

International Agency for Research on Cancer



وزارت بهداشت درمان و آموزش پزشکی
مرکز توسعه و هماهنگی تحقیقات و فناوری



ICD-O 3rd Edition

National Cancer Registry workshop

International Agency for Research on Cancer
Deputy of Research (Iran Ministry of Health)

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What is ICD-O?

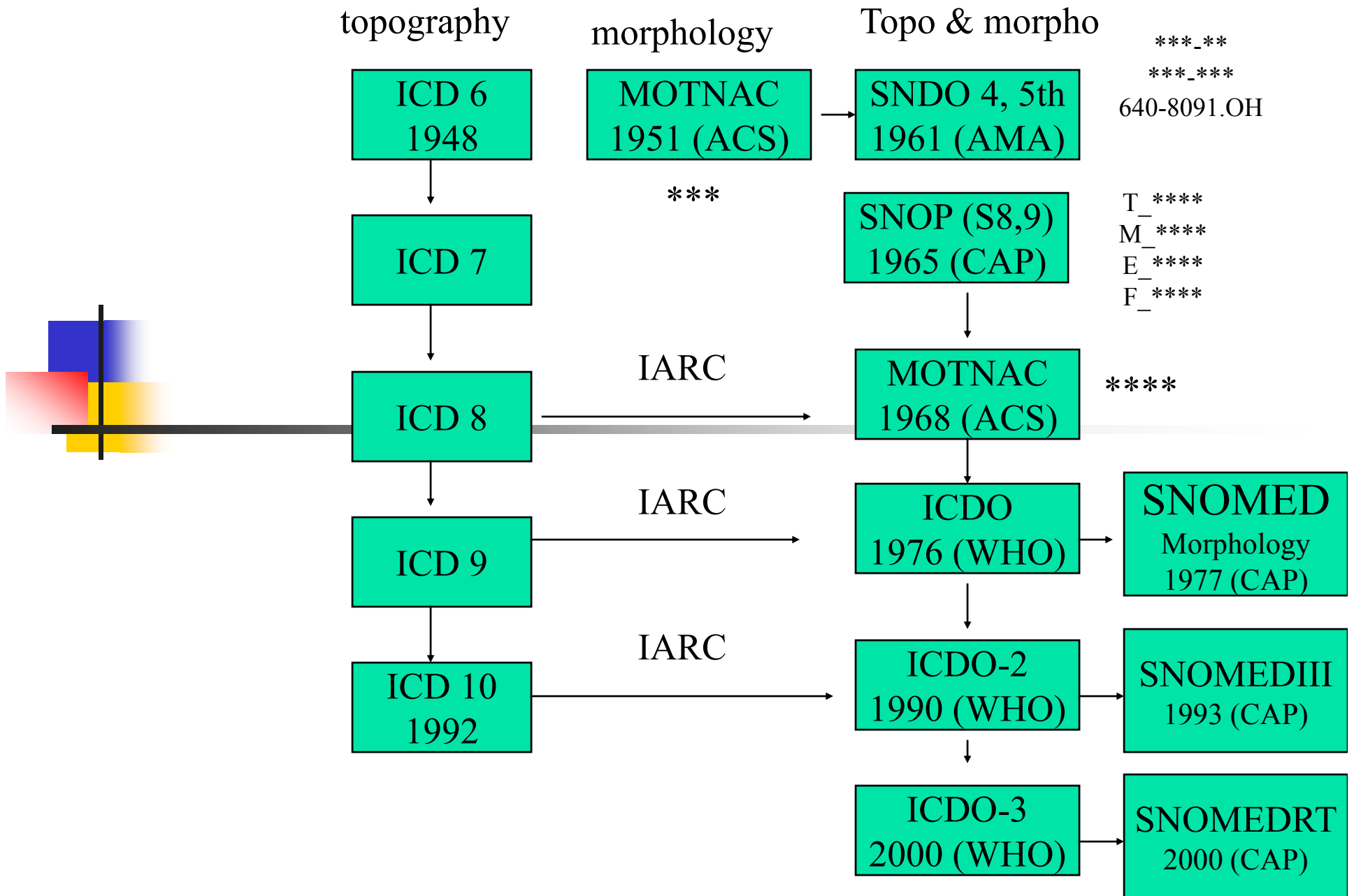
Includes codes from multiple classification systems

