Consensus Standards for Cancer Registries

Pathology Laboratory Electronic Reporting Recommendations

Data Items, Formatting, Recommendations

Supplement to NAACCR Volume II Chapter 6

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Preface

This manual documents recommended standards and implementation guidelines for electronic transmission of reports from pathology laboratories to central cancer registries.

It is the hope of the North American Association of Central Cancer Registries (NAACCR) Pathology Laboratory Subcommittee that making these consensus standards available to the community will make it easier for pathology laboratories, central cancer registries, and software vendors to adopt a uniform method for report transmission. Ultimately, our goal is to develop resources that will support future initiatives toward standardization through the recommended communication protocol that will assure the collection of those cancer cases that do not reach the traditional hospital setting. The content of this manual will help central cancer registries develop the infrastructure needed to electronically receive and process reports from pathology laboratories. It is not intended to be the final document, and it will evolve over time as more is learned about laboratory technology, electronic reporting, new information technologies, vocabulary and codes, reporting regulations, and confidentiality.

The current NAACCR Pathology Committee Chairs would like to acknowledge the previous Chairs (Frank Caniglia and Robin Otto of the Pennsylvania Cancer Registry) for their initiative, coordination, and efforts in the production of this document. In addition to the Pathology Laboratory Subcommittee, much of the data content of this document has been extensively reviewed by the NAACCR Uniform Data Standards (UDS) Committee as well as the Information and Technology (IT) Committee. A special thanks is warranted to all NAACCR members and committees that collaborated on this effort.

Sincerely,

Susan Gershman and
Warren Williams

Chapter I

Problem Statement, Goals, and Scope of This Document

The Problem

One of the major changes in the health care delivery system, and specifically in regards to the cancer patient, is that diagnoses and treatments are occurring in nonhospital settings. This shift from what traditionally has occurred primarily in hospital settings is presenting challenges to central cancer registries in their need for complete case ascertainment. It now is essential that central cancer registries develop mechanisms for ascertaining cases from these nonhospital sources to maintain a complete and accurate count of cancer cases.

One type of nonhospital source necessary for complete cancer data collection is the pathology laboratory. The lack of a standardized system for reporting by pathology laboratories results in each central registry developing its own procedures for capturing these cases. Pathology laboratories must comply with the different specifications from each state or province to which they are required to report.

The Proposed Solution

The Pathology Laboratory Subcommittee of the NAACCR IT Committee was formed to develop a recommended approach for pathology laboratories to report electronically to central cancer registries. The result of this Subcommittee's efforts is the documentation contained in this manual. The philosophy of the Subcommittee was to incorporate current industry standards and provide additional resources to offer support in areas of connectivity and communication protocols. Health Level 7 (HL-7) or a character-delimited flat file is recommended as the data format for reporting cases. A standard pathology laboratory dataset, data dictionary, and HL-7 transmission format and flat file were developed to enhance the completeness, timeliness, consistency, and efficiency with which cancer data are transmitted by pathology laboratories and received and processed by central cancer registries. These standards are referred to in this manual as the Standard Format Documents. They are contained in Chapter IV and consist of: *Text of NAACCR Pathology Laboratory Dataset and Record Format for Electronic Reporting to Central Cancer Registries; Pathology Laboratory Data Table*; and *HL-7 Addendum.* Implementation guidelines were developed to provide assistance in implementing the recommended standards.

Goals of the Pathology Laboratory Reporting Standards Document

The goal of this document is to define the data standards for cancer registration as used by central cancer registries, pathology laboratories, vendors, and other groups, as well as to provide guidelines for the implementation of these standards.

Objectives of the standardization effort include:

- Providing a resource to help ensure uniform data collection.
- Eliminating the need for each central cancer registry to develop a mechanism for electronic transmission of reports from pathology laboratories.
- Reducing the need for pathology laboratories to maintain separate transmission protocols for each central cancer registry to which they are required to report.
- Reducing the need for redundant coding and data recoding between data exchange parties.

- Providing a resource document to help registries and pathology laboratories that are establishing or revising their method of collection and reporting.
- Serving as a bridge to develop a cost-effective approach to system connectivity through the use of a clinical data interchange standard that will support current and future data standards.
- Encouraging the adoption of these standards by all parties.
- Encouraging consistent reporting formats and standards from laboratories to health department areas.

Scope of This Document

The scope of this document is limited to standards and guidelines regarding what electronic records should contain when they are used to transmit cancer information from pathology laboratories to central cancer registries. The Standard Format Documents address data items, data item definitions, and transmission specifications. Implementation guidelines and business rules are incorporated to help central registries, pathology laboratories, and vendors within North America respond to the call for cancer cases in a uniform method. In addition, the use of HL-7 as the recommended clinical data interchange standard will provide a cost-effective solution to addressing data exchange in the 21st century.

Chapter II

Standards and Guidelines for Electronic Transmission of Reports From Pathology Laboratories to Central Cancer Registries

The Standards

The Standard Format Documents included in this volume are the standards recommended by the NAACCR for electronic reporting by pathology laboratories to central cancer registries. Use of these standards (found in Chapter IV) will greatly increase the efficiency and consistency with which laboratories and central registries can meet reporting and data collection requirements.

- ***Text of NAACCR Pathology Laboratory Dataset and Record Format for Reporting to Central Cancer Registries*.** This document describes the data items reported by pathology laboratories. Standard NAACCR data item names, relative field lengths, and definitions for NAACCR-defined items are included in the Pathology Laboratory Data Description.

  The column "Field Requirements" indicates whether the data item is required or recommended. The required data items (Y) comprise the minimum dataset needed to process a report by the central registry. "Field Length" indicates a relative field length for the NAACCR-approved data items. Field lengths for pathology laboratory-specific data items are based on similar NAACCR data items and central registry experience with pathology laboratory data. Although field lengths are somewhat irrelevant for data transmission in HL-7, they are included to indicate limits by the central registry. The column "HL-7 Field Name and Field ID" specifies an HL-7 location that corresponds to the pathology laboratory information (see *File Layout*, Chapter IV).

  The third column of the table maps each pathology laboratory data item to the corresponding NAACCR Item Number. Many of these items are new NAACCR data item numbers as approved by the NAACCR UDS and IT Committees.

- ***Pathology Laboratory Data Table.*** This document defines each data item in the NAACCR Pathology Laboratory Dataset. NAACCR standard data items are defined according to the *NAACCR Standards for Cancer Registries, Volume II, Data Standards and Data Dictionary*. Many of the items in the pathology reporting documents translate to previously published NAACCR items, for example, the site code for a pathology report may be coded in a SNOMED code, and there are mapping tables available from the College of American Pathologists to translate to the appropriate ICD-O-2 code.

- ***HL-7 Addendum*.** This document is the key to standardization of electronic reporting from pathology laboratories to central cancer registries. It provides instructions and specific HL-7 formatting parameters for pathology laboratory personnel to use when transmitting reports. The documentation also is used by central registry personnel to check initial pathology laboratory transmissions to ensure that fields are correctly populated. Using the HL-7 format will enable pathology laboratories to report electronically to any central registry with minimal effort. Central registries also will be able to receive reports from all pathology laboratories in the same format. System-specific development by central registries for each pathology laboratory and by pathology laboratories for each state or province will be eliminated.

  An ASCII flat file also is provided for laboratories and registries that do not have the capability to report data in an HL-7 style message.

Guidelines for Implementation of an Electronic Pathology Laboratory Reporting System

When designing and implementing procedures for electronic pathology laboratory reporting, the uniqueness of each central registry must be considered. Information in this section is provided for use as a starting point. Although issues requiring discussion are not limited to those presented below, central registries should consider the following in preparing to implement an electronic pathology laboratory reporting system:

- Investigate several areas within the state infrastructure:

  - ***Clinical Laboratory Improvement Act Numbers:*** Central registries should identify the regulatory body within the state that certifies clinical laboratories and monitors Clinical Laboratory Improvement Act (CLIA) numbers issued by the Health Care Finance Administration (HCFA). This unique identifier provides central registries the ability to follow up with laboratories providing source records.

