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Why Are We Staging Cases Multiple Times?

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A variation of the question posed in the title of this article was asked from the floor at the NCRA meeting by a registrar frustrated with the number of new coding requirements for 2018. Given the reaction to the response at the meeting and the subsequent discussions related to the broad topic of 2018 changes on the NCRA Facebook page, it is clear that many of us want a better explanation as to why standard setters believe many of the new coding requirements are important. The purpose of this article is to address only one area of change . . . staging. Hopefully, after reading this article we will have a better understanding of the difference between a data collection system and a staging system; the purpose and differences associated with each staging system; and the options for incorporating these requirements into our database.

When it comes to the implementation of the new staging requirements, we are all in the same boat. Whether we are a registrar at a CoC-accredited facility, a non-CoC accredited facility or a central registry, the coding requirements associated with the various staging systems will change our daily work. While requirements vary depending to whom we report, it might prove helpful to have a little background on each staging system so we have a frame of reference as to the type of information included in the staging system, who the primary audience is for each, and what they do with this information so we can better understand why standard setters want us to collect it.

Why collect Extent of Disease (EOD)?

We probably need to start our discussion about EOD by clarifying that EOD is not a staging system. What? It's not a staging system? If it's not a staging system, what is it? According to Jennifer Ruhl, a Public Health Analyst with the NCI SEER Program, EOD is a data collection system . . . not a staging system. Collaborative Stage (CS) was not a staging system either; it was also a data collection system. Granted, I will be the first to admit it seems we've momentarily dropped into a bizzaro world when someone tells us something with the word "stage" in its name isn't really a staging system.

According to Jennifer, "The reason EOD is considered a data collection system is that it is used to collect the building blocks to derive a TNM and Summary Stage." EOD is used to collect specific/detailed information on the T, N, and M components. The information collected is either the same as that required by

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AJCC, or it is more detailed. So, for those registries not required to manually assign Summary Stage, they are collecting staging information twice:

- AJCC clinical and pathological TNM
- EOD which automatically derives the Summary Stage 2018 and a combined TNM"

Recognizing the need for continuity and stability of the staging data over time, SEER opted to revive the EOD data collection system. The concepts of the EOD are not new because registrars have been collecting similar data items in CS. Using the EOD, one determines a "best stage" value similar to what we did when using the previous EOD versions and the Collaborative Stage.

While the EOD and CS data collection systems allow us to determine a "best stage" or a combined TNM, the TNM staging system allows for a clinical and pathologic TNM stage to be collected and reported separately. Per SEER, EOD is, "a combination of the most precise clinical and pathological documentation of the extent of disease." That means we are generally not limited to collecting data only within a particular timeframe as we are when using the TNM staging system. By determining the "best stage" when using the EOD, researchers and epidemiologists can look more closely at staging trends over time because registrars have always been collecting this type of data.

While the EOD combines clinical and pathological staging, it can sometimes be used to check the accuracy of either our clinical or pathological TNM values when the EOD is based solely on either clinical or pathological findings. For example, if the EOD codes we assigned were based solely on a surgical resection, we will discover the EOD aligns with the corresponding pathological TNM stage.

The three EOD data items (EOD Primary Tumor, EOD Regional Nodes and EOD Mets) allow us to collect stage for all cancer sites/histologies. Why is that important? Well, if we rely solely on the AJCC Cancer Staging System, many of the cases we report will not be staged. While the AJCC Cancer Staging System provides staging guidelines for the majority of primary sites and their usual histologies, it doesn't provide staging guidelines for all cancer cases. For example, rare or uncommon tumors simply do not have the evidence-based requirements needed to develop AJCC staging. Additionally, some cancers (e.g., pediatric cancers) already have their own treatment guidelines, making AJCC staging unnecessary.

All patients need to be staged for the following reasons:

- To provide clinicians a common language to describe the size and spread of a malignancy and facilitate the exchange of information between facilities.
- To determine treatment plans.
- To predict prognosis.
- To facilitate the evaluation of treatment results among research studies.

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Why collect Summary Stage?

Summary Stage is the most basic form of staging that describes how far a cancer has spread from the primary site. The 1977 version applies to solid tumors while the 2000 and later versions of Summary Stage apply to all sites, including cases with lymphoid and hematologic histologies. Table 1 shows eight general categories of codes and definitions for Summary Stage 2018.

Table 1
Summary Stage Codes and Definitions

Code	Stage	Definition
0	In situ	No penetration of the basement membrane of the tissue and no stromal invasion
1	Localized only	Limited to the organ of origin with infiltration past the basement membrane of the epithelium
2	Regional by direct extension only	Invasion through entire wall of organ into surrounding organs and/or adjacent tissues **NOTE: Use code 2 for cases that were previously captured under code 5 (Regional, NOS) for cases diagnosed prior to 2018.**
3	Regional lymph nodes only	Tumor invasion of walls of lymphatics
4	Regional by BOTH direct extension AND lymph node involvement	Invasion through entire wall of organ into surrounding organs and/or adjacent tissues + Tumor invasion of walls of lymphatics
7	Distant	Tumor cells have broken away from the primary tumor and have traveled to and have begun to grow in a different part of the body
8	Benign/borderline	Applicable for reportable Brain, CNS Other, Intracranial Gland primaries
9	Unknown	Inadequate information available to stage.

