and 60, clinically positive axillary nodes. We are not discussing the use of evaluation codes in this presentation, but it is important to note that in this situation evaluation code 5 is used to indicate the lymph node status was based on clinical information. In the case where there is no clinical evaluation of lymph nodes in a patient that received adjuvant therapy prior to surgical removal of lymph nodes, code the lymph node involvement information from the pathology report and assign code 6 in the evaluation field. Evaluation code 6 indicates that the lymph node status was coded from pathology information gathered after the patient had pre-surgical adjuvant therapy.
5. Isolated tumor cells (ITC)
   - 03/05 Clarification
   - Single tumor cells or small clusters ≤ 0.2 mm
   - Usually detected only by immunohistochemical (IHC) or molecular studies but may be verified on H & E stains

**Note 5:** Isolated tumor cells (ITCs) are single tumor cells or small clusters of tumor cells that are no greater than 0.2mm in size. They are usually detected by immunohistochemistry (IHC) or molecular methods. However, they may be verified on H & E (hematoxylin and eosin) stains. H & E stains are performed on tissue sections as part of the pathologic examination of excised tissue.
CS Lymph Nodes Breast: Notes

5. ITCs (Continued)
   - Do not usually show evidence of malignant activity
   - Lymph nodes with ITCs only are NOT considered positive lymph nodes

ITCs don’t usually show evidence of malignant activity including proliferation or stromal reaction, and they are NOT considered or coded as positive lymph nodes.
CS Lymph Nodes Breast: Notes

5. ITCs (Continued)

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<thead>
<tr>
<th>Use</th>
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<tr>
<td>00</td>
<td>No nodes involved OR ITCs detected by IHC or molecular studies only</td>
</tr>
<tr>
<td>05</td>
<td>ITCs detected on routine H &amp; E stains</td>
</tr>
</tbody>
</table>

If a patient does have ITCs in the lymph region, the CS lymph nodes code must be either 00, no nodes involved or ITCs detected by IHC or molecular methods only; or 05, no nodes involved but ITCs detected on routine H & E stains. Information about IHC and molecular studies results are coded in SSF4 and SSF5. We won’t discuss those data items during this presentation because they are not submitted to NPCR.
CS Lymph Nodes Breast

• Code 00
  – No regional lymph node involvement OR ITCs detected by IHC or molecular methods ONLY

• Code 05
  – No regional lymph nodes BUT ITCs detected on routine H & E stains

Code 00 is assigned if there is no involvement of regional lymph nodes for the breast. It is also assigned if ITCs are found on IHC or by molecular methods. Code 05 is assigned if there is no regional lymph node involvement but ITCs are identified on H & E stains of pathologic tissue. Codes 00 and 05 indicate negative lymph node involvement even if ITCs are present.
CS Lymph Nodes Breast

• Code 13
  – Axillary lymph nodes, ipsilateral, micrometastasis ONLY detected by IHC ONLY

• Code 15
  – Axillary lymph nodes, ipsilateral, micrometastasis ONLY detected or verified on H & E; Micrometastasis, NOS

Code 13 is assigned when there is micrometastasis of regional nodes but the micrometastasis is detected only by immunohistochemistry (IHC). Micrometastasis is defined as lymph node involvement greater than 0.2 mm but not greater than 2.0 mm in size. It is considered regional lymph node involvement. Code 15 is used when micrometastasis in the ipsilateral axillary lymph nodes is detected or verified by H & E stain of pathologic tissue. Micrometastasis that is documented but unknown if determined through IHC or H & E stain is also assigned code 15. The same definition is used for micrometastasis in both codes 13 and 15.
Code 25 is used when there is involvement of movable ipsilateral axillary lymph nodes with at least one metastasis greater than 2.0 mm in size. The word movable does not need to be included in the description to use this code. If involved axillary lymph nodes are not described as matted or fixed, they are assumed to be movable. This is documented in the SEER Inquiry System (SINQ) ID #20051018. Assign code 26 if the only documentation of regional lymph node involvement is the physician’s assignment of N1 for AJCC TNM Staging. Assign code 28 if the only documentation of regional lymph node involvement is the physician’s assignment of N2 for AJCC TNM Staging.
CS Lymph Nodes Breast