- Actually **a coded nomenclature** for :
 - Topography (primary site of origin)
 - Morphology (histology, behavior, grade)



Rationale for ICD-O

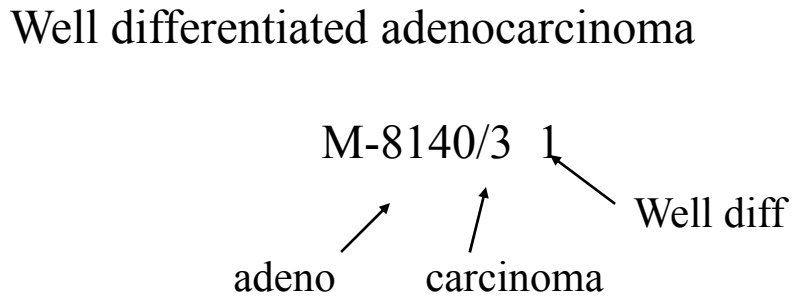
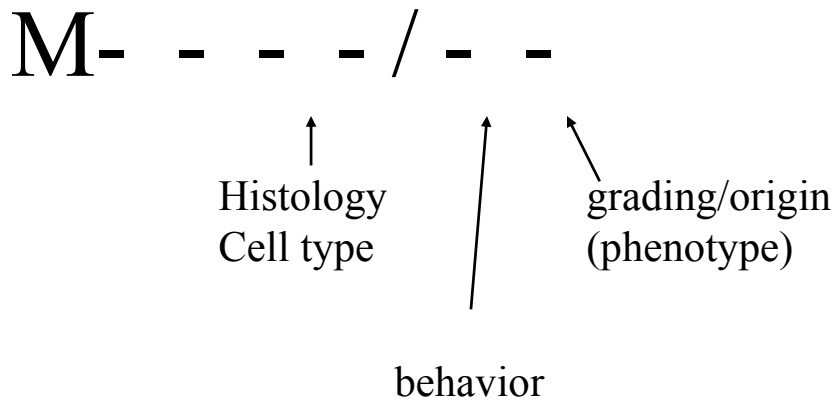
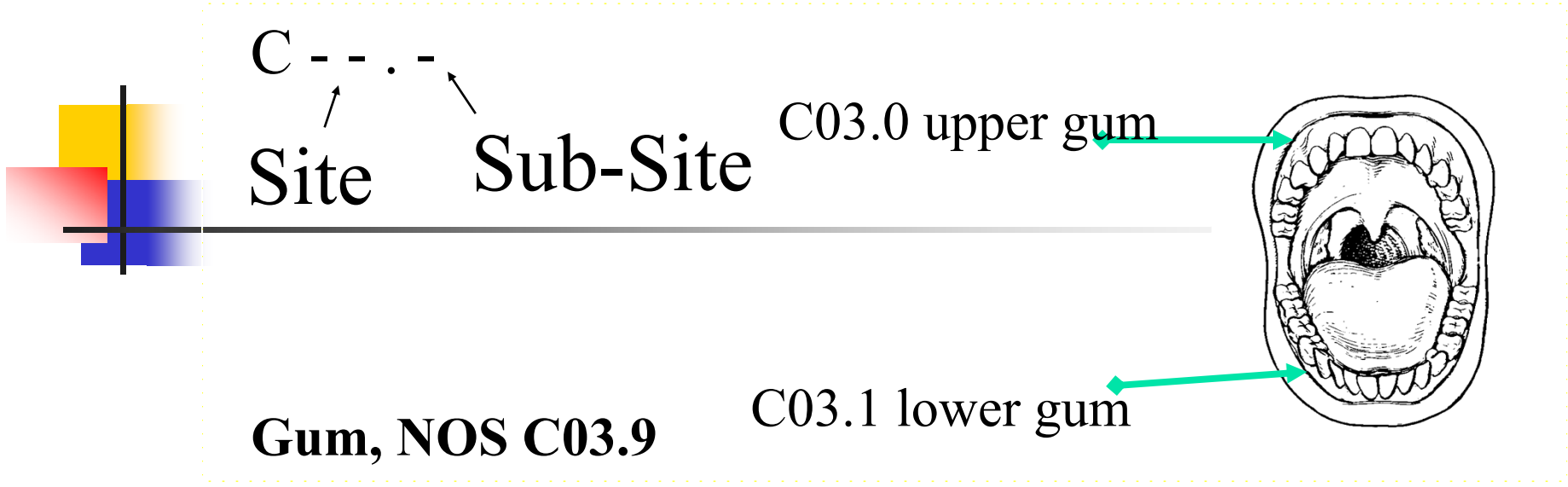
- To standardize cancer data collection
- To compare data
 - Regional
 - National
 - International