  - ***Other Reportable Diseases:*** This electronic reporting system has the potential to serve as the infrastructure for electronic reporting of all diseases reportable to the state or province or to be included in an existing electronic reporting system. Using HL-7, standard vocabularies, and code sets enables laboratories to transmit to one location the necessary data items to comply with many disease-reporting requirements. The HL-7 file header segment enables records to be automatically routed to the appropriate program area.

    To prevent duplication of effort, central registries should discuss electronic transmission issues with other program areas receiving reports from laboratories. Efforts to identify corporate and technical contacts with laboratories already could be established. Convening a work group comprised of representation from the cancer registry, communicable disease, lead program, and information services is advantageous to identify opportunities for joint efforts and to reduce time for system deployment. Examples of issues for discussion include:

    - Connectivity between laboratories and health departments.
    - Secured telephone lines for data transmission.
    - Predetermined format for data transfer (HL-7).
    - HL-7 capability within your organization.
    - HL-7 training needs and availability. Additional information on HL-7 can be found by referring to: http://www.HL7.org.

  - ***Hardware Recommendation:*** A recommendation of specific types of hardware requirements is inappropriate because of the many factors to be determined locally before the selection of hardware is addressed, and also because the computer field changes so quickly that recommendations soon are obsolete. The following questions, however, should be considered:

    - What type of operating system would best fit the registry's situation (i.e., multi-user, single user, network, etc.)?
    - What is the nature of the physical facility where the equipment will be housed, used, and connected?
    - What type of software packages will run on the system?
    - How much training will be required for existing staff?

- Refer to Chapter III, *Recommended Business Rules for Electronic Transmission of Reports From Pathology Laboratories to Central Cancer Registries*, on page 6 of this document. These rules were developed to identify critical issues requiring discussion between laboratories and central registries.

- ❖ Contact pathology laboratories to discuss electronic reporting and provide laboratories with the Standard Format Documents contained in this volume. Pathology laboratories should use *HL-7 Addendum* to prepare for electronic transmission of reports.

- ❖ Develop or link with a connectivity system (i.e., file transfer protocol [FTP], the bulletin board system [BBS], or Web-based) compatible with laboratory capabilities through which pathology reports can be electronically transmitted.

- ❖ Develop or acquire software to process pathology reports received from the laboratory. The processing software must:

  - Include a HL-7 reader to take the HL-7 transmission and convert it to an appropriate data file or flat file for processing.

  - Examine for reportable conditions.

  - Include a mechanism to assign ICD-O-2 codes to site and histology based on pathology report text, or map pathology SNOMED codes to ICD-O-2 codes.

  - Include a mechanism to identify reports with insufficient demographic information needed for record linkage to follow up with the ordering client (the physician ordering the analysis of the specimen).

  The Pennsylvania Cancer Registry (PCR) has developed software to process reports received electronically from pathology laboratories in HL-7. This software addresses the components mentioned above. The PCR Client Server software was developed using funding provided by the Centers for Disease Control and Prevention (CDC) through the National Program of Cancer Registries (NPCR). The PCR's HL-7 reader, processing software, code, and user's manual are available at: http://www.health.state.pa.us/download/cancer.

- ❖ Develop central registry-specific procedures for accessioning pathology laboratory records to the registry's database. Although procedures developed by each central registry will differ, it is important to remember that pathology reports alone usually do not provide adequate information to confirm a new primary cancer or the date of initial diagnosis. Some specimens may represent metastatic sites or recurrences. Therefore, linkage between pathology reports and existing records on the registry's database must be performed systematically for at least 6 to 9 months following receipt of the pathology report. If no match occurs during this time, sufficient information must be ascertained by the central registry before the pathology report can be confirmed as a new primary cancer. There are a variety of challenges associated with merging and consolidating patient, tumor, or treatment data. Please see the report by the NAACCR Workgroup on Consolidation for appropriate recommendations. A copy of the report can be found on the NAACCR Web Site.

Chapter III

Recommended Business Rules For Electronic Transmission of Reports From Pathology Laboratories to Central Cancer Registries

This chapter identifies recommendations to address basic issues in establishing electronic transmission of data from pathology laboratories to central cancer registries. These issues reflect a starting point for discussion between laboratories and central registries to assist and simplify data transmission. Both parties may have additional issues to incorporate as business rules.

- ***Record Format:*** Use of the *Text of NAACCR Pathology Laboratory Data and Record Format for Electronic Reporting to Central Cancer Registries* and *Pathology Laboratory Data Table* for pathology laboratories reporting to central cancer registries is strongly encouraged.

- ***Communication Protocol:*** To facilitate standardization of electronic transmission, laboratories should submit reports to the requesting central cancer registry using HL-7 communication protocol, and central cancer registries should accept cases transmitted in the HL-7 format as specified in the *HL-7 Addendum.* The Subcommittee also specifies an additional format: a character-delimited file for registries and laboratories to use when HL-7 reporting is not feasible.

- ***Narrative Diagnosis:*** All reports transmitted to central cancer registries should contain text to support the coded diagnosis. Text should be segmented as specified in the *Text of NAACCR Pathology Laboratory Data and Record Format for Electronic Reporting to Central Cancer Registries, Pathology Laboratory Data Table,* and *HL-7 Addendum.*

- ***File Transfer:*** Laboratories and central cancer registries should work together to select the most appropriate method to transfer reports between the laboratories and registries. The most appropriate method of transfer may differ among laboratories, resulting in the need for central registries to be able to accept transmissions in more than one file transfer method. Available options at this time include, but are not limited to, FTP, BBS, or the World Wide Web.

- ***Report Selection:*** Pathology laboratories and registries should negotiate various options for identifying which events or reports will be submitted to the requesting central cancer registry. Some registries will want all events/reports to be submitted, so that the registry can screen them for reportable diagnoses/conditions. In other situations, the registry and laboratory may need to define specific criteria (such as laboratory tests, diagnoses, or conditions) that will be used by the laboratory to select the events/reports to be submitted.

- ***Frequency of Reporting:*** Laboratories should submit reports to central cancer registries as often as possible. State reporting laws and regulations also must be considered when establishing frequency of reporting. The following schedule may be used as a guide; however, daily transmissions also are appropriate:

  - **Weekly Transmissions:** Laboratories with a report volume* $\geq$ 100 reports/week.
  - **Monthly Transmissions:** Laboratories with a report volume* $\leq$ 99 reports/week.

  * Report volume refers to the number of pathology reports a laboratory completes regardless of diagnosis.

- ***Data Security:*** Central registries and laboratories should work together to develop security measures to reduce the risk of any breach of confidentiality. In establishing a security plan, specific issues including, but not limited to, the following should be addressed: access control, access to information, backup procedures, encryption of files, passwords, retention, archiving, and destruction of electronic information.

- ***Duplicate Reports:*** Laboratories should evaluate the criteria for report transmission to prevent duplicate report submission to central cancer registries.

Chapter IV A

Text of NAACCR Pathology Laboratory Dataset and Record Format for Electronic Reporting to Central Cancer Registries

Data Item Name	Length (Characters)	Source of Standard
Record Type	1	NAACCR

Description:

Generated field length that identifies which of the NAACCR data exchange record types is being used in a file of data exchanges records. A batch should have records of only one type. This item is addressed by the Central Registry (required field—part of the minimum dataset).

Codes:

L Pathology laboratory record type. Includes narrative diagnosis.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
L	N	L	

* Used in flat file or HL-7 protocol.
† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Data Item Name	Length (Characters)	Source of Standard
Path--Version Number	6	

Description:

Designation of the layout of the message structure (required field—part of the minimum dataset).