- **Code 50**
  - Fixed/matted ipsilateral axillary nodes, positive with more than micrometastasis
  - Fixed/matted ipsilateral axillary nodes, NOS

- **Code 60**
  - Axillary/regional lymph nodes, NOS
  - Lymph nodes NOS

Code 50 is assigned when ipsilateral axillary lymph nodes are fixed/matted to each other or to other structures. The metastasis should be greater than 2.0 mm in size or size, NOS. When the most specific description of lymph node involvement is axillary lymph nodes, regional lymph nodes, or lymph nodes NOS, assign code 60. This code is used most often when the regional lymph node code is based on clinical evaluation.
## CS Lymph Nodes Breast

- **Code 71**
  - Internal mammary nodes, ipsilateral, positive on sentinel nodes but not clinically apparent **WITHOUT** axillary lymph nodes, ipsilateral
- **Code 72**
  - Internal mammary nodes, ipsilateral, positive on sentinel nodes but not clinically apparent **WITH** axillary lymph nodes, ipsilateral

Assign code 71 if ipsilateral internal mammary lymph nodes are involved but ipsilateral axillary lymph nodes are NOT involved. Assign code 72 if both ipsilateral internal mammary lymph nodes and ipsilateral axillary lymph nodes are involved. For both codes 71 and 72 the internal mammary node involvement is identified by sentinel node biopsy. The involvement of the internal mammary nodes was not apparent clinically either by positive imaging or clinical exam.
CS Lymph Nodes Breast

• Code 73
  – Internal mammary nodes, ipsilateral, positive on sentinel nodes but not clinically apparent UNKNOWN if positive axillary lymph nodes, ipsilateral

If ipsilateral internal mammary nodes are identified as involved by sentinel node biopsy but are not clinically apparent by imaging or clinical exam and it is UNKNOWN if the ipsilateral axillary nodes are positive, assign code 73. So, CS lymph nodes codes 71, 72, or 73 are assigned when internal mammary lymph node involvement is not clinically apparent but has been identified by positive sentinel lymph node biopsy.
CS Lymph Nodes Breast

- **Code 74**
  - Internal mammary nodes, ipsilateral, clinically apparent WITHOUT axillary lymph nodes, ipsilateral

- **Code 75**
  - Infraclavicular lymph nodes (subclavicular)

Assign code 74 if ipsilateral internal mammary lymph nodes that were clinically apparent are involved WITHOUT involvement of the ipsilateral axillary lymph nodes. Assign code 75 when infraclavicular, also described as subclavicular, lymph nodes are involved. The infraclavicular nodes are located between the level III axillary nodes and the supraclavicular nodes.
CS Lymph Nodes Breast

• Code 76
  – Internal mammary nodes, ipsilateral, clinically apparent WITH axillary lymph nodes, ipsilateral, WITH or WITHOUT infraclavicular lymph nodes

• Code 77
  – Internal mammary nodes, ipsilateral, clinically apparent UNKNOWN if positive axillary lymph nodes, ipsilateral

Assign code 76 when ipsilateral internal mammary nodes are clinically apparent and axillary lymph nodes are also involved. This code includes both with or without involvement of infraclavicular lymph nodes. Assign code 77 when ipsilateral internal mammary lymph nodes are involved and are clinically apparent but it is unknown if the ipsilateral axillary lymph nodes are positive.
CS Lymph Nodes Breast

- Code 78
  - (75) + (77)
- Code 79
  - Stated as N3, NOS
- Code 80
  - Supraclavicular nodes
- Code 99
  - Unknown

