

Directly Coded Summary Stage Prostate Cancer

National Center for Chronic Disease Prevention and Health Promotion
Division of Cancer Prevention and Control, Cancer Surveillance Branch



1

After much deliberation, consensus was reached by CDC, SEER and the Commission on Cancer's American College of Surgeons (ACS) that Directly Coded Summary Stage was, for most registries, a more efficient method of recording if and how far a solid tumor had extended from the point of origin. With the advent of AJCC TNM and Collaborative Staging some registries have lost touch with or have never been exposed to this method of staging. It was decided that Directly coded Summary Staging would be required from all reporters for CDC's National Program of Cancer Registries (NPCR). (Not CS derived). Registries that report to the American College of Surgeons or SEER will need to meet additional criteria as set forth by the ACoS or the NIH.

The following slides will look at how a registrar needs to approach Summary Staging. It will be a review for some and new information for others.

Directly Coded Summary Staging

- Summary Staging (known also as SEER Staging) bases staging of solid tumors solely on whether or not the disease has spread.
- Registrars need to be knowledgeable of the definitions of each stage to assign it correctly.
- Summary Staging is an efficient tool to categorize if and/or how far the cancer has spread from the original site.

2

As the slide states – Summary Stage is based only on whether or how far a malignancy has spread and is an efficient method of assigning that information in a usable format. It is the most basic staging system and is utilized for staging most solid tumors. It should be noted in the SEER Summary Staging Schema, Kaposi Sarcoma, Lymphomas and Hematopoietic Diseases are addressed. These schema use a different staging methodology than solid tumors- but you need to be aware they are provided.

Summary Staging timing is limited to information obtained through the completion of surgeries in the first course of treatment or within 4 months of diagnosis in the absence of disease progression, whichever is longer.

While Summary Stage can be of great value to cancer control planners who need general categories for their tasks, and do not need the detail found in AJCC TNM or Collaborative Staging, there are limitations in that it can be difficult to accomplish a detailed analysis of the data.

Determining how the Prostate Tumor should be Staged requires the Registrar to:

- ❑ Read the physical exam and work up documents.
- ❑ Read operative and pathology reports.
- ❑ Review imaging reports for documentation of any spread.
- ❑ Become familiar with the anatomy of the prostate and the regional and distant lymph node chains with the prostate.
- ❑ Refer to the online manuals regularly and periodically check the site for updates and/or changes.

4

History and physical exam documentation will provide information on the findings from the physical as reported by the physician including an overall report of the patient's general health status and whether or not a tumor is clinically apparent through a digital rectal exam (DRE). The DRE documentation may provide information on extracapsular extension, whether the seminal vesicles are firm, and/or if there is apparent fixation to the pelvic walls by the prostate. All documentation relating to stage of disease is important to note.

Operative, pathology and imaging reports relating to the apparent prostate cancer need to be carefully scrutinized. If there are CT or MRI reports of the chest, abdomen or pelvis they should be carefully reviewed. Bone scans are often done to identify bone metastases (mets) although they can also identify hot spots that may be other than mets – arthritis is a prime example. Follow up skeletal x-rays are often employed to support the findings of metastatic bone disease identified in a bone scan.

Other imaging tools include chest x-ray for lung mets, ProstaScint scan used in conjunction with a radioactive agent that is specifically geared to identify cells from the prostate in nodes, organs and soft tissue. A transrectal ultrasound (TRUS) uses sound waves to find suspicious areas in the prostate.

An elevated PSA blood test (which measures a prostate epithelial protein) alerts the physician to abnormal activity in the prostate. Although it is a useful tool it does not always reflect prostate cancer – it may be negative with a positive digital rectal exam or may be elevated with benign prostatic hypertrophy (BPH)

Review any endoscopic procedures – cystoscopy or urethroscopy used to determine if there is involvement of the bladder and/or urethra.

Additional procedures in identifying prostate cancer are the Transurethral resection of the prostate (TURP). TURP is usually used to remove tissue for benign prostatic hypertrophy but the procedure may remove tissue that proves to be malignant. It may not remove all the cancer but will alleviate poor urinary flow. Also included in these diagnostic tools for staging are laparoscopic biopsy of pelvic lymph nodes or a laparoscopic prostatectomy which removes the entire prostate, seminal vesicles, ends of vas deferens and local lymph nodes.

