North American Association of Central Cancer Registries, Inc. (NAACCR)

2022 Implementation Guidelines and Recommendations

(For NAACCR Data Standards and Data Dictionary, Version 22, effective with cases diagnosed on or after January 1, 2022)

Version 1.5

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1 Introduction

The North American Association of Central Cancer Registries, Inc. (NAACCR), has been working with the American College of Surgeons (ACoS) Commission on Cancer (CoC), American Joint Committee on Cancer (AJCC), National Cancer Institute (NCI) Surveillance Epidemiology and End Results (SEER) Program, Centers for Disease Control and Prevention (CDC) National Program of Cancer Registries (NPCR), Canadian Council of Cancer Registries (CCCR), National Cancer Registrars Association (NCRA), central cancer registries, and cancer registry software vendors to develop an implementation plan for NAACCR Standards for Cancer Registries Volume II, Data Standards and Data Dictionary, Version 22 (referred to as Data Standards and Data Dictionary, Version 22). The 2022 data standards have been developed in response to requested revisions from a broad set of constituents.

This Implementation Guidelines document (IG) provides an overview regarding changes in cancer surveillance reporting standards the various stakeholders will need to consider for 2022 diagnoses. There are links to source documents that are referenced throughout this IG, each being maintained by either the relevant standard setter or NAACCR. The NAACCR website continues to be an essential destination for the latest version of this Implementation Guide and for standards documents including the Data Standards and Data Dictionary, Version 22, and its log of changes. Given the complexity and dynamics involved in the changes for 2022, the sources referred to in the IG are the most up-to-date and the most granular information.

This document is a collaborative effort, in the true NAACCR spirit, to inform the many stakeholders of the changes that are expected to be incorporated in training materials, software, and databases so that cancer data will continue to be defined, collected, and transmitted in a standardized manner that facilitates the amazing sharing of data that has characterized cancer surveillance in North America since the inception of the American Association of Central Cancer Registries in 1987.

2 New Data Items

A table of all new data items is in Appendix A.

2.1 SSDI Data Items

Five new SSDIs have been added to capture information related to prognosis and/or treatment planning and reflect changes in clinical guidelines. All new SSDI information is incorporated into the Staging APIs. Please see the SSDI Manual, Version 2.1 (https://apps.naaccr.org/ssdi/list/).

Item #	SSDI Name	Schema
3955	Derived Rai Stage*	Lymphoma CLL/SLL
3956	p16**	Cervix V9
3957	LN Status Pelvic***	Cervix 8th, Cervix V9, Vagina, Vulva
3958	LN Status Para-Aortic***	Cervix 8th, Cervix V9, Vagina
3959	LN Status Femoral-Inguinal***	Vagina, Vulva

Item #	SSDI Name	Schema
* Derived Rai Stage is based on Lymphocytosis [3885], Adenopathy [3804], Organomegaly [3907], Anemia [3811] and Thrombocytopenia [3933], thus this field would have a value for 2018 forward if the contributing SSDI fields had values and if Derived Rai Stage is required by your standard setter. ** p16 is applicable starting in January 1, 2021 at the request of the AJCC. Older cases must be reviewed and coded. *** For existing cases, values for these 3 SSDIs will be set as a conversion of LN Status Femoral-Inguinal, Para-Aortic, Pelvic [3884], thus these fields will have values for 2018 forward.		

The value for new SSDIs should be blank for cases diagnosed prior to the initial date of use for the SSDI. An entry exists in the possible code list for all SSDIs created after 2018 specifying the diagnosis years for which the field should be blank. Questions regarding the SSDIs should be directed to CAnswer Forum.

2.2 NPCR Data Items

Five data items that were previously included within the retired NPCR-Specific Field [3720] are now moving as individual data items to the Data Standards and Data Dictionary, Version 22. One new data item was also added.

Item #	Item Name
530	EDP MDE Link Date
531	EDP MDE Link
194	IHS PRCDA
284	Urban Indian Health Organization (UIHO)
285	UIHO City
344	Tobacco Use Smoking Status

The EDP MDE Link Date and EDP MDE Link data items identify cases within the central cancer registry database that match the same patient and tumor within the CDC-supported Breast and Cervical Cancer or Colorectal Cancer Early Detection Programs. This information has been captured by NPCR-supported central cancer registries for several years, included in the NPCR Cancer Surveillance System (NPCR-CSS) data submission, and NAACCR XML IDs created. With implementation of the NAACCR v21 Record Layout, data are retrieved using the NAACCR XML ID rather than a column location. Therefore, existing data do not require conversion and will be retained.

The PRCDA, UIHO, and UIHO City data items identify cases in specific geographic locations and are derived, using NAACCR*Prep, in preparation for each NPCR-CSS data submission. Therefore, no data conversion is necessary.

Tobacco Use Smoking Status is a combination and new definition of the four tobacco data items previously included in the NPCR-Specific Field. This data item is applicable to cases diagnosed January 1, 2022 and forward only.

2.3 CoC Data Item

One new data item was added by the CoC, Macroscopic Evaluation of Mesorectum [3950]. This data item records whether a Total Mesorectal Excision(TME) was performed and the macroscopic evaluation

of the completeness of the excision and is in complete alignment with College of American Pathologists (CAP) protocol. This data item is reportable for cases diagnosed January 1, 2022 forward.

3 Changed Data Items

3.1 Name Changes

The following two data item names changed from API to DLL:

AJCC Cancer Surveillance API Version Current [2158] to AJCC Cancer Surveillance DLL Version Current
AJCC Cancer Surveillance API Version Original [2159] to AJCC Cancer Surveillance DLL Version Original

3.2 Race 1 – 5

In the Race 1 through 5 [160, 161, 162, 163 and 164] data items, code 03 was modified to replace the terms "Aleutian, or Eskimo" with "Alaska Native".

3.3 Site-Specific Data Items

Some SSDI codes and code descriptions were changed to reflect changes in clinical management and/or staging and to improve clarity or to address questions that were raised in the various forums. Code changes for SSDIs are applicable to cases diagnosed January 1, 2018 forward, but registrars will not be required to update previously coded information.

For SSDIs that were introduced after 2018, blank has been added to the possible code list to clearly indicate that the field is expected to be blank prior the year the SSDI was introduced.

- HER2 Overall Summary [3855] (Esophagus, Esophagus Squamous, Stomach)
- Ki-67 [3863] (NET Ampulla of Vater, NET Appendix NET Colon and Rectum NET Duodenum NET Jejunum and Ileum, NET Pancreas NET Stomach)
- ALK Rearrangement [3938] (Lung)
- EGFR Mutational Analysis [3939] (Lung)
- BRAF Mutational Analysis [3940] (Colon and Rectum)
- NRAS Mutational Analysis [3941] (Colon and Rectum)
- CA 19-9 PreTx Lab Value [3942] (Pancreas)

For SSDIs that are no longer required by any standard setter, blank has been added to the possible code list to clearly indicate that the field can be blank after the last year it was required.

- HER2 ISH Summary [3854] (Breast)
- HER2 IHC Summary [3850] (Breast)
- HER2 ISH DP Copy Ratio [3852] (Breast)
- HER2 ISH DP Copy No [3851] (Breast)
- HER2 ISH SP Copy No [3853] (Breast)

The following SSDIs had new codes added which would be available for newly collected cases but do not require changes to existing cases:

- HER2 Overall Summary [3855] (Esophagus, Esophagus Squamous, Stomach)
    - Code 8 was added for Not Applicable/Not Collected

- PSA Lab Value [3920] (Prostate)
    - Codes XXXX.2 and XXXX.3 were added for Lab Value not available, but physician stated negative or positive
- Sarcomatoid Features [3925] (Kidney Parenchyma)
    - Code XX5 was added to capture when these are only present from a metastatic site
- CA 19-9 PreTx Lab Value [3942] (Pancreas)
    - Codes XXXX.2 and XXXX.3 were added for Lab Value not available, but physician stated negative or positive

There was one name change:

- LDH Level [3869] (Plasma Cell Myeloma) – Pretreatment was removed from the name

The following SSDIs for Lymphoma CLL/SLL had Code 5 added and will be used whenever the Primary Site is not C421. This value should be used for cases 2018 and forward and is listed in the conversions in Appendix B:

- Adenopathy [3804]
- Anemia [3811]
- Lymphocytosis [3885]
- Organomegaly [3907]
- Thrombocytopenia [3933]

The following SSDIs for Plasma Cell Myeloma had Code 5 added and will be used when Schema Discriminator 1 is not 1 or 9, that is, it is not known to be multiple myeloma. This value should be used for cases 2018 and forward and is listed in the conversions in Appendix B:

- High Risk Cytogenetics [3857]
- LDH Level [3869]
- Serum Albumin Pretreatment Level [3930]
- Serum Beta-2 Microglobulin Pretreatment Level [3931]

The following SSDIs were either removed from schemas or are slated for removal next year, all data for these fields in these schemas should be removed (see Appendix B):

- LN Assessment Method Femoral-Inguinal [3871] – removed from Cervix 8th, Cervix V9
- LN Assessment Method Para-Aortic [3872] – removed from Vulva
- LN Status Femoral-Inguinal, Para-Aortic, Pelvic [3884] (Cervix 8th, Cervix V9, Vagina, Vulva) - No longer to be collected, it has been replaced by 3 new fields and will be removed next year.

In addition to these changes, some code descriptions were modified to improve clarity. There have also been revisions to notes and additional notes for many SSDIs; due to the addition of new notes such that many of the note numbers have changed. See the SSDI Manual, Version 2.1 (https://apps.naaccr.org/ssdi/list/) for changes to existing codes and code descriptions.

New SSDIs and code changes are incorporated in the AJCC Cancer Surveillance DLL and the SEER Staging REST API/library. Other than updating the staging API that you use, there is no need for action for these types of changes. They are documented in the change log which can be accessed on https://apps.naaccr.org/ssdi/list/.

3.4 Coding System Data Items

- Morph Coding Sys--Current [470] and Morph Coding Sys—Original [480]: Code C was added for ICD-O-3.2, plus WHO new terms used for conditions effective January 1, 2022
- Schema ID Version Current [2117] and Schema ID Version Original [2118]: Code 2.1 was added. Schema ID Version Current should be updated to the new value for all cases in the database diagnosed January 1, 2018 or later when the system is updated to include the new EOD 2018 version. Schema ID Version Original should be set to the version in use when the case is collected. While this version is required for the 2022 diagnosis year, if a 2018-2021 case is collected after the system is updated, the schema ID Version Original should be set to 2.1.
- AJCC Cancer Surveillance DLL Version Current [2158] and AJCC Cancer Surveillance DLL Version Original [2159]: Code 09.00.01.0001 was added. AJCC Cancer Surveillance DLL Version Current [2158] should be updated to the new value for all cases in the database diagnosed January 1, 2018 or later when the system is updated to NAACCR V22. AJCC Cancer Surveillance DLL Version Original [2159] should be set to the version in use when the case is collected. While this version is required for the 2022 diagnosis year, if a 2018-2021 case is collected after the system is updated, the AJCC Cancer Surveillance DLL Version Original [2159] should be set to 09.00.01.0001.
- AJCC API Version Current [2156] and AJCC API Version Original [2157]: Code 09.00.01 was added. AJCC Cancer Surveillance DLL Version Current [2158] should be updated to the new value for all cases in the database diagnosed January 1, 2018 or later when the system is updated to NAACCR V22. AJCC Cancer Surveillance DLL Version Original [2159] should be set to the version in use when the case is collected. While this version is required for the 2022 diagnosis year, if a 2018-2021 case is collected after the system is updated, the AJCC Cancer Surveillance DLL Version Original [2159] should be set to 09.00.01.
- No new codes for:
    - Race Coding Sys – Current [170] and Race Coding Sys - Original [180]
    - SEER Coding Sys--Current [2120] and SEER Coding Sys--Original [2130]: SEER no longer requires these
    - CoC Coding Sys--Current [2130] CoC Coding Sys—Original [2140] and RX Coding System--Current [1460]: CoC no longer requires these

4 Retired Data Items

Two data items were retired: State/Requestor Items [2220] and the NPCR Specific Field [3720].

Information collected in the NPCR-Specific Field [3720] will not be converted. Except for the EDP MDE Link Date [530] and EDP MDE Link [531] data items, previously collected information will not be included in future NPCR-CSS data submissions and XML Exchange Plus and NorthCon will not automatically include that information in a new user dictionary. However, the information may be retained, extracted, and used by the central cancer registry. Central cancer registries may choose to continue to capture that information.

5 Other Changes

5.1 ICD-O-3.2

The Guidelines for 2022 ICD-O-3.2 Histology Code and Behavior, effective January 1, 2022, developed by the NAACCR ICD-O-3 Implementation Work Group and approved by the High-Level Strategic Group (HLSG), address implementation of updated histology terms and new codes for cases diagnosed on or after January 1, 2022. Members of the work group represent standard setting organizations, central registries, hospital registries, and cancer registry software vendors.

The 2022 ICD-O-3.2 update includes changes identified during review of recently published World Health Organization's International Histological Classification of Tumors 5th Edition books (WHO "Blue Books"). This series covers all principal sites of cancer and includes ICD-O morphology codes for each neoplasm. Each new edition underwent thorough review to identify new histologies and ICD-O codes, behavior changes to existing ICD-O codes, and new terminology. The ICD-O-3 Implementation Work Group recommended adopting the changes for 2022 and implementation of the changes was approved by the standard setting agencies.

The 2022 ICD-O-3.2 histology code and behavior update includes comprehensive tables listing all changes made after the 2021 update and is effective for cases diagnosed January 1, 2022 forward. New to the 2022 update tables are columns for each standard setter which will indicate if that particular code and/or term are required for data collection and submission.

The ICD-O-3 Implementation Work Group created a guide for users which provides important information on the background and issues for this update along with how to use the tables. The 2022 guidelines have been modified to include only two tables, numeric and alpha, listing new ICD-O codes, terminology, behavior changes, and required status. The Work Group strongly recommends that users read the guidelines in order to efficiently use ICD-O-3.2 and the 2022 Update tables.

Note: Use of these guidelines is required for determining reportability and accurate coding.

Following the release of the 2021 Guidelines for ICD-O-3.2 Histology Code and Behavior Update, the ICD-O-3 Implementation Work Group reviewed the recent 5th Ed WHO Blue Books published after the creation of ICD-O-3.2. The Work Group submitted their implementation recommendations to the Mid-Level Technical Group (MLTG) and High-level Strategic Group (HLSG) in March 2021. The MLTG and HLSG reviewed the recommendations and accepted them for implementation in 2022.

