Florida Cancer Data System

International Classification of Diseases for Oncology
ICD-O-3

Basic Concepts

- Primary Site/Topography
- Histology/Morphology
- Behavior
- Grade/Immunophenotype

ICD-O 3 Structure/Format

- I. Instructions for use
- II. Topography - Numerical List
- III. Morphology - Numerical List
- IV. Alphabetic Index
- V. Appendices: Differences in Morphology Codes between 2nd and 3rd Editions
Format Of ICD-O Terms In Numerical List

- Each topographic and morphologic term appears only once
- The first listed term in **Bold Type** is the **Preferred Term**
- Synonyms are indented
- Non indented terms are equivalent terms
- Obsolete term [    ]
- Suggested site code (C_ _ . _)

Format And Use Of Alphabetic Index

- The Alphabetic Index is used to code both morphology and topography
- Topography codes begin with the letter ‘C’
- Morphology codes are preceded by the letter ‘M’

Ten Component Parts Of ICD-O-3 Code

```
C 0 0 . 0 [M-] 0 0 0 0 / 0 0
```

Topography (anatomic site):

Characters 1, 2, and 3 = Site (C00. - C80.)
Character 4 = Subsite (0 - 9)
Ten Component Parts Of ICD-O-3 Code

C 0 0 . 0 [M-] 0 0 0 0 / 0 0

Morphology (Histologic type):
Characters 5, 6, 7, 8 (8000-9989)

Ten Component Parts Of ICD-O-3 Code

C 0 0 . 0 [M-] 0 0 0 0 / 0 0

Behavior:
Character 9
0 Benign
1 Borderline
2 Carcinoma in situ
3 Malignant, primary site
6 Malignant Metastatic Site
9 Malignant NOS

Ten Component Parts Of ICD-O-3 Code

C 0 0 . 0 [M-] 0 0 0 0 / 0 0

Grade or Immunophenotype:
Character 10
Grade = 1 - 4 or 9
Immunophenotype = 5 - 8 or 9
Example Of Complete Coding
Identification: Grade

How to code well differentiated adenocarcinoma of the cecum:

C18.0 [M] 8140/31

Example Of Complete Coding
Identification: Immunophenotype

How to code B cell lymphoma of an axillary lymph node:

C77.3 [M] 9591/36

Principal Rules – ICD-O-3

- Guidelines follow Principal Rules A through K
- You must use the rules to code topography & morphology for every cancer reported
- Some rules apply only to topography (site)
- Some rules apply only to morphology (type)
- Some rules apply to both (topography and morphology)
<table>
<thead>
<tr>
<th>Rule A</th>
<th>Topographic Regions &amp; Ill-Defined Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>• If the diagnosis does not specify the tissue of origin, code the appropriate tissues suggested in the alphabetic index for each ill-defined site in preference to the ‘NOS’ category</td>
<td></td>
</tr>
<tr>
<td>• When no other information is available, assign the site according to the tissue type. Otherwise use ill defined site codes C76.0 – C76.8</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rule A Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Code liposarcoma of the arm to C49.1 (soft tissue of arm) since liposarcoma primarily arises in soft tissue</td>
</tr>
<tr>
<td>• Code melanoma of the arm to C44.6 (skin of arm) since melanoma primarily arises in the skin</td>
</tr>
<tr>
<td>• Code osteosarcoma of arm to C40.0 (long bone of arm) since osteosarcoma primarily arises in bone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rule B</th>
<th>Prefixes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• If a topographic site is modified by a prefix such as peri-, para-, or the like, which is not specifically listed in ICD-O, code to the appropriate ill-defined subcategory C76 (ill-defined site), unless the type of tumor indicates origin from a particular tissue. This rule also applies to phrases such as “in the area of” or “in the region of”</td>
<td></td>
</tr>
</tbody>
</table>
Rule B
Examples
- Code paratracheal malignancy NOS to C76.1 (thorax NOS)
- However if you know the type of tissue, see Rule A: code paratracheal sarcoma NOS to C49.3 (soft tissue of thorax) since sarcoma is primarily a soft tissue tumor
- Before using C76 look up the term: retrocecal tissue NOS is C48.0, retroperitoneum, not C76.3, ill defined pelvis NOS