Use code 78 when infraclavicular lymph nodes are involved and ipsilateral internal mammary lymph nodes that were clinically apparent are also involved but it is unknown if the ipsilateral axillary lymph nodes are involved. Use code 79 if the only documentation of regional lymph node involvement is the physician’s assignment of N3 for AJCC TNM staging. Code 80 is assigned if supraclavicular lymph nodes are involved. Supraclavicular lymph node involvement is N3 for AJCC TNM Staging, but it is distant lymph node involvement for Summary Staging 1977 and 2000. The CS algorithm will derive the appropriate staging information for all three systems. If lymph node involvement is unknown or not stated, assign code 99.
When CS lymph nodes code 74, 76, 77, or 78 is assigned, it indicates that internal mammary lymph node involvement was identified clinically. Clinical identification includes imaging studies that identify involvement of internal mammary nodes (excluding lymphoscintigraphy), physical exam identifying palpable internal mammary nodes, or internal mammary node involvement visualized grossly on pathologic exam. Lymphoscintigraphy maps the sentinel lymph nodes using radioisotopes on the nodes removed by sentinel node biopsy. Identification of internal mammary node involvement by lymphoscintigraphy is not considered clinically apparent.
The following slides demonstrate some of the CS lymph nodes codes. On this slide micrometastasis is identified by red crosses in the lymph nodes, and involvement with more than micrometastasis is identified by solid red lymph nodes. The diagram on the far left shows lymph node involvement assigned code 25. Movable axillary lymph nodes are involved by more than micrometastasis. The middle diagram demonstrates code 71. The internal mammary node involvement is micrometastasis identified by sentinel node biopsy and not clinically apparent. There is no involvement of the axillary nodes. The diagram on the right shows code 72, microscopic metastasis of internal mammary nodes not clinically apparent as well as involvement of the axillary nodes.

The diagram on the left shows code 50 involvement, axillary lymph nodes that are fixed or matted to one another and have more than micrometastasis. The diagram on the right shows code 74 involvement, internal mammary nodes clinically and microscopically involved without axillary node involvement.
The diagram on the left shows involvement consistent with code 75 or involvement of infraclavicular lymph nodes. The infraclavicular nodes are located above the level III axillary nodes. The diagram on the right shows the node involvement of code 76, clinically apparent internal mammary node involvement and axillary node involvement. Code 80 is used for involvement of supraclavicular nodes. The supraclavicular nodes are located above the collarbone and involvement is coded in CS lymph nodes, not in CS mets at dx.
Breast: CS Mets at DX

- Code 00
  - No; none
- Code 10
  - Distant lymph nodes
    - Cervical, NOS; contralateral/bilateral axillary and/or internal mammary; distant lymph nodes, NOS

Distant metastasis discovered at the time of diagnosis is coded in CS Mets at Dx. Assign code 00 when there is no distant metastasis. Involvement of distant lymph nodes, including but not limited to cervical and contralateral/bilateral axillary and/or internal mammary, is coded as 10.
Breast: CS Mets at DX

• Code 40
  – Distant metastases except distant lymph nodes
    • Distant metastasis, NOS; carcinomatosis
• Code 42
  – Further contiguous extension
    • Skin over:
      – axilla; contralateral breast; sternum; upper abdomen

Use code 40 for distant metastasis, NOS, except distant lymph nodes. Named distant sites that are not listed in code 44 are assigned code 40. Carcinomatosis is also assigned code 40. For most sites, distant metastasis coded in CS mets at dx is tumor that has spread through vascular or lymph channels to a site remote from the primary tumor. However for breast, code 42 is defined as further contiguous extension. It includes contiguous extension to the skin over the axilla, contralateral breast, sternum, or upper abdomen.
Breast: CS Mets at DX

- **Code 44**
  - Metastasis
    - Adrenal (suprarenal) gland; bone, other than adjacent rib; contralateral breast if stated as metastatic; lung; ovary; satellite nodule(s) in skin other than primary breast
- **Code 50**
  - (10) + any of [(40) to (44)]
- **Code 99**
  - Unknown

Use code 44 when there is metastasis to: the adrenal or suprarenal gland; bone, other than adjacent rib; contralateral breast if stated as metastatic; lung; ovary; or satellite nodule(s) in skin other than the skin of the primary breast. Code 50 is used when there is metastasis to both distant lymph nodes and other distant sites as described in codes 40, 42, or 44. Assign code 99 when the status of distant metastasis at diagnosis is unknown or cannot be assessed.
First Course Treatment

Breast Cancer
First Course Treatment

• Intended to affect tumor by
  – Modification
  – Control
  – Removal
  – Destruction

