CALIFORNIA CANCER REPORTING SYSTEM STANDARDS

VOLUME II

STANDARDS FOR AUTOMATED REPORTING

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Table of Contents

PART I INTRODUCTION

The reporting of cancer is mandatory under provisions of California's Health and Safety Code.

Hospitals and other reporting facilities are required to report cancer information to the California Cancer Registry using computer reporting systems that meet State standards. This manual, *California Cancer Reporting System Standards Volume II - Standards for Automated Reporting* is intended for hospitals and other reporting facilities or vendors wishing to update their own automated reporting systems or create new reporting systems that comply with State requirements.

The intended audience for this document is system analysts and software developers. It describes the format in which collected data must be reported.

Detailed instructions for collecting and coding data can be found in *Cancer Reporting in California: California Cancer Reporting System Standards, Volume I: Abstracting and Coding Procedures for Hospitals*.

Documentation for data items and their allowable values from the central and regional registry perspectives can be found in *Cancer Reporting in California: Data Standards for Regional Registries and California Cancer Registry, California Cancer Reporting System Standards, Volume III, but documentation for computer edits is now contained only within the CCR's latest edits metafile*.

Section I.1 Summary of Changes

Changes are identified with red font color.

Corrections to the changes are identified by blue font color.

On CCRCAL.ORG, this volume and its related appendices file will be listed in the Volume II – 2025 section of the CCR's Registrar Resources and Reporting web page (https://www.ccrcal.org/submit-data/cancer-registrars-hospitals-and-facilities/reporting-by-cancer-registrars/).

To comply with the national 2025 data changes, the CCR is requiring facilities to submit New Case Abstracts and Modified Records in NAACCR XML version 25.0 format. New data items, revised data items, and retired data items determined by NAACCR are described in the 2025 NAACCR Implementation Guide, which can be viewed at 2025-Implementation-Guidelines_20250114.pdf. But each year, these changes will also appear (in red) in Appendix A of this document, along with any additional integrated CA-specific changes. Previous versions of this volume listed changes in this summary section redundantly, but please just refer to Appendix A from now on.

2025 and later diagnoses must be submitted in this format, but once the facility software has been updated for 2025, new cases for all diagnosis years must be submitted this way using coding procedure 39. Coding procedure must be generated upon original new case completion, and it should not be changed when later updates occur, so subsequent modified records transmitted should continue to include that original new case coding procedure. Instructions for formatting these NAACCR XML data files are provided using a combination of the latest NAACCR XML Data Standard document and further instructions specific to California noted here in section II.5.

Shared follow-up and deletion records will continue to be transmitted in flat files. The CCR and California's regional registries also migrated from the Eureka central system to SEER*DMS in June 2024, which affected new case abstract and modified record requirements for a few data items, but these effects on facility transmissions have been minimized.

PART II DATA TRANSMISSION STANDARDS

Section II.1 Summary

Communication between a reporting facility and the California Cancer Registry (CCR) can be of two forms: some types of records are transmitted from the reporting facility to the CCR, and other types of records are transmitted from the CCR to the reporting facility.

Currently, there are three record types that must be transmitted from the reporting facility to the central registry. They are: New Case Records, Modified Records, and Deletion Records. All these record types are described in Section II.3. To comply with the California Cancer Registry's data exchange standards, each reporting facility's cancer registry is required to submit all three types of records following the procedures described below.

There is one type of record that is sent from the central registry to the reporting facility. This is Shared Follow-Up, described in Section II.3.4. Acceptance of that record by the reporting facility is optional (although we strongly recommend it).

Cases should NOT be transmitted to the CCR using a format that is earlier than the year that the case is reportable. For example, 2021 cases, as defined by the CCR casefinding rules, cannot be submitted in the format required in 2018.

Section II.2 Explanatory Notes

Reporting requirements vary by item and record type and are listed in the "CCR Required from Reporting Facility" column in the Appendices. Each record type is described in a table, which must be consulted to determine whether a particular item is required. The following key explains the terms used in the "CCR Required from Reporting Facility" column. For NAACCR XML new cases and modified records, data items should not be sent if they are blank/empty.