Rule C
Subsite
- Use subsite code “.8”, “overlapping lesion”, when a single tumor overlaps the boundaries of two or more subsites & its point of origin cannot be determined
- Use subsite code “.8” when a neoplasm involves two or more separate sites within the same body system and its point of origin cannot be determined (See ICD-O-3 Table 17 page 25)

Rule C Examples
- Code a single tumor that overlaps the upper outer and lower outer quadrants of the breast to C50.8
- Carcinoma of tip and ventral surface of tongue is coded C02.8
Rule D
Topography Codes For Lymphoma

- If the site of origin of the lymphoma is in the lymph nodes, code to C77
- If a lymphoma involves multiple lymph node regions only and it is unknown where the cancer arose, code C77.8, lymph nodes of multiple regions

Rule D
Topography Codes For Lymphoma

- Code extranodal lymphomas to the site of origin, which may not be the site of the biopsy
- If no site is indicated and the lymphoma is suspected to be extranodal, code to C80.9, unknown primary site

Rule D
Topography Codes For Lymphoma

- If it is clear that a specific lymph node is the primary site, it should be coded as such.
- If not, lymph nodes NOS (C77.9) is the appropriate code unless the lymphoma is extranodal
Rule D Examples

- Code lymphoma, NOS to C77.9
- Code a lymphoma involving cervical, axillary, and inguinal lymph nodes to C77.8

Rule D Examples

- Code a lymphoma arising in the stomach to C16.9
- Code a lymphoma involving the brain and lung with no lymph node involvement to C80.9

Rule E
Topography Code For Leukemia

- Code all leukemias to C42.1, bone marrow (except myeloid sarcoma 9930/3)
- Myeloid sarcoma is a leukemic deposit in an organ or tissue and should be coded to the site of origin
Rule F
Behavior Code In Morphology

- Use the appropriate 5th digit behavior code even if the exact term is not listed in ICD-O
- If the pathologist states that the behavior differs from the usual behavior as given in ICD-O, code as the pathologist indicates

Rule F Examples

- Code “benign chordoma” 9370/0
  (Chordoma, NOS is indexed 9370/3)
- Code “in situ Paget disease of breast” 8540/2
  (Paget Disease of breast is indexed 8540/3)

Rule G
Grade Or Differentiation Codes

- Assign the highest grade or differentiation code described in the diagnostic statement
  
  Gr I  (Well Diff)
  Gr II  (Moderately Diff)  Low Grade
  Gr III (Poorly Diff)  Medium Gr
  Gr IV (Undiff/Anaplastic)  High Grade
Rule G
Immunophenotype Codes For Lymphomas & Leukemias

- This code is also used for denoting the cell lineage or Immunophenotype for lymphomas & leukemias; T, B, Null, or NK cell origin

- The immunophenotype code takes precedence over other terms for grade or differentiation

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Rule G
Immunophenotype Codes For Lymphomas & Leukemias

<table>
<thead>
<tr>
<th>Code</th>
<th>Immunophenotype</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>T-cell</td>
</tr>
<tr>
<td>6</td>
<td>B-cell (Pre B-cell, B-precursor)</td>
</tr>
<tr>
<td>7</td>
<td>Null cell (Non-T/Non-B)</td>
</tr>
<tr>
<td>8</td>
<td>NK cell (Natural Killer cell)</td>
</tr>
<tr>
<td>9</td>
<td>Cell type not determined, not stated</td>
</tr>
</tbody>
</table>

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Gleason’s Score/Pattern/Grade

<table>
<thead>
<tr>
<th>Code</th>
<th>Score</th>
<th>Pattern</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2,3,4</td>
<td>1,2</td>
<td>1 Well Diff</td>
</tr>
<tr>
<td>2</td>
<td>5,6</td>
<td>3</td>
<td>2 Mod Diff</td>
</tr>
<tr>
<td>3</td>
<td>7,8,9,10</td>
<td>4,5</td>
<td>3 Poor Diff</td>
</tr>
</tbody>
</table>
Two Grade Coding System