Codes:

2.3 HL-7 2.3 file layout
1 1999 flat file layout

Allowable Values and Format:

Transmit Values	Convert*	Registry Values	Description/Comments
2.3†	N	2.3, left justify	Alpha-numeric
1‡	N	1, left justify	

* Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No
† Used in HL-7 protocol.
‡ Used in flat file.

Data Item Name	Length (Characters)	Source of Standard
Reporting Facility (Institution ID Number)	25	

Description:

Code for the facility reporting the case (required field—part of the minimum dataset).

Codes:

Clinical Laboratory Improvement Act Identification Numbers (CLIA) are used for laboratory reporting.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
39D0903558	N	Left justify	Alpha-numeric

* Used in flat file or HL-7 protocol.
† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No
Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Reporting Facility Name	50	Reporting Facility

Description:

Name of the reporting facility (required field—part of the minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
Test Laboratory	N	Left justify	Alpha-numeric, mixed case

* Used in flat file or HL-7 protocol.
† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No
Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Reporting Facility Addr-- No & Street	25	HL-7

Description:

The number and street address or rural address of the reporting facility (required field—part of the minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
2 Pine Street	N	Left justify	Alpha-numeric, mixed case, left justified

* Used in flat file or HL-7 protocol.
† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No
Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Reporting Facility Addr--City	20	

Description:

Name of the city of reporting facility (required field—part of the minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
Anytown	N	Left justify	Alpha-numeric, mixed case, left justified

* Used in flat file or HL-7 protocol.
† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No
Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Reporting Facility Addr--State	2	

Description:

U.S. Postal Service abbreviation for the state, commonwealth, or country of the reporting facility (required field—part of the minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
PA	N		Alpha only, upper case, no blanks allowed

* Used in flat file or HL-7 protocol.
† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No
Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Reporting Facility Addr--Postal Code	9	

Description:

U.S. Postal Service zip code for the state and city in which the facility resides. May use either the 5-digit or 9-digit extended zip code. Blanks follow the 5-digit code. Canadian postal code is a 6-digit alpha-numeric format (required field—part of the minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
123452222	N	Left justify, blank filled	Alpha-numeric

* Used in flat file or HL-7 protocol.
† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No
Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Reporting Facility--Phone Number	10	

Description:

Telephone number of the reporting facility (required field—part of the minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
2125551234	N	Left justify	Numeric, no imbedded blanks, blank filled

* Used in flat file or HL-7 protocol.
† Is it necessary to convert this item to match the NAACCR standards for this data item? Y= Yes, N= No
Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Name—Last (Patient's Last Name)	25	HL-7

Description:

Last name of the patient (required field—part of the minimum dataset).

Allowable Values:

Transmit Values*	Convert†	Registry Values	Description/Comments
Smith	N	Left justify	Alpha only, no embedded spaces, no special characters, blank filled, hyphens may be used

* Used in flat file or HL-7 protocol.
† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No
Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Name--First (Patient's First Name)	14	HL-7

Description:

First name of the patient (required field—part of the minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
John	N	Left justify	Alpha only, no embedded spaces, no special characters, blank filled

* Used in flat file or HL-7 protocol.
† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No
Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Name--Middle (Patient's middle name)	14	HL-7

Description:

Middle name or initial of the patient.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
Robert	N	Left justify	Alpha
R	N	Left justify	Alpha
No data	N	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Addr--No & Street (Patient's Street Address)	25	HL-7

Description:

The number and street address or the rural address of the patient's residence at the time the specimen was removed/collected.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
1 Main Street	N	Left justify	Alpha-numeric, mixed cases plus spaces, no punctuation
No data	Y	Populate to Unknown	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Addr--City (City or Town)	20	HL-7

Description:

Name of city in which the patient resides at the time the specimen was removed/collected. If the patient resides in a rural area, record the name of the city used in their mailing address. If the patient has multiple tumors, the city of residence may be different.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
Somewhere	N	Left justify	Alpha only, no special characters, mixed case, blank filled
No data	Y	Populate to Unknown	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Addr—State	2	HL-7

Description:

U.S. Postal Service abbreviation for the state (including U.S. territories, commonwealths, or possessions) or Canadian province in which the patient resides at the time the specimen was removed/collected. If the patient has multiple tumors, the state of residence may be different.

Special codes:

ZZ Unknown.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
PA	N		Alpha only, upper case
No data	Y	Populate with ZZ	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Addr--Postal Code (Zip code)	9	USPS

Description:

Postal code for the address of the patient's residence at the time the specimen was removed/collected. If the patient has multiple tumors, the postal code may be different. For U.S. zip codes, either the 5-digit or 9-digit extended zip code may be used. Blanks follow the 5-digit code. For Canadian residents, use the 6-character alpha-numeric postal code. When available, enter the postal code for other countries.

Special Codes:

999999999 Residence unknown.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
123455555	N	Left justify	Alpha-numeric, no special characters, blank filled, embedded spaces allowed
No data	Y	999999999	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Telephone	10	HL-7

Description:

Current telephone number with area code for the patient.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
2223245555	N		Numeric
No data	Y	999999999	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Birth Date (Date of Birth)	8	

Description:

Date of birth of the patient.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
CCCCMMDD	Y	MMDDCCYY	
No data	Y	99999999	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Data Item Name	Length (Characters)	Source of Standard
Path--Patient Age at Specimen	10	

Description:

The age of patient at the time of the specimen sample. Large block is designed to handle unstructured age information.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
75	Y	075	Numeric, right justify zero fill
85 years	Y	085	
24 months	Y	002	
No data	Y	999	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y= Yes, N= No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Social Security Number	9	

Description:

Records patient's social security number. The number is entered without dashes and without any letter suffix. This is not always identical to the Medicare claim number.

Special codes:

999999999 Unknown.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
123456789	N		Alpha-numeric
No data	Y	999999999	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Sex	1	

Description:

Code for sex of the patient.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
M	Y	1	Male
F	Y	2	Female
O	Y	3	Other
U	Y	9	Unknown

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Data Item Name	Length (Characters)	Source of Standard
Medical Record Number	11	NAACCR

Description:

Records medical record used by the facility to identify the patient.

Rationale:

This number identifies the patient in a facility. It can be used by a central registry to point to the patient record, and it helps identify multiple reports on the same patient.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
KP123456789	N	Right justify	Alpha-numeric, or all blank
No data	Y	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Path—Slide Report Number	20	

Description:

Unique sequential number assigned to a report by a laboratory (required field—part of minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
S98012345	N	Left justify	Alpha-numeric

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Ordering Client/Physician-License Number	8	

Description:

License number of physician ordering analysis of the specimen.

Codes:

99999999 Physician unknown or ID number not assigned.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
D1234567	N	Left justify	Alpha-numeric, no embedded blanks, blank filled
No data	Y	99999999	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Ordering Client/Physician--Name	50	

Description:

Last and first name of physician ordering analysis of the specimen (required field—part of the minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
Jones	N	Left justify	Alpha only, no special characters, may be initial only, space between names

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Ordering Client/Physician Addr--No & Street	25	

Description:

The number and street address or the rural or post office box address of the ordering physician's practice at the time the specimen was removed/collected. May also include street direction (required field—part of the minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
214 Center Street	N	Left justify	Alpha-numeric, mixed case

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Ordering Client/Physician Addr-- City	20	

Description:

Name of the city of the physician's practice at the time the specimen was removed/collected. If the physician's practice is in a rural area, record the name of the city used in their mailing address (required field—part of the minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
Hometown	N	Left justify	Alpha-numeric, mixed case, blank filled

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Ordering Client/Physician Addr-- State	2	

Description:

U.S. Postal Service abbreviation for the state, commonwealth, or country where the physician's practice is at the time the specimen was removed/collected (required field—part of the minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
PA	N		Alpha only, no blanks allowed; use only officially designated abbreviations

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Ordering Client/Physician Addr-- Postal Code	9	

Description:

U.S. Postal Service zip code for the state and city of the physician's practice at the time the specimen was removed/collected. May use either the 5-digit or 9-digit extended zip code. Blanks follow the 5-digit code. Canadian postal code is a 6-digit alpha-numeric format (required field—part of the minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
543219999	N	Left justify	Alpha-numeric, no imbedded blanks, blank filled

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Ordering Client/Physician-- Telephone	10	

Description:

Telephone number of ordering physician's practice, including the area code.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
2334444567	N	Left justify	Numeric, no embedded blanks, blank filled
No data	Y	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Path--Ordering Client/Physician Work Facility ID Number	25	

Description:

Facility ID number as defined by the American Hospital Association (AHA).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
230012	N	Left justify	Alpha-numeric, blank filled
No Data	Y	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Ordering Client/Physician Work Facility Name	50	

Description:

Name of the facility where specimen was removed/collected.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
Elm Cancer Center	N	Left justify	Alpha only, no special charaters
No Data	Y	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Ordering Client/Physician Work Facility Addr-- No & Street	25	

Description:

The number and street address or the rural or post office box address of the facility where the specimen was removed/collected.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
2 Pine Street	N	Left justify	Alpha-numeric, mixed case
No data	Y	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Ordering Client/Physician Work Facility Addr-- City	20	

Description:

Name of the city of the facility where the specimen was removed/collected.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
Happy Valley	N	Left justify	Alpha only, mixed case.
No data	Y	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Ordering Client/Physician Work Facility Addr—State	2	

Description:

U.S. Postal Service abbreviation for the state, commonwealth, or country of the facility where the specimen was removed/collected.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
PA	N		Alpha only, no imbedded blanks, blank filled, used only officially designated abbreviations
No data	Y	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Ordering Client/Physician Work Facility Addr-- Postal Code	9	

Description:

U.S. Postal Service zip code for the state and city of the physician's practice at the time the specimen was removed/collected. May use either the 5-digit or 9-digit extended zip code. Blanks follow the 5-digit code. Canadian postal code is a 6-digit alpha-numeric format.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
987654444	N	Left justify	Alpha-numeric, no imbedded blanks, blank filled
No Data	N	Blank	

* Used in flat file or HL-7 protocol.
† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No
Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Ordering Client/Physcian Work Facility—Telephone	10	

Description:

Telephone number of the facility where the specimen was removed/collected.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
2223334444	N	Left justify	Numeric, no imbedded blanks, blank fill
No Data	N	Blank	

* Used in flat file or HL-7 protocol.
† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No
Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Path--Reporting Pathologist Last Name	25	

Description:

The reporting pathologist's last name.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
Smith	N	Left justify	Alpha only, no special characters
No data	N	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Path--Reporting Pathologist First Name	14	

Description:

The reporting pathologist's first name.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
David	N	Left justify	Alpha only, no special characters
No data	N	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Path--Reporting Pathologist Middle Name	14	

Description:

The reporting pathologist's middle initial.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
F	N	Left justify	Alpha only, no special characters
No data	N	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Path--Reporting Pathologist Suffix	3	

Description:

The reporting pathologist's name suffixes (if any).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
Jr	N	Left justify	Alpha only, no special characters
No data	N	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Path--Pathologist License Number	8	

Description:

The reporting pathologist's license number for the state, commonwealth, or country for which the pathologist is licensed to practice in the laboratory reporting this cancer case.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
88888888	N	Left justify	Alpha-numeric
No data	N	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Path--Pathologist State Licensure	2	

Description:

Two-digit U.S. Postal Service abbreviation for the state, commonwealth, or country associated with the pathologist license number in which the reporting pathologist is licensed. If a commonly accepted 2-letter abbreviation does not exist for the country, leave blank.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
PA	N		Alpha only, upper case or all blank
No Data	N	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Path--Date of Specimen Collection	8	

Description:

Date of specimen collection for the cancer being reported, not the date read or date the report was typed (required field—part of the minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
CCCCMMDD	Y	MMDDCCYY	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Data Item Name	Length (Characters)	Source of Standard
Path--Report Type	2	

Description:

This variable is a derived (and somewhat arbitrary) classification to be calculated at the cancer registry. It can be derived from several information sources.

Rationale:

This variable is primarily used for administrative and tracking purposes at the cancer registry. Often, laboratories will classify the specimen in the slide or path number, for example, the first digit of the slide number will indicate pathology (P) or cytology (C). Laboratories also may categorize or recycle these slides or path numbers according to a specific year. It also may be derived from a specimen source type code, the institutional number, tag, or laboratory title from which the laboratory results came.

Codes:

01	Pathology
02	Cytology
03	Gyn Cytology
04	Bone Marrow
05	Autopsy
06	Clinical Laboratory Blood Work
07	Eye
98	Other
99	Unknown

Data Item Name	Length (Characters)	Source of Standard
Path--Status Individual Result	1	

Description:

Code reflecting verification to a specific individual reported result (required field—part of the minimum dataset).

Codes:

C	Record coming over is a correction and thus replaces final result.
D	Deletes the record.
F	Final results; can only be changed with a corrected result.
I	Specimen in lab; results pending.
P	Preliminary results.
R	Results entered—not verified.
S	Partial results.
X	Results cannot be obtained.
U	Results status change to Final, without retransmitting results already sent as Preliminary.
W	Post original as wrong.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
F	N		Alpha

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Data Item Name	Length (Characters)	Source of Standard
Path--SNOMED code(s)	18	

Description:

The Systematized Nomenclature of Medicine (SNOMED) code(s) for the encounter being reported may include morphology, topography, and procedure codes.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
M-8140	N	Left justify	Alpha-numeric
No Data	N	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Path--ICD-CM Code	6	

Description:

ICD-CM code for the diagnosis being reported.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
146.0	N	Left justify	Alpha-numeric, including decimal, ICDA-8, ICD-9, or ICD-10 codes
No Data	N	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Italics indicate an example.

Data Item Name	Length (Characters)	Source of Standard
Path--ICD Version Number	1	

Description:

Indicator for the coding scheme used to ICD-CM code the diagnosis being reported.

Codes:

See table.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
I9C	Y	Right justify	Numeric
No Data	N	Blank	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Data Item Name	Length (Characters)	Source of Standard
Date Transmitted	8	NAACCR

Description:

Date the reports are transmitted from the facility to the central cancer registry (required field—part of the minimum dataset).

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
CCCCMMDD	Y	MMDDCCYY	

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Data Item Name	Length (Characters)	Source of Standard
CPT codes	5	AMA

Description:

Current Procedural Terminology (CPT) codes.

Allowable Values and Format:

Transmit Values*	Convert†	Registry Values	Description/Comments
88309	N		

* Used in flat file or HL-7 protocol.

† Is it necessary to convert this item to match the NAACCR standards for this data item? Y = Yes, N = No

Data Item Name	Length (Characters)	Source of Standard
Path—Text-Diagnosis	45k	

Description:

If text cannot be separated into the categories below, use this field for free text including, at a minimum, text to support site, laterality, histology (pathology diagnosis, notes, comments, and differential diagnosis), and stage (required field—part of the minimum dataset).

Allowable Values and Format:

Alpha-numeric plus spaces, or all blank. No returns or line feeds are allowed within the text.

Data Item Name	Length (Characters)	Source of Standard
Path--Clinical History		

Description:

Relevant clinical information, generally stating the patient's past history of cancer, preoperative diagnosis, and/or the reason the specimen was collected (required field—part of the minimum dataset).

Allowable Values and Format:

Alpha-numeric plus spaces, or all blank. No returns or line feeds are allowed within the text.

Data Item Name	Length (Characters)	Source of Standard
Path--Nature of Specimen		

Description:

Describes the site(s) and laterality of the specimen(s). If there is more than one specimen included on the pathology report, each is generally assigned an identifying letter or numeral, beginning with "A," "1," or "I" (required field—part of the minimum dataset).

Allowable Values and Format:

Alpha-numeric plus spaces, or all blank. No returns or line feeds are allowed within the text.