The ICD-O-3 Implementation Work Group was charged with developing the implementation documents and acting as the clearinghouse for the review and resolution of new histology code implementation questions. If there are any questions, they are to be submitted through Ask A SEER Registrar. Implementation guidelines and updates will be posted on NAACCR's website. The Work Group will also be communicating updates via email using the NAACCR listserv and mailing lists of all organizations.

5.2 Site/Histology Validation List

The SEER Site/Histology Validation List is updated to reflect new ICD-O-3.2 histology codes and behaviors identified in the 2022 ICD-O-3 Update guidelines and is posted on the SEER website.

5.3 Solid Tumor Rules

The 2018 Solid Tumor Rules are a comprehensive revision to the 2007 site specific Multiple Primary and Histology Rules (MP/H), which were developed to promote consistent and standardized coding for cancer surveillance. In 2018, eight site groups were revised: Malignant and Non-malignant CNS, Breast, Colon, Head & Neck, Kidney, Lung, and Urinary. Since their implementation in 2018, these site groups continue to be updated to reflect changes in histology coding. In 2021, Cutaneous Melanoma MP/H site rules were revised as Solid Tumor Rules and became effective for cases diagnosed January 1, 2021 forward. Beginning January 1, 2022, the 2018 Solid Tumor Rules will be called "Solid Tumor Rules" and no longer include year. The General Instructions and each site-specific module include instructions on which rules to use depending on diagnosis date.

5.3.1 2022 Updates to Solid Tumor Rules

The 2018 Solid Tumor Head and Neck Rules, Table 5, instruct squamous cell carcinoma, HPV positive (8085) and squamous cell carcinoma, HPV negative (8086) are coded only when HPV status is determined by tests based on ISH, PCR, RT-PCR technologies to detect the viral DNA or RNA. p16 was not a valid test to assign these codes. ***Beginning with cases diagnosed January 1, 2022 forward, p16 test results can be used to code squamous cell carcinoma, HPV positive (8085), and squamous cell carcinoma, HPV negative (8086).***

Beginning January 1, 2022, non-keratinizing squamous cell carcinoma, HPV positive is coded 8085 for sites listed in Table 5 ***only***. For a diagnosis of non-keratinizing squamous cell carcinoma, NOS is coded 8072.

Beginning January 1, 2022, keratinizing squamous cell carcinoma, HPV negative is coded 8086 for sites listed in Table 5 ***only***. For a diagnosis of keratinizing squamous cell carcinoma, NOS is coded 8071.

Eight sites groups, excluding non-malignant CNS, were updated for 2022 and include the following minor updates*:

- New histologies, codes, and terms from ICD-O-3.2 and the 2022 ICD-O Updated added to tables
- Updated Equal/Equivalent terms
- Updated Terms that are Not Equivalent or Equal
- Clarified instructions for coding p16 results for Head & Neck primaries
- Timing requirements for Colon Rules M7 and M8 have been revised
- A new section, "Changes from 2018 Solid Tumor Rules", has been added to the Colon and Head & Neck site modules

*Updates will ***not*** require review of previously abstracted cases

5.3.2 2007 Multiple Primary and Histology Rules (MP/H): Other Sites

The Other sites rules have been formatted to match the Solid Tumor Rules and will be valid for cases diagnosed January 1, 2022. The Other sites module has undergone minimal revisions for 2022 and comprehensive revisions will continue to be developed for implementation at a later date. While revisions for 2022 are minimal, the 2007 MP/H Other Sites Rules will continue to be valid for cases diagnosed prior to 2022. Also, beginning January 1, 2022, the Solid Tumor General Instructions apply to all sites.

Other sites 2022 update includes the following:

- Site specific Table Index similar to Head & Neck Solid Tumor Rules. Sites tables will include coding criteria is applicable. Table Index will include:
    - Female Reproductive Organs
    - Other GI
    - Prostate
    - Soft Tissue & Bone
    - Thyroid

Notes and examples are added to existing rules as needed.

Priority Order for Using Documentation to Identify Histology and Coding Histology sections will be added to H rules module.

5.3.3 Solid Tumor Revision History

The Solid Tumor download page includes a section for revision history which includes comprehensive change logs for each update. The change logs are for reference only and should not be used in place of the rules.

Questions regarding the Solid Tumor Rules should be directed to Ask A SEER Registrar.

5.4 Reportability

Reportability for cases diagnosed in 2022 is based on the ICD-O Third Edition, Second Revision Morphology (ICD-O-3.2) plus the ICD-O-3.2 updates posted on the NAACCR website.

The 2022 ICD-O update tables have columns for each standard setter (SEER, NPCR, CoC, and Canada) to indicate reportability for each of the new codes, terms, etc.

Reportable

Clear cell papillary renal cell carcinoma 8323/3 **is** reportable. The 2016 WHO Classification of Tumors of the Urinary System and Male Genital Organs, 4th Edition, has reclassified this histology as a /1 because it is low nuclear grade and is now thought to be a neoplasia. This change has not yet been implemented and it remains reportable.

Low-grade appendiceal mucinous neoplasm (LAMN) now has a behavior of /2 and /3 making it reportable. LAMNs are slow-growing neoplasms that have the potential for peritoneal spread and can result in patient death. LAMNs demonstrate an interesting biology in that they do not have hematogenous dissemination risk, but risk for appendiceal perforation, which can result in peritoneal dissemination, repeated recurrences after surgery and even death.

- /2 = Tis(LAMN) confined by muscularis propria (T1-T2 are not used for LAMN), and such lesions are designated as Tis
- /3 = T3-T4 extending into subserosa or serosa

The ICD-O Committee and authors of the WHO Classification of Tumors of the Digestive System, 5th Edition agreed to issue corrigenda as follows:

Corrigenda – Appendiceal mucinous neoplasm
8480/2 Low-grade appendiceal mucinous neoplasm

8480/2 High-grade appendiceal mucinous neoplasm
8480/3 Appendiceal mucinous neoplasm with extra-appendiceal spread

Not Reportable
High grade dysplasia of the colon is **not** reportable even though it has been designated in situ (/2) in the latest WHO classification.

There are two new histology codes for HPV-related adenocarcinoma in situ of the cervix. These are **not** reportable.

8483/2 Adenocarcinoma in situ, HPV-associated (C530-C531, C538-C539)
8484/2 Adenocarcinoma in situ, HPV-independent, NOS (C530-C531, C538-C539)

5.5 Surgery Codes

The following surgery codes from Site Specific Surgery Codes for Colon, Rectosigmoid, Anus, and Rectum have been removed as obsolete treatment for these primary sites:

- 11 and 21 Photodynamic Therapy (PDT);
- 13 and 23 Cryosurgery;
- 14 and 24 Laser Ablation;
- 25 Laser Excision.

The word Wedge was removed from Rectum and Rectosigmoid Surgical code 30. The Miles Procedure was removed from Rectum Surgical code 50 and Anus Surgical code 60. The phrase Total mesorectal excision (TME) was removed from Rectum Surgical code 30. All changes effective with cases diagnosed January 1, 2022 and forward.

CoC is field testing four new user-defined data items to field test proposed new breast surgery codes and a new coding system for the STORE Manual, Appendix A, Site Specific Surgery Codes, anticipated in 2023 –RX Hosp-Surg Breast [10104] and RX Summ Surg Breast [10105], RX Hosp-Recon Breast [10106] and RX Summ-Recon Breast [10107] are the four custom data items CoC will be collecting effective with cases diagnosed January 1, 2022. The rules and instructions are in Appendix D of this document and in STORE v2022.

5.5.1 Histology Exclusion List

The “Histology Exclusion List” refers to the list of histologies included with each set of surgery codes in the STORE and SEER Program Coding and Staging Manual (SPCSM). The Histology Exclusion List is consistent between the STORE and SPCSM for years 2003-2020. SEER updated the Histology Exclusion List in the SPCSM 2021, but CoC did not. SEER and CoC have agreed that the Histology Exclusion List included in SPCSM 2021 should be used. Beginning with STORE 2022 and SPCSM 2022, the Histology Exclusion List has been removed from the surgery codes.

5.6 Extent of Disease (EOD)

1. New EOD Schema: Cervix Sarcoma.
2. New EOD Schema: Soft Tissue Other has been split into Soft Tissue Rare (00450) and Soft Tissue Other (00459)
3. 9700-9701 (Mycosis Fungoides/Sezary Syndrome): The Mycosis Fungoides schema includes all primary sites. Review of data revealed approximately four cases from 2018 and 2019 that were not in the Mycosis Fungoides schemas. These will be automatically converted.

4. Corpus Carcinoma and Carcinosarcoma: Code 070 and 080 were deleted and automatically converted to 050. These will be automatically converted.
5. Pleural Mesothelioma: New code 05, for positive pleural effusion only.

5.7 Hematopoietic and Lymphoid Neoplasms Manual and Database

The Heme manual is effective for cased diagnosed 2010+.

There were some changes made to the Heme manual; however, there are no changes to histologies or rules. Changes are listed on the SEER website and also noted in the manual. A new field was added to the database with other minor changes. Link to the revision history: Revision History for the Hematopoietic Project - SEER Registrars (cancer.gov)

6 XML

The NAACCR XML Data Exchange Work Group continues to develop the *NAACCR Data Exchange Standard, XML Specifications for Cancer Registry Records*. The latest standard, the base dictionary, sample data, and software tools are available to registries and software vendors. The XML website provides links to these documents and products.

6.1 Updated Data Exchange Standard

The NAACCR Data Exchange Standard specification has been updated to version 1.5. The changes include:

- Changed "specificationVersion" attribute to be required in both dictionaries and data files
- Added new "dateLastModified" optional attribute to dictionaries

6.2 XML Dictionaries

NAACCR XML dictionaries are XML files that define key metadata about NAACCR data items as they relate to a NAACCR XML data exchange file, their valid parent XML elements, and processing rules for dealing with text nodes containing coded values.

There are two types of dictionaries:

1. Base dictionaries define standard data items that are defined in the NAACCR Data Standards and Data Dictionary. *Base Dictionary XML v22* can be found on the NAACCR XML web page under the Documentation tab. This dictionary represents the NAACCR standard and must not be modified.

2. User dictionaries define non-standard (state or organization-specific) items, maintained by the organizations defining them.

Note: Central registries which only collect standard NAACCR data items do not need to produce a user dictionary. Central registries that created a user dictionary for v21 that included NPCR data items should review it for v22, as some of these items became standard data items in v22 (e.g. Tobacco Use Smoking Status) and should not be included in a user dictionary. Height and Weight did not move to the standard list, a registry wishing to continue collecting these data need to continue defining them in a user dictionary.

6.3 XML Software Utilities

This section highlights several XML software tools. Software vendors should use a standard software tool or NAACCR XML library to validate XML files.

Registry Plus XML Exchange Plus software by NPCR is an aid for central registries that want to collect their own data items. It produces a valid user dictionary that can be distributed to cancer registry software vendors. The software validates data files and produces an edit report similar to Genedits Plus 5.

File*Pro by SEER provides a variety of useful functions for central registries. It can be used to view, edit, and manage data in text files. The NAACCR XML Dictionary Editor creates and validates XML dictionaries.

The NAACCR XML Utility Tool translates fixed-width NAACCR files to NAACCR XML files and back. It also validates XML files and creates and validates user-defined NAACCR XML dictionaries.

6.4 User Dictionary Clearinghouse

NAACCR has established a User Dictionary Clearinghouse website to share examples of user dictionaries from central registries. Central registries with local data items are encouraged to upload their XML User Dictionary along with the MS Excel data items workbook which describes the user dictionary. Software vendors will be able to acquire the documents and registries will benefit from learning from each other's local data field choices.

6.5 Other Considerations

Software that still requires the fixed-width or other flat file formats will not be able to process data files created using the new NAACCR XML standard. Therefore, software vendors should continue to offer flat file export options.

Contact the NAACCR XML Data Exchange WG with any questions. Valerie Yoder (valerie.yoder@hsc.utah.edu) and Isaac Hands (isaac.hands@uky.edu) are the work group co-chairs.

7 EDITS

7.1 V22 NAACCR Edits Metafile

A beta version of the v22 edits metafile was made available in mid-June. The beta version is available upon request (see contact info below). The initial release of the v22 metafile is scheduled to be made available online in mid-August at https://www.naaccr.org/standard-data-edits/

Changes to edits for cases diagnosed 2018 through 2021 address fixes to edit logic as well as updates necessary to accommodate changes to existing data items for 2022. The NAACCR v22 Change Spreadsheet includes a “Corrections” page that lists corrected edits, a “Global Changes” page that lists similar changes across multiple edits, an “Updates” page that lists existing edits modified to accommodate 2022 changes in data items, a “New Edits” page that lists all new edits for both existing and new data items, and a “Categories” page that groups new and changed edits by the types of changes that were made.

Corrections to edits include changes to edit names, edit descriptions, and edit logic. Changes were prompted by problem reports from users as well as review of edits when considering required updates

for 2022. Some edits were deleted as not working correctly, and these should be deleted from any customized metafiles as well.

The "Global Changes" are of four types. Edits had enforced the inclusion of leading and trailing blanks in the evaluation of data items that did not take up the full character length for the item, for example, leading blanks for right-justified lab value SSDIs and trailing blanks for one- and two-character AJCC IDs. Requirements for leading and trailing blanks have been removed from edits in conformance with XML standards for data transmission, though they are still accounted for in processing of XML files with EditWriter5 through GenEdits Plus.

The second type of "Global Change" is the modification of surgery-related edits to apply 2021/2022 data item codes and instructions, coordinated between CoC and SEER, to 2018 and forward data; these instructions affect default codes for lymphoid and hematopoietic schemas and/or primary sites, and data from 2018 through 2020 or 2021 will be converted accordingly.

The third type of "Global Change" is the addition of skips for Type of Reporting Source or Class of Case = Autopsy Only to edits where a surgical procedure is required to support staging or SSDI information; such information could be found at autopsy, but surgery would not be performed. Skip for Type of Reporting Source = Death Certificate Only was also added.

The last type of "Global Change" involves new edits as well, with new edits created for reporting Gleason Score and Gleason Pattern SSDIs for NPCR requirements as of 2021. These edits were modeled on existing edits for these data items, some of which had been previously included in the NPCR edit sets. Updates to existing edits were necessitated by the addition of the following:

a) Cervix Sarcoma for 2021 with a new Schema ID 00528 and inclusion in AJCC ID 54.1,
b) reassignment of some histologies to new Schema IDs and AJCC IDs,
c) the implementation of new ICD-O-3.2 codes for 2022, and
d) the addition of some codes to existing SSDIs to facilitate Rai staging for lymphomas and RISS staging for myelomas.