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>Low Grade</td>
<td>2</td>
</tr>
<tr>
<td>2/2</td>
<td>High Grade</td>
<td>4</td>
</tr>
</tbody>
</table>

Three Grade Coding System

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>I/II</td>
<td>low grade</td>
<td>2</td>
</tr>
<tr>
<td>II/III</td>
<td>medium grade</td>
<td>3</td>
</tr>
<tr>
<td>III/III</td>
<td>high grade</td>
<td>4</td>
</tr>
</tbody>
</table>

Grade Or Differentiation As Part Of Histologic Code

- Words such as anaplastic, well differentiated, etc. when used as an integral part of the histologic type should be used to code both histologic type and grade
- Example - Code malignant anaplastic teratoma to 9082/34
Rule G Examples

- Code well to moderately differentiated adenocarcinoma 8140/32
- Code T-cell lymphoma 9702/35
- Code adenocarcinoma of the prostate
  Gleason’s score 6 (moderately differentiated) to 8140/32

Grading Tips

- If a needle bx or incisional biopsy of a primary site has a grade given and the excision or resection does not, code the information from the needle/incisional biopsy
- If there is a difference between the grade given for a biopsy of the primary site and the grade given for the resection, use the higher grade
- Code grade to 9 if there is no grade provided for the primary site, even if a grade is given for a metastatic site
- Code grade 9 when primary site is unknown (C80.9)
- Code the grade for in-situ lesions if it is stated
Rule H
Site-Associated Morphology Terms

- Use the topography code provided in parenthesis beside the morphology code in ICD-O when a topographic site is not stated in the diagnosis
- The topography code provided by ICD-O should be disregarded if the tumor is known to arise at another site

Rule H Examples

- Code the primary site for nephroblastoma to C64.9 (kidney)
- Code the primary site for infiltrating duct carcinoma of the pancreas to C25.9 (pancreas)

Rule H
Pseudo-topographic Morphology

- Certain neoplasms have names that could be interpreted as implying a topographic location, but these tumors should not necessarily be coded to that site
**Rule H Examples**

- Bile duct carcinoma is a specific histologic type frequently found in both the intrahepatic bile ducts (C22.1), and the extrahepatic bile ducts (C24.0)
- Carcinoma, intestinal type usually occurs in the stomach (C16.9), not the intestines (C26.0)

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**Rule J**

**Compound Morphology Diagnosis**

- Not all forms of compound words are listed in ICD-O
- Change the order of the word roots in a compound term if the term is not listed

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**Rule J Example**

- Fibromyxosarcoma (8811/3) is in ICD-O but Myxofibrosarcoma is not. Code both to 8811/3 since both compound terms share identical word roots, although inverted, they are the same disease process
Rule K
Coding Multiple Morphology Terms
- When no single morphology code includes all diagnostic terms, use the numerically higher code if the diagnosis of a single tumor includes 2 or more modifying adjectives with different code numbers
- If a combination code exists use it
- If not, use the numerically higher morphology code

Rule K Examples
If A Combination Code Exists:
- Code ductal and lobular carcinoma to 8522/3, not 8500/3 (Ductal carcinoma), and not 8520/3 (Lobular carcinoma)
If No Combination Code Exists:
- Code transitional cell epidermoid carcinoma to 8120/3
  Transitional cell carcinoma (8120/3)
  Epidermoid carcinoma (8070/3)

Final Pathologic Diagnosis
- Always code the final pathologic diagnosis

Exception: at times the final diagnosis is “NOS” (carcinoma NOS, melanoma NOS, etc.). Code the histology from the microscopic description or comment if it identifies a more specific histologic type
Most Explicit Path Report

- Review all pathology reports
- Reports based on specimens from the definitive cancer directed surgery are usually the most explicit
- Exception: When the biopsy removes all of the tumor

Cancer And Carcinoma

- The terms “cancer” and “carcinoma” are not synonymous. Consider “cancer” the same as “malignant neoplasm NOS” (8000/3)
- Code cancer to 8000/3
- Code carcinoma to 8010/3

Other Site Specific Morphology Codes

- Code Waldenstrom Macroglobulinemia to C42.0 (blood)
- Kaposi Sarcoma - Record the primary site in which it arises. Record skin, NOS (C44.9) if no primary site is identified
- Code unknown primary to C80.9
Mixed Or Multiple Histologies
Principal Tumor Type

- Phrases such as “predominantly” and “with features of” are often used to identify the principal tumor type. Code to this histology when no combination code exists.