• Includes curative and palliative treatment

First course treatment is defined in FORDS 2004, page 28, as “all methods of treatment recorded in the treatment plan and administered to the patient before disease progression or recurrence.” The intent of treatment is to modify, control, remove, or destroy the tumor. Curative treatment as well as treatment given to control symptoms, alleviate pain, or make the patient more comfortable may also be first course treatment. We will discuss the first course treatment data items the central registry is required to submit to NPCR. Hospital cancer programs approved by the Commission on Cancer (CoC) are required to collect other first course treatment data items as well.
Surgical Procedure of Primary Site

• Site-specific codes
  – *FORDS*, pages 269 and 270
  – *SEER PCSM 2004*, Appendix C, pages C-485 and C-486

The codes for surgical procedure of primary site are site-specific and hierarchical. The surgical procedure of primary site codes for breast are found in *FORDS*, pages 269 and 270, and in *SEER Program Coding and Staging Manual 2004*, Appendix C, pages C-485 and C-486. If more than one procedure is performed as part of first course treatment, code the procedure with the highest code.
Surgical Procedure of Primary Site: Breast

• Code 00: None
• Code 19: Local tumor destruction with no pathology specimen
  – Cryosurgery, cryotherapy, cryoablation
  • Code to 19 unless there is a path specimen, then code to 20

Use code 00 when no surgical procedure of primary site was performed. Procedures recorded as surgical procedure of the primary site destroy or remove tumor. Assign code 19 for surgical procedure of primary site when the procedure performed destroys the tumor but there is no pathological specimen. Cryosurgery, cryotherapy, and cryoablation of tumor, all of which destroy the tumor by freezing it, are coded as 19 unless there is a path specimen. If cryosurgery includes a pathologic specimen, assign code 20.
Surgical Procedure of Primary Site: Breast

- Code 20: Partial mastectomy, NOS
- Code 21: Partial mastectomy with nipple resection
  - Reduction mammoplasty with nipple resection with incidental finding of carcinoma

Codes 20 through 24 are used when the procedure removes the gross primary tumor as well as some of the breast tissue. These procedures are described as breast-conserving or preserving procedures. Code 20 is used for a partial mastectomy, NOS. The tumor and some breast tissue are excised. Assign code 21 when the procedure is a partial mastectomy, excision of tumor and a small amount of breast tissue, and includes nipple resection. A reduction mammoplasty with nipple resection with an incidental finding of carcinoma is assigned code 21.
Surgical Procedure of Primary Site: Breast

- **Code 22: Lumpectomy or excisional biopsy**
  - Ultrasound needle localized lumpectomy
  - Core needle biopsy when it’s known that entire tumor was removed
- **Code 23: Re-excision of biopsy site for gross or microscopic residual disease**
- **Code 24: Segmental mastectomy**
  - Wedge resection, quadrantectomy, tylectomy

If the procedure is a lumpectomy or excisional biopsy, assign code 22. Lumpectomy and excisional biopsy are both excision of the tumor and some surrounding tissue. If a core needle biopsy removes the entire tumor, it is considered an excisional biopsy and assigned code 22. An ultrasound needle localized lumpectomy is also assigned code 22. Ultrasound is the surgical approach and not coded. If the original biopsy site is re-excised because there was residual disease identified either grossly or microscopically, assign code 23. Code 24 is used for segmental mastectomy, which is removal of a portion of the breast that includes the tumor but not the entire breast. The amount of tissue excised is more extensive than tissue excised by lumpectomy or excisional biopsy. It includes procedures described as wedge resection of breast, quadrantectomy, or tylectomy.
Surgical Procedure of Primary Site: Breast

- Code 30: Subcutaneous mastectomy
- Code 40: Total (simple) mastectomy
  - 41: Without removal of uninvolved contralateral breast
  - 43: Reconstruction NOS
  - 44: Tissue
  - 45: Implant
  - 46 Combined (tissue and implant)