Data Item Name	Length (Characters)	Source of Standard
Path--Gross Pathology		

Description:

A physical description of the gross appearance of the specimen, including source, size, color, unusual features, location of any lesions visible within the specimen, margins, markings placed by the surgeon, and labeling scheme used by the pathologist for assigning portions of the specimen to blocks or cassettes (required field—part of the minimum dataset).

Allowable Values and Format:

Alpha-numeric plus spaces, or all blank. No returns or line feeds are allowed within the text.

Data Item Name	Length (Characters)	Source of Standard
Path--Microscopic Pathology		

Description:

Findings and description of the presence or absence of disease in each section of the specimen(s). Generally include the types of tissues, cells, or mitotic activity observed (required field—part of the minimum dataset).

Allowable Values and Format:

Alpha-numeric plus spaces, or all blank. No returns or line feeds are allowed within the text.

Data Item Name	Length (Characters)	Source of Standard
Path--Final Diagnosis		

Description:

Summarizes the microscopic findings for each specimen examined. Confirms or denies gross findings of malignancy, given the histologic type of the cancer and, in some instances, the grade (required field—part of the minimum dataset).

Allowable Values and Format:

Alpha-numeric plus spaces, or all blank. No returns or line feeds are allowed within the text.

Data Item Name	Length (Characters)	Source of Standard
Path--Comment Section		

Description:

Additional comments from the pathologist regarding situations such as the possible source of the metastases, comparison to previous specimens, the need for additional surgery or specimens, and the usefulness of additional stains/examinations, if applicable (required field—part of the minimum dataset).

Allowable Values and Format:

Alpha-numeric plus spaces, or all blank. No returns or line feeds are allowed within the text.

Data Item Name	Length (Characters)	Source of Standard
Path--Supplemental Reports and/or Addenda		

Description:

Additional information attached to the pathology report, generally after the original report has been issued. May address subsequent testing or stains, comparison with previous specimens, second opinions from other pathologists or laboratories, or a change in diagnosis resulting from reexamining the specimen(s) or sampling new areas within the specimen (required field—part of the minimum dataset).

Allowable Values and Format:

Alpha-numeric plus spaces, or all blank. No returns or line feeds are allowed within the text.

Data Item Name	Length (Characters)	Source of Standard
Staging Parameters		

Description:

Information to aid in assigning a stage to each cancer. Commonly includes a discussion of tumor size and spread, lymph node involvement, metastasis, and pathologic American Joint Committee on Cancer (AJCC) stage (required field—part of the minimum dataset).

Allowable Values and Format:

Alpha-numeric plus spaces, or all blank. No returns or line feeds are allowed within the text.

Data Item Name	Length (Characters)	Source of Standard
Laboratory Codes Version Control Table		

Description:

A table indicating the type/version of the code being submitted. The values indicated which SNOMED, ICD, CPT or other code version is being used.

Rationale:

It is anticipated that this list of standard codes may need local modification and additions to adequately capture the version of the codes transmitted from laboratories. Registries and laboratories are encouraged to use this list and make local modification as needed. A value from this table is anticipated to be transmitted with every code to indicate its version.

Allowable Values and Format:

Alpha-numeric.

Codes:

I9	ICD9
I9C	ICD9-CM
ICDO	ICDO Second Edition
I10	ICD-10
C4	CPT-4
C5	CPT-5
I8	ICD 8
SNM	SNOMED Second Edition
SNM3	SNOMED International
SNT	SNOMED Topology
LN	LOINC
L	LOCAL Codes

Chapter IV B

Pathology Laboratory Data Table

Table 1. Format Table: HL-7 Location and Pipe Delimited Flat File Location

Data Item Name/ Corresponding NAACCR Name	Field Requirement	NAACCR Item Number	HL-7 Location Name Field ID See HL-7 Note	Field Length	Flat File Field @
RECORD TYPE	S	10	Specified by Receiving Software	1	1
PATH VERSION NUMBER	S	7000	Specified by Translation Software	6	2
PATH FACILITY ID NUMBER (CLIA NUMBER)	R	7010	BHS 4/Batch Sending Facility	25	3
LABORATORY NAME	R	7020	BHS 10/Batch Comment	50	4
STREET	R	7030	BHS 10/Batch Comment	25	5
CITY	R	7040	BHS 10/Batch Comment	20	6
STATE/PROVINCE	R	7050	BHS 10/Batch Comment	2	7
ZIP CODE/POSTAL CODE	R	7060	BHS 10/Batch Comment	9	8
TELEPHONE NUMBER	R	7070	BHS 10/Batch Comment	10	9
PATIENT NAME					
LAST NAME	R	2230	PID 5/Patient Name Component	25	10
FIRST NAME	R	2240	PID 5/Patient Name Component	14	11
MIDDLE NAME	S	2250	PID 5/Patient Name Component	14	12
PATIENT ADDRESS					
STREET	S	2330	PID 11/Patient Address Component	25	13
CITY/TOWN	S	70	PID 11/Patient Address Component	20	14
STATE/PROVINCE	S	80	PID 11/Patient Address Component	2	15
ZIP CODE/POSTAL CODE	S	100	PID 11/Patient Address Component	9	16
PATIENT TELEPHONE NUMBER	S	2360	PID 13/Home Phone	10	17
DATE OF BIRTH	S	240	PID 7/Date of Birth	8	18
PATH-AGE AT SPECIMEN	S	7080		10	19
SOCIAL SECURITY NUMBER	S	2320	PID 19/Patient SSN	9	20
SEX	S	220	PID 8/Sex	1	21
MEDICAL RECORD NUMBER	S	2300	PID 3/Internal Patient ID	11	22

Data Item Name/ Corresponding NAACCR Name	Field Requirement	NAACCR Item Number	HL-7 Location Name Field ID See HL-7 Note	Field Length	Flat File Field [@]
PATH-SLIDE/ PATHOLOGY REPORT NUMBER	R	7090	OBR 3/Filler Order Number	20	23
PATH ORDERING CLIENT/PHYSICIAN (ATTENDING)					
LICENSE NUMBER/PHYSICIAN (ATTENDING)	S	7100	OBR 16/Contact Identifier [A]	8	24
LAST NAME	R	7110	OBR 16/Contact Name [A]	25	25
FIRST NAME	R	7120	OBR/Name Component [A]	14	26
MIDDLE NAME	R	7130	OBR/Name Component [A]	14	27
STREET	R	7140	OBR 47/Contact Address [A]	25	28
CITY	R	7150	OBR 47/Contact Address [A]	20	29
STATE/PROVINCE	R	7160	OBR 47/Contact Address [A]	2	30
ZIP/POSTAL CODE	R	7170	OBR 47/Contact Address [A]	9	31
TELEPHONE NUMBER	S	7180	OBR 17/Contact Phone Number [A]	10	32
PATH-WORK FACILITY ID NUMBER (AHA NUMBER)	S	7190	OBR 16/Provider Identifier Components	25	33
NAME	S	7200	OBR 44/Provider Name [A]	50	34
STREET	S	7210	OBR 45/Provider Address [A]	25	35
CITY	S	7220	OBR 45/Provider Address [A]	20	36
STATE/PROVINCE	S	7230	OBR 45/Provider Address [A]	2	37
ZIP/POSTAL CODE	S	7240	OBR 45/Provider Address [A]	9	38
TELEPHONE NUMBER	S	7250	OBR 46/Provider Phone Number [A]	10	39
PATH-REPORTING PATHOLOGIST LAST NAME	S	7260	OBR 32/Principal Result Interpreter Component	25	40
PATH-REPORTING PATHOLOGIST FIRST NAME	S	7270	OBR 32/Principal Result Interpreter Component	14	41
PATH-REPORTING PATHOLOGIST MIDDLE NAME	S	7280	OBR 32/Principal Result Interpreter Component	14	42
PATH-REPORTING PATHOLOGIST SUFFIX	S	7290	OBR 32/Principal Result Interpreter Component	3	43
PATH-PATHOLOGIST LICENSE NUMBER	S	7300	OBR 32/Principal Result Interpreter Component	8	44
PATH-PATHOLOGIST STATE LICENSOR	S	7310	OBR 32/Principal Result Interpreter Component	2	45
PATH-DATE OF SPECIMEN COLLECTION	R	7320	OBR 7/Observation Date/Time	8	46
PATH-STATUS INDIVIDUAL RESULT	S	7330	OBX 11/Status Code	1	47

