# REGISTRAR PIP

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## Coding Breast Histology – A "Do Better" Plan

Breast cancer is the most common malignant tumor in women which occurs as the result of a malignant transformation of either the epithelial or stromal component of the breast. It is classified based on histopathologic characteristics, including cell morphology, architecture, and growth patterns. The clinical course of the disease and resulting outcomes of breast cancer subtypes also differ based on estrogen receptor, progesterone receptor, and human epidermal growth factor receptor 2 (HER2) statuses.

Ductal and lobular carcinomas, which arise in the epithelial tissue, make up the vast majority of all breast cancers. Mucinous (colloid), medullary, micropapillary, papillary, and tubular are other examples of carcinomas. Sarcomas (e.g., phyllodes tumors and angiosarcoma) are rare cancers that arise from the stromal (connective tissue) portions of the breast. It is important to differentiate between these various histology types, presenting stages of disease and the patient's age and overall health to understand the likely treatment recommendations that will be offered to a patient to facilitate the abstracting process.

The focus of this article will be on the following:

- Histology coding changes effective for cases diagnosed 1/1/2018 and later per the Solid Tumor Rules (STR) that experienced registrars often overlook
- Common breast histology errors identified through SEER*Educate training exercises
- Suggestions for navigating the histology tables in the breast section of the STR

**Experienced Registrars Need to Unlearn and Relearn for 2018 Diagnosed Cases**

**The BIGGIE:** The following are the new ***preferred*** terms for ductal carcinoma coded to 8500:

- No Special Type (NST)
- Mammary Carcinoma NST
- Carcinoma NST

We may still see duct and ductal carcinoma being used, but we need to keep in mind that other terms are now also coded to 8500 for breast cases.

GRADE is much more important than histologic type/subtype when it comes to classifying DCIS/Carcinoma NST in situ cases now. The majority of in situ tumors will be coded to DCIS 8500/2 because the subtypes/variant, architecture, pattern, features, etc. used to describe other types of DCIS are no longer used.

When two invasive histologies are diagnosed (i.e., an NOS histology and a subtype/variant), the invasive subtype/variant is coded ONLY when it comprises greater than 90% of the tumor.


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If the percentage of the subtype/variant is unknown or stated to be less than or equal to 90% of the tumor, then the subtype/variant histology is ignored.

### 2018 ICD-O-3 Update Table

We need to appropriately use the 2018 ICD-O-3 Update Table if we can't find the histology on Table 2 or Table 3. We are supposed to check the Update Table before we check the ICD-O. In the Update Table we can find the latest official release of the new terms, new codes, new behaviors and invalid histologies (e.g. 8265 is not valid – Use code 8507 for micropapillary carcinoma and micropapillary adenocarcinoma) for breast cancer.

With so many changes released for cases diagnosed in 2018, some registrars missed the fact a ***2018 ICD-O-3 Update Table*** exists that needs to be referenced. If you haven't created and added a link to this document and stored it where you keep the links to all your other coding references, you might want to do that today https://www.naaccr.org/icdo3/.

### Reportable Malignant Terms – DO NOT Exclude

Even though the terms below are listed on the 2018 ICD-O-3 Update Table, we want to emphasize the importance of capturing them because not picking them up is an easy error to make. We have to be careful not to inadvertently exclude reportable terms when casefinding especially those terms that don't look reportable because we incorrectly assumed the behavior of these tumors to be benign or borderline. A quick check of the Update Table confirms the reportability of these rare tumors you might incorrectly assume are non-reportable:

- 8246/3 – Neuroendocrine tumor, well differentiated
- 9020/3 – Periductal stromal tumor, low grade

### Breast STR's *"Table 2"* and *"Table 3"*

We will be able to accurately code the histology when multiple histologies are present (Histology Combination Codes (Table 2)) or using Table 3 (Specific Histologies, NOS/ NST, and Subtypes/Variants) only if we understand the rules for each table. Relying solely on the content in the histology field dropdown provided in our abstracting software package will result in coding errors. If the H Rule we are applying does not provide us with a specific histology, then it will tell us to use Table 2. In all other cases we start our search for the histology by checking Table 3. Using these tables is not optional, but is required.

We only code **differentiation** or **features** when there is a specific code for the NOS with differentiation or the NOS with features in Table 2, Table 3, the 2018 ICD-O-3 Update Table, or the ICD-O.

Table 2 should only be used when instructed by the Multiple Primary and Histology Rules to do so. It's important to review the instructions for Table 2 before actually using the table. In Column 1 the required histology terms are listed that must be present in the tumor (or tumors) under consideration. If the H Rules refer us to Table 2, and all of the histology and behavior requirements (if applicable) are met, then Column 2 provides us with the appropriate histology combination code and term to use for the case we are working on.