Requirement Key

- **No:** Not required. Do not submit this data item to the central registry.
- **Yes:** Required. The facility must submit this data item to the central registry, unless blank is an allowable value for it and the value is blank (e.g., middle name can be blank, so if it is blank, don't transmit it; blank will be assumed). Refer to the allowable values section for the item in California Cancer Reporting Standards, Volume III to determine if blank is allowable. Modified record items not sent will be interpreted as changes to blank if the original new case provided non-blank values.
- **Yes*:** Required if available. If the information can be obtained, and it is not blank/empty, the facility must submit it to the central registry. If not available or not applicable, it should not be transmitted.
- **Conditional:** Required on selected cases dependent on one or more conditions being true, such as the case's diagnosis date being before or after a certain date.
- **Yes, gen by facility:** Required, but the facility's registry software must generate the data item value based on a standard algorithm, rather than a user manually entering the data item value.

Items that are facility-generated are described in more detail, including allowable values, in Cancer Reporting in California, Volume III.

Section II.3 Transmission between Hospitals and Regions

II.3.1 Selection of Cases

Only cases which are reportable under California Cancer Registry (CCR) requirements are to be included in transmissions to the CCR. A reporting facility may elect to abstract certain benign conditions or skin cancers to meet local interest or ACoS requirements; however, these cases are not to be transmitted to the CCR.
Transmit all cases with a 2 or 3 (in situ or malignant) in Histology - Behavior, EXCEPT the following histologies occurring in the skin (site codes C44.0 -C44.9):

- 8000-8005 Neoplasms, malignant, NOS of the skin
- 8010-8046 Epithelial carcinomas of the skin
- 8050-8084 Papillary and squamous cell carcinomas of the skin
- 8090-8110 Basal cell carcinomas of the skin

In addition, for cases diagnosed after 1995, do not transmit any in situ (Histology - Behavior of 2) of the cervix (site codes C53.0 - C53.9). Beginning with cases diagnosed January 1, 2001, benign (behavior code 0) and uncertain behavior (behavior code 1) intracranial and central nervous system tumors are reportable. Borderline ovarian tumors (behavior code 1) in ICD-O-3 are no longer reportable, effective with cases diagnosed January 1, 2016 and forward.

- For cases diagnosed 2018-2020, refer to ICD-O-3 for current morphology codes - see **2018 ICD O 3 Annotated Histology List**.
- For cases diagnosed in 2021, refer to ICD-O-3 for current morphology codes - see **2021 ICD O 3.2 Annotated Histology List**.
- For cases diagnosed in 2022, refer to ICD-O-3 for current morphology codes - see **2022 ICD O 3.2 Annotated Histology List**.
- For cases diagnosed in 2023-forward, refer to ICD-O-3 for current morphology codes - see **2023 ICD O 3.2 Annotated Histology List**.
- For cases diagnosed in 2024-forward, refer to ICD-O-3 for current morphology codes – see **2024 ICD O 3.2 Annotated Histology List**.

II.3.2 New Case Record

For every abstract of a reportable case that is completed at the reporting facility, a New Case Record must be sent to the CCR. Timing considerations for reporting are discussed in Standards, Volume I, Section IX.1.1.

All new case record data items of interest to the CCR are specified in this volume's Appendix A (key to requirement statuses is in Section II.2), including Data Standards and Data Dictionary v25 | NAACCR Data Dictionary items required from facilities, items generated by the CCR, and California-specific data items noted as Special Use items. The XML formatting for a new case record is described below in section II.5.1.

PLEASE NOTE: Due to various issues with modified record transmit files for different facility software vendors, requirements in the next section will affect the data submitted in new case abstract transmit files as well. Please refer section II.3.3 Modified Records below and Appendix A for more information.

II.3.3 Modified Record

The CCR requires facilities to use the Modified Record to transmit data modifications for abstracts already submitted as New Case Records. The Modified Record, record type M, has the same data items of interest as the New Case Record, record type A, so Appendix A now lists the data items for both record types.

The Modified Record is designed to allow facilities to submit the current version of an abstract, providing the cumulative updates to all fields since the original new case was submitted. But over the years since modified record processing was implemented, the volume of records included in some facility software vendors' modified record transmit files became excessive, creating a heavy burden on the regional registries and the CCR to process them. And the CCR has also been concerned that some updated cases have been incorrectly omitted from modified record transmit files. The primary reasons for these problems were misunderstandings and inconsistencies among different facility software vendors about how to recognize a case that should be included in a modified record transmit file. Other inconsistencies have been found in modified records generated by different facility software vendors too. Thus, these requirements were revised as part of the 2023 data changes to provide more clarity and more specific instructions for vendors to avoid misunderstandings and promote standardized processing among different systems. And again, the CCR and California's regional registries also migrated their central system to SEER*DMS in June 2024, and that project necessitated that these requirements be changed again for 2024 as well.