Existing data will be subject to conversions for most of these changes. AJCC added date requirements for some histologies, to allow staging after 2021 or 2022. SEER also updated treatment-related edits with required codes for Type of Reporting Source = Autopsy Only and Type of Reporting Source = Death Certificate Only.

New fields are listed on the "New" edits page. There are new valid values and "required" edits for these fields. Most of the new edits relate to the three SSDIs, LN Status Femoral-Inguinal, LN Status Para-Aortic, and LN Status Pelvic, which have replaced LN Status Femoral-Inguinal, Para-aortic, Pelvic. These edits are all similar to edits involving the single SSDI, which at this point are still included in the metafile.

The v22 edits metafile was developed in EditWriter v5 (EW5) and will only be available in a .smf format. The layout for EW5 is imported from XML Exchange Plus and is based on the Data Standards and Data Dictionary, Version 22.

Contact Jim Hofferkamp at jhofferkamp@naaccr.org with any questions or concerns about the NAACCR edits metafile.

For NPCR EDITS technical support via email, contact cancerinformatics@cdc.gov.

7.2 Impact of XML for EDITS

It is important to note the NAACCR XML Standard is the standard for data exchange between agencies using files. It should not be confused with how data are passed in memory between applications. Applications that use the Edit Engine to validate data will need to continue to construct a flat buffer with data items in fixed column positions. The Edit Engine will continue to use record layouts maintained in the metafile to retrieve data from the flat buffer and run edits. The new NPCR XML Exchange Plus automates the creation of record layouts in metafiles by automatically assigning column positions to data items based on certain rules. Applications will need to construct the flat buffer by placing data items in the same column positions as specified in the record layout.

While a record layout must continue to be generated, fixed column positions are not expected to be defined by edit metafile administrators for the record layout. The record layout for the NAACCR v22 Edit Metafile will be created automatically and maintained using the XML Exchange Plus.

XML Exchange Plus will create a layout assigning the column positions based on NAACCR item number order with a few exceptions due to special circumstances. Since grouped data items and the data items associated with grouped items are not always in consecutive NAACCR item number order and to address state-specific data items as well as standard setter-specific data items, all non-grouped data items will be sorted first, and grouped items will be allocated at the end of the layout adjacent to the items they are associated with.

An example of a grouped data item is Morph--Type&Behav ICD-O-3, and its associated data items include Histologic Type ICD-O-3 and Behavior Code ICD-O-3. An example of a grouped item that contains associated items or subfields that are not in consecutive NAACCR item number order is GeoLocationID – 2020 which is a twelve-character concatenation of State at DX Geocode 2020, County at DX Geocode2020, Census Tract 2020, and Census Block Group 2020.

The column start position automatically generated by XML Exchange Plus will be sorted in the following order:

1. Non-grouped data items
2. Grouped data items with associated items contained in the group
3. User-defined data items added to the user dictionary (items not specifically defined in NAACCR Volume II and not included in the NAACCR Base Dictionary).

A record layout sorted by NAACCR item number will be generated in XML Exchange Plus and inserted into the NAACCR edit metafile, and the data exchange layout will continue to be packaged in the NAACCR edit metafile. Registries with defined local data items will be instructed to add the local items to the end of the layout in customized edit metafiles. When registries are creating user dictionaries, the order in which the items are listed is the same order in which the fields need to be added to the record layout in EditWriter5.

7.2.1 Running *EDITS* on XML Files

Edits can be run directly on XML files using GenEDITS Plus5 and XML Exchange Plus.

It is not necessary to convert NAACCR XML data files to flat buffer format to run EDITS. Both GenEDITS Plus5 and XML Exchange Plus convert each patient and tumor to flat buffer to pass to the Edit Engine.

Note that the current version of EditWriter5 cannot edit XML files when running Edits to test Edit Sets and when using the Data Wizard within the Test Bench. The interactive testing tool known as the Test Bench within EditWriter5 can still be used to test individual edits using the Test button with the user entering values for each of the fields involved in the edit to determine the test result.

8 Standard Setters Reporting Requirements for 2022

Each standard setting agency provided their respective information for this section.

8.1 CoC Reporting Requirements

Beginning with cases diagnosed January 1, 2022 and forward, all CoC accredited programs should follow the rules and instructions in STORE v2022. Word and minor coding changes allowed STORE to align more with SEER. A summary of the STORE 2022 changes is in Appendix D. The only new data item for collection is Macroscopic Evaluation of the Mesorectum [3950] reportable for cases diagnosed January 1, 2022 forward.

CoC Accredited programs will NOT collect the follow histology and sites for cases diagnosed January 1, 2022 and forward:

- 8210/2 Adenomatous polyp, high grade dysplasia (C160 – C166, C168-C169, C170-C173, C178-C179)
- 8211/2 Tubular adenoma, high grade
- 8261/2 Villous adenoma, high grade
- 8263/2 Tubulovillous adenoma, high grade
- 8483/2 Adenocarcinoma in situ, HPV-associated (C530-C531, C538-C539)
- 8484/2 Adenocarcinoma in situ, HPV-independent, NOS C530-C531, C538-C539)
- 8590/1 Uterine tumor resembling ovarian sex cord tumor
- 9200/1 Osteoblastoma
- 9261/1 Osteofibrous dysplasia-like adamantinoma

SARCoV2 data items, NCDB—SARSCoV2—Test [3943], NCDB--SARSCoV2—Pos [3944], NCDB--SARSCoV2--Pos Date [3945], NCDB--COVID19--Tx Impact [3946] are not required on cases with a reportable malignancy with diagnosis date during calendar year 2022 and beyond. However, SARSCoV2 data items should continue to be collected on all cases with a reportable malignancy with a diagnosis date during the calendar years of 2020 and/or 2021.

RX Hosp-Surg Breast [10104], RX Summ-Surg Breast [10105], RX Hosp-Recon Breast [10106] and RX Summ-Recon Breast [10107] are the four custom data items CoC will be collecting effective with cases diagnosed January 1, 2022 for breast primary site only. The rule and instructions are in Appendix D of this document and in STORE v2022. These data items will be submitted to NCDB/RCRS.

Questions related to STORE can be submitted to the CA Forum. The STORE Manual 2022 was released to the NCDB Call for Data website on August 31, 2021.

8.2 CDC NPCR Reporting Requirements

Beginning with cases diagnosed January 1, 2022 and forward, CDC-NPCR will adopt the new record format and data collection requirements as published in the Data Standards and Data Dictionary, Version 22. Refer to the CDC-NPCR requirements listed in the Data Standards and Data Dictionary, Version 22, Chapter VIII Required Status Table. Share these requirements with your software vendors and key stakeholders.

CDC is following the NAACCR Guidelines for 2022 ICD-O-3.2 Histology Code and Behavior Update (published for 2022).

8.2.1 Staging Requirements for 2022 Diagnosis

CDC-NPCR continues to require directly assigned Summary Stage 2018 (most current version) [764]. NPCR requirements for Summary Stage 1977 [760], Summary Stage 2000 [759], and CS Derived Summary Stage 2000 [3020] have not changed. If voluntarily capturing AJCC TNM and/or SEER EOD stage data items, rules and requirements provided by those sources should be followed.

Central registries will inform state reporters of their individual state requirements.

Questions related to CDC-NPCR Stage requirements can be submitted to: **cancerstaging@cdc.gov**.

8.3 NCI SEER Reporting Requirements

Beginning with cases diagnosed January 1, 2022, SEER registries will follow the instructions in the 2022 SEER Manual and the most recent Solid Tumor Rules, Hematopoietic Manual, Grade Manual, SSDI Manual, SEER*RSA, EOD, Summary Stage, and ICD-O-3.2 update.

Data items required for cases diagnosed January 1, 2022 or later, not previously required

Item #	Item Name
3950	Macroscopic Evaluation of the Mesorectum
3955	Derived Rai Stage
3956	p16
3957	LN Status Pelvic
3958	LN Status Para-Aortic
3959	LN Status Femoral-Inguinal
284	UIHO
285	UIHO City
194	PRCDA
344	Tobacco Use
1770	Cancer Status
1772	Date of Last Cancer (tumor) Status
1773	Date of Last Cancer (tumor) Status Flag

Data items no longer required for cases diagnosed January 1, 2022 or later

Item #	Item Name
3917	Primary Sclerosing Cholangitis
3935	Tumor Growth Pattern

See the V22 Required Status Table in NAACCR Vol II for more information.

COVID-19 data collection will continue for cases diagnosed in 2022.

Submit questions about SEER requirements to Ask A SEER Registrar.

8.4 CCCR Reporting Requirements

Beginning with cases diagnosed on or after January 1, 2022, the Canadian Council of Cancer Registries (CCCR) will implement the data collection and submission requirements as published in the NAACCR Data Standards and Data Dictionary, Version 22, Chapter VIII, Required Status Table.

For cases diagnosed January 1, 2022 onward, Canada will continue to collect TNM stage data using the AJCC Cancer Staging Manual 8th Edition (cases diagnosed 2018+) and 9th Version (cervix cases diagnosed 2021+). Information regarding new and updated SSDIs is available in the NAACCR SSDI Manual. Refer to the Canadian SSDI spreadsheet and the 2022 Canadian Cancer Registry Variable Specifications for specific requirements.

Canada will follow the NAACCR ICD-O-3 Implementation Guidelines to adopt updates to ICD-O-3.2 for cases diagnosed January 1, 2022 onward. Refer to the 2022 Canadian Cancer Registry Reference Tables for more information.

Canada will follow any updates to the NAACCR Grade Manual and the SEER Solid Tumor Rules for cases diagnosed January 1, 2022 onward.

Cases will be submitted to the Canadian Cancer Registry during Statistic Canada's Call for Data. Provincial/Territorial cancer registries can reference the 2022 CCR Record Layout and supporting data provider documentation for a more comprehensive listing.

9 Summary for Central Cancer Registries

Each central registry should review this entire document to determine which revisions will affect their operations. Central registries must consider the revisions that will be necessary to meet the different requirements of national standard setters. These determinations should be communicated to reporting facilities and registry software vendors as soon as possible.

9.1 Identify Central Registry Changes

The following table outlines each of the sections that central registries should review as described above:

Section Number	Section Contents
2	New Data Items
3	Changed Data Items
4	Retired Data Items.

Section Number	Section Contents
5.1	ICD-O-3.2 changes
5.2	SEER Site/Histology Validation List
5.3	2018 Solid Tumor Rules
5.4	Reportability
5.5	Surgery codes
6	XML
7	Edits
8.1	CoC Reporting Requirements
8.2	CDC NPCR Reporting Requirements
8.3	NCI SEER Reporting Requirements
8.4	CCCR Reporting Requirements
13 Appendix B	Conversions and Manual Review Logs
14 Appendix C	ICD-O Update for 2022 Implementation: the ICD-O codes and terms, listed numerically, which are new or have been updated.

9.2 Central Registry Edits

Central registries should carefully review section 7 for information regarding the NAACCR v22 edits metafile. Also, the updated SEER*Edits will be released after the NAACCR v22 edits metafile. It is expected that all SEER registries will run all of the SEER edits. If central registries wish to write their own edits, create new edit sets, or develop customized metafiles, EditWriter 5 should be utilized. See the manual, Developing a Central Registry Edits Metafile, for detailed instructions on selecting edits and developing customized metafiles in EditWriter 5.

It is important to remember that state-specific data items need to be defined in an XML user-defined dictionary so that edits can be incorporated in metafiles.

Central registries should review the new NAACCR edits metafile, associated documentation, and the data items required by their standard setters in the Required Status Table (Chapter VIII) of the Data Standards and Data Dictionary when developing edit sets for incoming abstracts and consolidated records in their metafile. Edits in the metafile may need to be revised to accommodate central registry-specific or state-specific reporting requirements, and custom edits may need to be developed for any non-standard or custom data items. Implementation, testing, and distribution of metafiles to reporting facilities and registry software vendors should be considered as central registries develop their requirements for reporting. Central registries that generate and distribute their own metafiles should have a plan to keep them updated.

Central registries should evaluate the time required to correct errors in previous years' data that appear retrospectively when applying new edits, particularly when there are no guidelines that limit diagnosis years to which the new edits are applied. Taking into account the relative importance of the affected data items and the amount of time required to edit the records, central registries should prioritize and fix retrospectively-identified errors.

9.3 Software Implementation Plan

Central registries that receive submissions from facilities using commercial vendor software to generate their files should pay close attention to the new releases of these products and coordinate their own

v22 implementation plan accordingly. Every new vendor software version should be reviewed to ensure compliance with the NAACCR XML data transmission format and with registry requirements. This review should be completed before files are added to the central registry's database. Various methods can be used to test a submission for compliance with standards, such as running edits and performing visual reviews of abstracts. The use of a test environment into which submissions can be loaded and reviewed is recommended.

When implementing a new version of the NAACCR base dictionary or user dictionary, some central registries may require a "test file" from each software vendor and/or reporting facility. Regardless of whether a registry requires an initial test file, a reporting facility's first transmission file following the change should be tested as thoroughly as possible to identify format or code problems before additional records are accepted from that facility.

The central registry should be alert to directives from their software vendor about any conversion logs. Only minimal manual review is anticipated to be needed, see Appendix B.

9.4 Communication with Reporting Facilities and Software Vendors

Central registries will need to distribute their implementation plan and timeline to reporting facilities and software vendors as early as possible. The communication should include an updated list of reportable tumors and required data items with explicit instructions for state/province/territory-specific data items. Changes to the implementation plan or timeline should be forwarded immediately to all affected parties. Reporting facilities that are not CoC-accredited may be less aware of upcoming changes and may need more transition time. Facilities that do not use a vendor for their reporting software will need extra attention.

Central registries relying on vendor software for their own systems or for their reporting facilities should be aware that delays in the communication of this information or customizations to software vendors may result in a delay receiving and processing cases in the new format.

Central registries must continue to support the reporting and processing of v21 records for diagnosis years 2021 and earlier until all reporting facilities are converted to v22.

9.5 Education and Training

Central registries will need to facilitate training to their reporting facilities on changes identified in this document. Trainings should focus on new required data items and new or revised coding manuals.

It is anticipated that education and training opportunities will be offered by AJCC, NCRA, and all national standard setters, which should be utilized by central registries as appropriate. Information on education and training resources will be available on the v22 Reference Page. Organizations may also be open to suggestions for training and education needs.

Central registry staff must also be trained on rules for consolidation of newly required information coming from multiple sources for the same tumors. The NAACCR Data Item Consolidation Manual prescribing best practices for many standard data items should have been distributed to central registry staff, with the rules followed manually until they can be implemented automatically in the central registry software.

