

# SUMMARY STAGE 2018



# What is Summary Stage?

- Summary Stage is the most basic way of categorizing how far a cancer has spread from its point of origin
- The 2018 version of Summary Stage applies to every site and/or histology combination, including lymphomas and leukemias
- Summary Stage uses all information available in the medical record; in other words, it is a combination of the most precise clinical and pathological documentation of the extent of disease
- Many central registries report their data by Summary Stage as the staging categories are broad enough to measure the success of cancer control efforts and other epidemiologic efforts



- There are six main categories in Summary Stage
- Regional stage is subcategorized by the method of spread
- The code structure table is below:

Code	Definition
0	In situ
1	Localized only
2	Regional by direct extension only
3	Regional lymph nodes only
4	Regional by BOTH direct extension AND lymph node involvement
7	Distant site(s)/node(s) involved
8	Benign/borderline*
9	Unknown if extension or metastasis (unstaged, unknown, or unspecified) Death certificate only case



# GUIDELINES BY STAGE



# Code 0: In situ

- In situ means “in place”
- The technical definition of in situ is the presence of malignant cells within the cell group from which they arose
- There is no penetration of the basement membrane of the tissue and no stromal invasion
- An in situ cancer fulfills all pathological criteria for malignancy except that it has not invaded the supporting structure of the organ or tissue in which it arose

**Note:** If the pathology report indicates an in situ tumor but there is evidence of positive lymph nodes or distant metastases, code to the regional nodes/distant metastases



- An in situ diagnosis can only be made microscopically,
- A pathologist must identify the basement membrane and determine that it has not been penetrated
- If the basement membrane has been disrupted (in other words, the pathologist describes the tumor as microinvasive, microinvasion), the case is no longer in-situ
  - It is at least localized (code 1)



### Synonyms for In Situ

- Behavior code '2'
- Bowen disease (not reportable for C440-C449)
- Clark Level I for melanoma (limited to epithelium)
- Confined to epithelium
- Hutchinson melanotic freckle, NOS (C44\_)
- Intracystic, noninfiltrating (carcinoma)
- Intraepidermal, NOS (carcinoma)
- Intraductal (carcinoma)
- Intraepithelial neoplasia, Grade III (e.g., AIN III, LIN III, SIN III, VAIN III, VIN III)
- Intraepithelial, NOS (carcinoma)
- Involvement up to, but not including the basement membrane
- Lentigo maligna (C44\_)
- Lobular, noninfiltrating (C50\_) (carcinoma)
- Noninfiltrating (carcinoma)
- Non-invasive (carcinoma)
- No stromal invasion/involvement
- Papillary, noninfiltrating or intraductal (carcinoma)
- Precancerous melanosis (C44\_)
- Pre-invasive
- Queryrat erythroplasia (C50\_)
- Stage 0 (except Paget's disease (8540/3) of breast and colon or rectal tumors confir propria/intramucosa)

# IN-SITU SYNONYMS

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- Organs and tissues that have no epithelial layer cannot be staged as in situ, since they do not have a basement membrane

e 0 is not applicable for the following Summary Stage chapters/Schei

Bone (00381, 00382, 00383)

Brain (00721)

Cervical Lymph Nodes, Occult Head and Neck (00060)

CNS Other (00722)

Corpus Sarcoma (00541, 00542)

Heart, Mediastinum and Pleura (00422)

HemeRetic (00830)

Ill-defined other (99999)

Kaposi Sarcoma (00458)

Lymphoma (00790, 00795)

Lymphoma Ocular Adnexa (00710)

Mycosis Fungoides (00811)

Plasma Cell Disorders (00822)

Plasma Cell Myeloma (00821)

Pleural Mesothelioma (00370)

Primary Cutaneous Lymphoma (non-MF and SS) (00812)

Retinoblastoma (00680)

Retroperitoneum (00440)

Soft Tissue (00400, 00410, 00421, 00450)



# Code 1: Localized

A localized cancer is defined as:

- Malignancy limited to the site of origin
- Spread no farther than the site of origin in which it started
- Infiltration past the basement membrane of the epithelium into parenchyma (the functional part of the organ), but there is no spread beyond the boundaries of the organ

**Note:** A tumor can be widely invasive or even show metastases within the organ itself and still be “confined to organ of origin” or localized in Summary Stage