The first row of Table 2 (Figure 1) lists all the requirements, as well as caveats, for coding a mixed histology tumor comprised of carcinoma NST and lobular carcinoma. The Notes describe the behavior and histology requirements needed to apply this row of the table, and also remind us NOT to use the mixed histology code 8522 when only "lobular differentiation" is identified. Be sure to carefully review the requirements in each row when using Table 2.


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**Figure 1**
**Breast Equivalent Terms and Definitions**

| Example Row of Table 2 | |
|---|---|
| **Required Histology Terms** | **Histology Combination Term and Code** |
| **DCIS/duct carcinoma/carcinoma NST 8500**<br>**AND**<br>**Lobular carcinoma 8520**<br><br>**Note 1:** Both histologies, duct and lobular, **must have** the **same behavior** code.<br><br>**Note 2: 8522** is used when:<br>• Duct **AND** lobular carcinoma are present in a **single tumor OR**<br>• Duct is present in at least one tumor and lobular is present in at least one tumor in the same breast **OR**<br>• One tumor is mixed duct and lobular; the other tumor in the same breast is either duct or lobular **OR**<br>• All tumors in the same breast are mixed duct and lobular<br>**Example:** One tumor with invasive duct CA in LOQ RT breast; second tumor with invasive lobular in UOQ RT breast<br><br>**Note 3:** **Do not** use **8522** when the diagnosis is carcinoma NST/duct carcinoma with lobular **differentiation**. See **Histology Rules** for instructions on **coding differentiation.** | Invasive carcinoma NST/duct carcinoma **and** invasive lobular carcinoma **8522/3**<br><br>**Note 1:** CAP uses the term Invasive carcinoma with ductal and lobular features ("mixed type carcinoma")<br><br>**Note 2:** Carcinoma NST includes all subtypes/variants of carcinoma NST.<br><br>DCIS **and in situ** lobular carcinoma **8522/2**<br>**Note:** The lobular carcinoma includes pleomorphic lobular carcinoma in situ **8519/2**. |

When the H Rules do not provide a specific histology, or refer one to Table 2, we must start by using Table 3 first to determine the correct histology. Sometimes, we'll see that only some of the H rules specifically instruct us to review Table 3. We need to remember that for these cases we ALWAYS start by using Table 3 whether it is indicated in the H rule or not. Table three columns include the following:

- Column 1 lists the specific and NOS/NST terms and codes.
- If a specific histology is listed in Column 1, then there will be no subtypes/variants listed in Column 3.
- If a NOS histology is listed in Column 1, then there will be subtypes/variants listed in Column 3.
- Column 2 lists synonyms for the histology code in Column 1.

Synonyms always have the same histology code. Table 3 lists the most common histologies used for breast tumors. If the histology for the case at hand is not listed in Table 3, it is not yet an impossible histology for this case. One must then use the 2018 ICD-O-3 Update Table, followed by the ICD-O-3 to determine the histology code.

Keep in mind that the behavior is listed in this table if the histology has only one possible behavior code associated with it (i.e., the tumor is **either** in situ (/2) or invasive (/3)). In Figure 2, the metaplastic carcinoma


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NOS row does not provide a behavior for any of the listed histologies. These histologies can have a behavior that is either in situ or invasive; code the behavior from the pathology.

**Figure 2**
**Breast Equivalent Terms and Definitions**

| Example Row of Table 3 | | |
|---|---|---|
| **Specific and NOS/NST Terms and Codes** | **Synonyms** | **Subtypes/Variants** |
| **Metaplastic carcinoma NOS or of no special type (NST) 8575**<br><br>**Note:** Squamous cell carcinoma of the breast is **extremely rare.** Carefully **check** the **pathology** report to verify the squamous cell originated in the breast parenchyma, rather than the skin of the breast. | Invasive mammary carcinoma with matrix production<br>Metaplastic carcinoma, mixed epithelial and mesenchymal type<br>Metaplastic carcinoma with mesenchymal differentiation<br>Metaplastic carcinoma with squamous features<br>Metaplastic carcinoma with other types of mesenchymal differentiation<br>Mixed metaplastic carcinoma | Carcinosarcoma **8980/3**<br>Fibromatosis-like metaplastic carcinoma **8572**<br>Low grade adenosquamous carcinoma **8570**<br>Metaplastic carcinoma spindle -cell type/spindle cell carcinoma **8032**<br>Metaplastic carcinoma with chondroid differentiation/ with osseous differentiation **8571**<br>Myoepithelial carcinoma **8982**<br>Sarcomatoid carcinoma **8033**<br>Squamous cell carcinoma **8070** |

## Coding Issues Identified in SEER*Educate

Reviewing these rules and believing we understand them is one thing: consistently and accurately applying them is another thing. We know we are having a few problems because we have stumbled trying to consistently code histology for breast cases in SEER*Educate. What did we observe?