10 Summary for Software Developers and Vendors

Until a state registry is fully converted to Data Standards and Data Dictionary, Version 22 software vendors will need to provide continued support for reporting and processing of records for 2021 and earlier diagnoses.

Regarding 2022 data changes, software vendors will be responsible for identifying required software changes; accommodating new and changed data items; providing support for the implementation of revised staging systems; performing data conversions, and providing access to updated supplementary coding resources such as updated and new manuals. Vendors will also need to address testing and implementation issues, as well as technical support and training. Instructions to development staff should address the additions/updates needed to registry software.

It is recommended that software vendors include new version 22 data fields in their Version 21 software for those facilities in states that are not ready to receive version 22 records early in 2022. While the fields may not have updated edit and help support, it will allow facilities that practice concurrent abstracting the ability to partially abstract 2022 cases.

10.1 Identify Software Changes

Each vendor will need to review published documentation of changes and generate appropriate specifications for their software, based on their user base (hospital or central registries; U.S. or Canadian registries), their software capabilities, and standard-setter requirements. Specifically, vendors will need to accommodate the following changes and additions documented in this guide:

Section Number	Section Contents
2.1	New SSDI data items: Consider only displaying fields appropriate for the year of diagnosis. These are schema specific and should be blank for diagnosis years prior to the initial year. There are five new fields.
2.2	Six new NPCR data items added.
2.3	One new CoC data item added.
3.1	Be aware that the Cancer Surveillance API's name was changed to Cancer Surveillance DLL.
3.2	Race code 03 definition change.
3.3	Several SSDIs had at least one new value added; some of these require conversion logic to set a value. One SSDI had a name change, one is slated for removal next year so should no longer be collected, and two SSDIs were removed from schemas where they no longer apply.
3.4	Versioning data items are incremented.
4	Retired data items.
5.1	ICD-O-3.2 changes
5.2	SEER Site/Histology Validation List
5.3	2018 Solid Tumor Rules (formerly known as Multiple Primary and Histology Rules).
5.4	Reportability
5.5	Surgery codes
6	XML
7	Edits

Section Number	Section Contents
8.1	CoC Reporting Requirements. Note that STORE has provided a list of data items that CoC no longer requires (see Appendix C). Metadata for these items may need to be updated in the software.
8.2	CDC NPCR Reporting Requirements
8.3	NCI SEER Reporting Requirements
8.4	CCCR Reporting Requirements
13 Appendix B	Conversions and Manual Review Logs: list of all the data conversions and notes when manual review will be necessary
14 Appendix C	ICD-O Update for 2022 Implementation: the ICD-O codes and terms, listed numerically, which are new or have been updated.

10.2 Tracking Versions

Vendor software should store the original and current versions for any included components such as APIs or DLLs as system-generated fields (vendor-specific).

The SEER Staging API's TNM and EOD versions are listed on the SEER*RSA website and also can be acquired from the API. The AJCC Cancer Surveillance Staging DLL includes version fields for the DLL as well as for TNM and EOD. The AJCC API has a version field to designate whether the disease site is using 8th or 9th. All three Original staging API/DLL version fields should be set when the case is initially collected and not changed thereafter. All three Current staging API version fields should be set to the current version of the API in use.

NAACCR Record Version [50] will have a new value of '220' meaning '2022 Version 22'.

10.3 Data Conversion

The CDC will provide a NorthCon 220 Registry Plus Utility Program conversion utility for the conversions below and for the changes going from v21 to v22. Manual review logs will be provided where applicable. The conversions are listed in Appendix B, with a section for each one. The conversions related to staging are listed first, then those for other data items.

There are several conversions and recalculations related to Staging and EOD 2018, which are listed by Schema ID. Some situations do require manual review, but the number of cases to be reviewed is expected to be low.

There are several changes to AJCC eligibility (AJCC ID changing to or from XX). These will require manual intervention to set the T, N, M and Stage Group values correctly. There are 2 new schemas as well as some changes to Schema ID because the site and histology combination moved from one schema to another, most of which will require manual intervention. Defaults were provided where possible to reduce human effort.

There are some new values for SSDIs, some new SSDIs and some changes to values in the EOD fields. None of these require manual intervention.

Outside of updates to staging, there are changes to related fields, like Tumor Size and the six Mets at DX fields, and Surgery related fields. Such changes were defined to ensure the data are consistently captured for instances where a specific value is expected. Again, details are provided in Appendix B.

10.4 Edits

Refer to section 7 for general EDITS information. A new website has been developed that will allow central registries to post their registry specific metafile and supporting documentation. Individuals will be able to register to get notifications from specific registries each time a new file is posted.

10.5 Staging

CoC (section 8.1), NPCR (section 8.2), and SEER (section 8.3) specified that hospital facilities are not required to submit derived stage groups. CoC requires physician AJCC staging.

AJCC is updating some of the eligible site and histology combination. These modifications are incorporated into the staging APIs/DLLs. New versions of the SEER Staging API, the AJCC API and the Cancer Surveillance DLL are being released. Given the number of recalculations, we recommend that these APIs/DLLs be run over all 2018+ cases, which would address most of the issues in Appendix B.

10.6 Programming, Testing, and Implementation

Clear communication with standard setters, central cancer registries, and reporting facility customers is critical to avoid delays in delivering software that can meet the requirements for 2022 cases. Software vendors should provide programming instructions to their developers to support the necessary changes for the Data Standards and Data Dictionary, Version 22, as well as testing (if time allows, beta site testing) and implementing the items listed elsewhere in this document. Software vendors, to the best of their ability, need to revise/develop, test, distribute, and install software prior to implementation dates set by standard setting organizations and central cancer registries.

Central cancer registries may require software vendors to submit test files prior to reporting in the Version 22 format. Testing should determine that appropriate values are validated within the software. Testing should also accommodate verification of revisions for data import and export, revisions to the software interface, addition of look-ups for new and changed data items where applicable, data entry verifications internal to the software (if available within the software), data item consolidation where applicable, data item conversion where applicable, and standard as well as ad hoc report writing. Any changes to the implementation timeline should be immediately reported to all involved parties. If there are delays to the standards or errata that have not yet been identified, the software vendor programs will be at risk of delay. States must communicate individual changes to state-specific data items, as well as correction record triggering fields, early in the coding and implementation period to accommodate the software release. State-specific edit metafiles which address the state-specific data items must be provided in a timely manner.

10.7 Help Files

Changes to any software's online help system (if available) will need to be made in conjunction with Data Standards and Data Dictionary, Version 22-related changes made to the software.

10.8 Technical Support and Training

Software vendors are expected to support the data changes in the Data Standards and Data Dictionary, Version 22 in the software and provide their clients with training and documentation appropriate to use the updated software. For reporting-facility-level applications, this will include instruction regarding export of records for transmission to their respective central registries in the correct format with correctly coded and error-free data, as well as import from their previously supported casefinding

interface. Documentation to support the updated software may include information presented via the software's online help system and/or training or tutorial guides. Training and support on new coding rules should be referred to the appropriate standard setting organization.

10.9 Communication with Central Cancer Registries and Hospital Registries

Software vendors should provide a timeline to the central registries, as well as their registry clients, for plans to release registry software that is able to process and export NAACCR v 22 case records in the XML format. Vendors and central registries need to communicate expectations for the delivery of state-specific changes in required data reporting including data fields, metafiles and XML dictionaries for state-specific data items. Delays in providing state specific changes to vendors may result in delay of facility reporting capabilities. Vendors should work with central registries to accommodate test files in their state-specific export version as may be required by individual central registries. Central registries should be aware that delays in communication of this information from central registry clients to the software vendor may result in further delays in reporting 2022 cases.

11 Summary for Hospital Cancer Registrars and Reporting Facilities

Note: CDC Registry Plus Online Help is no longer maintained or updated by CDC.

11.1 Case Abstracting Considerations

Registrars should pay particular attention to the requirements of national standard setters, the state central registry to which they submit cases, and the Commission on Cancer (if applicable) for cases diagnosed January 1, 2022 and forward. Often these requirements will be similar, but occasionally data fields may be required by only one entity. Registrars should consult their reporting manuals and state central registry for instructions and updates on reportable and reportable-by-agreement cases. Hospital Registries should also be aware of any completeness and timeliness guidelines established by their state central registry.

11.2 Communication with Central Cancer Registries and Software Vendors

Several new developments for 2022 will affect cancer reporting software requirements. New edits have been developed and updates to existing edits were necessitated by changes to data item names, changes in code structure in existing data items, and changes to coding instructions for the v22 NAACCR Edits Metafile.

The use of NAACCR XML for reporting facilities to submit records to the central cancer registry began with the 2021 data year. This data exchange standard will continue for 2022. Cancer registry software will continue to create XML data submission files without additional input from the registrar.

CTRs should maintain open communications with their software vendor and state central registry to ensure their registry software is up-to-date with current edit files and guidelines. Dates and timelines should be communicated to all parties. CTRs should include hospital IT Departments in communications if needed.

11.3 Education and Training

Continuing education is necessary to maintain a high level of knowledge and skills in cancer registry practice. New data field requirements for 2022 and the implementation of these new fields will likely

enhance the education and training opportunities for registrars. CTRs should register for Standard Setter ListServ including NAACCR, NCI/SEER, CDC/NPCR and CoC. NAACCR and NCRA, as well as state and regional professional organizations, regularly post educational opportunities on their websites and notify members of upcoming events. CTRs should also check with their state central registry for additional opportunities or make suggestions for needed subjects. Many organizations offer a great deal of online training.

12 Appendix A New Data Items

New Data Items for 2022					
Length	**Item Number**	**Item Name**	**XML NAACCR ID**	**PARENT XML ELEMENT**	**Section**
1	194	IHS PRCDA	ihsPurchRefCareDeliveryArea	Tumor	Demographic
1	284	Urban Indian Health Organization (UIHO)	urbanIndianHealthOrganization	Tumor	Demographic
2	285	UIHO City	uihoFacility	Tumor	Demographic
1	344	Tobacco Use Smoking Status	tobaccoUseSmokingStatus	Tumor	Demographic
8	530	EDP MDE Link Date	edpMdeLinkDate	Tumor	Demographic
1	531	EDP MDE Link	edpMdeLink	Tumor	Demographic
2	3950	Macroscopic Evaluation of Mesorectum	macroscopicEvalOfTheMesorectum	Tumor	Stage/Prognostic Factors
1	3955	Derived Rai Stage	derivedRaiStage	Tumor	Stage/Prognostic Factors
1	3956	p16	p16	Tumor	Stage/Prognostic Factors
1	3957	LN Status Pelvic	lnStatusPelvic	Tumor	Stage/Prognostic Factors
1	3958	LN Status Para-Aortic	lnStatusParaAortic	Tumor	Stage/Prognostic Factors
1	3959	LN Status Femoral-Inguinal	lnStatusFemoralInguinal	Tumor	Stage/Prognostic Factors

13 Appendix B Conversions, Recalculations and Manual Review Logs

The conversions that follow are related to staging and SSDI fields. These changes apply to cases diagnosed on or after January 1, 2018.

13.1 AJCC ID [995] changes within Schema ID [3800] (Recalculation)

AJCC revised the eligible histologies in several chapters, adding new histologies and correcting typos.

Resetting AJCC TNM fields: For all of the included combinations, the AJCC TNM fields must be reset. T, N, M and related Suffix fields for c, p, yc, and yp should be set to blank. Stage group should be set to 99 for c and p stage group and to blank for yp and yc stage group. For some sections, defaults are provided.

TNM Item #	TNM Item name
1001	AJCC TNM Clin T
1002	AJCC TNM Clin N
1003	AJCC TNM Clin M
1004	AJCC TNM Clin Stage Group
1011	AJCC TNM Path T
1012	AJCC TNM Path N
1013	AJCC TNM Path M
1014	AJCC TNM Path Stage Group
1021	AJCC TNM Post Therapy Path (yp) T
1022	AJCC TNM Post Therapy Path (yp) N
1023	AJCC TNM Post Therapy Path (yp) M
1024	AJCC TNM Post Therapy Path (yp) Stage Group
1031	AJCC TNM Clin T Suffix
1032	AJCC TNM Path T Suffix
1033	AJCC TNM Post Therapy Path (yp) T Suffix
1034	AJCC TNM Clin N Suffix
1035	AJCC TNM Path N Suffix
1036	AJCC TNM Post Therapy Path (yp) N Suffix
1062	AJCC TNM Post Therapy Clin (yc) T
1063	AJCC TNM Post Therapy Clin (yc) T Suffix
1064	AJCC TNM Post Therapy Clin (yc) N
1065	AJCC TNM Post Therapy Clin (yc) N Suffix
1066	AJCC TNM Post Therapy Clin (yc) M
1067	AJCC TNM Post Therapy Clin (yc) Stage Group

A) The following Schema ID [3800] and Histology ICD-O-3 [522] combinations are now eligible for AJCC staging. The AJCC ID [995] and TNM Edition Number [1060] should be recalculated using the Staging API/DLL released for 1/1/2022.

Schema ID	Schema Name	Histology	New AJCC ID
00150	Cutaneous Squamous Cell Carcinoma of the Head and Neck	8402	15
00170 00180	Stomach Small Intestine	8213	17 18.1
00180	Small Intestine	8144	18.1
00190 00200 00210	Appendix Colon and Rectum Anus	8033	19 20 21
00200	Colon and Rectum	8262	20
00400 00410 00421 00422 00440 00450	Soft Tissue Head and Neck Soft Tissue Trunk and Extremities Soft Tissue Abdomen and Thoracic Heart, Mediastinum and Pleura Retroperitoneum Soft Tissue Rare	9222	40 41 42 42 44 45
09520	Cervix Version 9	8045, 8054, 8085-8086, 8154, 8246, 8430, 8483-8484	52^
00530	Corpus Carcinoma and Carcinosarcoma	8441 with Behavior ICD-O-3 [523] = 2	53
00790	Lymphoma	9715	79.0

The AJCC ID will change from XX to the value shown in the table above.
If TNM Edition Number [1060] is blank or 00 (indicating that TNM is not coded in the record), no additional changes are necessary.
If TNM Edition Number [1060] is any value other than 00
TNM Edition Number [1060] will be changed to 08
^ For 09520 Cervix Version 9, TNM Edition Number will be changed to **09**
All the AJCC TNM fields should be reset (see above) and then a **manual review** of the AJCC T, N, M and Stage Group fields will be required.