- Sites where it is straightforward to determine if the cancer is localized:
  - For organs that have definite boundaries (such as prostate, testis, or stomach)
  - Sites where there is a clear line between the organ of origin and the surrounding region (such as breast or bladder)
- An exception is skin, because it is sometimes difficult to determine where the dermis ends and subcutaneous tissue begins
- For many internal organs, it is difficult to determine whether the tumor is localized without surgery
  - With the increasing sophistication of imaging, it may be possible to determine whether a cancer is localized or regional without surgery



## To avoid over-staging:

- It is important to know and recognize the names of different structures within the organ (such as lamina propria, myometrium, muscularis)
  - This will help interpret the description of invasion appropriately
- Summary Stage uses both clinical and pathological information
  - Review and read the pathology and operative report(s) for comments on gross evidence of spread, microscopic extension and metastases, as well as physical exam and diagnostic imaging reports for mention of regional or distant disease
  - If any of these reports provides evidence that the cancer has spread beyond the boundaries of the organ of origin, the case is not localized
  - If the pathology report, operative report and other investigations show no evidence of spread, the tumor may be assumed to be localized



Code 1 is not applicable for the following Summary Stage chapters/Schema IDs

- Cervical Lymph Nodes and Unknown Primary (00060)
- Ill-defined other (99999)



# Regional Stage: Codes 2-4

There are several codes to describe the different methods of regional spread of tumor

Code	Definition
2	Regional by direct extension only
3	Regional lymph node(s) involved only
4	Regional by BOTH direct extension AND regional lymph node(s) involved

Clinicians may use some terms differently than cancer registrars

It is important to understand the words used to describe the spread of the cancer and how they are used in staging

## For example:

- “Local” as in “carcinoma of the stomach with involvement of the local lymph nodes”
  - Local nodes are the first group of nodes to drain the primary site and often are referred to as “regional” nodes
  - Unless evidence of distant or regional spread is present, such a case should be staged as regional, lymph node(s) involved only, assign 3
- “Metastases” as in “carcinoma of lung with peribronchial lymph node metastases”
  - Metastases in this sense means involvement by tumor
  - The name of the involved lymph node will determine whether it is a regional node or distant node
  - In this case, it would be a regional node. It is important to learn the names of regional nodes for each primary site



## Code 2: Regional by direct extension only

- Regional stage by direct extension is perhaps the broadest category as well as the most difficult to properly identify
- The brief definition is direct tumor extension beyond the limits of the site of origin
- Although the boundary between localized and regional tumor extension is usually well-identified, the boundary between regional and distant spread is not always clear and can be defined differently by physicians in various specialties



- Cancer becomes regional by direct extension when there is potential for spread by more than one vascular supply route

**Example:** The tumor goes outside of the wall and invades another organ, it regional by direct extension

- The formal (scientific) definition of regional used by surgeons is that area extending from the periphery of an involved organ that lends itself to removal en bloc with a portion of, or an entire organ with outer limits to include at least the first level nodal basin



- Radiation oncologists define the term regional as including any organs or tissues encompassed in the radiation field used to treat the primary site and regional lymph nodes
- For primary sites that have “walls” (e.g. colon, rectum), regional by direct extension is invasion through entire wall of organ into surrounding organs and/or adjacent tissues, direct extension or contiguous spread
  - “Hollow Organs”
- For those primary sites without defined walls, regional by direct extension is when the tumor has spread beyond the primary site or capsule into adjacent structures
  - “Solid Organs”



- Do **NOT** use code 2 if there is direct extension **and also** regional nodes positive (see code 4)
- Code 2 is not applicable for the following Summary Stage chapters/Schema IDs
  - Cervical Lymph Nodes and Unknown Primary (00060)
  - HemeRetic (00830)
  - Ill-defined other (99999)
  - Plasma Cell Disorders (00822)
  - Plasma Cell Myeloma (00821)



# Code 3: Regional lymph nodes only

- Regional lymph nodes are listed for each chapter/site
- If a lymph node chain is not listed in code 3, then the following resources can be used to help identify regional lymph nodes
  - Appendix I
  - Anatomy textbook
  - ICD-O manual
  - Medical dictionary (synonym)



- Pathological information takes precedence
  - If no preoperative treatment was administered and there is a discrepancy between clinical information and pathological information about the same lymph nodes
- It is not necessary to biopsy every lymph node in the suspicious area to disprove involvement.
  - Use the following priority order:
    - Pathology report
    - Imaging
      - If nodes are determined positive based on imaging and then confirmed to be negative on pathological exam, treat the regional nodes as negative when assigning Summary Stage
    - Physical exam
      - If nodes are determined positive based on physical exam and then confirmed to be negative on pathological exam, treat the regional nodes as negative when assigning Summary Stage