Assigning the Correct Summary Stage Code

Nine possible codes for Summary Stage

- ❑ 0 = In-Situ
- ❑ 1 = Local
- ❑ 2 = Regional disease by direct extension only
- ❑ 3 = Regional disease with only regional lymph nodes involved
- ❑ 4 = Regional disease by both direct extension and regional lymph node(s)
- ❑ 5 = Regional disease that is not otherwise specified
- ❑ 7 = Distant sites or distant lymph node involvement
- ❑ 8 = benign and borderline CNS tumors
- ❑ 9 = Unknown if there is extension or metastatic disease (unstaged, death certificate only cases)

5

Summary Staging is correctly assigning one of nine single-digit codes that describes the tumor extent at the time of diagnosis. There are nine codes that can be assigned in general, but only 8 possible for most cancers. Code 8 is used for benign and borderline CNS tumors.

The codes for Summary Stage are in ascending order, starting with the most minimal tumor involvement or growth up to distant spread. A thorough evaluation of the medical record(s) documentation will normally provide the information for the accurate coding of Summary Stage.

An in-depth explanation of the Summary Stage categories can be found at <http://seer.cancer.gov/tools/ssm/>. (This web site is provided on a slide later in the presentation).

Code 9, or unknown stage should be used only when all efforts to establish the stage of disease have been exhausted, it is an unknown primary site, or it is a death certificate only case (which can only be assigned by the central cancer registry).

Code 5 or Regional, NOS should likewise only be assigned when a more specific regional stage cannot be determined.

What does In-Situ Mean?

- ❑ In-Situ is defined as malignancy without invasion.
 - Only occurs with epithelial or mucosal tissue
 - **Must be microscopically diagnosed** to visualize the basement membrane.
- ❑ In-Situ of the prostate may also be referred to as non-invasive, pre-invasive, or intraepithelial.
- ❑ If pathology states tumor is in-situ with microinvasion it is **no longer** staged as in-situ but is considered to be at least a localized disease.

6

In-Situ tumors are found on the surface of the organ and microscopically have characteristics of malignant tumors. However, an in-situ lesion has not yet invaded or penetrated through the basement membrane. That is why it is so important to ascertain that the in-situ lesion has been microscopically evaluated.

A diagnosis of in-situ with micro-invasion takes it out of the in-situ stage category and it is considered at least localized. These micro-invasive cells are now able to penetrate and be carried through the lymphatic system or blood and invade other organs. It is important to know that in-situ stage is assigned for carcinoma and melanomas but never for sarcomas.

In-Situ Equivalent Terms

Behavior Code of 2

Non-infiltrating

Noninvasive

Pre-invasive

Stage 0

Intraepithelial

There are multiple synonymous terms that denote if the cancer is in-situ and the Registrar needs to become acquainted with those terms. Newer Registrars may find it helpful to post a listing of the equivalent terms near their work station.

It is important to remember that sites that do not have an epithelial layer cannot be assigned an in-situ stage since they do not have a basement membrane and therefore cannot be diagnosed as in-situ.

7

Staging In-Situ Prostate Cancers Requires Knowledge of a Specific Exception

In-Situ is a non-invasive malignancy and is coded as 0, UNLESS

- ❑ Primary Tumor was documented in pathology report as having only an “in-situ behavior” but there is an additional statement confirming malignancy has spread and is present in regional node(s) or in a distant site.....
- ❑ **Should the above occur, the in-situ stage is not valid and the stage must be documented to reflect the regional or distant disease.**

An important rule to remember is that there is an exception to an in-situ diagnosis. Even though a pathologist has documented in-situ in the final diagnosis, if there is additional regional or distant disease spread from the primary site found – **it can no longer be considered in-situ.**

8

What Does Localized Mean?

May be referred to as:

- ❑ Clinically inapparent tumor
 - Stage A in the Whitmore-Jewett system
 - T1a, T1b, T1c
 - ❑ Confined to the prostate
 - Involves one lobe
 - T2a (from AJCC 5th Edition)
 - More than one lobe
 - T2b (from AJCC 5th Edition)
 - Confined to the prostate
 - T2, NOS (T2 from AJCC 5th Edition, NOS is not an AJCC term)
 - ❑ Arising in prostatic apex
 - ❑ Extension to prostatic apex *
 - ❑ Invasion into but not beyond prostatic capsule*
 - ❑ Intracapsular involvement only
 - ❑ Stage B in the Whitmore-Jewett system
 - ❑ Localized, NOS
- * Considered regional in historic stage



Localized prostate cancer includes various descriptions that may be documented in the record as: clinically inapparent invasive tumors, Stage A or tumor in one lobe or both lobes. In addition, it is important to be aware that localized disease may be described as confined to the prostate, arising in the prostatic apex or extension to the prostatic apex, tumor that invades into but not beyond the prostatic capsule, tumor with intracapsular involvement only, Stage B, or localized, NOS.