B) The following Schema ID [3800] and Histology ICD-O-3 [522] and Behavior ICD-O-3 [523] combination is now eligible for AJCC staging. The AJCC ID [995] and TNM Edition Number [1060] should be recalculated using the Staging API/DLL released for 1/1/2022. AJCC ID will change as shown. Defaults have been provided.

No manual review is necessary.

Schema ID	Schema Name	Histology	New AJCC ID
00480	Breast	8509 with Behavior ICD-O-3 [523] = 2	48.1

The AJCC ID will change from XX to the value shown in the table above.

If TNM Edition Number [1060] is blank or 00 (indicating that TNM is not coded in the record), no additional changes are necessary.
If TNM Edition Number [1060] is any value other than 00

TNM Edition Number will be changed to 08
All the AJCC TNM fields should be reset (see above) and then the AJCC TNM Defaults should be set as described below

AJCC TNM Defaults

If RX Summ—Surgery Prim Site [1290] = 20-45

Set AJCC TNM Path T [1011] = pTis(DCIS)
Set AJCC TNM Path N [1012] = cN0
Set AJCC TNM Path M [1013] = cM0
Set AJCC TNM Path Stage Group [1014] = 0

Else

Set AJCC TNM Path T [1011] = blank
Set AJCC TNM Path N [1012] = blank
Set AJCC TNM Path M [1013] = blank
Set AJCC TNM Path Stage Group [1014] = 99

Set AJCC TNM Clin T [1001] = cTis(DCIS)
Set AJCC TNM Clin N [1002] = cN0
Set AJCC TNM Clin M [1003] = cM0
Set AJCC TNM Clin Stage Group [1004] = 0

C) The following Schema ID [3800] and Histology ICD-O-3 [522] combinations are no longer eligible for AJCC staging. The AJCC ID [995] and TNM Edition Number [1060] should be recalculated using the Staging API/DLL released for 1/1/2022. Defaults have been provided.

No manual review is necessary.

Schema ID	Schema Name	Histology	OLD AJCC ID
00150	Cutaneous Squamous Cell Carcinoma of the Head and Neck	8400	15
09520	Cervix Version 9	8200, 8720	52

TNM Recalculated Values
AJCC ID will be changed FROM the ID in the table above to XX

If TNM Edition Number [1060] is blank or 00 (indicating that TNM is not coded in the record), no additional changes are necessary.
If TNM Edition Number [1060] is any value other than 00

TNM Edition Number will be changed to 88
All the AJCC TNM fields should be reset (see above) and then AJCC TNM Defaults should be set as described below

AJCC TNM Defaults

Set AJCC TNM Clin T [1001] = 88
Set AJCC TNM Clin N [1002] = 88
Set AJCC TNM Clin M [1003] = 88
Set AJCC TNM Clin Stage Group [1004] = 88
Set AJCC TNM Path T [1011] = 88 (or blank)
Set AJCC TNM Path N [1012] = 88 (or blank)
Set AJCC TNM Path M [1013] = 88 (or blank)
Set AJCC TNM Path Stage Group [1014] = 88

13.2 Schema ID [3800] = 00421 (Soft Tissue Abdomen & Thoracic) - C474 (Recalculation)

If Schema ID [3800] = 00421 (Soft Tissue Abdomen & Thoracic) and Primary Site [400] = C474 and Date of Diagnosis [390] is 2018-2020, recalculate

Schema ID [3800] will be changed to 00410
If AJCC ID [995] = 42, then AJCC ID will be changed to 41

The Schema ID change which will necessitate a **manual review.**

C474 has been moved to Soft Tissue Trunk and Extremities for 2018-2020.

13.3 Schema ID [3800] = 00450 (Soft Tissue Rare), 00459 (Soft Tissue Other) – New Schema (Recalculation)

Schema ID [3800] = 00450 has been renamed as Soft Tissue Rare and has been split so that Schema ID = 00450 only contains combinations that are AJCC eligible and Schema ID = 00459, Soft Tissue Other only contains combinations that are not AJCC eligible. All field definitions within these schemas are the same.

A) If Schema ID [3800] = 00450 and AJCC ID [995] = XX
Schema ID [3800] will be changed to 00459 (Soft Tissue Other - new)

No manual review is necessary.

These combinations were not eligible so the only field that needs to change is the Schema ID.

B) If Schema ID [3800] = 00450 and one of the following combinations:

Primary Site [400]	Histology ICD-O-3 [522]	Other fields
C473, C475, C493-C495	8815, 8901, 8910-8920, 9120, 9133, 9180	Schema Discriminator 2 [3927] = 9
C481-C488	8806, 8930-8931	Sex [220] = 4
C696, C698	8930-8931, 8991, 9020, 9180, 9231	

Schema ID [3800] will be changed to 00459 (Soft Tissue Other - new)
AJCC ID [995] will be changed from 45 to XX
Depending on the API/DLL used, this may already have AJCC ID = XX

If TNM Edition Number [1060] is blank or 00 (indicating that TNM is not coded in the record), no additional changes are necessary.
If TNM Edition Number [1060] is any value other than 00
TNM Edition Number will be changed to 88

No manual review is necessary.

Since AJCC T, N, M and Stage Group were not defined for Chapter 45, no other fields need to be adjusted.

C) If Schema ID [3800] = 00700 (Orbital Sarcoma) and Histology ICD-O-3 [522] = 9222
If Primary Site [400] = C690-C695, C699, C723

Set Schema ID = 00450 (Soft Tissue Rare)
AJCC ID [995] will be changed from XX to 45
If TNM Edition Number [1060] is blank or 00 (indicating that TNM is not coded in the record), no additional changes are necessary.
If TNM Edition Number [1060] is any value other than 00
TNM Edition Number will be changed to 08

The AJCC TNM fields will not need to change as 9222 was not AJCC eligible in Schema 00700 and T, N, M and Stage Group are not defined in Chapter 45.

If Primary Site [400] = C696, C698

Set Schema ID = 00459 (Soft Tissue Other - new)
(AJCC ID will remain XX and TNM Edition Number will remain 88; the AJCC TNM fields will not change)

Because the Schema ID changed from something other than 00450, a **manual review** is necessary.

Histology ICD-O-3 = 9222 is a relative new histology and has been moved to Chapter 45.

13.4 Schema ID [3800] = 00450 (Soft Tissue Rare) – C530-C539 (Recalculation)

If Primary Site [400] = C530-C539 and Histology ICD-O-3 [522] = 8815, 8901, 8912, 8920, 9120, 9133, 9180, 9222, 9581 **and Date of Diagnosis Year [390] >= 2021**

Recalculate
Schema ID [3800] will be changed to 00450
AJCC ID [995] will be changed to 45
(9222 changing from Schema ID = 00420, AJCC ID = XX
9581 changing from Schema ID = 09520, AJCC ID = 52

All other histologies changing from Schema ID = 00420, AJCC ID = 42)

If Schema ID was 09520, Set SSDIs from Cervix to blank:
FIGO Stage [3836] (09520)
LN Status Femoral-Inguinal, Para-aortic, Pelvic [3884] (09520)
Lymph Nodes Assessment Method Femoral-Inguinal [3871] (09520)
Lymph Nodes Assessment Method Para-aortic [3872] (09520)
Lymph Nodes Assessment Method Pelvic [3873] (09520)
Lymph Nodes Distant: Mediastinal, Scalene [3875] (09520)
Lymph Nodes Distant Assessment Method [3874] (09520)

If TNM Edition Number [1060] is blank or 00 (indicating that TNM is not coded in the record), no additional changes are necessary.
If TNM Edition Number [1060] is any value other than 00
TNM Edition Number will be changed to 08
All the AJCC TNM fields should be reset as described in Section 13.1 and then AJCC TNM Defaults should be set as described below

AJCC TNM Defaults

Set AJCC TNM Clin T [1001] = 88 (or blank)
Set AJCC TNM Clin N [1002] = 88 (or blank)
Set AJCC TNM Clin M [1003] = 88 (or blank)
Set AJCC TNM Clin Stage Group [1004] = 88
Set AJCC TNM Path T [1011] = 88 (or blank)
Set AJCC TNM Path N [1012] = 88 (or blank)
Set AJCC TNM Path M [1013] = 88 (or blank)
Set AJCC TNM Path Stage Group [1014] = 88

Because the Schema ID changed, a **manual review** is necessary.

13.5 Schema ID [3800] = 00528 (Cervix Sarcoma) – New Schema (Recalculation)

If Primary Site [400] = C530-C539 and Histology ICD-O-3 [522] = 8710-8714, 8800-8803, 8805, 8810-8814, 8816-8858, 8860-8900, 8902-8910, 8921-8941, 8951-8975, 8981-8990, 8992-9016, 9030-9043, 9045-9105, 9121-9132, 9135-9138, 9141-9175, 9181-9221, 9230, 9240-9365, 9370-9580, 9582 **and Date of Diagnosis Year [390] >= 2021**

Recalculate
Schema ID [3800] will be changed to 00528 (Cervix Sarcoma)
If Histology ICDO3 = 8714, 8800, 8805, 8890-8891, 8896, 8900, 8910, 8930-8931, 8933, 8935
AJCC ID [995] will be changed to 54.1
If TNM Edition Number [1060] is blank or 00 (indicating that TNM is not coded in the record), no additional changes are necessary.
If TNM Edition Number [1060] is any value other than 00
TNM Edition Number will be changed to 08
All the AJCC TNM fields should be reset as described in Section 13.1

Else

AJCC ID [995] will be changed to XX
If TNM Edition Number [1060] is blank or 00 (indicating that TNM is not coded in the record), no additional changes are necessary.
If TNM Edition Number [1060] is any value other than 00

TNM Edition Number will be changed to 88
All the AJCC TNM fields should be reset as described in Section 13.1

(8805, 8933 changing from Schema ID = 09520, AJCC ID = 52
8935, 8936 changing from Schema ID = 00430, AJCC ID = XX
8930-8931 changing from Schema ID = 00450, AJCC ID = 45
8992 changing from Schema ID = 00450, AJCC ID = XX
8711, 8800-8802, 8810-8811, 8825, 8832-8833, 8840, 8850, 8852, 8854, 8858, 8890, 8910, 9040-9041, 9043, 9136, 9251, 9364, 9540, 9542, 9561, 9580 changing from Schema ID = 00421, AJCC ID = 42
All other histologies changing from Schema ID = 00421, AJCC ID = XX)

Set all existing SSDIs to blank. These may include

FIGO Stage [3836] (09520)
LN Status Femoral-Inguinal, Para-aortic, Pelvic [3884] (09520)
Lymph Nodes Assessment Method Femoral-Inguinal [3871] (09520)
Lymph Nodes Assessment Method Para-aortic [3872] (09520)
Lymph Nodes Assessment Method Pelvic [3873] (09520)
Lymph Nodes Distant: Mediastinal, Scalene [3875] (09520)
Lymph Nodes Distant Assessment Method [3874] (09520)
KIT Gene Immunohistochemistry [3865] (00430)
Bone Invasion [38115] (00421, 00450)

Because this is an entirely new schema, **manual review** is necessary.

Cervix Sarcoma is a new Schema created due to new guidelines that cervix sarcomas should be staged with the corpus uteri sarcoma chapter in cervix Version 9. Histologies that used to be in several different schemas including Cervix V9, GIST, Soft Tissue Abdomen and Thoracic, Soft Tissue Rare and Soft Tissue Other are being moved. The new histologies 8976 and 9111 are also in this schema.

With respect to AJCC Staging, the cases are moving to Chapter 54.1 and will be staged accordingly. As mentioned, all the AJCC TNM fields should be reset as described in the beginning of Section 13.1.

13.6 Schema ID [3800] = 00280 (Pancreas) and Derived EOD fields (Recalculation)

If Schema ID [3800] = 00280 (Pancreas) and Derived EOD T, N, M and Stage Group [785, 815, 795, 818] are required, recalculate the values.

No manual review is necessary.

The calculation tables were updated.

13.7 Schema ID [3800] = 00370 (Pleural Mesothelioma) and EOD Mets (Conversion)

If Schema ID [3800] = 00370 (Pleural Mesothelioma) and EOD Mets [776] = 00 and Pleural Effusion [3913] = 2 (Pleural effusion present, malignant)

Set EOD Mets = 05.

No manual review is necessary.

Code 05 has been added to EOD Mets.

13.8 Schema ID [3800] = 09520 (Cervix Version 9), 00520 (Cervix 8th), 00510 (Vagina), 00500 (Vulva) and Lymph Node Status Femoral-Inguinal, Para-aortic and Pelvic [3884] (Conversion)

If Schema ID [3800] = 09520 (Cervix V9), 00520 (Cervix 8th), 00510 (Vagina), 00500 (Vulva)

If Lymph Node Status: Femoral-Inguinal, Para-aortic and Pelvic [3884] is 0, 8 or 9

If Schema ID = 09520 or 00520, **set LN Status: Paraaortic (3958) and LN Status: Pelvic (3957) to 0, 8, or 9 respectively.** (LN Status: Femoral-Inguinal should be blank)

Else If Schema ID = 00510, **set LN Status: Femoral Inguinal (3959), LN Status: Paraaortic (3958), and LN Status: Pelvic (3957) to 0, 8, or 9 respectively.**

Else if Schema ID = 00500, **set LN Status: Femoral Inguinal (3959), and LN Status: Pelvic (3957) to 0, 8, or 9 respectively.** (LN Status: Para-aortic should be blank)

Else

If Lymph Node Status: Femoral-Inguinal, Para-aortic and Pelvic = 1, 4, 5, 7 and Schema ID = 00500, 00510

Set LN Status Femoral-Inguinal [3959] = 1

Else set LN Status Femoral-Inguinal = 0

If Lymph Node Status Femoral-Inguinal, Para-aortic and Pelvic = 2, 4, 6, 7 and Schema ID = 00510, 00520, 09520

Set LN Status Para-aortic [3958] = 1

Else set LN Status Para-aortic = 0

If Lymph Node Status: Femoral-Inguinal, Para-aortic and Pelvic = 3, 5, 6, 7 and Schema ID = 00500, 00510, 00520, 09520

Set LN Status Pelvic [3957] = 1

Else set LN Status Pelvic = 0

If Schema ID = 00520, 09520, set LN Assessment Method Femoral-Inguinal [3871] to blank
If Schema ID = 00500, set LN Assessment Method Para-Aortic [3872] to blank

No manual review is necessary.

Lymph Node Status: Femoral-Inguinal, Para-aortic and Pelvic [3884] is being split into one item per node type. The field is being retired next year at which point it can be removed from the database entirely.