**Remember:** See with your eyes, not with your hands

- The things that are seen take priority over the things that are felt



- If the patient receives neoadjuvant (preoperative) systemic therapy (chemotherapy, immunotherapy) or radiation therapy, code the clinical information if that is the most extensive lymph node involvement documented
- If the post-neoadjuvant surgery shows more extensive lymph node involvement, code the regional nodes based on the post-neoadjuvant information
- Code based on when they were the **worst**



## Yes Words

For solid tumors these terms are recorded as involvement of lymph nodes (with no specific information as to tissue involved)

- “fixed”
- “matted”
- “mass” in the hilum”
- “mass in the mediastinum”
- “mass in the retroperitoneum”
- “mass in the mesentery”

## No Words

For solid tumors the terms below should be ignored:

- “palpable”
- “enlarged”
- “visible swelling”
- “shotty”
- “lymphadenopathy” (Prior to 2018, allowed for lung primaries)
- If these terms are used and there is no treatment to indicate lymph node involvement, treat the case as having no lymph node involvement



## **Accessible lymph nodes:**

- For “accessible” lymph nodes that can be observed, palpated, or examined without instruments, look for some description of the regional lymph nodes
  - A statement such as “remainder of examination negative” is sufficient to determine negative regional lymph nodes

## **Inaccessible lymph nodes:**

- For certain primary sites, regional lymph nodes are not easily examined by palpation, observation, physical examination, or other clinical methods
- These are lymph nodes within body cavities that in most situations cannot be palpated, making them inaccessible
- When the tumor is Localized and standard treatment for a localized site is done, it is sufficient to determine negative regional lymph nodes



- The terms “homolateral,” “ipsilateral,” and “same side” are used interchangeably
- Involved nodes found during sentinel lymph node procedures are classified as positive regional nodes
  - The sentinel lymph node is the first lymph node to receive lymphatic drainage from a primary tumor
    - If it contains metastatic tumor, this indicates that other lymph nodes may contain tumor
    - If it does not contain metastatic tumor, other lymph nodes are not likely to contain tumor. Occasionally there is more than one sentinel lymph node

The Sentinel Lymph Node stands watch and is the lymph node’s first defense against invasion from the cancer



Soldiers from the 3rd U.S. Infantry Regiment, are known as the "The Old Guard," stand watch over the Tomb of the Unknown Soldier. The Tomb Guards, **also called Sentinels**, stand watch **24-hours-a day**



- For some chapters, ITCs are counted as positive regional nodes, while other chapters count them as negative
  - See the individual chapters to determine how to count ITCs
- Discontinuous (satellite) tumor deposits (peritumoral nodules) for colon, appendix, rectosigmoid and rectum can occur WITH or WITHOUT regional lymph node involvement
  - Assign the appropriate code according to guidelines in individual chapters
  - Tumor nodules in pericolic or perirectal fat without evidence of residual lymph node structures can be one of several aspects of the primary cancer:
    - Discontinuous spread
    - Venous invasion with extravascular spread, or
    - Totally replaced lymph node
- If there are Tumor Deposits AND node involvement, code only the information on node involvement in Summary Stage



- If direct extension of the primary tumor into a regional lymph node is shown, code as involved regional nodes
- Any positive unidentified nodes included with the resected primary site specimen are to be coded as “Regional Lymph Nodes, NOS”
- If the only indication of positive regional lymph node involvement in the record is the physician’s statement of a positive N category from the TNM staging system or a stage from a site-specific staging system, **use that information to code regional lymph node involvement**
- If a specific chain of lymph nodes is named, but not listed as regional, first determine if the name is synonymous with a listed lymph node
  - Otherwise, assume distant lymph node(s) are involved
- Do **NOT** use code 3 if there are regional nodes positive **AND also** direct extension (see code 4)



Code 3 is not applicable for the following Summary Stage chapters/Schema ID

- Brain (00721)
- CNS Other (00722)
- HemeRetic (00830)
- Ill-defined other (includes unknown primary site, C809) (99999)
- Intracranial Gland (00723)
- Lymphoma (00790, 00795)
  - Primary Cutaneous Lymphoma (00812) and Ocular Adnexal Lymphoma (00710) have separate chapters from Lymphoma and regional lymph node involvement is assigned in these chapters.
- Plasma cell myeloma (00821)



# Code 4: Regional by BOTH direct extension AND regional lymph node(s) involved

- Code 4 are for tumors that have both direct extension and regional lymph node involvement
  - Code 4 tumors are a combination of code 2 and code 3 (see definitions of code 2 and code 3 )
- **Important:** If there is only localized involvement (see definition of code 1) with regional lymph node involvement, assign code 3.