Code 30 is used when the patient has a subcutaneous mastectomy. A subcutaneous mastectomy involves removal of all of the breast tissue without the removal of the nipple and areolar complex or the overlying skin of the breast. Code 30 is used if a patient has a reduction mammoplasty and incidental cancer is diagnosed and the nipple and areolar complex are not removed. A total or simple mastectomy is the removal of all breast tissue including the nipple and areolar complex. The axilla is not dissected. Code 40 is used for a total mastectomy. If total mastectomy is performed and it is known that the uninvolved breast is not removed, then use code 41. If the procedure performed was total mastectomy without removal of the uninvolved contralateral breast and with reconstruction, NOS, use code 43. If the type of reconstruction was specified, code reconstruction with tissue to 44, reconstruction with implant to 45, and reconstruction with both tissue and implant to 46. Reconstruction and mastectomy do not have to be performed at the same time to use codes 43 through 46. If they are both part of first course treatment, the codes 43 through 46 should be used for surgical procedure of primary site.
Surgical Procedure of Primary Site: Breast

• Code 40: Total (simple mastectomy)
  – 42: With removal of uninvolved contralateral breast
    • 47: Reconstruction NOS
    • 48: Tissue
    • 49: Implant
    • 75: Combined (tissue and implant)

When a simple mastectomy with removal of the uninvolved contralateral breast is performed, use code 42. If a simple mastectomy with removal of the uninvolved contralateral breast and reconstruction, NOS, are performed, assign code 47. Use code 48 if the reconstruction was with tissue, 49 if it was implant, and 75 if it was combined natural tissue and implant.
In this diagram, the area in green shows tissue removed by total mastectomy. The breast tissue and nipple and areolar complex are removed but the axilla is not.
Surgical Procedure of Primary Site: Breast

• Code 50: Modified radical mastectomy
  – 51: Without removal of uninvolved contralateral breast
    • 53: Reconstruction NOS
    • 54: Tissue
    • 55: Implant
    • 56: Combined (tissue and implant)

A modified radical mastectomy includes removal of all breast tissue, as well as the nipple, the areolar complex, and variable amounts of breast skin in continuity with the axilla. Code 50 is assigned for modified radical mastectomy. If modified radical mastectomy is performed without removal of the uninvolved contralateral breast, use code 51. If reconstruction is performed with a code 51 procedure, use code 53 for reconstruction NOS, 54 for reconstruction with natural tissue, 55 for reconstruction with implant, and 56 for combined reconstruction.
Surgical Procedure of Primary Site: Breast

• Code 50: Modified radical mastectomy
  – 52: With removal of uninvolved contralateral breast
    • 57: Reconstruction NOS
    • 58: Tissue
    • 59: Implant
    • 63: Combined (tissue and implant)

Use code 52 if a modified radical mastectomy was performed with removal of the uninvolved contralateral breast. If reconstruction was performed with a code 52 procedure, assign code 57 for reconstruction NOS, 58 for tissue reconstruction, 59 for implant reconstruction, and 63 for combined reconstruction.
Surgical Procedure of Primary Site: Breast

Modified Radical Mastectomy

Breast Cancer Tumor

Lymph Nodes

Image: University of Chicago Hospitals

This diagram represents a modified radical mastectomy. The areas in green show that the entire breast and the axilla containing axillary lymph nodes were removed.
Surgical Procedure of Primary Site: Breast

- Code 60: Radical mastectomy NOS
  - 61: Without removal of uninvolved contralateral breast
    - 64: Reconstruction NOS
    - 65: Tissue
    - 66: Implant
    - 67: Combined (tissue and implant)

A radical mastectomy includes removal of all breast tissue, the nipple, the areolar complex, variable amounts of breast skin in continuity with the axilla, and chest wall muscles. Assign code 60 for radical mastectomy NOS and 61 for radical mastectomy without removal of uninvolved contralateral breast. If reconstruction is performed with a code 61 procedure, assign code 64 for reconstruction NOS, 65 for reconstruction with tissue, 66 for reconstruction with implant, and 67 for combined reconstruction.
Surgical Procedure of Primary Site: Breast

• Code 60: Radical mastectomy NOS
  – 62: With removal of uninvolved contralateral breast
    • 68: Reconstruction NOS
    • 69: Tissue
    • 73: Implant
    • 74: Combined (tissue and implant)