- LN Status Femoral-Inguinal [3959]: (Vagina, Vulva)
- LN Status Para-aortic [3958]: (Cervix and Vagina)
- LN Status Pelvic [3957]: (Cervix, Vagina and Vulva)

LN Assessment Method Femoral-Inguinal [3871] is being removed from Cervix.
LN Assessment Method Para-Aortic [3872] is being removed from Vulva.

13.9 Schema ID [3800] = 00530 (Corpus Carcinoma and Carcinosarcoma) and EOD Primary Tumor [772] (Conversion)

If Schema ID [3800] = 00530 (Corpus Carcinoma and Carcinosarcoma) and EOD Primary Tumor [772] = 070, 080

Set EOD Primary Tumor = 050

No manual review is necessary.

EOD Primary Tumor codes 070 and 080 have been removed.

13.10 Schema ID [3800] = 09520 (Cervix Version 9) and p16 [3956] (Manual Review)

If Schema ID [3800] = 09520 (Cervix Version 9) **and Date of Diagnosis Year [390] >= 2021**

Manual Review to set p16 [3956]

If you follow the CoC Required Status rules for data items, these cases will need **manual review** to check text for p16 test results to be documented in SSDI p16 [3956] and to check text to see if the new histology codes, particularly HPV-associated and HPV-independent should be used.

13.11 Schema ID [3800] = 00795 (Lymphoma-CLL/SLL) and SSDIs (Conversion)

If Schema ID [3800] = 00795 (Lymphoma-CLL/SLL) and Primary Site [400] is NOT C421

Set Lymphocytosis [3885] = 5
Set Adenopathy [3804] = 5
Set Organomegaly [3907] = 5
Set Anemia [3811] = 5
Set Thrombocytopenia [3933] = 5

No manual review is necessary.

The new code 5 has been added to these SSDIs to be used when Primary Site is not C421. These fields will be used to calculate Derived Rai Stage [3955]. At this time, Derived Rai Stage is only required by SEER. The Derived Rai Stage can be calculated by the SEER*RSA Staging API. If another API/DLL is in use, and the Derived Rai Stage is desired, the calculation table can be found in SEER*RSA v2.1 at https://staging.seer.cancer.gov/eod_public/table/2.1/derive_rai_stage_42032/

13.12 Schema ID [3800] = 00821 (Plasma Cell Myeloma) and SSDIs (Conversion)

If Schema ID [3800] = 00821 (Plasma Cell Myeloma) and Schema Discriminator 1 [3926] = 1 or 9

Set Serum Beta-2 Microglobulin Pretreatment Level [3931] = 5
Set Serum Albumin Pretreatment Level [3930] = 5
Set High Risk Cytogenetics [3857] = 5
Set LDH Level [3869] = 5

No manual review is necessary.

The new code 5 has been added to these SSDIs to be used when Schema Discriminator does not indicate multiple myeloma. These fields will be used in future to calculate Derived RISS Stage.

AFTER the Staging API/DLL released for 1/1/2022 has been run across the database, the following two can be applied:

13.13 Schema ID [3800] = 00811 (Mycosis Fungoides) - Sites moved (Defaults after Recalculation)

If Schema ID [3800] = 00811 (Mycosis Fungoides) and Primary Site [400] is **not** C000-C002, C006, C440-C449, C510-C512, C518-C519, C600-C602, C608-C609, C632

If EOD 2018 fields are required:

Set EOD Primary Tumor [772] = 999
Set EOD Regional Nodes [774] = 999
Set EOD Mets [776] = 99

If Summary Stage 2018 [764] is required

Set Summary Stage 2018 [764] = 9

Set Grade Clinical [3843] = 8
Set Grade Pathological [3844] = 8
Set Peripheral Blood Involv [3910] = 9

ALTERNATE LOGIC: If Schema ID [3800] is NOT 00811 and Histology ICDO3 = 9700-9701

Recalculate

Schema ID [3800] will be set to 00811 (these are coming from a variety of Schema IDs)
All SSDIs from the original schemas must be set to blank
Set the defaults for EOD 2018, SS2018, Grade and Peripheral Blood Involv described earlier in this section

No manual review is necessary.

Many Primary Sites were moved into the Mycosis Fungoides schema. Because they were not eligible for AJCC Staging in the original schemas and the sites that are moving are not eligible for AJCC Staging in 00811, AJCC ID [995], TNM Edition Number [1060] and the AJCC TNM fields do not need to change.

13.14 AJCC ID [995] is NOT XX and TNM Edition Number [1060] = 88 (Correction)

The assignment of TNM Edition Number [1060] for chapters where AJCC has defined the disease but has not defined any of T, N, M or Stage Group was inconsistently handled by the APIs/DLLs. This has been corrected.

If Date of Diagnosis Year [390] >= 2018 and AJCC ID [995] is not XX
If TNM Edition Number [1060] = 88, set TNM Edition Number = 08

This had been set to 88 to match the values in the T, N, M and Stage Group fields, but should be set to 08. No manual review is necessary.

13.15 Schema ID [3800] = 99999 (Ill-Defined Other) – Histologies moved (Defaults after Recalculation)

If Schema ID [3800] = 99999 (Ill-Defined Other) and Primary Site [400] = C760

Set Schema Discriminator 1 [3926] = blank

If EOD 2018 fields are required:
Set EOD Primary Tumor [772] = 888
Set EOD Regional Nodes [774] = 888
Set EOD Mets [776] = 88

If Summary Stage 2018 [764] is required
Set Summary Stage 2018 [764] = 9

Set Grade Clinical [3843] = 9
Set Grade Pathological [3844] = 9

Set SSDIs from Cervical Lymph Nodes and Unknown Primary of Head & Neck to blank
Extranodal Exten H&N Clin [3831]
Extranodal Exten H&N Path [3832]
Lymph Nodes Size of Mets [3883]
Lymph Nodes H&N Lev I-III [3876]
Lymph Nodes H&N Lev IV-V [3877]
Lymph Nodes H&N Lev VI-VII [3878]
Lymph Nodes H&N Other [3879]

ALTERNATE LOGIC: If Schema ID [3800] = 00060 and Histology ICD-O-3 [522] is **not** 8010, 8046, 8051-8052, 8070-8074, 8082-8084, 8121, 8140, 8147, 8200, 8310, 8430, 8450, 8480, 8525, 8550, 8562, 8941, 9700, 9701

Recalculate
Schema ID [3800] will be set to 99999
Set the defaults for Schema Discriminator 1, EOD 2018, SS2018 and Grade and blank out SSDIs from Schema ID = 00060 as described earlier in this section

No manual review is necessary.

Histologies that are not eligible for AJCC Staging in Schema ID = 00060 (Cervical Lymph Nodes, Unknown Primary of Head and Neck) were moved into the Ill-Defined Other schema; except for 9700-9701 which moved to Mycosis Fungoides (see Section 13.13). Because they were not eligible, AJCC ID [995], TNM Edition Number [1060] and the AJCC TNM fields would not need to change.

13.16 Hematopoietic Conversions and Mets at DX fields [1112-1117]

These should only be applied if A) the Mets at DX fields are required or B) one or more of the Mets at DX fields has a value in it (is not blank).

For Date of Diagnosis Year [390] >= 2018

A) If Primary Site [400] = C420, C421, C423 or C424
Set Mets at DX - Bone [1112] = 8
Set Mets at DX - Brain [1113] = 8
Set Mets at DX - Liver [1115] = 8
Set Mets at DX - Lung [1116] = 8
Set Mets at DX - Distant Lymph Nodes [1114] = 8
Set Mets at DX - Other [1117] = 8

This applies to ALL histologies, although it will mostly be the leukemias, and those lymphomas that are only in the bone marrow.

B) If Primary Site [400] = C770-C779
Set Mets at DX - Distant Lymph Nodes [1114] = 8

This applies to all histologies, but it will mostly be the lymphomas.

C) If Schema ID [3800] = 00790 or 00795 [Lymphoma, Lymphoma-CLL/SLL] and Primary Site [400] = C770-C779

/ at least one of Clin SG, Path SG, (EOD PT & Derived SS2018) or SS2018 has a specific value which does NOT imply Mets */*
If [AJCC TNM Clin Stage Group [1004] = I, IE, II, IIE, II bulky, III or
AJCC TNM Path Stage Group [1014] = I, IE, II, IIE, II bulky, III or
(EOD Primary Tumor [772] = 100-600 and Derived Summary Stage 2018 [762] = 1 or 2) or
Summary Stage 2018 [764] is 0-4, 8] AND

/ AND NONE of the fields have a specific value which DOES imply Mets */*
[AJCC TNM Clin Stage Group [1004] is not IV (includes blank) and
AJCC TNM Path Stage Group [1014] is not IV (includes blank) and
EOD Primary Tumor [772] is NOT equal to 700, 750, 800 (includes blank) and
Derived Summary Stage 2018 [762] is NOT equal to 7 (includes blank) and
Summary Stage 2018 [764] is NOT equal to 7 (includes blank)]
Set Mets at DX - Bone [1112] = 0
Set Mets at DX - Brain [1113] = 0
Set Mets at DX - Liver [1115] = 0
Set Mets at DX - Lung [1116] = 0
Set Mets at DX - Distant Lymph Nodes [1114] = 8
Set Mets at DX - Other [1117] = 0

D) If Schema ID [3800] = 00790 or 00795 [Lymphoma, Lymphoma-CLL/SLL] and Primary Site [400] NOT equal to C420, C421, C423, C424, C770-C779, C809
/ at least one of Clin SG, Path SG, (EOD PT & Derived SS2018) or SS2018 has a specific value which does NOT imply Mets */*
If [AJCC TNM Clin Stage Group [1004] = I, IE, II, IIE, II bulky, III or

AJCC TNM Path Stage Group [1014] = I, IE, II, IIE, II bulky, III or
(EOD Primary Tumor [772] = 100-600 and Derived Summary Stage 2018 [762] = 1 or 2) or
Summary Stage 2018 [764] is 0-4, 8] AND

/ AND NONE of the fields have a specific value which DOES imply Mets */*
[AJCC TNM Clin Stage Group [1004] is not IV (includes blank) and
AJCC TNM Path Stage Group [1014] is not IV (includes blank) and
EOD Primary Tumor [772] is NOT equal to 700, 750, 800 (includes blank) and
Derived Summary Stage 2018 [762] is NOT equal to 7 (includes blank) and
Summary Stage 2018 [764] is NOT equal to 7 (includes blank)]

Set Mets at DX - Bone [1112] = 0
Set Mets at DX - Brain [1113] = 0
Set Mets at DX - Liver [1115] = 0
Set Mets at DX - Lung [1116] = 0
Set Mets at DX - Distant Lymph Nodes [1114] = 0
Set Mets at DX - Other [1117] = 0

E) If Schema ID [3800] = 00822
Set Mets at DX – Bone [1112] = 8
Set Mets at DX - Brain [1113] = 8
Set Mets at DX - Liver [1115] = 8
Set Mets at DX - Lung [1116] = 8
Set Mets at DX - Distant Lymph Nodes [1114] = 8
Set Mets at DX - Other [1117] = 8

13.17 SUGGESTED Conversions related to Edits (Tumor Size, EOD fields, SS2018, SSDIs)

The following are suggested conversions related to edits. They are not required but would make the data more consistent.

For Date of Diagnosis Year [390] >= 2018

A) **Edit N6130:** Tumor Size 999, Schema ID, Primary Site (NAACCR)
If Primary Site [400] = C420, C421, C423, C424, C770-C779, C809
OR Schema ID [3800] = 00830 (HemeRetic) and Primary Site is NOT C422
OR Schema ID [3800] = 00458 (Kaposi Sarcoma), 00790 (Lymphoma), 00795 (Lymphoma CLL/SLL), 00671 (Melanoma Iris), 00672 (Melanoma Choroid and Ciliary Body), 00821 (Plasma Cell Myeloma), 00822 (Plasma Cell Disorders),
If Tumor Size Clinical [752] is not blank or 999, Set Tumor Size Clinical to 999
If Tumor Size Pathologic [754] is not blank or 999, Set Tumor Size Pathologic to 999
If Tumor Size Summary [756] is not blank or 999, Set Tumor Size Summary to 999

B) **Edit N6076:** EOD Mets, Type of Reporting Source (SEER)
If EOD Mets [776] = 99 and Type of Reporting Source [500] is NOT 7
Set EOD Mets = 00

C) **Edit N6150:** Esophagus and EGJ Tumor; Epicenter, Esophagus, EOD Primary Site (SEER)
If Schema ID [3800] = 00161 (Esophagus Squamous)
If Esoph Tumor Epicenter [3829] is not null or 9, Set Esoph Tumor Epicenter = 9

D) **Edit N6315:** EOD Primary Tumor, HemeRetic Histology (SEER), Schema ID: 00830
If Schema ID [3800] = 00830 and Type of Reporting Source [500] is NOT 7 and
Histology ICD-O-3 [522] = 9591, 9724, 9727, 9741, 9742, 9762, 9800, 9801, 9806-9809, 9811-9820, 9831-9834, 9837, 9840, 9860, 9861, 9863, 9865-9867, 9869-9879, 9891, 9895-9898, 9910-9912, 9920, 9931, 9940, 9945, 9946, 9948, 9950, 9961-9968, 9975, 9980, 9982, 9983, 9985, 9986, 9989, 9991, 9992, 9993
If EOD Primary Tumor [772] is not blank or 700, Set EOD Primary Tumor = 700
If SS2018 [764] is not blank or 7, Set SS2018 = 7

E) **Edit N6311:** EOD Primary Tumor/Nodes, Plasma Cell Disorders, Histology (SEER)
If Schema ID [3800] = 00822 (Plasma Cell Disorders) and Type of Reporting Source [500] is NOT 7
If Histology ICD-O-3 [522] = 9731 and EOD Primary Tumor [772] is not blank or 100
Set EOD Primary Tumor = 100
If Histology ICD-O-3 [522] = 9734 and EOD Primary Tumor [772] is not blank or 200
Set EOD Primary Tumor = 200
If Histology ICD-O-3 [522] = 9671, 9761 and EOD Primary Tumor [772] is not blank or 700
Set EOD Primary Tumor = 700

F) **Edit N6316:** Summary Stage 2018, Plasma Cell Myeloma, Histology (SEER)
If Schema ID [3800] = 00821 (Plasma Cell Myeloma) and Type of Reporting Source [500] is NOT 7
If SS2018 [764] is not blank or 7, Set SS2018 = 7

13.18 Surgery fields

The following changes ensure consistent coding of surgery and scope of regional lymph node fields when Surgery or Scope of Regional LN does not apply.