Data Item Name/ Corresponding NAACCR Name	Field Requirement	NAACCR Item Number	HL-7 Location Name Field ID See HL-7 Note	Field Length	Flat File Field [@]
PATH-SNOMED CODE(S) [C]	S	7340	OBX 5/Observation Value **	18 (x 15 Sets)	48
PATH-SNOMED VERSION CONTROL [D]	S	7350	OBX 5/Observation Value 3rd Component	5	49
PATH-ICD CODE	S	7360	OBX 5/Observation Value **	10 (x 6 Sets)	50
PATH-ICD REVISION NUMBER CODE VERSION CONTROL [D]	S	7370	OBX 5/Observation Value 3rd Component	5	51
PATH-CPT CODE	S	7380	OBX 5/Observation Value **	5 (x 3 Sets)	52
PATH-CPT CODE VERSION CONTROL [D]	S	7390	OBX 5/Observation Value 3rd Component	5	53
NARRATIVE DIAGNOSIS					
PATH-TEXT-DIAGNOSIS If text cannot be separated into categories below, use this field for free text.	R	7400	OBX 5/Observation Value **	44.8k	54
PATH-CLINICAL HISTORY	R	7410	OBX 5/Observation Value **		55
PATH-NATURE OF SPECIMEN	R	7420	OBX 5/Observation Value **		56
PATH-GROSS PATHOLOGY	R	7430	OBX 5/Observation Value **		57
PATH-MICROSCOPIC PATHOLOGY	R	7440	OBX 5/Observation Value **		58
PATH-FINAL DIAGNOSIS	R	7450	OBX 5/Observation Value **		59
PATH-COMMENT SECTION	R	7460	OBX 5/Observation Value **		60
PATH-SUPPLEMENTAL REPORTS AND/OR ADDENDA	R	7470	OBX 5/Observation Value **		61
PATH-STAGING PARAMETERS	R	2600	OBX 5/Observation Value **		62
DATE TRANSMITTED/ DATE CASE TRANSMITTED	R	2110	Generated by the Laboratory at the Time the File is Written	8	63
PATH-REPORT TYPE	R	7480	Calculated Upon Receipt of File	2	N/A

[@] Refers to a pipe delimited flat file exchange.

"|" The pipe delimited standard can be used to separate variables without truncating large text fields. The first variable, Record Type, will begin as the first position of a flat file exchange. For example, L|Next field 2-Path Version number|Next field 3- Facility ID|, etc. If no data are available for a specific variable, laboratories and registries are encouraged to truncate the value to null/nothing, so that there are just two pipe symbols in a row.

Missing information for dates can be truncated as necessary, for example, |199901| would be a date referring to January 1999. The full date |19990124| would refer to January 24, 1999.

Field Requirement Definitions: R = Required data items S = Supplementary recommended data items

** OBX 5, observation value, is used for all of these fields. It is part of a repeating segment that would occur once for each of these fields to be transmitted for a single case. Another field, OBX 3, indicates which field is being transmitted in each OBX segment. Standard identifier codes (such as LOINC codes) should be used in the associated OBX 3 field to identify the categories of descriptive text. Please see http://www.mcis.duke.edu/standards/termcode/loinc.htm for a description of LOINC codes. These also can be downloaded from the site.

CH Clinical History LOINC Code: 22636-5
NS Nature of Specimen LOINC Code: 22633-2
GP Gross Pathology LOINC Code: 22634-0
MP Microscopic Pathology LOINC Code: 22635-7
FD Final Diagnosis LOINC Code: 22637-3
CM Comment Section LOINC Code: 22638-1
SR Supplemental Reports/Addendum LOINC Code: 22639-9
PR Staging Parameters LOINC Code: 22640-7

Example:

GN General laboratory report, used if report text is stored in such a way that it may not be broken down into above categories.

[A] Question HL-7 Structure. These items may be changing due to evolution of the HL-7 standard, specifically inclusion of these items into different HL-7 segments. See HL-7 2.3.1 for new additions.

[B] Age at specimen can be handled several different ways in HL-7.
OBX level Option 1 OBX||21612-7^Age^LN||32|yr

[C] Registries and laboratories are encouraged to negotiate the ordering and grouping of SNOMED codes. SNOMED codes are assumed to be submitted in sets of 3 (a morphology, topography, and procedure code), but this assumption may not apply to all laboratories. The central registry and laboratory must coordinate and negotiate how the SNOMED codes will be grouped and submitted. It is suggested that, if the SNOMED codes are grouped (M, T, and P together), a ^ or other character be used to delimit different groupings of codes within the allocated area. This space anticipates up to 15 sets of (or 45 individual) SNOMED codes. Morphology codes are written MXXXXXX for a total of 7 characters with position 6 as Behavior and position 7 as Grade, Procedures are written PXXXX for a total of 5 characters, and Topography codes are written TXXXXX for a total of 6 characters.

[D] Please reference the Version Control Table.

HL-7 note: The application of HL-7 in laboratory reporting in cancer registration involves several technical challenges and will require additional documentation and expertise from what this document can provide. Registries and laboratories should use this document as a general guide. Actual HL-7 implementation may require specific vendor input and reference to materials published by HL-7 (specifically Chapter 7) or other documents.

Chapter IV C

HL-7 Addendum

Reporting to Cancer Registries Using the HL-7 Conventions for the Unsolicited Transmission of Messages

A file header segment (FHS) should be the first segment of any transmission. Data within the FHS identifies the laboratory transmitting the data. After the FHS are any number of batch header segments (BHS). A batch (a group of messages) follows each batch header, and contains the data to be reported for a single laboratory. These data take the form of a series of Observational Result–Unsolicited (ORU) messages. There is one ORU message per patient being reported. The document in Chapter IV describes the general location of the information within the structure of the ORU HL-7 style message. Future reporting standardized formats applying comprehensively the use of the HL-7 ORU message are being examined by the NAACCR to include reporting from laboratories as well as use of the HL-7 standard in a hospital setting.

Chapter V

Frequently Asked Questions About Pathology Reporting

This document is provided as a resource for registries to use when initiating and dealing with laboratory reporting activities. The responses to these questions are compiled from central registries active in the laboratory-reporting arena.

1. What are the resources to assist in developing a list of pathology laboratories in your state?

    - State health departments.
    - CLIA lists.
    - Hospital registrars.
    - Registry field staff.
    - State pathology associations (www.cap.org/html/member/statepath.html).

2. Do you have any sample contact letters or surveys that you used to solicit laboratory reporting of cancer data to the cancer registry?

    - See Appendices A and B for sample letters and surveys.

3. What types of challenges have you encountered in identifying laboratories or in working with them?

    - Challenges identifying:

        - Unable to distinguish between anatomic and clinical.
        - Survey will provide information as far as caseload, electronic transmission capabilities, etc.

    - Challenges working with:

        - The two major laboratories reporting to Pennsylvania insisted on having the system call them on a scheduled basis instead of their system calling Pennsylvania. Would not agree to use a BBS.
        - Smith Kline had text formatting issues on their end that required additional programming. Their text is saved in 100 character chunks.
        - Differences in data formats.
        - Lack of programmer time at the laboratories.
        - Need to develop mechanisms to verify that all reports are being sent.
        - Confidentiality issues.

4. Describe the reportable cancer conditions in your state. Are these listed in your legislation and regulations?

    - Many states use the SEER Program Code Manual, 3rd Edition, January, 1998

        - Some are investigating SNOMED codes.