Mixed Or Multiple Histologies
Non-principal Tumor Type

- The phrases “with foci of”, “areas of” or “elements of” do not describe the majority of the tumor. Do not code the histologies described by these terms unless there is a combination code.

Helpful Hints

- Include all adjectives when determining the correct code.

- Whenever possible avoid using ill-defined site or unknown primary codes. Try to speak with the physician to locate a specific primary.
Helpful Hints

- Carcinomas do not arise in the brain, bone, or soft tissue except in rare instances. Double check to make sure these are not metastatic deposits.

Nodal/Extranodal Lymphoma

- If it is clear that a specific lymph node was the primary site, code it as the primary.
- If a lymphoma arises in lymph nodes, but the site of origin can't be determined, code lymph nodes NOS, C77.9.
- If a lymphoma involves multiple lymph node regions with no extranodal involvement, code C77.8.
- Code lymphomas that arise in extranodal sites to the site of origin.
- If the lymphoma involves both lymph nodes and an extranodal site or sites and the primary is unknown, code to C80.9 (unknown primary).

Reportable/Non Reportable Neoplasms

- Benign and borderline brain and central nervous system tumors are reportable as historical cases to FCDS if they were diagnosed prior to 1/1/04 and the patient has another active reportable neoplasm on or after 1/1/04.
- Benign and borderline brain and central nervous system tumors diagnosed on or after 1/1/04 must be reported to FCDS.
Reportable/Non Reportable Neoplasms

- Squamous Intraepithelial Neoplasia of the Vulva, Vagina and Anus (VIN III, VAIN III, AIN III) are reportable if diagnosed on or after 1/1/2001.
- Squamous Intraepithelial Neoplasia of the Vulva, Vagina and Anus (VIN III, VAIN III, AIN III) are reportable as historical cases if diagnosed before 1/1/2001 and the patient has another active reportable neoplasm on or after 1/1/01.

Any cancer with an ICD-O-3 Behavior Code of /2 (In situ) or /3 (Malignant) is reportable to FCDS.

In situ carcinoma of the cervix (CIS), intraepithelial neoplasia of the cervix (CIN III), and intraepithelial neoplasia of the prostate (PIN III) are not reportable.

Basal cell carcinoma and squamous cell carcinoma of non genital skin sites are not reportable. All other malignant neoplasms of the skin are reportable.

The following morphology terms of borderline behavior are reportable to FCDS as historical cases if they were diagnosed prior to 1/1/01 and the patient has another active reportable neoplasm on or after 1/1/01:
8931/1  9960/1  9981/1  9989/1  9393/1  9961/1  9982/1  9538/1  9962/1  9983/1  9950/1  9980/1  9984/1
ICD-O-3 Errata

- Since publication of the hardcover version of ICD-O-3 in June 2000, two sets of errata have been created that offer corrections for a number of errors and discrepancies that appear in the original document.
- The first errata is dated May 22, 2001.
- The second errata is dated May 6, 2003.
- FCDS highly recommends that you transcribe the information offered in these errata into your ICD-O-3 books to avoid coding topography and morphology incorrectly.
- Errata and clarifications for ICD-O-3 are available on the SEER website at http://seer.cancer.gov/icd-o-3/

ICD-O-3: Conclusion

- This concludes our presentation on the International Classification of Diseases for Oncology 3rd Edition.
- Please feel free to view all of the other web-based training modules available on our website.
- FCDS would like to thank you for your participation and your support.