Assign code 62 for radical mastectomy with removal of uninvolved contralateral breast. If reconstruction is performed with a code 62 procedure, assign code 68 for reconstruction NOS, 69 for reconstruction with tissue, 73 for reconstruction with implant, and 74 for combined reconstruction.
In this diagram, the area in green shows the removal of breast, axilla with lymph nodes, and chest wall muscles as part of radical mastectomy.
Surgical Procedure of Primary Site: Breast

• 70: Extended radical mastectomy
  • 71: Without removal of uninvolved contralateral breast
  • 72: With removal of contralateral breast

An extended radical mastectomy includes removal of all breast tissue, the nipple, the areolar complex, variable amounts of breast skin in continuity with the axilla, chest wall muscles, and internal mammary lymph nodes. Use code 70 for extended radical mastectomy, code 71 for extended radical mastectomy without removal of uninvolved contralateral breast, and 72 for extended radical mastectomy with removal of contralateral breast.
Surgical Procedure of Primary Site: Breast

• Reconstruction
  – Transverse rectus abdominis mycutaneous (TRAM) flap reconstruction
  – Natural tissue (codes 44, 48, 54, 58, 65, 69)

This slide shows a transverse rectus abdominis mycutaneous (TRAM) flap reconstruction that may be performed with any of the types of mastectomy. It uses natural tissue to reconstruct the breast and the codes for this procedure are dependent upon the type of mastectomy performed with the reconstruction.
Surgical Procedure of Primary Site: Breast

• Reconstruction
  – Lastissimus dorsal flap
    • With natural tissues (44, 48, 54, 58, 65, 69)
    • With tissue over implant (46, 56, 63, 67, 74, 75)

Lastissimus dorsal flap reconstruction may use natural tissue or both natural tissue and implant. Implant is artificial tissue. The codes are dependent upon the type of mastectomy and whether natural tissue or natural tissue and implant were used.
Patients with breast cancer may receive a sentinel lymph node biopsy as part of work-up and treatment. The sentinel lymph node biopsy evaluates the first axillary node to receive lymph drainage from the breast. If that node is negative, the patient may not have lymph node metastasis and an axillary lymph node dissection may not be needed. Patients who have breast conserving surgery may also have a lymph node dissection. That procedure is coded in scope of regional lymph node surgery. Removal of the axilla is part of a modified radical, radical, or extended radical mastectomy. If lymph nodes are found in the axilla that is removed, the dissection of the nodes is recorded in scope of regional lymph node surgery.
<table>
<thead>
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<th>Code</th>
<th>Label</th>
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<td>1</td>
<td>Biopsy or aspiration of regional LNs, NOS</td>
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<td>2</td>
<td>Sentinel LN biopsy</td>
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<td>Number of regional LNs removed unknown</td>
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<td>4</td>
<td>1-3 regional LNs removed</td>
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<td>5</td>
<td>4 or more regional LNs removed</td>
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<td>Sentinel biopsy and code 3, 4, or 5 at same time or timing not stated</td>
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<td>7</td>
<td>Sentinel biopsy and code 3, 4, or 5 at different times</td>
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</tbody>
</table>

Shown on this slide are the codes for scope of regional lymph node surgery. The same code set is used for all sites. Sentinel lymph node biopsy alone for breast cancer is assigned code 2. If the patient has a sentinel lymph node biopsy as well as sampling or dissection of other regional lymph nodes, code 6 is assigned if the procedures were performed at the same time or if the timing is not stated, and code 7 is assigned if the procedures were performed at different times. Sampling or dissection of regional lymph nodes for breast cancer without sentinel biopsy is assigned codes 3, 4, or 5 depending on the number of lymph nodes removed.
Surgical Procedure/Other Site: Breast

- Record removal of distant lymph nodes or other tissues beyond the primary site
  - Resection of cervical lymph nodes
  - Removal of contralateral breast with metastatic disease
- Do not record surgical removal of ovaries in surgical procedure/other site