Due to the SEER*DMS migration, the CCR has adopted SEER's interpretation of the data standard for the NAACCR item, Date Case Report Exported, so facility vendor systems shall now capture the export/transmit date for the original new case abstract and then overwrite this value with the latest modified record export/transmit date thereafter. The NAACCR XML Standard follows the SEER interpretation, noting that "it is assumed that the Date Case Report Exported field will be updated when an "M" record is generated." But the NAACCR data dictionary definition is too vague to make it clear which standard is required for modified records and allows registry definition variation. The CCR has been requiring facility software vendors to preserve the original new case abstract's Date Case Report Exported for decades, and that date has been preserved successfully in most cases. Some facility software vendors have not always followed that standard, though, especially after the implementation of modified record processing. But the change in CCR systems has forced this new data standard for all facility vendors. The adoption of this new standard means that the original new case abstract's export/transmit date will no longer have a data item to capture it for facilities that were preserving it, and the preserved and migrated original export/transmit dates will now be updated with each new modified record processed. Facilities that have been preserving that original date may want to capture it on their own in a separate field, depending on how they are using the field.

Facility software vendors MUST NOW INCLUDE ONLY ONE LATEST MODIFIED RECORD PER CASE UPDATED in a single modified record transmit file for the latest transmit cycle, regardless of the number and types of changes made after the last transmit cycle. At least one facility software vendor has been sending multiple records per case in the same transmit cycle, such as one record for recent follow-up-related changes and another record for recent non-follow-up related changes. The CCR never intended to allow this kind of duplication for any reason. Thus, for any facility software vendors including the same case multiple times in the same modified record transmit file or in different modified record transmit files created for the same transmit cycle, please implement this change immediately to stem the tide of excessive and unnecessary modified records transmitted. Follow-up Flag is no longer required in case that was causing any confusion.

Due to the need to avoid incorrect omissions in modified record transmit files when the latest changes were made on the previous transmit date but after the transmit file was created, the CCR requires facility software vendors to capture and compare date AND time case last changed values with date AND time case last exported values to determine whether cases should be included in modified record transmit files or excluded from them. In 2023, due to inadequate and conflicting NAACCR item definitions, three CA-specific date/time items were introduced into this volume to facilitate this kind of additional case selection precision, and they were expected to be transmitted (Date/Time Case First Reported, Date/Time Case Last Changed, and Date/Time Modified Record Last Exported). But these three CA-specific items were excluded from the SEER*DMS migration and were removed from this volume and CCR Volume III. Thus, the times last changed and exported will need to be captured in facility databases (but not transmitted) along with their associated Date Case Last Changed and Date Case Report Exported values in vendor systems to facilitate these comparisons. **NOTE:** Unfortunately, there were issues in the accompanying 2023 CA-specific XML user dictionary, including the omission of the three date/time items added to Appendix A in 2023 (Date/Time Case First Exported, Date/Time Case Last Changed, and Date/Time Modified Record Last Exported), but those issues have been resolved in the v2 version of the 2023 XML user dictionary file. And now the three date/time items have been removed for 2024, so they will not appear in the 2024 XML user dictionary file.

A facility case must ONLY be included in the next modified record transmit file when BOTH of the following conditions are true:

- The Date Case Last Changed is later than the previous Date Case Report Exported, where that comparison includes time comparisons for the two dates as well in case those dates were the same but later updates were made that day.
- At least one item was changed since the previous Date (and time) Case Report Exported with an Update Triggers Modified Record specification of yes, yes*, or conditional in the CCR's Volume II, Appendix A: New Case and Modified Record Items.

The case's Date Case Last Changed should be updated every time one or more field values are changed (along with the time of the update captured in the facility vendor system). The case's Date Case Report Exported should be updated upon inclusion in the next modified record transmit file (along with the time of the export captured in the facility vendor system).

When the CCR's central system (now SEER*DMS) receives transmitted modified records, the modified record's Date Case Last Changed value will be compared with the matched abstract's Date Case Last Changed value to determine if the modified record's updates should be applied to the abstract. When the modified record's date is later or the same as the abstract's date, the updates will be applied to the matched abstract and reconsolidation will occur. But if the modified record's date is earlier than the abstract's current date, none of the modified record values will be applied to the abstract.

Regardless which changed items require case inclusion in the next modified record transmit file, almost all data items in the case must be resent to the CCR in modified records. The exceptions would be items with blank/empty/space(s)/null values in XML transmits and those that should not be included according to the Appendix A CCR Required from Reporting Facility Software requirements and triggers modified records requirements.