Note the Stage A and B are from the Whitmore-Jewett system.

The T2a and T2b are definitions from the AJCC 5th edition and are NOT valid for the AJCC 6th edition or the AJCC 7th edition. These should NOT be used. A

9

	physician referring to T2a or T2b will be referring to the AJCC 7th edition definitions which do not match with the one lobe or more than one lobe listed here. Of interest is that extension to prostatic apex and into but not beyond the prostatic capsule was considered regional in historic staging.
Important: TNM codes Out of Date ❑ The TNM codes in Summary Stage 2000 Manual are out of date! ▪ TNM Codes are from AJCC 5th Edition ▪ AJCC 7th Edition is the current edition ▪ Any MD statements regarding TNM for diagnosis date 2010 forward would be based on the 7th Edition criteria. ❑ As a general rule-Do not use the TNM codes in Summary Stage 2000	Since the TNM codes in SS200 are out of date, it is recommended to only code Summary Stage based on disease extent from information in the medical record other than just a TNM statement.
What Does Regional Disease Mean? ❑ Regional Disease indicates that the tumor has gone beyond the organ of origin but is not considered distant. ▪ Regional by direct extension Tumor has invaded surrounding organ(s) or adjacent tissues. May also be referred to as direct extension or contiguous spread. ▪ Regional to lymph nodes Tumor cells may have traveled through the lymphatic system to regional lymph nodes where they remain and begin to “grow”. ▪ Regional by direct extension and lymph nodes Extension into adjacent structures or organs and lymph node involvement are both present. ▪ Regional (as stated by the physician but the site[s] of regional spread is/are not clearly documented)	Regional disease has many avenues of presentation. Regional by direct extension or contiguous spread (Coded as 2) occurs when the tumor invades into adjacent tissue or organs. Review the record to be certain that there are no nodes or distant tumor involvement before assigning this code. Regional to lymph nodes or code 3 indicates that tumor cells have found their way to node(s) that are recognized as regional and have actively begun “to grow.” The record should provide documentation that nodal involvement is the only disease other than the primary in order to assign code 3. Regional by both direct extension and involving regional lymph nodes is coded as 4. Code 5 indicates there is a physician statement that patient has regional prostate cancer but no other documentation. Note to the Registrar: If there is lymph node involvement but the chain is not named in the records, assume that the chain is regional.

10

11

How is Regional Disease Coded?

- ❑ Regional disease by direct extension only is coded as 2.
- ❑ Regional disease with only regional lymph nodes involved is coded as 3.
- ❑ Regional disease with direct extension and regional lymph node involvement is coded as 4.
- ❑ Regional disease that is not otherwise specified is coded as 5.

Regional disease has four distinct codes. The following few slides will explain each code.

12

Staging of Regional Disease

- ❑ Review records to confirm that tumor is more than localized.
- ❑ Review all pertinent reports looking for specific regional disease references and exclusions of distant spread.
- ❑ Terms to watch for are seeding, implants and nodules – scrutinize diagnostic reports for regional disease spreading references to eliminate that spread is not distant.

Caution: Prostate cancer with lymph node metastases means some nodes have involvement by tumor – always confirm that the lymph nodes are regional.

Regional disease can be present in many sites – lymph nodes and direct extension. It is important to remain aware that with the drainage in the lymphatic channels from the tumor site, a cell or cells from the tumor can result in lymph nodes anywhere in the body to become involved. The registrar needs to evaluate to determine whether nodal involvement is regional or distant before assigning the stage.