For Date of Diagnosis Year [390] >= 2018

A. If Primary Site [400] is C420, C421, C423, C424, C760-C768, C809
   a. If RX Hosp—Surg Prim Site [670] is not blank and not 98, set to 98
   b. If RX Summ—Surg Prim Site [1290] is not blank and not 98, set to 98
   c. If RX Summ—Surgical Margins [1320] is not blank and not 9, set to 9
   d. If Reason for No Surgery [1340] is not blank and not 1, set to 1

B. If Primary Site [400] is C420, C421, C423, C424, C589, C700-C729, C751-C753, C761-C768, C770-C779, C809 or Schema ID [3800] is 00790, 00795, 00822 (Lymphoma, Lymphoma CLL/SLL, Plasma Cell Disorders)
   a. If RX Hosp—Scope Reg LN Sur [672] is not blank and not 9, set to 9
   b. If RX Summ—Scope Reg LN Sur [1292] is not blank and not 9, set to 9

14 Appendix C ICD-O Update for 2022 Implementation

- Codes/terms listed numerically
- **Only new** associated terminology to **existing ICD-O-3.2** codes are included in the 2022 ICD-O Implementation guidelines and documentation. Terms are those listed in the blue books.
- Update based on the following 5th Ed classification of Tumors books: Breast, Digestive System, Female Genital, and Soft tissue & Bone

ICD-O Code	Term	Required SEER	Required NPCR	Required CoC	Required CCCR	Remarks
8033/3	Carcinoma with sarcomatoid component	Y	Y	Y	Y	New related term
8044/3	Small cell carcinoma, large cell variant **(C56.9)**	Y	Y	Y	Y	New related term: ***ovary only***
8085/3	Squamous cell carcinoma, HPV-associated	Y	Y	Y	Y	New term for uterine cervix valid 1/1/2022
8086/3	Squamous cell carcinoma, HPV-independent	Y	Y	Y	Y	New term for uterine cervix valid 1/1/2022
8144/2	Intestinal-type adenoma, high grade **(C160 – C166, C168-C169, C170-C173, C178-C179)**	Y **See remarks**	Y **See remarks**	Y **See remarks**	Y **See Remarks***	Term is reportable for stomach and small intestines **ONLY beginning 1/1/2022 *CCCR required High Grade Dysplasia 2010+ for all GI sites; stopped for C18._, C19._, and C20._ in 2018**
8150/3	Oncocytic neuroendocrine tumor, non-functioning pancreatic	Y	Y	Y	Y	New related term
8150/3	Pleomorphic neuroendocrine tumor, non-functioning pancreatic	Y	Y	Y	Y	New related term
8150/3	Clear cell neuroendocrine tumor, non-functioning pancreatic	Y	Y	Y	Y	New related term
8163/2	**Papillary neoplasm, pancreatobiliary type, with high grade intraepithelial neoplasia C241**	Y	Y	Y	Y	New reportable term

ICD-O Code	Term	Required SEER	Required NPCR	Required CoC	Required CCCR	Remarks
8150/3	Cystic neuroendocrine tumor, non-functioning pancreatic	Y	Y	Y	Y	New related term
8174/3	Hepatocellular carcinoma, steatohepatitic	Y	Y	Y	Y	New related term
8174/3	Hepatocellular carcinoma, macrotrabecular massive	Y	Y	Y	Y	New related term
8174/3	Hepatocellular carcinoma, chromophobe	Y	Y	Y	Y	New related term
8174/3	Hepatocellular carcinoma, neutrophil-rich	Y	Y	Y	Y	New related term
8174/3	Hepatocellular carcinoma, lymphocyte-rich	Y	Y	Y	Y	New related term
8200/3	Solid-basaloid adenoid cystic carcinoma	Y	Y	Y	Y	New related term
8200/3	Adenoid cystic carcinoma with high-grade transformation	Y	Y	Y	Y	New related term
8210/2	Adenomatous polyp, high grade dysplasia **(C160 – C166, C168-C169, C170-C173, C178-C179)**	Y **See remarks**	Y **See remarks**	N	Y **See Remarks***	Term is reportable for stomach and small intestines **ONLY beginning 1/1/2022 *CCCR required High Grade Dysplasia 2010+ for all GI sites; stopped for C18._, C19._, and C20._ in 2018**
8211/2	Tubular adenoma, high grade	N	N	N	Y **See Remarks***	Term is NOT reportable ***CCCR required High Grade Dysplasia 2010+ for all GI sites; stopped for C18._, C19._, and C20._ in 2018**
8213/2	Serrated dysplasia, high grade **(C160 – C166, C168-C169, C170-C173, C178-C179)**	Y **See remarks**	Y **See remarks**	Y **See remarks**	Y **See Remarks***	Term is reportable for stomach and small intestines **ONLY beginning 1/1/2022 *CCCR required High Grade Dysplasia 2010+**

ICD-O Code	Term	Required SEER	Required NPCR	Required CoC	Required CCCR	Remarks
						for all GI sites; stopped for C18._, C19._, and C20._ in 2018
8243/3	**Goblet cell adenocarcinoma**	Y	Y	Y	Y	New preferred term
8261/2	Villous adenoma, high grade	N	N	N	Y **See Remarks***	Term is NOT reportable ***CCCR required High Grade Dysplasia 2010+ for all GI sites; stopped for C18._, C19._, and C20._ in 2018**
8262/3	Adenoma-like adenocarcinoma	Y	Y	Y	Y	New related term
8263/2	Tubulovillous adenoma, high grade	N	N	N	Y **See Remarks***	Term is NOT reportable ***CCCR required High Grade Dysplasia 2010+ for all GI sites; stopped for C18._, C19._, and C20._ in 2018**
8310/3	Adenocarcinoma, HPV-independent, clear cell type	Y	Y	Y	Y	New term for uterine cervix
8455/2	**Intraductal oncocytic papillary neoplasm, NOS (C250-C254, C257-C259)**	Y	Y	Y	Y	New ICD-O code/term
8455/3	**Intraductal oncocytic papillary neoplasm with associated invasive carcinoma(C250-C254, C257-C259)**	Y	Y	Y	Y	New ICD-O code/term
8480/2	Low grade appendiceal mucinous neoplasm (LAMN) **(C181)**	Y	Y	Y	Y	ICD-O-3.2 currently lists LAMN as 8480/1. Beginning with cases diagnosed 1/1/2022 forward, LAMN should be assigned a behavior code of /2. LAMN diagnosed prior to 1/1/2022 is not reportable.
8480/2	High grade appendiceal mucinous neoplasm (HAMN) **(C181)**	Y	Y	Y	Y	New behavior/term

ICD-O Code	Term	Required SEER	Required NPCR	Required CoC	Required CCCR	Remarks
8482/3	Adenocarcinoma, HPV-independent, gastric type (**C530-C531, C538-C539)**	Y	Y	Y	Y	New related term
8483/2	**Adenocarcinoma in situ, HPV-associated (C530-C531, C538-C539)**	N	N	N	N	New ICD-O code/term Not reportable
8483/3	**Adenocarcinoma, HPV-associated C530-C531, C538-C539)**	Y	Y	Y	Y	New ICD-O code/term
8484/2	**Adenocarcinoma in situ, HPV-independent, NOS C530-C531, C538-C539)**	N	N	N	N	New ICD-O code/term Not reportable
8484/3	**Adenocarcinoma, HPV-independent, NOS C530-C531, C538-C539)**	Y	Y	Y	Y	New ICD-O code/term
8500/2	DCIS of low nuclear grade	Y	Y	Y	Y	New related term
8500/2	DCIS of intermediate nuclear grade	Y	Y	Y	Y	New related term
8500/2	DCIS of high nuclear grade	Y	Y	Y	Y	New related term
8503/2	**Ductal carcinoma in situ, papillary**	Y	Y	Y	Y	New preferred term
8509/3	**Tall cell carcinoma with reversed polarity**	Y	Y	Y	Y	New preferred term
8520/2	Florid lobular carcinoma in situ	Y	Y	Y	Y	New related term
8576/3	Paneth cell carcinoma	Y	Y	Y	Y	New related term
8590/1	Uterine tumor resembling ovarian sex cord tumor	N	N	N	N	Existing code with new behavior-not Reportable
8804/3	Proximal or large cell epithelioid sarcoma	Y	Y	Y	Y	New related term
8804/3	Classic epithelioid sarcoma	Y	Y	Y	Y	New related term
8811/3	Epithelioid myxofibrosarcoma	Y	Y	Y	Y	New related term
8832/3	Myxoid dermatofibrosarcoma protuberans	Y	Y	Y	Y	New related term
8832/3	Dermatofibrosarcoma protuberans with myoid differentiation	Y	Y	Y	Y	New related term

ICD-O Code	Term	Required SEER	Required NPCR	Required CoC	Required CCCR	Remarks
8832/3	Plaque-like dermatofibrosarcoma protuberans	Y	Y	Y	Y	New related term
8859/3	**Myxoid pleomorphic liposarcoma**	Y	Y	Y	Y	New ICD-O code/term
8912/3	Congenital spindle cell rhabdomyosarcoma with VGLL2/NCOA2/CITED2 rearrangements	Y	Y	Y	Y	New related term
8912/3	MYOD1-mutant spindle cell/sclerosing rhabdomyosarcoma	Y	Y	Y	Y	New related term
8912/3	Intraosseous spindle cell rhabdomyosarcoma with TFCP2/NCOA2 rearrangements	Y	Y	Y	Y	New related term
8976/3	**Gastroblastoma (C16.0 – C16.9)**	Y	Y	Y	Y	New ICD-O code/term
8990/3	NTRK-rearranged spindle cell neoplasm (emerging)	Y	Y	Y	Y	New related term
9110/3	**Adenocarcinoma, HPV-independent, mesonephric type**	Y	Y	Y	Y	New preferred term
9111/3	**Mesonephric-like adenocarcinoma**	Y	Y	Y	Y	New ICD-O code/term for ovary and corpus uterus
9120/3	Post radiation angiosarcoma of the breast	Y	Y	Y	Y	New related term
9120/3	Epithelioid angiosarcoma	Y	Y	Y	Y	New related term
9133/3	Epithelioid hemangioendothelioma with WWTR1-CAMTA1 fusion	Y	Y	Y	Y	New related term
9133/3	Epithelioid hemangioendothelioma with YAP1-TFE3 fusion	Y	Y	Y	Y	New related term
9140/3	Classic indolent Kaposi sarcoma	Y	Y	Y	Y	New related term
9140/3	Endemic African Kaposi sarcoma	Y	Y	Y	Y	New related term

ICD-O Code	Term	Required SEER	Required NPCR	Required CoC	Required CCCR	Remarks
9140/3	AIDS-associated Kaposi sarcoma	Y	Y	Y	Y	New related term
9140/3	Iatrogenic Kaposi sarcoma	Y	Y	Y	Y	New related term
9200/1	Osteoblastoma	N	N	N	N	Behavior change from /0 to /1. Remains **non-reportable**
9222/3	Chondrosarcoma, grade 1	Y	Y	Y	Y	Behavior change. **Reportable 1/1/2022 forward**
9261/1	Osteofibrous dysplasia-like adamantinoma	N	N	N	N	New behavior code/term. **Non-reportable**
9366/3	Round cell sarcoma with EWSR1-non-ETS fusions	Y	Y	Y	Y	New ICD-O code/term
9367/3	CIC-rearranged sarcoma	Y	Y	Y	Y	New ICD-O code/term
9368/3	Sarcoma with BCOR genetic alterations	Y	Y	Y	Y	New ICD-O code/term
9687/3	Endemic Burkitt lymphoma	Y	Y	Y	Y	New related term
9687/3	Sporadic Burkitt lymphoma	Y	Y	Y	Y	New related term
9687/3	Immunodeficiency-associated Burkitt lymphoma	Y	Y	Y	Y	New related term

15 Appendix D STORE 2022 Summary of Changes

New Data Items

Macroscopic Evaluation of the Mesorectum [3950]

Macroscopic Eval of Mesorectum instructions will include coding data items from the Total Mesorectal Excision procedure's pathology report.

Specimen will be evaluated for completeness of the Total Mesorectal Excision (TME) or completeness of the Mesorectal Envelope.

Four new custom data items will be collected for diagnosis year 2022 only.

Rx Hosp—Surg Breast [10104]
Rx Summ—Surg Breast [10105]
These two data items record the breast surgical procedure performed at this facility [10104] and at any facility [10105]. The collection of data will be used for updating the surgery codes to support the Synoptic Operative Reporting and to allow for more descriptive Appendix A surgery codes in 2023.

Rx Hosp—Recon Breast [10106]
Rx Summ—Recon Breast [10107]
Records the immediate reconstruction procedure performed the same day as the surgical procedure at the reporting facility [10106] and at any facility [10107].
Breast reconstruction was previously collected within the breast surgery codes. CoC will collect these data items to support the Synoptic Operative Reports and allow for more descriptive reconstruction codes. This is being collected in anticipation for a 2023 Site Specific Disease Item.

Deleted Data items

NCDB—SARSCoV2—Test [3943]
NCDB--SARSCoV2—Pos [3944]
NCDB--SARSCoV2--Pos Date [3945]
NCDB--COVID19--Tx Impact [3946]
SARCoV2 data items are not required to be collected on cases with a reportable malignancy with a diagnosis date during calendar year 2022 and beyond. However, SARSCoV2 data items should continue to be collected on all cases with a reportable malignancy with a diagnosis date during the calendar years of 2020 and/or 2021 following STORE v2021 rules and instructions.

Data Items with Changes

Lymphovascular Invasion [1182]

AJCC was contacted by CAP requesting a change to the LVI data item. CAP pathologists noted they were getting questions from registrars when coding LVI for thyroid and adrenal cancer. The wording on the

CAP protocol is slightly different, and we added the terminology to the coding table. Lymphatic invasion for L instead of lymphatic and small vessel invasion, and angioinvasion for V instead of venous large vessel invasion.