This staging system uses both clinical and pathologic information. Pathologic findings typically take precedence over clinical findings. However, surgical observations take precedence over other types of clinical information if the pathology or the surgical observation(s) disagrees with nonsurgical clinical findings. Summary Stage should combine all the information available through the first course surgery or within four months following diagnosis (whichever is longer), as long as there is no disease progression.

Summary Stage is a tool used by the surveillance community rather than clinicians. The surveillance community's uses of cancer data are focused on planning, implementing and evaluating public health practice. Public health activities focus on entire populations, not on individual cancer patients. SEER uses

Summary Stage because it needs a relatively stable staging system with broad enough categories capable of measuring the success of cancer control and other epidemiologic efforts such as:

- Supporting and promoting research for all types of cancer
- Reporting and monitoring trends in cancer incidence and outcomes

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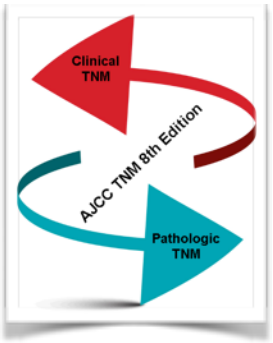
- Allowing the ongoing continuity of staging trends over time that reflect a combination of clinical and pathologic information

Who decides whether a registry is to directly assign Summary Stage 2018 or simply provide the Summary Stage 2018 that is derived from the EOD data items? CoC is requiring directly assigned Summary Stage 2018 from their accredited hospital registry programs. Each state registry looks to its funding agent (NPCR or SEER) for guidance for the requirements for non-CoC facilities. Washington State, which has two separately funded registries (WSCR and CSS), made a joint decision to require directly assigned Summary Stage 2018 from non-CoC facilities so that 100% of the state's data would have this data item available for analysis.

Why collect TNM Clinical and Pathological Staging and Prognostic Stage Group?



AJCC TNM staging has very specific purposes. TNM stage is used primarily by clinicians and only secondarily by the surveillance community. TNM provides site and/or histology-specific evidence-based staging guidelines used by clinicians to define the prognosis and identify the treatment options for a patient. Clinical staging is used as the baseline for comparison when evaluating how the cancer responds to treatment. Pathologic staging provides more precise information that can be used to predict treatment response and outcomes.

The assignment of TNM and Prognostic Stage Group allows researchers to analyze patient outcomes based on more detailed stage categories than they are able to do using Summary Stage. A combination of advances in diagnostic and treatment options offered patients, the latest research involving site specific factors and patient outcomes provide the framework for future revisions to TNM and Prognostic Stage Groups. Cancer staging isn't an exact science. Our understanding of cancer is always improving.

The AJCC Cancer Staging Manual has been published since 1959; the current version is the 8th edition. Staging advances are a result of the knowledge gained from prior patient experience. The current stage for a patient diagnosed with a particular site/histology of cancer may not be the same stage for someone diagnosed 10 years ago. Therefore, the treatment options offered to today's patient and that patient's chance of recovery may be different. This is invaluable information to clinicians and researchers.

The strict clinical staging and pathological staging timeframes that define TNM and Prognostic Stage Groups provide clinicians with optimal, evidence-based treatment guidelines for a patient. These strict timeframes don't allow the "best stage" classification for a tumor as we determine when coding Summary Stage. The "best stage" classification is not necessarily clinically relevant in deciding treatment. For example, if a physician was only considering the Summary Stage classification of a tumor, it is much more difficult to assess which localized staged breast cancer patients might benefit most from neoadjuvant chemotherapy because tumor size is not part of this classification system. On the other hand, TNM staging includes the classification of the tumor by size, so a physician can quickly identify the patients that might be likely candidates for neoadjuvant chemotherapy.

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Accurate collection of Clinical and Pathological TNM and the Prognostic Stage Group is critical for ongoing research and advances in treatment and cancer outcomes. TNM stage may not apply to all sites and the various versions of TNM may not be as relatable to one another over time as the Summary Stage is, but TNM drives advances in cancer care that cancer patients desperately need.

Summary

Hopefully, this article provided enough information to explain why standard setters updated their 2018 staging requirements. Table 2 summarizes the highlights associated with 2018 implementation of EOD and the two staging systems and Table 3 specifies the Washington State requirements for cases diagnosed in 2018.

As registrars pondering the bigger picture, we can recognize these staging systems provide different and critical information to various users of our data. At the same time we believe it is equally important for standard setters to acknowledge that when they change or add to the data collection requirements, it is more work requiring additional training and time to accurately reflect new information in our databases.

Table 2 • 2018 Highlights for Data Item Group Implementation

Extent of Disease 2018	Summary Stage 2018	AJCC TNM 8th Edition
The three data items (tumor extension, regional node involvement and distant metastasis) will be familiar to most of us.	While there have been some changes to categories, the Summary Stage 2018 will be collected in the same manner as Summary Stage 1977 and Summary Stage 2000.	Once we capture T, N and M values and any applicable prognostic factors, the determination of Prognostic Stage Group can be done using only the AJCC Prognostic Stage Group table in the manual.
The individual EOD categories have been simplified and condensed compared to the last version of Collaborative Stage we used.		
There are new NOTES provided in most schemas to help us code cases more consistently.		
The EOD data items align with the 8th Edition TNM data items.		

Table 3 • 2018 Washington State Requirements • Diagnosis Year 2018

Data Item Group	Washington State Requirements for Dx Year 2018
AJCC TNM 8th Edition	Required to be submitted by CoC- approved facilities
Extent of Disease 2018	Required
Summary Stage 2018	Required; must be manually coded and not derived from EOD

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