- **Breast Histology Rules Are Different**

  That's right! The rules for coding breast histology are different from the histology coding rules for all other sites. There is no avoiding a review of the Coding Histology Instructions in the Breast Histology Coding Rules if we want to improve our coding of histology for breast cases. The histology coding in SEER*Educate indicates one of two things is going on: a) we either haven't read these rules at all OR b) we read them but need to refer to them more frequently when coding until we've fully embraced them. Overall, we think option b is responsible for many of the mistakes. Gone are the days of scanning a simple list of changes for a new diagnosis year. Here to stay: more referencing of coding guidelines and associated tables.

- **Priorities Matter**

  We need to keep in mind not only the priority order of the type of documentation from the medical record we plan to code histology from, but if we are using pathology reports from the primary site, there is also a priority associated with the sections of the pathology report used (addendums/comments, final diagnosis/synoptic report as required by CAP, followed by the CAP protocol). We cannot use a combination of findings across the various sections of the pathology report to code histology. We need to use the diagnoses referred to in the highest priority report and the highest priority section of the report.


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In addition to the priorities mentioned above, if the rules instruct us to use Table 2 or Table 3, these tables have priority over using the ICD-O-3 update list and the ICD-O-3. We need to avoid using only the ICD-O-3 or the histology dropdown in our abstracting to code this field accurately.

### ➢ Metastatic Carcinoma of Breast Origin – 8500 not 8010

According to the 2018 Breast Solid Tumor Rules Equivalent Terms and Definitions, mammary carcinoma is a synonym for carcinoma no special type (NST)/duct carcinoma not otherwise specified (NOS) 8500. Metastatic carcinoma, NOS of breast origin is also synonymous with carcinoma NST of the breast per SINQ 20190066. If all we have is a biopsy of a metastatic site with a diagnosis of "metastatic carcinoma of breast origin" we are to code the histology 8500 and not 8010 per SEER.

### ➢ Modifiers Might Matter

When checking for the histology in the rules, Tables 2 and 3, ICD-O-3 update and the ICD-O-3, we need to check for all the terms used to describe a tumor because not doing can also result in coding errors. Note the following examples:

- ***Pleomorphic*** **lobular carcinoma in situ** (8519/2) is not coded to **lobular carcinoma in situ** (8520/2).
- ***Solid*** **papillary carcinoma** (8509) is not coded to **papillary carcinoma** (8050) or **infiltrating papillary adenocarcinoma** (8503).

In these two examples, errors were made because the modifiers were overlooked by the registrars and in the case of papillary carcinoma; those registrars incorrectly used the abstracting software's histology dropdown to code this field. Ouch!

Assume the modifying terms matter and check the coding sources for them. Some modifiers are a part of the histology code itself. We can use those modifiers to code histology. Other terms like type, subtype, variant, etc., alone do not describe a majority of the tumor. We can't use those modifiers to code histology. We need to let the rules, tables and reference materials be our guide to determine whether or not we can use the modifiers to code histology.

### ➢ Ambiguous Terminology

Can we handle a couple more "ambiguous" rules when it comes to coding a cancer case? Coding histology has a couple of these rules we need to embrace.

- **DO NOT USE** an ambiguous terminology modifier to code the more specific histology if more than one histology is documented (e.g., code diagnosis "ductal carcinoma consistent with micropapillary carcinoma" to 8500).
- **USE** ambiguous terminology when there is only a single histology stated that is described with ambiguous terms (e.g., code diagnosis "consistent with micropapillary carcinoma" to 8507).

### ➢ "Differentiation" and "Features" - - Limited Applicability

We only code **differentiation** or **features** when there is a specific code for the NOS with differentiation or the NOS with features in Table 2 or Table 3 or 2018 ICD-O-3 Update Table or ICD-O. For example, we must ignore the ductal and cribriform features when coding histology for a diagnosis of, "Invasive carcinoma with ductal and cribriform features" because there is no exact histology for that term in any of the histology coding sources. We are left with the histology, "Invasive carcinoma," which according to the breast coding rules is a term considered synonymous with ductal carcinoma (8500).


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### ➢ Table 3 – Be Careful

Using this table is not optional. It is required if the rules tell us to use it AND sometimes even if the rule doesn't explicitly tell us we have to use it (Rule H7). I wondered if the problems we have with this table have more to do with the fact that Table 3 is long and we simply didn't find the histology we were looking for, rather than because we didn't try to use the table.

When I want to see whether the histology mentioned in the medical record is on Table 3, I have the computer help me. I swear that sometimes I can't see the term sitting on the page right in front of me without a little computer assistance.

I position my cursor at the top of the page that references Table 3. (See Figure 3) and then hold the Ctrl button down and type the letter F (See Figure 4). A search box appears. I enter the term I want to locate in the document. This search method will quickly identify all the instances of the term I entered in the search box throughout the entire STR Manual.