Allowable values and format:

Code	Label
0	Lymphovascular Invasion stated as Not Present
1	Lymphovascular Invasion Present/Identified (NOT used for thyroid and adrenal)
2	Lymphatic and small vessel invasion only (L) OR Lymphatic invasion only (thyroid and adrenal only)
3	Venous (large vessel) invasion only (V) OR Angioinvasion (thyroid and adrenal gland only)
4	BOTH lymphatic and small vessel AND venous (large vessel) invasion OR BOTH lymphatic AND angioinvasion (thyroid and adrenal only)
8	Not Applicable
9	Unknown/Indeterminate/not mentioned in path report

Code Changes:

Instructions were modified to code lymph vascular invasion to codes 0, 2, 3, 4, or 9 for the Schema IDs in the following list:

thyroid (schema ID 00730)
thyroid medullary (schema ID 00740)
adrenal gland (schema ID 00760)

Word Changes

The following items have been updated in STORE with a word change from patient record to medical record:

Tumor Size Summary [756]
Regional Lymph Nodes Positive [820]
Regional Lymph Nodes Examined [830]
Sentinel Lymph Nodes Examined [834]
Sentinel Lymph Nodes Positive [835]

Code Changes

Mets at Diagnosis – Bone [1112], Mets at Diagnosis – Brain [1113], Mets at Diagnosis – Liver [1115], Mets at Diagnosis – Lung [1116] and Mets at Diagnosis – Other [1117]

In STORE 2021 (pages 178, 180, 184, 186 and 188), the coding instructions have been updated, to align with SEER.

- The "*C770-C779*" codes for any histology in the last row, under coding instruction table have been removed.
- For ICD-O-3 sites C000-C809
    - The following histologies were removed: 9740-9809, 9840-9992
    - The following histologies were added: 9671
- For ICD-O-3 sites C000-C440, C442- C689, C691-C694, C698-C809
    - The following histologies were removed: 9820, 9826, 9831- 9834
- For ICD-O-3 sites C000-C440, C442- C689, C691-C694, C698-C809 was changed to C000-C809 for histologies: 9731, 9732, 9734

ICD-O-3 Site	ICD-O-3 Histology	
C000-C809	9671, 9741-9742, 9761-9762, 9800-9809, 9820, 9826, 9831-9834, 9840-9920, 9931-9993 9671, 9741-9742, 9761-9762, 9800-9809, 9820, 9826, 9831-9834, 9840-9920, 9931-9993	Mast cell, histiocytosis, immunoproliferative, and leukemias
C420, C421, C424	9811-9818, 9823, 9827, 9837	Specific leukemia/lymphoma histologies coded to blood, bone marrow, hematopoietic
C000- C809	9820, 9826, 9831-9834	Mostly lymphoid leukemias coded to any site except eyelid, conjunctiva, lacrimal gland, orbit, and eye overlapping and NOS
C000-C809	9731, 9732, 9734	Plasma cell tumors coded to any site
C420, C421, C424	Any histology	

Reportability Change

The Eligibility section in STORE has been updated to include the new ICD-O codes for new terminology, behavior changes, reportability changes, and specific histology for specific primary.

The table below represents the ICD-O-3 terms that CoC is required to collect (Appendix B).

ICD-O Code	Term	Required and collected by CoC	Remarks
8033/3	Carcinoma with sarcomatoid component	Y	New related term
8085/3	Squamous cell carcinoma, HPV-associated	Y	New term for uterine cervix

ICD-O Code	Term	Required and collected by CoC	Remarks
8086/3	Squamous cell carcinoma, HPV-independent	Y	New term for uterine cervix
8144/2	Intestinal-type adenoma, high grade (C16.0 – C16.9, C17.0 - C17.9)	Y Reportable for Stomach and Small Intestine only	Term is reportable for stomach and small intestines ONLY beginning 1/1/2022
8213/2	Serrated dysplasia, high grade (C16.0 – C16.9, C17.0 -C17.9)	Y for Stomach and Small Intestine	Term is reportable for stomach and small intestines ONLY beginning 1/1/2022
8243/3	Goblet cell adenocarcinoma	Y	New preferred term
8262/3	Adenoma-like adenocarcinoma	Y	New term
8310/3	Adenocarcinoma, HPV-independent, clear cell type	Y	New term for uterine cervix
8455/2	Intraductal oncocytic papillary neoplasm, NOS	Y	New ICD-O code/term
8455/3	Intraductal oncocytic papillary neoplasm with associated invasive carcinoma	Y	New ICD-O code/term
8480/2	Low-grade appendiceal mucinous neoplasm (LAMN)	Y	New behavior/term
8480/3	Low-grade appendiceal mucinous neoplasm (LAMN)	Y	New behavior/term
8480/2	High grade appendiceal mucinous neoplasm (HAMN)	Y	New behavior/term
8480/3	Appendiceal mucinous neoplasm with extra-appendiceal spread	Y	New behavior/term
8482/3	Adenocarcinoma, HPV-independent, gastric type	Y	New term
8483/3	Adenocarcinoma, HPV-associated	Y	New ICD-O code/term
8484/3	Adenocarcinoma, HPV-independent, NOS	Y	New ICD-O code/term
8503/2	Ductal carcinoma in situ, papillary	Y	New preferred term
8509/3	Tall cell carcinoma with reversed polarity	Y	New preferred term
8859/3	Myxoid pleomorphic liposarcoma	Y	New ICD-O code/term
8912/3	Congenital spindle cell rhabdomyosarcoma with VGLL2/NCOA2/CITED2 rearrangements	Y	New term
8912/3	MYOD1-mutant spindle cell/sclerosing rhabdomyosarcoma	Y	New term

ICD-O Code	Term	Required and collected by CoC	Remarks
8912/3	Intraosseous spindle cell rhabdomyosarcoma with TFCP2/NCOA2 rearrangements	Y	New term
8976/3	Gastroblastoma (C16.0 – C16.9)	Y	New ICD-O code/term
9110/3	Adenocarcinoma, HPV-independent, mesonephric type	Y	New preferred term
9111/3	Mesonephric-like adenocarcinoma	Y	New ICD-O code/term for ovary and corpus uterus
9120/3	Post radiation angiosarcoma of the breast	Y	New term
9133/3	Epithelioid hemangioendothelioma with WWTR1-CAMTA1 fusion	Y	New term
9133/3	Epithelioid hemangioendothelioma with YAP1-TFE3 fusion	Y	New term
9222/3	Chondrosarcoma, grade 1	Y	Behavior change. Reportable 1/1/2022 forward
9366/3	Round cell sarcoma with EWSR1-non-ETS fusions	Y	New ICD-O code/term
9367/3	CIC-rearranged sarcoma	Y	New ICD-O code/term
9368/3	Sarcoma with BCOR genetic alterations	Y	New ICD-O code/term

Histologies and sites CoC Accredited programs will NOT be required to collect are:

- 8210/2 Adenomatous polyp, high grade dysplasia (C160 – C166, C168-C169, C170-C173, C178-C179)
- 8211/2 Tubular adenoma, high grade
- 8261/2 Villous adenoma, high grade
- 8263/2 Tubulovillous adenoma, high grade
- 8483/2 Adenocarcinoma in situ, HPV-associated (C530-C531, C538-C539)
- 8484/2 Adenocarcinoma in situ, HPV-independent, NOS (C530-C531, C538-C539)
- 8509/1 Uterine tumor resembling ovarian sex cord tumor
- 9200/1 Osteoblastoma
- 9261/1 Osteofibrous dysplasia-like adamantinoma.

Ambiguous terms
Words in parenthesis are optional.

Updates in STORE APPENDIX A-Site Specific Surgery Codes:

List of excluded histologies in COC lists in site-specific surgery code tables have been removed in STORE v2022.

The following surgery codes from Site-Specific Surgery Codes for Colon (C18.0–C18.9), Rectosigmoid (C19.9), Rectum (C20.9) and Anus (C21.0-C21.8) have been removed as these are obsolete treatments for these primary sites.

11 and 21 Photodynamic therapy (PDT)
13 and 23 Cryosurgery
14 and 24 Laser Ablation
25 Laser Excision

- The word Wedge was removed from Rectum (C20.9) surgical code 30.
- The word Wedge was removed from Rectosigmoid (C19.9) surgical code 30.
- The word Miles Procedure was removed from Rectum (C20.9) surgical code 50.
- The word Miles Procedure was removed from Anus (C21.0-C21.8) surgical code 60.
- The word Total Mesorectal Excision (TME) was removed from Rectum (C20.9) surgical code 30.

Code Clarification

Scope of Regional Lymph Node Surgery [1292] and Scope of Regional Lymph Node Surgery at this Facility [672]

Coding instructions clarified to code 9 for:

Lymphoma (excluding CLL/SLL) (schema ID 00790)
Lymphoma (CLL/SLL) (schema ID 00795)

Phase I-II-III Radiation Primary Treatment Volume [1504, 1514, 1524]
Code 64 Prostate-whole description changed to Prostate with /without seminal vesicles

16 Appendix E 2022 Source References

2022 SEER Program Manual: https://seer.cancer.gov/tools/codingmanuals/

> Questions regarding the SEER Program Coding and Staging Manual 2022 should be directed to Ask a SEER Registrar at: https://seer.cancer.gov/registrars/contact.html

AJCC 8th Edition Chapter Updates and Histologies: https://cancerstaging.org/references-tools/deskreferences/Pages/8EUpdates.aspx

> Questions regarding AJCC Cancer Staging should be directed to the CAnswer Forum at: http://cancerbulletin.facs.org/forums/

AJCC API: https://cancerstaging.org/Pages/Vendors.aspx

AJCC Cancer Staging Form Supplement: https://cancerstaging.org/references-tools/deskreferences/Pages/Cancer-Staging-Forms.aspx

Cancer Surveillance DLL: AJCC licensees can request the licensed version of the library from Martin Madera, mmadera@facs.org. The version for unlicensed users will be available from the AJCC website, please contact Martin Madera (mmadera@facs.org) for access.

CAnswer Forum: http://cancerbulletin.facs.org/forums/help

Commission on Cancer STORE Manual: https://www.facs.org/quality-programs/cancer/ncdb/call-for-data/cocmanuals

Data Exchange Standard, XML Specifications for Cancer Registry Records, Version 1.4: https://www.naaccr.org/xml-data-exchange-standard/

Data Standards and Data Dictionary (Volume II): https://www.naaccr.org/data-standards-data-dictionary/

EDITS: https://www.naaccr.org/standard-data-edits/

> Questions regarding the NAACCR edits metafile should be directed to Jim Hofferkamp at jhofferkamp@naaccr.org.

EOD 2018: https://seer.cancer.gov/tools/staging/rsa.html

> Questions regarding EOD 2018 should be directed to Ask a SEER Registrar at: https://seer.cancer.gov/registrars/contact.html

Grade Manual: https://www.naaccr.org/wp-content/uploads/2021/03/Grade-Manual_v-2.01.pdf?v=1639490886

> Questions regarding the Grade Manual should be directed to the CAnswer Forum at: http://cancerbulletin.facs.org/forums/

Hematopoietic and Lymphoid Neoplasm Database: https://seer.cancer.gov/tools/heme/

Questions regarding the SEER Hematopoietic and Lymphoid Neoplasm Database should be directed to Ask a SEER Registrar at: https://seer.cancer.gov/registrars/contact.html

ICD-O-3.2: http://www.iacr.com.fr/index.php?option=com_content&view=article&id=149:icd-o-3-2&catid=80:newsflashes&Itemid=545

Questions regarding ICD-O-3 Histology changes should be directed to Ask a SEER Registrar at: https://seer.cancer.gov/registrars/contact.html

ICD-O-3 SEER Site/Histology Validation List: https://seer.cancer.gov/icd-o-3/

Questions regarding the SEER Site/Histology Validation List should be directed to Ask a SEER Registrar at: https://seer.cancer.gov/registrars/contact.html

NPCR Northcon 210 Registry Plus Utility Program: https://www.cdc.gov/cancer/npcr/tools/registryplus/up_download.htm

NPCR Registry Plus Software: https://www.cdc.gov/cancer/npcr/tools/registryplus/index.htm

Radiation Conversion Specifications: https://www.naaccr.org/data-standards-data-dictionary/

SEER API: https://api.seer.cancer.gov/

SEER Registrar Staging Assistant (SEER*RSA): https://seer.cancer.gov/tools/staging/rsa.html

Questions regarding SEER*RSA should be directed to Ask a SEER Registrar at: https://seer.cancer.gov/registrars/contact.html

SEER*Rx: https://seer.cancer.gov/tools/seerrx/

Questions regarding SEER*Rx should be directed to Ask a SEER Registrar at: https://seer.cancer.gov/registrars/contact.html

Site-Specific Data Items Manual: https://www.naaccr.org/SSDI/SSDI-Manual.pdf

Questions regarding SSDIs should be directed to the CAnswer Forum at: http://cancerbulletin.facs.org/forums/

Solid Tumor Rules: https://seer.cancer.gov/tools/solidtumor/

Questions regarding the Solid Tumor Rules should be directed to Ask a SEER Registrar at: https://seer.cancer.gov/registrars/contact.html

Summary Stage 2018: https://seer.cancer.gov/tools/ssm/

Questions regarding Summary Stage 2018 should be directed to Ask a SEER Registrar at: https://seer.cancer.gov/registrars/contact.html

17 Appendix F Revision Control

2021 Implementation Guidelines Revision Control			
Version Number	**Revision Date**	**Section**	**Revision Notes**
1.1	8/2021	5.7	Replaces the statement, "There are no new histologies and no changes to rules for 2022 cases." with the current content.
1.1	8/2021	13.1	Changed the AJCC ID of 79 to 79.0 in the table under part A.
1.1	8/2021	13.8	Replaced the first paragraph, "If Schema ID…"
1.2	9/2021	5.5	Revised last paragraph in this section.
1.2	9/2021	8.1	Added second to last paragraph and revised the last paragraph in this section.
1.2	9/2021	15	CoC revised Appendix D STORE 2022 Summary of Changes.
1.3	11/2021	12	Appendix A, Tobacco Use Smoking Status [344] the Parent XML Element was changed to Tumor.
1.3	11/2021	3.3	Two data items names were listed incorrectly and corrected, the data item numbers were correct. Changed *LN Status Femoral-Inguinal* to *LN Assessment Method Femoral-Inguinal* and *LN Status Para-Aortic* to *LN Assessment Method Para-Aortic*.
1.4	12/2021	3.4	Revised the second bullet for Schema ID Version Current and Original [2117 and 2118]. Added two bullets; one for AJCC Cancer Surveillance DLL Version Current and Original [2458 and 2159], the other for AJCC API Version Current and Original [2156 and 2157].
1.4	12/2021	5.5.1	Added new section, Histology Exclusion List, in section 5.5 Surgery Codes.
1.4	12/2021	13.1	Section 13.1 (A), rows 3 and 4 of the NEW AJCC ID column were revised from 18 to 18.1. Section 13.1 (C), *blank* was removed from the TNM Defaults for AJCC TNM Clin T, Clin N and Clin M.
1.5	01/2022	6.2	Deleted second paragraph regarding base dictionary modification to add allowUnlimitedText = true for Text Histology Title and Text Primary Site Title. And, deleted the following sentence, "The change will make the fields' attributes consistent with most of the other text fields".