Follow-Up Flag should no longer be included in modified record transmit files at all. Some facility software vendors have been setting this field to 1 (one or more follow-up fields updated) for all modified records and some have been setting it to 0 (no follow-up fields updated) for all modified records. And misunderstandings surrounding this item seem to be a big reason that excessive modified records have been transmitted. If both follow-up and non-follow-up changes were made, the 1 value was misleading anyway.

Apparently, some new case abstracts and modified records are not being transmitted with the right record type attribute value, but this a requirement, not an option, and it is one of the most critical pieces of information transmitted, so please make sure the record type attribute in new case abstract transmit files is set to A and the record type attribute in modified record transmit files is set to M. The XML formatting instructions in section II.5.1 require using the record type attribute for the whole file rather than including a record type item element in every modified record transmitted. New case abstracts should only be included in new case transmit files with the file's record type attribute set to A and modified records should only be included in transmit files with the file's record type attribute set to M. Section II.4 also notes that we should have A or M at the end of these file names to allow identification as new case abstracts or modified records in the file too. Record type item elements within each case should NOT be included in either type of XML transmit file to avoid redundancy and to avoid any uncertainty about the record type. The record type attribute placed at the beginning of the XML transmit file identifies the record type for all records in the file.

Resolving Coding Procedure Confusion

When modified record processing began, the CCR already had a standard for the former corrections, active follow-up, and deletions to be transmitted with the latest system coding procedure rather than the original coding procedure upon new case completion. But that requirement conflicted with the requirement to send ALL the latest hospital case item values in each modified record (which would include coding procedure). After some analysis, it appears that facility software vendors have mostly just been sending the original coding procedure upon initial case completion. Given the difference between modified records and the former update records, section I.1 and Appendix A have been changed to require that coding procedure must be

generated upon original new case completion, and it should not be changed when later updates occur, so subsequent modified records transmitted should continue to include that original new case coding procedure.

It is very important to make data fixes identified by CCR or regional registry quality control/audit reports in the facility database.

When quality control data fixes made by regional registry staff in the central system are reported back to facility registrars, and the registrars don't make the same changes in the facility database, subsequent modified records can cause difficulties in the central system and for regional registry staff. Later modified records for the associated cases may be transmitted with their original values, conflicting with QC changes made in the central system and making it more difficult to retain the highest quality data for research.

In addition, the CCR and the regional registries have been shifting quality control activities toward targeted audits, with the regional and central registry staff focusing more on preparing the best consolidated data for research from all sources. These changes could lead to facility registrars being given the responsibility for making audit-identified abstract data fixes and transmitting the changes via modified records. We are all in this together, supporting our collective mission in the cancer fight. If registrars are asked to do this, the CCR and the regional registries will depend on them to do so.

Another way to reduce modified record volume is to skip transmitting modified records for cases where the ONLY facility updates are changes the CCR/regional registries provided to the facility, such as shared follow-up data and regional registry quality control changes made to the central system database, because the central system already has the information. Thus, if the facility system is not already excluding them, please try to find ways to avoid including modified records in transmits when central system data changes are the only types of updates involved. If other types of updates were made too, there is no choice but to include those cases, but it is unnecessary to send cases again as modified records when the central system already has all the updated information. In general, facility software vendors should strive to avoid any additional work effort placed on facility registrars to identify cases for inclusion in modified record transmit files, but facility vendor systems may need to prompt users at times to identify sets of manual updates made that were all provided by the CCR/regional registries to help flag those cases for inclusion or exclusion in the next modified record transmit file.

Modified records must pass CCR edits before inclusion in a modified record transmit file.

II.3.4 Shared Follow-Up Record

Reporting facilities which agree in advance may be able to receive shared follow-up. Whenever the CCR receives follow-up data on a reporting facility's patient (and, possibly, that patient's tumor) from a different source (another reporting facility, state death records, DMV, etc.), the CCR may make available to the reporting facility the most current follow-up data available on that patient and tumor. The fields Follow-Up - Last Type (Patient) and Follow-Up - Last Type (Tumor) in the Shared Follow-Up record will indicate the type of reporting source that supplied the latest follow-up information being provided.

See Appendix S for the record layout for Shared Follow-Up records. (Key to symbols is in Section II.2.)

II.3.5 Deletion Record

Whenever a reporting facility decides to delete a case from its database that has previously been reported to the CCR, a Deletion record must be transmitted to the CCR.