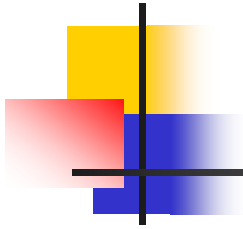




ICD-O 3rd Edition

- ICD-O-3 Manual format
 - Instructions
 - Numerical list for topography
 - Numerical list for morphology
 - Alphabetic index
 - Differences in morphology codes between 2nd and 3rd editions





/0

Benign

/1

Unknown/uncertain

Borderline malignancy

Low malignant potential

uncertain malignant potential

/2

Carcinoma in situ

intraepithelial

noninvasive

noninfiltrative

/3

Primary

/6

Secondary

/9

malignant , uncertain



Topography – Numerical List

- Range : C00.0 – C80.9
 - Grouped by systems / common organs
 - Numerical order



Morphology - Numerical List

- Range : 8000/0 to 9989/3
 - Grouped by common cell types
 - Numerical order



Morphology – Grade/Differentiation

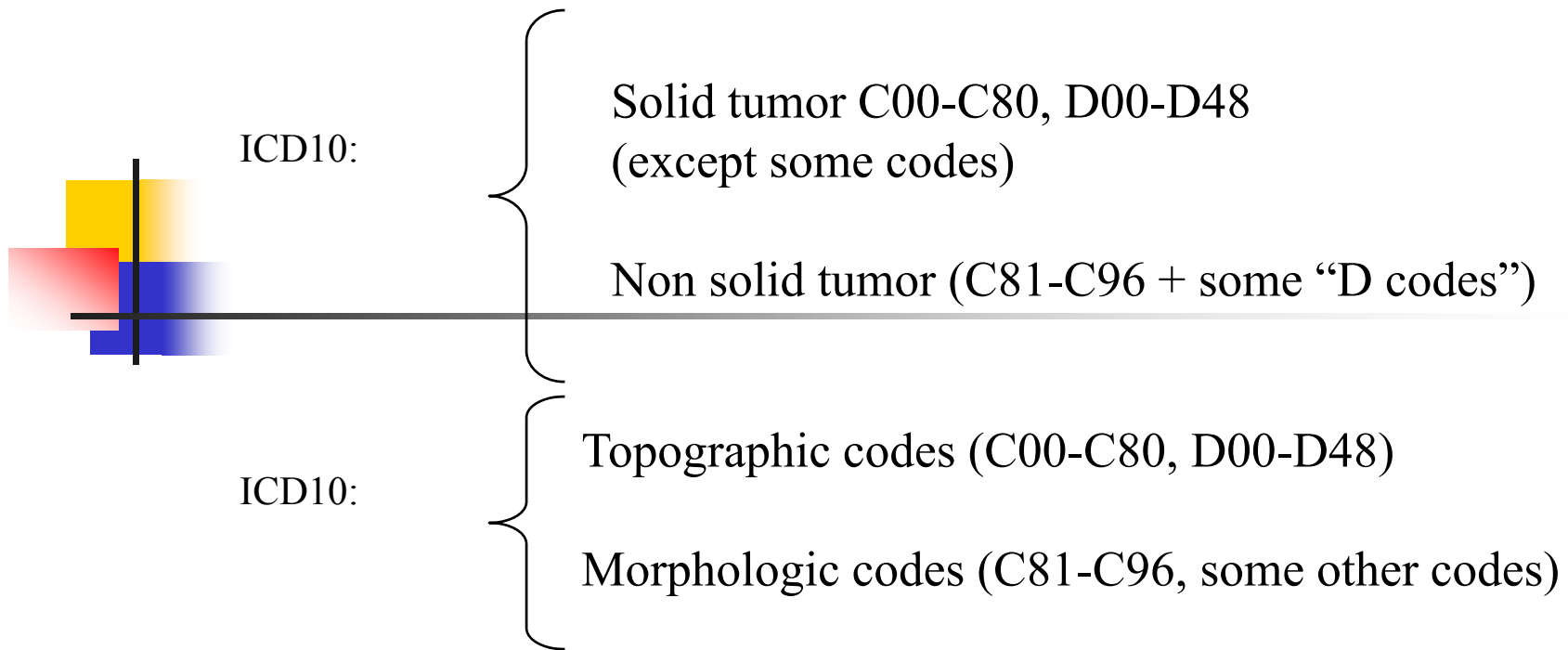
- Grade/Differentiation is the sixth digit (after the /) of the morphology code
- Describes how much or how little a tumor **resembles the normal tissue** from which it arose
- Code the **grade of the primary tumor**. Do code the grade if given for an in situ neoplasm. Do not code grade for **intraepithelial neoplasias**