5. Describe the process (or diagrams) for getting different types of pathology laboratory records into a database. How do you link to the master database tables/files? How have you tested this process?

    Here is one example:

    - Private pathology specimens are received through the Pathology Laboratory Reporting System developed with assistance from the Pathology Laboratory Subcommittee of the NAACCR.

- Hospital pathology specimens (both hospital patient specimens and private outpatient specimens) are reported through the hospital tumor registrar or the department responsible for reporting to the Pennsylvania Cancer Registry.

- Registrars submit a full abstract on all pathology specimens based on services received at their hospital.

- If they only have a private outpatient (POP) specimen for a patient and no other information, they report the case with whatever information they have available. Hospitals are instructed to hold POPs for at least 3 months to wait and see if the patient is admitted to the hospital.

- Private pathology cases are currently maintained in a separate database. Procedures are being developed to add them to the master database.

- Procedures are being developed to follow up on POP specimens not matched with a hospital abstract.

6. When your state initiated laboratory reporting, what type of pilot testing did you perform?

   - Initiated work groups with independent pathology laboratories.

7. What are your procedures for handling nonreportable conditions? Do you retain the nonreportable records or destroy it?

   - Nonreportable conditions received through the Pathology Laboratory Reporting System can be archived and deleted after a specified number of days. POP specimens are returned to the hospital.

8. List the key partners in your organization for electronic laboratory reporting beyond cancer (examples: TB program or other communicable diseases program).

   - Possibilities include the Division of Communicable Disease Epidemiology at your state health department.

   - Pathology associations.

9. What are the benefits and challenges of collaborating with these partners?

   - Benefit: can work with the same laboratories and develop a common mechanism for laboratories to electronically report all state-required diseases.
   - Challenges: different types of information needed by the different groups, different time requirements.

10. How do you solicit involvement from laboratory organizations to facilitate the electronic reporting of pathology reporting in your state?

    - In Minnesota, a request for proposals was established in 1990 to provide funds for facilities to report electronically. Most facilities that applied chose to start a hospital cancer registry. One pathology laboratory chose to submit their pathology reports electronically.

    - Iowa utilized telephone calls followed by a letter. They also had a respected Iowa pathologist contact the laboratory pathologist to solicit support.

11. Describe the percentage of reports processed through a laboratory reporting mechanism that result in a reportable condition.

    - Estimates for individual laboratories range from 12 percent to 30 percent.

12a. What are the national private laboratories that currently report electronically to central registries?

- Smith Kline/Quest Diagnostics
- Laboratory Corp
- Tamtron

12b. What are the laboratory information systems that registries have used?

- Co-Path
- Cerner
- SunQuest

13. Describe the experience of your registry in using the pathology information as a source of followup or tracking.
    - Washington gets followup information from path linkages (including PAP smears).

14. What issues concerning confidentiality have arisen as a result of pathology laboratory reporting?

- Concerns about reporting of nonreportable conditions.
- Concerns from out-of-state laboratories that are not covered by state statutes.

15. How do you follow up on reports with missing demographics? If you have sample letters or forms, please supply them.

- See Appendix A-3 for a sample.

16. How do you confirm medical information (primary site, histology, date of diagnosis, etc.) when a laboratory report does not link to a more complete source record? If you have sample letters or forms, please supply them.

- See Appendix A-3 for a sample.

Appendix A-1

Sample Letter

Dear Dr. XXXXX:

This letter is in regard to our recent telephone conversation regarding the identification and data collection of cancer cases at the Physicians Laboratory of Northwest Iowa in XXXXXX, IA. As we discussed, it is the desire of the State Health Registry of Iowa (SHRI) to obtain cancer patient pathology information from this laboratory that has been previously unavailable.

The Iowa Department of Public Health has designated the Registry as the repository for reportable cancer data in Iowa. Registry field staff collect the data during regular visits to hospitals, clinics, and numerous pathology laboratories throughout Iowa and neighboring states where Iowans receive care. It is known from previous studies done by the Registry that pathology laboratories, not located in hospital settings, are a resource of pathology reports for melanomas, cervix *in situ*, prostate, and CLL diagnoses. As health care delivery for the cancer patient has evolved into more outpatient care, the case ascertainment of some cancer data in the Registry has been slowly migrating from the traditional hospital setting.

In an attempt to improve data collection and ascertainment of not only melanoma cases but also all invasive and noninvasive cancer cases, we are requesting that Sue XXXX, field representative for the XXXXXX area, be allowed monthly access to the laboratory reports. Registry field personnel are highly trained professionals with extensive experience in reviewing pathology reports. Sue will contact the laboratory staff to make the necessary arrangements and will review all laboratory reports, looking for only those cases that have not been identified from another source, such as a hospital or outpatient clinic.

Enclosed for your review is the most recent report from the Registry, *Cancer In Iowa, 1998*, and a copy of the Registry's confidentiality policy and pledge. The Iowa Department of Public Health has approved this mechanism for the compliance with State of Iowa-mandated reporting of all cancers.

If you have any questions, please contact me at (319) 356-2986, or the Registry Administrative Director, Kathleen M. McKeen, at (319) 335-8609.

Sincerely,

Charles E. Platz, M.D.
Professor, Pathology
Investigator, Iowa Cancer Registry

Enclosures
cc: Roxy XXXXXX, M.D.
Kathleen M. McKeen
Chuck Lynch, M.D.
Sue XXXXX

Appendix A-2

Sample Letter

Dear Ms. XXXXX:

As we discussed on the telephone on Thursday, February 11, I am requesting your assistance with the ascertainment of newly diagnosed urological cancer cases among Iowans.

Cancer is reportable in the State of Iowa and the State Health Registry of Iowa (SHRI) has been designated by the Iowa Department of Public Health as the repository for cancer data in Iowa. In addition, the Iowa Cancer Registry is a member of the prestigious National Cancer Institute Surveillance, Epidemiology, and End Results (SEER) Program. Cancer data are gathered through arrangements with hospitals, pathology laboratories, and numerous physicians offices throughout the State of Iowa or in neighboring states where Iowans receive their care, and from vital records mortality files.

We are requesting copies of pathology reports for all Iowans with invasive and *in situ* cancers. Enclosed is a list of terms that represent a reportable cancer. In addition to the pathology report, we would also like personal identifiers for the cancer patient that would help us link with another report we may have in the Registry from another source. Please complete the patient form and attach it to the appropriate pathology report. We realize this information may or may not always be available.

I suspect going back in time will be more difficult to identify pathology reports for Iowans, but it would be extremely helpful to receive reports for earlier years. If you are unable to supply information for those earlier years, it would be desirable to begin with January 1998 and forward into 1999.

As we discussed, you would prefer to fax the reports to the Iowa Registry. Please send them to my attention: Kathleen M. McKeen, at fax number (319) 335-8610.

In addition, I would also like you to discuss the possibility of an electronic transfer of the pathology report with your computer data systems staff. We have several options available to us here for receiving your data electronically. Gary XXXXX from our data processing staff would be more than willing to discuss these options with UroCor data systems staff. Gary's phone number is (319) XXX-XXXX.

Enclosed is a copy of the Iowa Administrative Code along with a recent publication from the Registry. If you have any questions, please give me a call at (319) 335-8508, or you may call the Registry Medical Director, Chuck Lynch, M.D., Ph.D. at (319) 335-9633.

Sincerely,

Kathleen M. McKeen
Registry Director

Enclosures
cc: Chuck Lynch, M.D., Ph.D.

Appendix A-3

Sample Letter

Dear XXXXX:

I am requesting your assistance in obtaining additional pertinent information regarding your patient(s) contained on the enclosed form(s). The information we recently received from a pathology laboratory report is extremely vague and will not allow us to identify, reconcile, or consolidate other reports we might have received from another source. We would appreciate it if your staff would complete the **missing information** and correct any **misinformation** contained on the form(s).