13

Regional by Direct Extension

- Bilateral extracapsular extension
- Bladder Neck
- Bladder NOS
- Extracapsular extension beyond prostatic capsule
- Fixation
- Levator Muscles
- Periprostatic extension
- Periprostatic Tissue
- Rectovesical or Denonvilliers fascia
- Rectum: external sphincter
- Seminal Vesicle(s)
- Skeletal Muscle
- Through capsule
- Unilateral extracapsular extension
- Ureter
- Stage C in the Whitmore-Jewett system
- T3 (from AJCC 5th Edition)
- T4 (from AJCC 5th Edition)



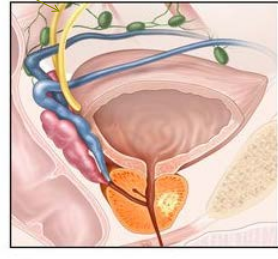
Regional by direct extension (coded as 2) is the pathway of the primary site growing directly into a regional site but no further. There are no nodes identified as being involved. The listing on this slide shows that direct extension offers several pathways that the primary tumor may take and be considered regional direct.

Caution, the T categories listed in Summary Stage are NOT the current AJCC 7th edition definitions.

14

Regional With Lymph Node Involvement

- Iliac
 - External
 - Internal (hypogastric), NOS
 - Obturator
- Pelvic
- Periprostatic
- Sacral
 - Lateral (laterosacral)
 - Middle (promontorial; Gerota's Node)
 - Presacral
- Regional, NOS



This slide shows that the cancer has involved the regional lymph nodes only and the Registrar would assign code 3 to this stage of disease.

15

Regional Direct and Regional Nodes



Regional Direct and Regional Nodes involvement at time of diagnosis is assigned a code 4. As the slide indicates, tumor has spread directly to regional sites and regional nodes are involved.

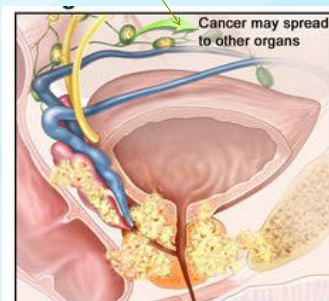
16

What Does Distant Stage Mean?

Distant stage is assigned when spread is found in remote areas of the body.

It can be a direct growth going beyond the regional organs but most distant metastases have no direct pathway from the primary site.

Distant Disease



Distant disease can occur in any site other than local or regional spread. It can occur in distant lymph nodes or organs. In prostate cancers, the most common area of distant metastases is bone. It is coded as stage 7. The Registrar may find notes with a stage D or D2 in the Whitmore-Jewett system which means distant metastases. These should also be coded as stage 7.

17

Distant Stage

- ❑ Distant lymph nodes are those that are not included in the drainage area of the primary tumor.
- ❑ Hematogenous metastases develop from tumor cells carried by the bloodstream and begin to grow beyond the local or regional areas.

18

Tips for the abstractor

- ❑ If review of the patient's records documents distant metastases, the registrar can avoid reviewing records to identify local or regional disease.
- ❑ Documentation that contains a statement of invasion, nodal involvement or metastatic spread cannot be staged as in-situ even if the pathology of the primary tumor states it is so.
- ❑ If there are nodes involved, the stage must be at least regional.
- ❑ If there are nodes involved but the chain is not named in the pathology report, assume the nodes are regional.
- ❑ If the record does not contain enough information to assign a stage, it must be recorded as unstageable.

19

Remember to Read Carefully

Example: Prostate adenocarcinoma with periprostatic lymph node metastases.

Don't be misled by the term metastases – It doesn't always mean distant disease. Periprostatic lymph nodes in this example are regional to the prostate.

20

Note: Many Registrars new to the field have been confused with the term "metastases." It is important to realize the term means *spread* and can be regional or distant. This is a reason to become familiar with what is and what is not regional vs distant sites.

Exercise 1 – How would you stage this case?

- ❑ Patient was found to have a elevated PSA level of 18 - well above normal.
- ❑ He underwent prostate biopsies bilaterally which identified moderately differentiated adenocarcinoma in both lobes.
- ❑ He subsequently was admitted for bilateral pelvic lymph node dissection and prostatectomy with the findings of seminal vesicle invasion.
- ❑ 14 lymph nodes were negative for metastases.

Stage Case...Answer on next slide

Exercise 1 – How would you stage this case?

- ❑ Patient was found to have a elevated PSA level of 18 - well above normal.
- ❑ He underwent prostate biopsies bilaterally which identified moderately differentiated adenocarcinoma in both lobes.
- ❑ He subsequently was admitted for bilateral pelvic lymph node dissection and prostatectomy with the findings of seminal vesicle invasion.
- ❑ 14 lymph nodes were negative for metastases.