ICD-10 vs ICD-O

- ICD-10 topography code describes **the behavior of the neoplasm**

	Primary	Seconadry	insitu	benign	unknown
Lung	C34.9	C78.0	D02.2	D14.3	D38.1

/0	D10-D36	Benign
/1	D37-D48	Unknown
/2	D00-D09	Insitu
/3	C00-C76, C80	Primary
/3	C81-C96	Primary (lymphoma, leukemia)
/6	C77-C79, C80	Secondary



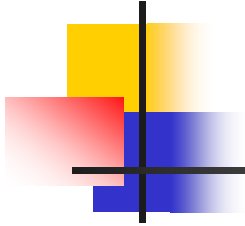
Melanoma of skin C43.9

Malignant neoplasm of skin C44.9

Benign neoplasm of uterus D26.9

Leiomyoma of uterus D25.9

Lymphoma C85.9



Not Used in ICD O

D codes (non malignant)

C81-C96 (non solid)

C43 melanoma

C45 Mesothelioma

C46 Kaposi Sarcoma

C97 Multiple Neoplasms

C78, C79 secondary

C77 Secondary lymph node

Used in ICD O

C00-C76, C80

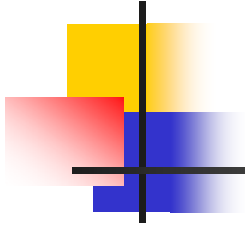
C77 lymph node

C42 hematopoetic

C42.0 Blood

C42.1 Bone marrow [C96.9]

C42.2 Spleen [C26.1]



Tumor like lesion

Hematoma (see SNOMED)

Acanthoma (see SNOMED)

Keloid (see SNOMED)



Tabular:

- Preferred term is bold type
- Synonyms are intended
- **Equivalents** are **under Preferred term**

M-8290/3 **Oxyphilic adenocarcinoma**

Onocytic carcinoma

Onocytic adenocarcinoma

Hurtle cell carcinoma (C73.9)

Hurtle cell adenocarcinoma (C73.9)

Follicular carcinoma, oxyphilic cell (C73.9)