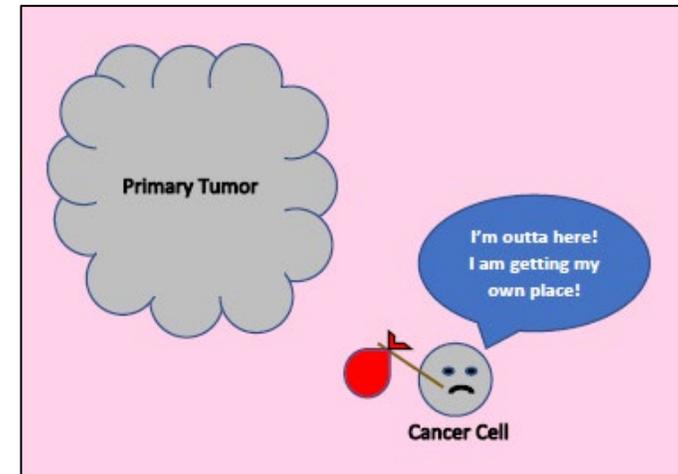
Code 4 is not applicable for the following Summary Stage chapters/Schema ID

- Brain (00721)
- Cervical Lymph Nodes and Unknown Primary (00060)
- CNS Other (00722)
- HemeRetic (00830)
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- Plasma Cell Disorders (00822)
- Plasma Cell Myeloma (00821)
- Myeloma Plasma Cell Disorder (00821, 00822)



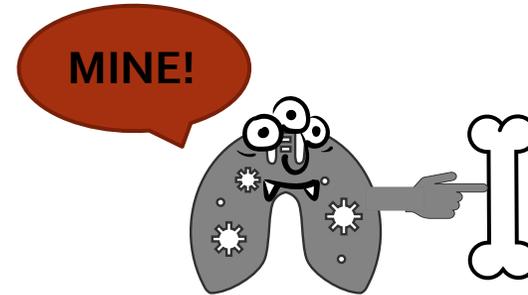
# Code 7: Distant

- Distant metastases are tumor cells that have broken away from the primary tumor, have travelled to other parts of the body, and have begun to grow at the new location
- Distant stage is also called:
  - Remote
  - Diffuse
  - Disseminated
  - Metastatic
  - Secondary disease
- The point is that in most cases there is no visible continuous trail of tumor cells involving only the primary site and the distant site



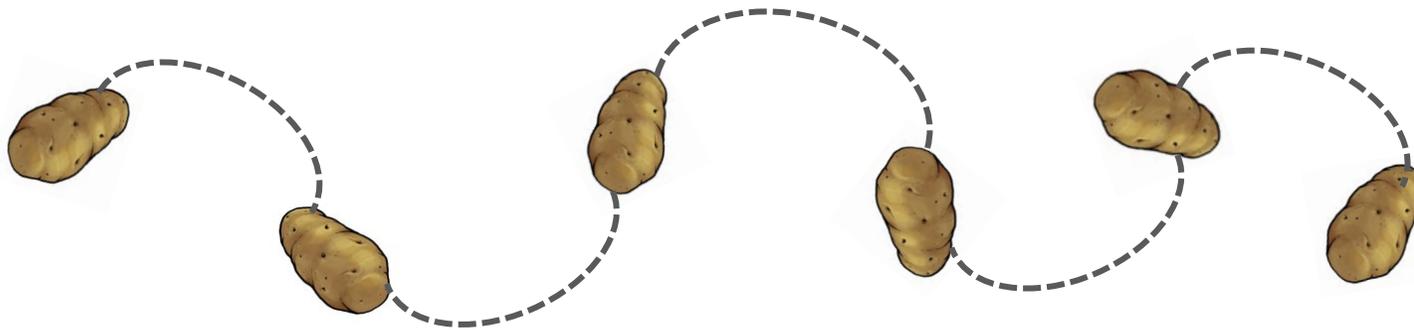
## Cancer cells can travel from the primary site in any of four ways

- **Extension** from primary organ beyond adjacent tissue into next organ; for example, from the lung through the pleura into bone or nerve