EXCEPTIONS: DO NOT transmit a deletion record when the reporting facility is deleting a duplicate or the case is being associated with a new reporting source.

The following special item is used in the record layout for this record type:

Text - Transaction Remarks - This is a 150-character field (3 lines of 50). It must contain a comment indicating the reason for deleting the record.

If a deletion is made because the CCR's regional registry instructed the reporting facility to do so, the Text-Transaction Remarks field should contain only an "R" or "REGION" (all upper case).

See Appendix D for the record layout of deletion records. (Key to symbols is in Section II.2.)

Section II.4 Transmit File Naming Conventions

Transmitted Data Files

All electronic files must be sent in a secure manner as instructed by the Central and Regional Registries. File names must conform to the following schema:

- A three-letter abbreviation assigned by the CCR regional registry to the hospital (the case file suffix).
- Plus, the four-digit year (YYYY) showing the year the file was created.
- Plus, the three-digit day of the year (001 through 366) showing the day the file was created.
- Plus, a single letter (A-Z) showing the sequence within one day the file was created. (Different file types can have the same sequence letter.)
- For XML new case and modified record files, the record type initial/code must be included in the file name as well.
- Plus, a standard suffix/extension according to the record type (see below).

For example, the first file of new cases created on February 1 at hospital abbreviated STJ would be named STJ2021032AA.XML and the second file of new cases created that day would be STJ2021032BA.XML.

The following table shows the record type initials/codes, suffixes/extensions, and record lengths, where appropriate.

Table 1. Data File Types

Record Type	Initial	File Suffix	Record Length
New Case (Abstract)	A	.XML	Not applicable
Modified Record	M	.XML	Not applicable
Shared Follow-Up	S	.XSH	795 plus CR/LF
Deletion	D	.XDL	365 plus CR/LF

Section II.5 Formatting Standards

II.5.1 XML File Structure for New Cases and Modified Records

Please refer to the latest NAACCR XML Data Standard document available on the NAACCR XML Data Exchange Standard web page (https://www.naaccr.org/xml-data-exchange-standard/), section 2 and all of its subsections, for the bulk of the specific XML formatting requirements for new cases and modified records. Make sure 2025 versions and file references are used in any NAACCR XML data files transmitted for 2025 forward diagnoses. Some additional clarifications and requirements specific to California are included here.

1) XML dictionaries
   Section 2.1 Dictionary Specifications in the NAACCR XML Data Standard document describes the XML dictionaries that must be created and referenced in NAACCR XML data files to define all the valid individual data items that may be transmitted and metadata about them.

   a. The v25 Base Dictionary available on the NAACCR XML Data Exchange Standard web page defines all valid 2025 NAACCR items. It is maintained by NAACCR.

   b. An XML user dictionary has been created for CCR-specific data items that must/may be transmitted by facilities to the regional/central registry too. This user dictionary has been uploaded to the NAACCR website, but the CCR also maintains it on its website under Registrar Resources and Reporting, in the Volume II – 2025 section. CCR-specific data items that are generated/obtained elsewhere by the CCR (which have a "no" requirement for facilities in Appendix A) are not included in this user dictionary.

2) Both dictionaries must be identified as attributes of the root <NaaccrData> element of any NAACCR XML data file transmitted:
   <NaaccrData baseDictionaryUri="http://naaccr.org/naaccrxml/naaccr-dictionary-250.xml"
   userDictionaryUri="https://www.ccrcal.org/submit-data/cancer-registrars-hospitals-and-facilities/reporting-by-cancer-registrars/california-facility-to-ccr-naaccr-dictionary-250-v1.xml"

3) Please include the <NaaccrData> element attributes for specification version (now required by NAACCR) and timeGenerated (Optional). The specification version attribute should be set to the latest XSD file version, currently "1.8."
   timeGenerated="2025-08-16T08:09:19-04:00"
   specificationVersion="1.8"

4) As noted in section 2.2.1 of the NAACCR XML Data Standard document, the full hierarchical structure of a NAACCR xml data file is defined by these elements:

```
<NaaccrData>
    <Item/></Item>
    <Patient>
        <Item></Item>
        <Tumor>
            <Item></Item>
        </Tumor>
    </Patient>
</NaaccrData>
```

That document states that there can only be one root <NaaccrData> element per data file, one <Patient> element per patient, and one or more <Tumor> elements per diagnosis for each patient. There can be multiple <Patient> elements per data file. The majority of the individual data items within a new case or modified record will be transmitted in child <Item> elements within a parent <Patient> element and a related parent <Tumor> element. Thus, in a NAACCR XML data file, each new case or modified record is transmitted within a single patient/tumor element pair. The parent XML element for each data item is documented in Appendix A.