Alphabetic Index

Topography and morphology

- 3 or more terms are in **bold type**
- Tumor-like lesions

NOS- not otherwise specified

See

[obs] obscure terms

Spell- American- Britain (refer to American)

.- complete the code



General Coding Guidelines -Topography

- Code **the site in which the primary tumor** originated, even if it extends to an adjacent subsite.
- Code subsite to **.9** for ***single primaries*** when multiple tumors arise in different **subsites of the same anatomic site.**
 - Infiltrating duct carcinoma in UOQ of R Breast and infiltrating duct carcinoma in LIQ R Breast



General Coding Guidelines - Site

- If a tumor is **metastatic** and the primary site is unknown, **code primary site to C80.9**
- If the medical record does not contain enough info to code site:
 - Consult physician advisor
 - Use **NOS** for organ system or **ILL** defined site code
 - Code **unknown C80.9**



■ Rule A: ill defined site

Codes C76._

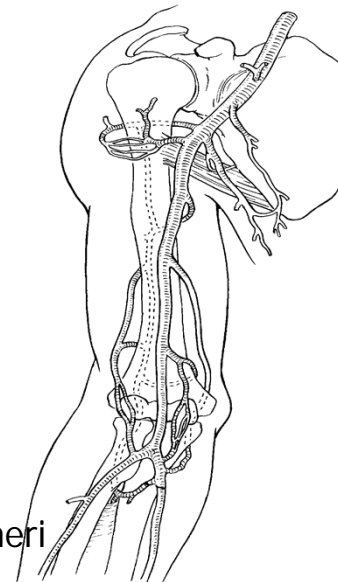
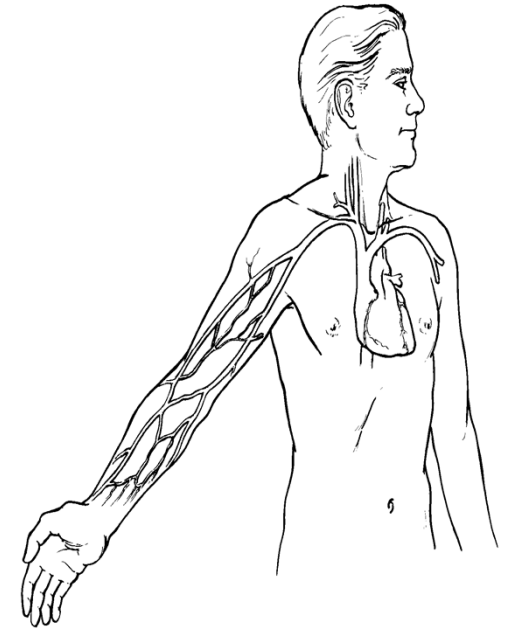
If the diagnosis specifies the **tissue of origin**, code to the tissue suggested in the alphabetic index in preference to NOS

C76._ codes should be **used very rarely** as the **histology** usually will allow you to use a more specific code

اگر در مورد مواضع بد تعریف شده، نوع بافت درگیر در تشخیص نیامده است، به **بافت پیشنهادی** در ایندکس الفبایی کد دهید و از NOS استفاده نکنید.

Arm

- C76.4 NOS
- C44.6 NOS (carcinoma, melanoma, nevus)
- C49.1 NOS (sarcoma, lipoma)
- C49.1 adipose tissue
- C47.1 autonomic nervous system
- C40.0 bone
- C49.1 connective tissue
- C49.1 fatty tissue
- C49.1 fibrous tissue
- C77.3 lymph node
- C49.1 muscle
- C47.1 peripheral nerve
- C49.1 skeletal muscle
- C44.6 skin
- C49.1 soft tissue
- C49.1 subcutaneous tissue
- C49.1 tendon
- C49.1 tendon sheath





Example of Rule A

Code : Malignant carcinoma of the arm

Answer : C44.6 (skin of upper limb)



Prefixes (B)

Some prefixes modify the topographic site and are listed with specific codes (ex. **C77.2 Para-aortic lymph node**)

Use **III-defined** site code **C76._** for terms such as those above if not specifically listed in ICD-O (only **if Rule A** does not apply)

اگر موضع با پیشوندهایی مانند **infra**، **para**، **peri** و ... آمده باشد در صورتی که در کتاب باشد از همان استفاده کنید و در غیر این صورت از **مواضع بدتعریف شده مناسب (C76)** استفاده کنید.