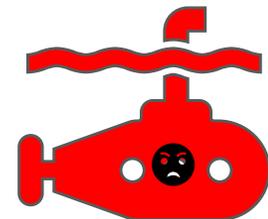
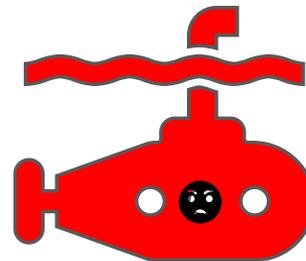
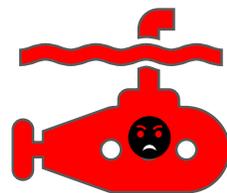
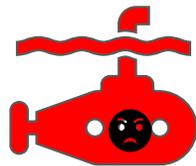
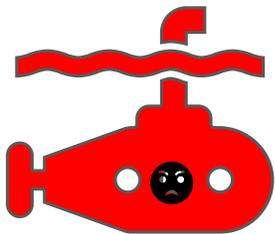
- **Lymph channels**

- Travel beyond the first (regional) drainage area
- Tumor cells can be filtered, trapped and begin to grow in any lymph nodes in the body



- **Hematogenous or blood-borne metastases:**

- Invasion of blood vessels within the primary tumor (veins are more susceptible to invasion than thicker-walled arteries) allows escape of tumor cells
- Tumor emboli which are transported through the blood stream to another part of the body where it lodges in a capillary or arteriole
- At that point, the tumor penetrates the vessel wall and grows back into the surrounding tissue



- **Body cavity fluids:**

- **Example:** malignant cells rupture the surface of the primary tumor and are released into the thoracic or peritoneal cavity
- Cells float in the fluid and can land and grow on any tissue reached by the fluid
- This type of spread is also called implantation or seeding metastases
- Some tumors form large quantities of fluid called ascites that can be removed, but the fluid rapidly re-accumulates
- However, the presence of fluid or ascites does not automatically indicate dissemination
  - There must be cytologic evidence of malignant cells
  - A subsequent clinical diagnosis should be able to override a negative cytology

**Important:** Malignant cells in ascites or peritoneal washings may not be distant involvement in some schemas



## Common sites of distant spread are:

- Liver
- Lung
- Brain
- Bones
  - They are not listed specifically for each chapter
  - These organs receive blood flow from all parts of body and thus are a target for distant metastases

**Important:** If the primary site is adjacent to the liver, lung, brain or bone, it is important to review the Summary Stage chapter for the primary site to assure that the stage is not regional by direct extension

**Example:** Liver involvement from a primary in the gallbladder. It is likely that this is regional by direct extension rather than distant stage, since the gallbladder is adjacent to the liver



- Read the diagnostic imaging reports to determine whether the cancer involves the surface of the secondary organ, if so, this could indicate of either:
  - Spread by regional direct (contiguous) extension
  - Spread by surface implant
- If the tumor is identified growing from one organ onto/through the surface of the secondary organ,
  - Then it is contiguous extension.
  - If the tumor is only found in the parenchyma of the secondary organ away from the primary organ, then it is discontinuous mets



- Hematopoietic, immunoproliferative, and myeloproliferative neoplasms are distant except as noted in the Summary Stage chapter
- Code 7 is not applicable for the following Summary Stage chapters/Schema IDs
  - III-defined other (99999)



# Code 8: Benign/Borderline

- Code 8 is for Benign/borderline neoplasms. Benign/borderline neoplasms are collected **ONLY** for the following Summary Stage chapters/Schema IDs
  - Brain (00721)
  - CNS Other (00722)
  - Intracranial Gland (00723)
- If a registry collects other benign/borderline tumors that are not reportable, use code 9 for Summary Stage 2018
  - Code 8 will not be allowed for other sites



# Code 9: Unknown if extension or metastasis (unstaged, unknown or unspecified)

- If the primary site is unknown (C809)
  - Then Summary Stage must be unknown
- Assign 9 very sparingly
  - If possible, contact the physician to see if there is more information about the case which is not in the record, such as diagnostic studies performed prior to admission or documentation in the physician's office record



# How to Assign Summary Stage

Answers to four basic questions will determine the correct Summary Stage

## 1. Where did the cancer start?

- In what organ or tissue did the tumor originate?
- Is there a specific subsite of the organ involved?
- Information about the primary site and histology will usually come from the physical examination, a diagnostic imaging report, the operative report or the pathology report
- Code the primary site and histology according to the rules in the International Classification of Diseases for Oncology, Third Edition; 2018 Solid Tumor Rules; and the Hematopoietic Manual and Database
- In addition to recording this code in the primary site and histology fields on the cancer abstract, this code will be useful later in the staging process