5) Despite one of the examples in the NAACCR XML Data Standard document, each <Patient> element submitted must contain at least one <Tumor> element.

6) **<u>IMPORTANT NOTE:</u> TO AVOID THE POSSIBLE CREATION OF DUPLICATES FOR THE REGIONAL AND CENTRAL REGISTRIES, PLEASE ONLY PROVIDE PATIENT/TUMOR ELEMENT PAIRS IN NEW CASE DATA FILES FOR CASES THAT HAVE NOT ALREADY BEEN TRANSMITTED.**

If the patient has multiple primaries diagnosed and abstracted at the same time or at least before the next transmission, multiple <Tumor> elements can be transmitted within a <Patient> element in the same new case data file, but otherwise each new case data file <Patient> element should contain just one <Tumor> element for a new diagnosis not previously submitted for a new case abstract. <Patient> elements for the same patients may be sent again in subsequent files with new <Tumor> elements for additional diagnoses when new diagnoses are abstracted and need to be transmitted. A <Patient> element should only be sent in a new case file if there is at least one new <Tumor> element for a new abstracted diagnosis that has not previously been transmitted.

7) For modified records, if tumor level information was updated in only one of a patient's new case abstracts, then just send the patient/tumor element pair associated with that new case abstract that was updated. If tumor level information was changed in multiple abstracts for the

same patient, then multiple <Tumor> elements can be sent within the <Patient> element. If only patient level information was updated where there are multiple new case abstracts for different primaries/diagnoses captured at the facility, then only one patient/tumor element pair needs to be sent to notify the regional and central registries of the changes.

8) <Item> elements should not be transmitted in NAACCR XML new cases and modified records if their values are blank, empty, one or more spaces only, or any flavor of null. They should also be omitted if the item has a "no" in the CCR Required from Reporting Facility Software column of Appendix A.

9) As noted in section II.3.3, regardless which changed items trigger a Modified Record's creation, all data items in the case must be resent to the CCR, except for items with blank/empty/space(s)/null values and those that should not be included according to the Appendix A CCR Required from Reporting Facility Software requirements. Thus, the CCR requires a patient/tumor element pair and **ALL** their non-blank patient and tumor level data items required for a new case to be transmitted in a modified record too.

10) Since the CCR and California's regional registries have migrated to the SEER*DMS system, it is highly recommended that all facility software vendors use File*Pro to validate XML data files prior to transmit, freely available on the SEER website (File*Pro Software - SEER Registrars (cancer.gov).

11) For NAACCR XML data files, even though there are recordType and naaccrRecordVersion NAACCR XML IDs that could be transmitted in <Item> elements within the <NaaccrData> parent XML element, they should **NOT** be transmitted that way as that would duplicate record type and record version attributes. The record type **MUST** be transmitted as the recordType attribute of the <NaaccrData> root XML element in a NAACCR data file. And the record version is identified using the recordVersion attribute of the <NaaccrDictionary> element of the NAACCR base dictionary, which is referenced in the data file, so there is no need to include an item element for it either. NPI registry ID (if available and not blank) and Registry ID should be the only direct child <Item> elements within the root <NaaccrData> element. Transmitting record type and record version in this way is documented in Appendix A for those items as well.

```
<NaaccrData baseDictionaryUri="http://naaccr.org/naaccrxml/naaccr-dictionary-250.xml"
    userDictionaryUri="https://www.ccrcal.org/submit-data/cancer-registrars-hospitals-
        and-facilities/reporting-by-cancer-registrars/california-facility-to-ccr-naaccr-
        dictionary-250-v1.xml"
    recordType="A" timeGenerated="2025-08-16T08:09:19-04:00"
    specificationVersion="1.8" xmlns="http://naaccr.org/naaccrxml">
<NaaccrDictionary dictionaryUri="http://naaccr.org/naaccrxml/naaccr-dictionary-250.xml"
    naaccrVersion="250"
    specificationVersion="1.8"
    dateLastModified= "2025-10-01T12:00:00-04:00"
    description="NAACCR 25 base dictionary"
```

xmlns="http://naaccr.org/naaccrxml">

12) For transmissions from facilities to the regional registry/central registry, the <NaaccrData> recordType attribute should be set to "A" for a new case data file, or it should be set to "M" for a modified records file.