What is most important to remember to do when doing a search of the table in any section of the STR site sections, is to position the cursor immediately before the table you want to search. By doing so, the first instances of the term typed into the dialog box will appear. Depending on the browser used to open the manual, moving to the next term, if one exists in the table, is typically done by hitting the down arrow (in the dialog box) or the ENTER key on the keyboard.

**Figure 3**
**Breast Equivalent Terms and Definitions**
**C500-C506, C508-C509**
**(Excludes lymphoma and leukemia M9590 – M9992 and Kaposi sarcoma M9140)**

**Table 3: Specific Histologies, NOS/ NST, and Subtypes/Variants**

Use Table 3 as directed by the Histology Rules to assign the more common histology codes for breast tumors.

**Note 1:** Rare histologies may not be listed in the table. When a histology term is not found, reference ICD-O and all updates.

**Note 2**: Submit a question to Ask a SEER Registrar when the histology is not found in Table 3, ICD-O or all updates.

**Note 3:** Behavior codes are listed when the term has only one possible behavior (either a /2 or /3). For histologies which may be either /2 or /3, a behavior code is not listed. Code behavior from pathology.

**Note 4:** Only use the histology code from the table when the diagnosis is EXACTLY the term listed

Before believing that 0 matches were found when using the Ctrl F search method, we need to double-check what we entered. Spelling matters here.


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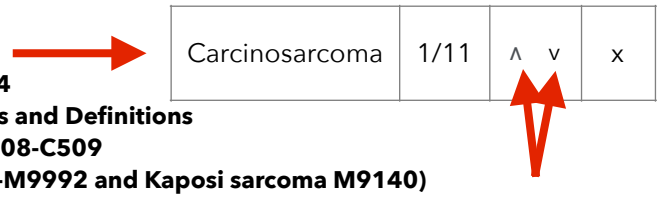


**Figure 4**
**Breast Equivalent Terms and Definitions**
**C500-C506, C508-C509**
**(Excludes lymphoma and leukemia M9590-M9992 and Kaposi sarcoma M9140)**

| Specific and NOS/NST Terms and Code | Synonyms | Subtypes/Variants |
|---|---|---|
| Metaplastic carcinoma NOS or of no special type (NST) 8575 Note: Squamous cell carcinoma of the breast is **extremely rare**. Carefully **check** the **pathology** report to verify the squamous cell originated in the breast parenchyma, rather than the skin of the breast. | Invasive mammary carcinoma with matrix production<br>Metaplastic carcinoma, mixed epithelial and mesenchymal type<br>Metaplastic carcinoma with mesenchymal differentiation<br>Metaplastic carcinoma with squamous features<br>Metaplastic carcinoma with other types of mesenchymal differentiation<br>Mixed metaplastic carcinoma | Carcinosarcoma **8980/3**<br>Fibromastosis-like metaplastic carcinoma **8572**<br>Low grade adenosquamous carcinoma **8570**<br>Metaplastic carcinoma spindle-cell type/spindle cell carcinoma **8032**<br>Metaplastic carcinoma with chondroid differentiation/with osseous differentiation **8571**<br>Myoepithelial carcinoma **8982**<br>Sarcomatoid carcinoma **8033**<br>Squamous cell carcinoma **8070** |

### ➢ Misunderstanding Table 3 Rules

The subtype/variant listed in Column 3 is more specific than the NOS histology listed in Column 1 and should be coded over the NOS, even if the histology of the NOS code is numerically higher. For example, the histology in a pathology report listed as, **"Spindle cell carcinoma (metaplastic carcinoma, spindle cell type)"** should be coded to 8032 (Spindle cell carcinoma) and not 8575 (Metaplastic carcinoma NOS). Although the diagnosis also included the term, "metaplastic carcinoma, spindle cell type," in parentheses, this is not an additional histology or more specific subtype/variant. Per Table 3, both metaplastic carcinoma spindle cell type and spindle cell carcinoma are equivalent terms for histology code 8032 and both terms are specific subtypes/variants of the NOS histology "metaplastic carcinoma NOS." Since the specific subtype/variant alone was diagnosed, the NOS histology is not coded.

## Conclusion

There were a lot of changes to the breast histology coding guidelines following the release of the STRs. These changes reflect the data needs of the standard setters and their goals determine how the data are to be processed and how it will be used. As SEER indicated on its training website, "Shared standards ensure clarity of communication, protect the integrity of data when pooled or compared across multiple sources, and focus attention on key aspects of cancer care or cancer control."

Our coding needs to reflect the adoption of the current coding standards. Misclassifying the histology and other data items critical to understanding the histopathologic characteristics of this disease on a regional level, makes it more challenging for investigators to interpret how stage and treatment impact the outcomes observed.


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