## 2. Where did the cancer go?

- Once the primary site is known, determine what other organs or structures are involved
- Review the physical examination, diagnostic imaging reports, operative report(s), pathology report(s), and laboratory tests to identify any structures that are involved by cancer cells
- Any of these reports can provide a piece of information that might change the stage
- Note whether there is lymphatic or vascular invasion and/or spread, which organs are involved, and whether there is a single focus or multiple foci of tumor
- It is important to know the names of the substructures within the primary site as well as the names of surrounding organs and structures
  - Note the names of any tissues that are reported to be involved by cancer cells



### 3. How did the cancer spread to the other organ or structure?

- Did the cancer spread to the new organ/tissue in a continuous line of tumor cells from the primary site?
- If the pathologist can identify a trail of tumor cells from one organ to another, the stage may be regional by direct extension or distant by direct extension
- Did the cancer spread by breaking away from the primary cancer and floating to the new site in the blood stream or body fluids (includes lymph within lymph vessels, blood within blood vessels, fluid outside of vessels such as pleural, pericardial, peritoneal)?
- If there is no direct trail of tumor cells from the primary organ to another site, the stage is probably distant



#### 4. What are the stage and correct code for this cancer?

- In the Summary Staging Manual 2018, go to the appropriate chapter that includes the ICD-O primary site and/or histology code identified earlier
- Review the chapter looking for the names of the structures and organs that were reported as involved
  - If more than one structure or organ is involved, select the highest category that includes an involved structure



## Summary Stage Manual

- General Instructions: Pages 18-19
  - Guidelines for Summary Stage: Pages 20-21
  - Definitions: Pages 23-24
  - Ambiguous Terminology: Pages 25-26
  - Schema ID Table: Pages 27-31
- 
- <https://seer.cancer.gov/tools/ssm/SSM-2018-GENERAL-INSTRUCTIONS.pdf>
  - **All the information contained in the sections above has been covered in this review or in other presentations**



# QUIZ TIME

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You have 10 minutes

# Summary Stage 2018 Quiz

## True or False

- 1) The pathology report indicates an insitu tumor but there is evidence of positive lymph nodes. Code 0 because the primary tumor is stated to be insitu.
- 2) “Localized” includes localized lymph nodes?
- 3) A tumor from the gallbladder has moved out of the primary organ and has grown contiguously into the liver. This would be Summary stage 2 (regional by extension)?
- 4) There is a contiguous tumor from the transverse colon to the lower left lobe of the liver. There is also a second tumor located on the outside of the right lobe of the liver. This would be Summary Stage 2 (regional by extension) because the primary tumor is growing contiguously into the liver?
- 5) Use all information before the initiation of neoadjuvant treatment?
- 6) Code 4 are for tumors that have both direct extension and distant lymph node involvement?
- 7) All benign and borderline tumors are coded 8?
- 8) Sentinel lymph nodes will always be the first positive lymph node in the chain?
- 9) Lymphadenopathy can be used for lung cases only?
- 10) Death Certificates only cases are always coded 9?

# Summary Stage 2018 Quiz

## True or False

- 1) The pathology report indicates an insitu tumor but there is evidence of positive lymph nodes. Code 0 because the primary tumor is stated to be insitu. **False**
- 2) “Localized” includes localized lymph nodes? **False**
- 3) A tumor from the gallbladder has moved out of the primary organ and has grown contiguously into the liver. This would be Summary stage 2 (regional by extension)? **True**
- 4) There is a contiguous tumor from the transverse colon to the lower left lobe of the liver. There is also a second tumor located on the outside of the right lobe of the liver. This would be Summary Stage 2 (regional by extension) because the primary tumor is growing contiguously into the liver? **False**
- 5) Use all information before the initiation of neoadjuvant treatment? **False**
- 6) Code 4 are for tumors that have both direct extension and distant lymph node involvement? **False**
- 7) All benign and borderline tumors are coded 8? **False**
- 8) Sentinel lymph nodes will always be the first positive lymph node in the chain? **False**
- 9) Lymphadenopathy can be used for lung cases only? **False**
- 10) Death Certificates only cases are always coded 9? **False**

**QUESTIONS?**