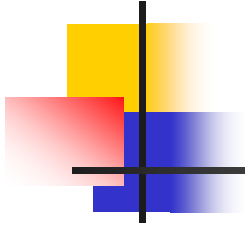


Example of Rule B

Code : periabdominal cystadenocarcinoma

Answer : C76.2 (abdomen, NOS)

Rule C. overlap lesion



- یک نئوپلاسم
- هر دو بدخیم اولیه
- نقطه شروع نامشخص
- نواحی هم مرز (مجاور)
- مگر اینکه کد ترکیبی وجود داشته باشد.

- A single neoplasm that overlaps two contiguous sites *and* whose point of origin cannot be determined is coded to 'C___.8'

Adenocarcinoma of upper and middle lobe, right lung. Site of origin unknown.

4/29/2015

– Lung C34.8

A. Sheikhtaheri



Example of Rule C

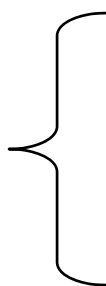
Code : Carcinoma overlapping the stomach
and small intestine?

Answer : C26.8 (overlapping digestive)

Rule D. Topography codes for lymphomas:

Always code site of origin (extranodal/nodal)

lymphoma



Nodal (LN, tonsil, spleen,)

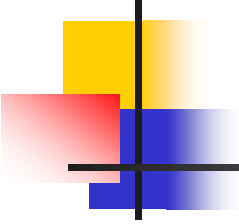
Extranodal (lymphatic cell of organs)

Nodal C77.- , C77.9 , C77.8

If no site of origin is given, code to lymph nodes, NOS (C77.9);–

Extranodal C00-C76, C80.9

C80.9 if suspected to be extranodal but site is not stated.