13) "Group" or "Parent" items that contain child items must not be transmitted in NAACCR XML, so they have been removed from Appendix A. Each group/parent item's child items must be given their own <Item> elements. The group/parent items have been omitted from Appendix A to make sure facility software doesn't try to send them. Old "reserved" items have also been removed from Appendix A.

14) Transmitted NAACCR XML new case data files and modified record data files must be limited to a maximum of 2 GB each to prevent any one overly large file upload from holding up other file uploads.

Some sample XML for a 2025 California facility NAACCR XML new case file is included on the next page. The sample includes the first few <Patient> element's child <Item> elements and the first few <Tumor> element's child <Item> elements for two patients, leaving out some items that would be blank. Each with patient has just one tumor/diagnosis.

```
<NaaccrData
        baseDictionaryUri="http://naaccr.org/naaccrxml/naaccr-dictionary-250.xml"
        userDictionaryUri="https://www.ccrcal.org/submit-data/cancer-registrars-hospitals-and-facilities/reporting-by-cancer-registrars/california-facility-to-ccr-naaccr-dictionary-250-v1.xml"
        recordType="A"
        timeGenerated="2025-08-16T08:09:19-04:00"
        specificationVersion="1.8"
        xmlns="http://naaccr.org/naaccrxml">
        <Item naaccrId="registryId">0000009700</Item>
        <Patient>
                <Item naaccrId="addrCurrentCountry">USA</Item>
                <Item naaccrId="birthplaceCountry">USA</Item>
                <Item naaccrId="birthplaceState">CA</Item>
                …
                <Tumor>
                        <Item naaccrId="behaviorCodeIcdO3">3</Item>
                        <Item naaccrId="casefindingSource">10</Item>
                        <Item naaccrId="dateOfDiagnosis">20230722</Item>
                        …
                </Tumor>
        </Patient>
        <Patient>
                <Item naaccrId="addrCurrentCountry">USA</Item>
                <Item naaccrId="birthplaceCountry">USA</Item>
                <Item naaccrId="birthplaceState">CA</Item>
                …
                <Tumor>
                        <Item naaccrId="behaviorCodeIcdO3">2</Item>
                        <Item naaccrId="casefindingSource">10</Item>
                        <Item naaccrId="dateOfDiagnosis">20230723</Item>
                        …
                </Tumor>
        </Patient>
</NaaccrData>
```

II.5.2 Record Type

This is a one-character field used to identify the type of record being processed. The hospital computer system must supply the appropriate code letter at the time that the file is created. The appropriate code for each record type is listed below:

New Case: A

Modified Record: M

Deletion: D

The code for the record type generated by the central registry is

Shared Follow-up: S

II.5.3 NAACCR or Central Registry Record Version

This field must contain the version code that identifies which revision of a record layout was used to create a record for the recipient. Once your software system has been modified to transmit records using the latest record layouts in this volume, all records transmitted must include the latest record version code(s), shown parenthetically after the record version data item name in each Appendix.

II.5.4 Shared Follow-up and Deletion Record Layouts

Appendix S provides the shared follow-up flat file record layout and Appendix D provides the deletion record layout.

Section II.6 Rules to Computer Generate Data Items for Standard Setting Organizations

The California Cancer Registry is required to submit data to standard-setting organizations. There are a number of data items that are generated for these submissions. These organizations include the North American Association of Central Cancer Registries (NAACCR), NCI's Surveillance, Epidemiology and End Results Program (SEER) and the Center for Disease Control and Prevention's National Program of Cancer Registries (NPCR). Please refer to California Cancer Reporting System Standards, Volume III, for specifications for the data items listed below.

II.6.1 Data Items

- Census Cod Sys 1970/80/90 (120)
- Census Tr Poverty Indictr (145)
- COC Coding Sys--Current (2140)
- COC Coding Sys--Original (2150)
- Coding System for EOD (870)
- Computer Ethnicity (200)
- Computer Ethnicity Source (210)
- County at DX Analysis (89)
- ICD Revision Number (1920)
- IHS Purchased/Referred Care Delivery Area (194)
- Industry Source (300)
- Follow-Up Source- Central (Mapped from Last Type of Follow-Up (Patient)) (1791)
- Morph Coding Sys—Current (470)
- Morph Coding Sys—Original (480)
- Occupation Source (290)
- ~~Race Coding Sys--Current (170)~~
- ~~Race Coding Sys--Original (180)~~
- Record Number Recode (1775)
- Reporting facility restriction flag (1856)
- RuralUrban Continuum 2013 (3312)
- RUCA 2000 (339)
- RUCA 2010 (341)
- RX Coding System – Current (1460)
- SEER Cause Specific COD (1914)
- SEER Other COD (1915)
- Site Coding Sys – Current (450)
- Site Coding Sys – Original (460)
- Surv-Date Active Followup (1782)
- Surv-Flag Active Followup (1783)
- Surv-Mos Active Followup (1784)
- Surv-Date Presumed Alive (1785)
- Surv-Flag Presumed Alive (1786)
- Surv-Mos Presumed Alive (1787)
- Surv-Date DX Recode (1788)
- Urban Indian Health Organization (UIHO) (284)
- UIHO City (285)
- URIC 2000 (345)
- URIC 2010 (346)
- Vital Status Recode (1762)