Summary Stage 2 based on direct extension to seminal vesicle.

22

Exercise 2 – How would you stage this case?

- ❑ 68 year old male admitted through the ER with a pathologic fracture of his right hip.
- ❑ Bone scan was ordered and revealed bone mets in the pelvis and femurs.
- ❑ PSA was elevated to over 600.
- ❑ Prostate biopsies were done with the findings of poorly differentiated adenocarcinoma.

23

Stage Case...Answer on next slide

Exercise 2 – How would you stage this case?

- ❑ 68 year old male admitted through the ER with a pathologic fracture of his right hip.
- ❑ Bone scan was ordered and revealed bone mets in the pelvis and femurs.
- ❑ PSA was elevated to over 600.
- ❑ Prostate biopsies were done with the findings of poorly differentiated adenocarcinoma.

Summary Stage 7 with distant bone metastases.

24

Exercise 3 – How would you stage this case?

- ❑ 60 year old male was found on routine physical exam to have an enlarged prostate. Exam did not reveal nodularity – prostate was symmetrical and smooth on rectal exam.
- ❑ PSA was slightly elevated. Cystoscope was essentially normal.
- ❑ Patient underwent needle biopsy confirming adenocarcinoma.
- ❑ Patient opted for prostatectomy and node dissection. Left base involved with no further sign of disease. Nodes were negative for metastases.

25

Stage Case...Answer on next slide

Exercise 3 – How would you stage this case?

- ❑ 60 year old male was found on routine physical exam to have an enlarged prostate. Exam did not reveal nodularity – prostate was symmetrical and smooth on rectal exam.
- ❑ PSA was slightly elevated. Cystoscope was essentially normal.
- ❑ Patient underwent needle biopsy confirming adenocarcinoma.
- ❑ Patient opted for prostatectomy and node dissection. Left base involved with no further sign of disease. Nodes were negative for metastases.

Summary Stage 1 – Local disease

26

Exercise 4 – How would you stage this case?

- ❑ 70 year old male presented with complaints of difficulty in urinating and increasing nocturia. PSA was slightly elevated. Rectal exam noted prostate to be enlarged.
- ❑ There was a small nodule identified in the left lobe of the prostate.
- ❑ Biopsy found well differentiated adenocarcinoma in the left lobe.
- ❑ Prostatectomy and bilateral lymph node dissection found the left lobe with adenocarcinoma present in the greatest proportion of the lobe. There was extension into the periprostatic fat. There were 2 positive nodes in the obturator lymph nodes.
- ❑ Bone scan was negative for disease.

27

Stage Case...Answer on next slide

Exercise 4 – How would you stage this case?

- ❑ 70 year old male presented with complaints of difficulty in urinating and increasing nocturia. PSA was slightly elevated. Rectal exam noted prostate to be enlarged.
- ❑ There was a small nodule identified in the left lobe of the prostate.
- ❑ Biopsy found well differentiated adenocarcinoma in the left lobe.
- ❑ Prostatectomy and bilateral lymph node dissection found the left lobe with adenocarcinoma present in the greatest proportion of the lobe. There was extension into the periprostatic fat. There were 2 positive nodes in the obturator lymph nodes.
- ❑ Bone scan was negative for disease.

Summary Stage 4 –Regional extension to the periprostatic fat and regional nodes involved.

28

Excellent Resources for Summary Staging

- ❑ http://seer.cancer.gov/manuals/2013/SPCSM_2013_maindoc.pdf
- ❑ SEER Summary Stage 2000, SEER Training modules:
<http://training.seer.cancer.gov>
- ❑ SEER Coding Manuals – Historic – 1977.
- ❑ http://training.seer.cancer.gov/modules_site_spec.html
- ❑ <http://training.seer.cancer.gov/prostate/>



Centers for Disease Control and Prevention
Chamblee Campus, Atlanta GA

29

Presentation created by CDC.
For questions, please contact your designated CDC/NPCR Education Training Coordinator:

Donna M. Hansen, CTR
Auditor/Trainer
UC Davis Institute of Population Health
California Cancer Registry
1631 Alhambra Blvd, Suite #200
Sacramento, CA 95816
(916) 731-2543

Email: dhansen@ccr.ca.gov

For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333
Telephone, 1-800-CDC-INFO (232-4636)/TTY:1-888-232-6348
E-mail: cdcinfo@cdc.gov Web: www.cdc.gov



30