If distant lymph nodes or tissues beyond the primary site are removed, the procedure is coded in the data item, surgical procedure/other site. The resection of a cervical lymph node as part of breast cancer treatment would be coded in surgical procedure/other site because cervical lymph node is distant for breast. If a patient has the contralateral breast removed and it is diagnosed with metastatic cancer, the procedure is coded in this data item. However, if the contralateral breast is determined to be a second primary, do not code the procedure in the data item, surgical procedure/other site. A second abstract is completed, and the surgery is coded in surgical procedure of primary site for the second primary. If part of first course surgery includes bilateral surgical removal of the ovaries, do not code as surgical procedure/other site. Ovarian ablation is coded in the data item, hematologic transplant and endocrine procedures.
The codes for surgical procedure/other site are shown on this slide. The same codes are used for all sites. The resection of a cervical lymph node for a patient with breast cancer is assigned code 3, nonprimary surgical procedure to distant lymph nodes. The removal of a contralateral breast with metastatic breast cancer is assigned code 4, nonprimary surgical procedure to distant site.
Regional Treatment Modality: Breast

• Adjuvant radiation therapy, usually external beam, may be given as part of first course treatment
  – After breast conserving surgery
  – Prior to surgery to shrink tumor
• Do not code radiation for ovary ablation in this data item
• Codes defined in FORDS, pages 155–156

The radiation treatment data item submitted to NPCR is regional treatment modality. It defines the modality used to deliver the dose of radiation. Codes for regional treatment modality are the same for all sites and defined in FORDS, pages 155 and 156. Adjuvant radiation therapy may be part of first course treatment for breast cancer either after breast conserving surgery or prior to surgery to shrink the tumor. The modality is usually external beam. If a patient receives radiation therapy to ablate the ovaries as part of first course treatment for breast cancer, do not code it in this data item. It is coded in hematologic transplant and endocrine procedures.
Chemotherapy: Breast

- Single agent chemotherapy
  - Anthracycline, adriamycin, methotrexate, herceptin
- Multiple agent chemotherapy
  - CMF regimen: cyclophosphamide, methotrexate, 5-FU
  - CAF regimen: cyclophosphamide, adriamycin, 5-FU
- Codes defined in FORDS, pages 171–172

Chemotherapy is also sometimes part of first course therapy for breast cancer. It may be given as adjuvant therapy with breast conserving surgery or given pre-operatively when a patient has lymph node metastasis at the time of diagnosis. Some of the agents include but are not limited to anthracyline, adriamycin, methotrexate, and herceptin. If only one chemotherapy agent is given, it is coded as a single agent; but if multiple chemotherapeutic drugs are given in combination, they are coded as multiple agents. Multiple agent regimens for breast cancer include CMF (cyclophosphamide, methotrexate, 5-FU) and CAF (cyclophosphamide, adriamycin, 5-FU). When a regimen is given, check the drugs on the SEER Rx database to determine what type of drug is included in the regimen. If multiple drugs are chemotherapeutic, code as multiple agent chemotherapy. If hormone therapy is part of the regimen, code it in the data item for hormone therapy. Do not code ancillary drugs as treatment.
Hormone Therapy

• Hormone therapy for breast cancer
  – Tamoxifen, anastrozole, exemestane, letrozole

• Codes defined in FORDS, pages 175–176

Hormone therapy may also be part of first course treatment for breast cancer. Tamoxifen is the hormonal agent given most often, but other hormonal substances include anastrozole, exemestane, and letrozole. Again, check the SEER Rx database to identify the drug type before coding it.
Hematologic Transplant and Endocrine Procedures

- Codes 10–12: bone marrow transplant
- Code 20: stem cell harvest and infusion
- Code 30: endocrine surgery and/or endocrine radiation therapy
  - Ovarian ablation by either radiation or surgery
- Codes defined in FORDS, pages 182–183

Some breast cancer patients receive bone marrow transplant or stem cell harvest after receiving high dose radiation or chemotherapy because the treatment destroys the healthy as well as the diseased tissues. If the bone marrow or stem cell transplant is part of first course treatment, code the procedure in the data item, hematologic transplant and endocrine procedures. Bone marrow transplant is assigned codes 10–12. Stem cell transplant, harvest, or infusion is assigned code 20. If part of first course treatment includes bilateral ovarian ablation by either radiation or surgery, the procedure is coded in hematologic transplant and endocrine procedures and assigned code 30. Review the records carefully to determine if the transplant or endocrine procedure was part of first course treatment. The codes are defined in FORDS, pages 182–183.