Part III Quality Control Standards

Section III.1 2025 Data Conversions

Automatic and manual data conversions must be performed on facility databases as part of the 2025 data changes implementation as specified in the latest NAACCR 2025 Implementation Guidelines and Recommendations document, section 15 – Appendix B Conversions, Recalculations and Manual Review Logs. This document is available on the NAACCR website's Implementation Guidelines page (https://www.naaccr.org/implementation-guidelines/).

Section III.2 Edits

One method used by the regional registry for insuring data quality is to pass submitted records through computer edits to assess whether coding rules have been properly followed. Two types of computer edits will be applied to New Case Records and Modified Records when they are received: allowable value edits and interfield edits. Allowable Value edits check individual data items for valid codes or other types of allowable values. Interfield edits compare the contents of two or more fields for consistency. These edits are described in the latest CCR edits metafile. See Section III.3 in this manual for the acceptance standards.

CCR edits must be run and any edit errors corrected before the creation of a New Case Record or Modified Record submission file. Modified Records will be rejected by the CCR's central system software if they are unable to pass the CCR edits, and the facility will be required to fix the necessary data items prior to the next scheduled monthly transmit. Please see Section II.3.3 for further requirements for the Modified Record.

Section III.3 Acceptance Procedure

III.3.1 Acceptance Standards for Software

Hospitals (and other reporting sources) wishing to develop their own systems for automated reporting to the regional registry, or vendors wishing to market software which meets California Cancer Registry requirements, are required to demonstrate that they have procedures in place to assure the accuracy of the data being collected. In order for another method of automated reporting to be accepted for reporting to the California Cancer Registry and its regional registries, the hospital or vendor must demonstrate the following:

1. Data must conform to the rules and specifications described in this document, its appendices, and in other referenced documents (e.g., Facility software vendors MUST NOW INCLUDE ONLY ONE LATEST MODIFIED RECORD PER CASE UPDATED in a single modified record transmit file for the latest transmit cycle, regardless of the number and types of changes made after the last transmit cycle). Software must allow all valid values in data item fields.
2. All records must pass the allowable value edits (data standards described in California Cancer Reporting System Standards, Volume III (items with CA-specific standards) and NAACCR Data Standards and Data Dictionary (items with no CA-specific standards), and they are specified and implemented in the CCR's edits metafile).
3. All records must pass the inter-field edits specified and implemented in the CCR's edits metafile too.

A hospital or vendor must demonstrate its ability to meet these standards before its system is accepted and it will be expected to continue to meet these standards. Each time a hospital or vendor changes the registry software (i.e., changes the version) it must again demonstrate its ability to meet these standards.

III.3.2 Test Submission

To allow the California Cancer Registry to determine whether a hospital or vendor meets the above requirements, the hospital or vendor must submit test records of each type for approximately 50 new cases, covering one-month, three-months, or six-months; whichever time period is closest to 50 cases. A test file cannot contain only easy cases but must contain a sample that is representative of the normal caseload. **Given the transformation to NAACCR XML new case and modified record reporting, and the direction not to transmit items with blank, empty string, spaces, or null values, at least one test case MUST be included with all items entered to demonstrate the ability to send all data items (except those items with a "no" in the facility requirement column in Appendix A).** After the submission is evaluated by the California Cancer Registry, the reporting facility or vendor will receive notification of problems detected and what changes, if any, need to be made before the reporting facility's or vendor's software can be accepted for automated reporting.

When Volume II requirements change in such a way that vendor software must be revised, then the vendor must submit additional test files to demonstrate that they meet the new requirements.

Appendices A, D, & S (Exchange Items/Records)

Appendices A, D, & S are presented in spreadsheet format and are available in the Volume II – 2025 section of the Registrar Resources and Reporting - California Cancer Registry page on the CCR's website.