Malignant lymphoma involving cervical and inguinal lymph nodes

- **Primary site**

- **C77.8**

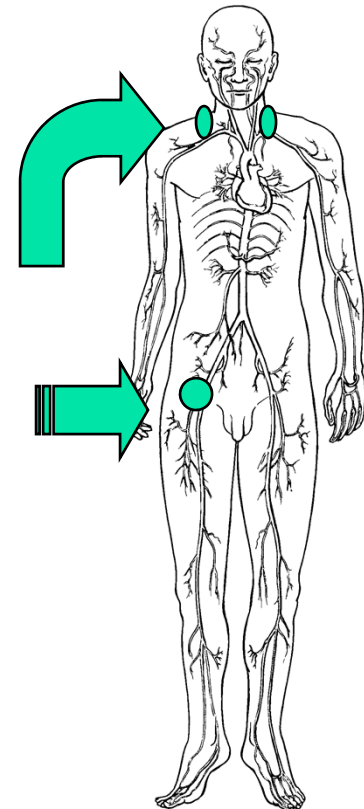
- Cervical lymph nodes C77.0**

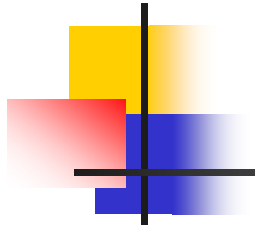
Plus

- Inguinal lymph nodes C77.4**

Equals

- Multiple lymph nodes C77.8**





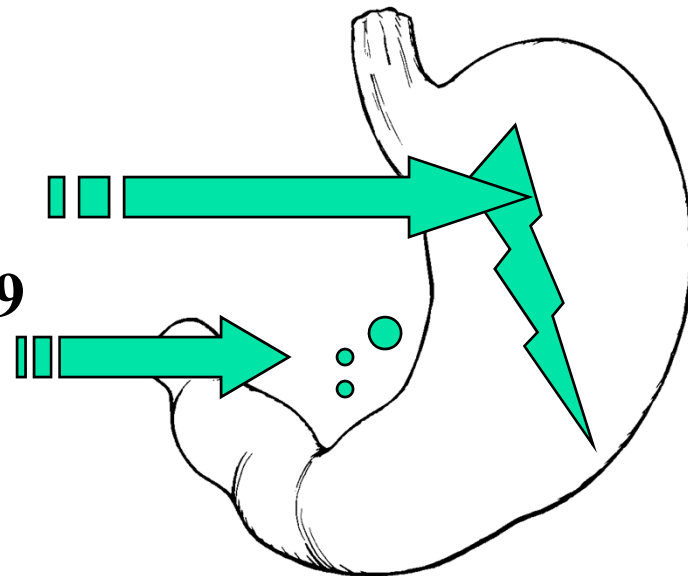
- **Examples**

- **Malignant lymphoma stomach and aortic lymph nodes**

- **Primary site**

- **C16.9**

**Stomach C16.9
Plus
Aortic Lymph
Nodes C77.2**





Rule E. Topography for Leukemias:

Code **all leukemias** except for *myeloid sarcoma* *
(M-9930/3) to **C42.1** (bone marrow)

* Myeloid sarcoma is a leukemic deposit in an **organ or tissue** and should be coded to the site of origin



General Coding Guidelines - Behavior

- Collect **in situ and malignant** always
- Code the **behavior as /3** if any portion of the **primary tumor is invasive**



General Coding Guidelines - Grade

- Code the grade from the **final diagnosis** of the **pathology report**.
- Code **grade from primary tumor**, not from a metastasis or recurrence
- If tumor has **invasive and in situ components**, code **grade of invasive component** of tumor.



Morphology – Matrix Concept (F)

- Use the **appropriate 5th digit behavior code even if the exact term is not listed in ICD-O**
- **over-ride suggested code** if pathology report says something different

از کد رفتاری مناسب استفاده کنید.

**Sigmoid colon with mucin-producing
adenocarcinoma, in situ**

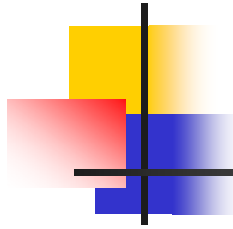
M-8481/2



Rule G. Grading or differentiation code:

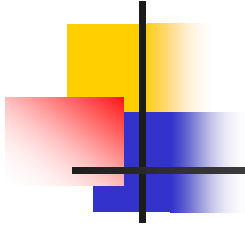
code to the highest grade/diff

- بالاترین درجه تمایز را اختصاص دهید.
- نشان دادن نوع سلول درگیر اولویت دارد.
- فقط برای نئوپلاسم های بدخیم کاربرد دارد.



6 th digit	
1 Grade 1	well differentiated Differentiated, NOS
2 Grade 2	Moderately diff Moderate well diff Intermediate diff
3 Grade 3	Poorly diff
4 Grade 4	Undifferentiated Anaplastic
9	Not determined/ not stated/NA

6 th digit immunophenotype	
5	T cell
6	B cell
7	Null cell (not B or T)
8	NK cell (natural killer)
9	Not determined/ not stated NA



Bladder with well to moderately differentiated transitional cell carcinoma

- **Code: 8120/32**

Malignant lymphoma, B lymphocytic, small, NOS

- **Code: 9670/36**

- **Well diff carcinoma M-8010/31**

Rule H. Site-associated morphology terms:

برخی مورفولوژی ها نشان دهنده موضع نیز هستند (کد آنها در پرانتز می آید).

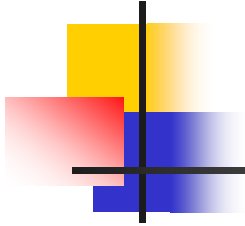
این کد زمانی استفاده می شود که :

۱- موضع دیگری **ذکر نشده** باشد یا هیچ موضعی ذکر نشده باشد.

۲- نئوپلاسم در آن موضع **ثانویه** نباشد.

If **no specific primary** site is listed in the diagnosis, default to the suggested code

Disregard suggested code if tumor is known to arise at another primary site



Infiltrating duct carcinoma in Prostate (Primary site)

Infiltrating duct carcinoma (C50.__)
prostate: C61.9

Infiltrating duct carcinoma
Breast : C50.9

Pseudo-topographic terms

برخی واژه های مورفولوژی الزاما در موضعی که اسم آنها نشان می دهد رخ نمی دهد و در موضع دیگری رخ می دهد.

Bile duct carcinoma معمولا در intrahepatic bile duct of liver (C22.1) رخ می دهد نه الزاما در bile duct (C24.0) در این موارد هر دو کد در مقابل واژه می آیند.

Carcinoma (M8010/3)

M-8160/3 Bile duct (C22.1, C24.0)



Rule J. Compound morphology diagnoses:

اگر مورفولوژی ترکیبی از چند واژه است آنرا جابجا کنید.

- Some tumors have **more than one histologic pattern**
- **Common combinations are listed and given a specific code**

Mixed adenocarcinoma & squamous cell carcinoma

- **8560/3 (adenosquamous carcinoma)**

Fibromyxosarcoma vs. Myxofibrosarcoma

Adenofibroma

fibroadenoma

4/29/2015

A. Sheikhtaheri



Rule K. multiple morphology terms:

two or more modifying terms describe the same single tumor

اگر واژه مورفولوژی نشان دهنده چند صفت با کد متفاوت باشد و کد ترکیبی وجود نداشته باشد کد بزرگتر اختصاص می یابد.

transitional cell epidermoid carcinoma

transitional cell carcinoma M8120/3

epidermoid carcinoma M8070/3



Morphology - Multiple Terms (K)

- Rule K **does not apply to separate tumors** nor to the **hematopoetic diseases** in general.
- For the hematopoetic diseases, code the **more specific histology over the higher code.**

Example) Diffuse large B-Cell lymphoma (9680/3)

Mantle cell lymphoma (9673/3)



CIN III (cervix intra epithelial neoplasia)

Dysphasia cervix

- Mild N87.0
- Moderate N87.1
- Severe N87.2
- اگر همراه با severe ، CINIII گزارش شده باشد یا CINIII بتنهایی باشد
- کارسینوم insitu در نظر گرفته میشود.

Vagina (VAIN III)

Anus (AIN III)

4/29/2015 Vulva (VIN III) A. Sheikhtaheri



References



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Group Exercise - Topography

- Ascending colon
 - C18.2

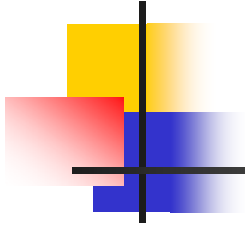
- Axillary lymph node
 - C77.3

- UOQ right breast
 - C50.4



Group Exercise - Morphology

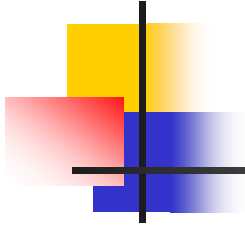
- Medullary adenocarcinoma
 - 8510/3
- Acute myelomonocytic leukemia
 - 9867/3
- Malignant neuroastrocytoma
 - 9505/3
- Seminoma and teratocarcinoma (1 tumor)
 - 9081/3 (higher than 9061/3 and more specific)



Benign chordoma 9370/0

Undiff carcinoma M-8020/34

Follicular Lymphoma, grade 1 M- 9695/39



carcinoma of stomach and esophagus.

Carcinoma of tip and ventral surface of tongue

Adenocarcinoma of tip and ventral surface of tongue, tip is origin

تشخیص های زیر را بر اساس ICDO کد دهید.

- Papillary carcinoma of thyroid, undifferentiated
- Differentiated retinoblastoma
- Monocytic chronic leukemia
- Lipomyxosarcoma in lower limb