As you probably already know, the Iowa Department of Public Health has designated this Registry as the repository for reportable cancer data in Iowa. The data are collected from hospitals, surgery centers, and numerous pathology laboratories throughout Iowa and neighboring states where Iowans receive care.

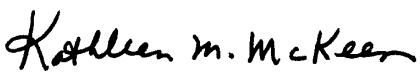
It is known from previous studies performed by the Registry that pathology laboratories not located in hospital settings are a vital resource of pathology reports for melanomas, cervix *in situ*, prostate, and CLL diagnoses. As health care delivery for the cancer patient has evolved into more outpatient care, the case ascertainment of some cancer data in the Registry has been slowly migrating from the traditional hospital setting.

Unfortunately, many of the pathology laboratory-reported cases do not contain patient-specific, personal identifying information, and as a result, vital pieces of information are incomplete. Frequently, the only information received is the patients' name and the physician who referred the specimen to the laboratory. With only these variables, computerized linkage within the Registry's large database is nearly impossible.

Your help is extremely important and will provide us with the information we require for maintaining a high quality Cancer Registry program of all Iowans.

Thus, we are requesting you complete the enclosed forms and return them in the enclosed, postage-paid envelope(s) at your earliest convenience. If you have any questions, please contact me at (319) 335-8609. We appreciate your assistance and thank you in advance for your help in this important program.

Sincerely,



Kathleen M. McKeen
Registry Director

Enclosures

Appendix A-4

Sample Letter

Doctor:
Case #:
Patient:
Date of Birth:
Cancer Type:
Diagnosis Date:

Minnesota Cancer Surveillance System
717 Delaware Street, S.E.
Minneapolis, MN 55414

Based on Minnesota Statutes 144.671-69, the Minnesota Cancer Surveillance System (MCSS) collects cancer data on all Minnesota residents. The majority of cases reported to the MCSS are complete. A physician's office is contacted only if missing or discrepant data are not available from a hospital medical record or a Cancer Registry. The above patient still requires some data items. Please complete the information checked below and return this form in the enclosed business reply envelope (even if the patient is deceased). Thank you!

DEMOGRAPHICS:
Social Security Number:_____

Address at Diagnosis:_____
(Street) (City/State/Zip)

Birthdate:_____

Race:_____
* * IF THE PATIENT DID NOT LIVE IN MINNESOTA AT THE TIME OF DX, STOP HERE * *

TUMOR INFORMATION:
Date of Diagnosis:_____

Primary Site:_____

Histology:_____

STAGE OF DISEASE AT DIAGNOSIS (Doctor should complete):
T_____ N_____ M_____ Stage_____ Clinical or Pathologic? (circle one)

INITIAL CANCER-DIRECTED THERAPY (Doctor should complete):

SURGICAL PROCEDURE:_____

Date:_____

RADIATION THERAPY: Type:_____

Date Started:_____

CHEMO/HORMONE/IMMUNOTHERAPY:

Date(s) started:_____

Drug name(s):_____

ADDITIONAL INFORMATION NEEDED:_____

_____

If you have any questions, please call (612)676-5216. Thank you very much for your continued cooperation with the MCSS.

Sincerely,

Minnesota Cancer Surveillance System

Appendix B-1

Sample Survey to Laboratories Soliciting Information About Ability To Carry Out Laboratory Reporting

Pennsylvania Cancer Registry
Division of Health Statistics

Pathology Laboratory Questionnaire

*Please complete and return this questionnaire to the Division of Health Statistics, Pennsylvania Department of Health, 555 Walnut Street - 6th Floor, Harrisburg, PA, 19101, in the enclosed postage-paid envelope no later than **Date**. The response also may be faxed to Wendy Aldinger at (717) 772-3258. Please answer the questions by checking the correct response or entering the information in the space provided.*

I. Laboratory Information:

Is the following information correct? GYes GNo
If No, indicate any changes in the space provided.

Director: _____

Address: _____

_____

_____

Telephone Number: _____

II. Electronic Data System Functions:

A. Are your pathology reports maintained electronically? GYes GNo

If No, are there future plans for implementing an electronic system? GYes GNo

If Yes, when? _____

If no electronic pathology report system currently is in place, please skip to Section III.

B. Does your laboratory use vendor-provided software or in-house-developed software for your clinical information? GVendor GIn-house

If Vendor, please supply following information:

Company Name: _____

Address: _____

_____

Telephone Number: _____
Contact Person: _____

C. Are all specimen types included in your laboratory's electronic pathology report system? GYes GNo

If No, what types are not included? _____

D. Is your laboratory's billing information maintained electronically? GYes GNo

E. Does your laboratory use vendor-provided software or in-house-developed software for your billing information? GVendor GIn-house

If Vendor, please supply following information (if different than vendor listed in II.B.):

Company Name: _____

Address: _____

_____

Telephone Number: _____

Contact Person: _____

F. Is your laboratory able to transmit pathology reports in the HL-7 format? GYes GNo

If No, is your laboratory able to submit in a fixed-column ASCII file? GYes GNo

G. Is your laboratory able to transmit files through a direct-dial into a firewall-protected FTP server at the Pennsylvania Department of Health? GYes GNo

H. Does your laboratory have an FTP server the Pennsylvania Department of Health can dial into to pick up files? GYes GNo

I. Is your laboratory able to submit files on diskette? GYes GNo

III. Specimen Information:

A. What type of pathology specimens does your laboratory process?

Type	T if Yes	Average # per year	Average # with cancer diagnosis per year
Anatomic			
Cytology			
Gyn Cytology			
Bone Marrow			
Autopsies			
Other			

B. Is each specimen assigned a unique number? GYes GNo
If Yes, are the different specimen types differentiated within the specimen number (i.e., specimen numbers beginning with S are surgical pathology reports, C are cytology reports, etc.)? GYes GNo

C. Does your laboratory review slides more for initial diagnosis or second opinion? GInitial GSecond

D. What information is maintained at your laboratory ?

Item	Documented T if Yes	Maintained on Paper T if Yes	Maintained Electronically Tif Yes
Clinical History			
CPT Codes			
Final Dx Text			
Gross Pathology Text			
History Text			
ICD-CM Codes			
Laboratory CLIA Number			
Microscopic Pathology Text			
Nature of Specimen			
Ordering Client Address			
Ordering Client License Number			
Ordering Client Telephone Number			
Ordering Client Name			
Patient Address			
Patient Age			
Patient DOB			
Patient Name			
Patient Race			
Patient Sex			
Patient SSN			
Reporting Pathologist Name			
Reporting Pathologist License Number			
SNOMED Codes			
Specimen Number			
Specimen Date			

IV. Client Information:

A. What types of facilities/practitioners does your laboratory serve?
Hospitals GYes GNo
Private Physician Practices GYes GNo

Clinics GYes GNo

Other _____

B. If possible, please enclose a list of your laboratory's clients with this form.

V. Whom should we contact to discuss the details of reporting?

Name: _____

Telephone Number: _____

E-mail: _____

VI. Survey Completed By:

Name: _____

Title: _____

Signature: _____

Date: _____

** Survey Complete. Thank you for your participation.**

Appendix B-2

Computerization Capability Survey of Pathology Laboratories for the South Carolina Central Cancer Registry (SCCCR)

Please complete this questionnaire and return it to the Registry using the enclosed envelope. Or, you may simply familiarize yourself with the questionnaire and provide the requested information over the telephone (telephone surveys will be conducted after April 8, 1999). Please note that questionnaires not returned by April 8 will be administered over the telephone. If you have any questions, please contact Susan Bolick or Gregory Kirkner at (803) 898-4460.

Section I.

1) Facility Name: _____

Address: _____

Telephone Number: _____ Fax Number: _____

2) Office Administrator's Name: _____

3) Does this facility do pathology laboratory work? _____
(If you have answered "yes" to this question, then continue to Section II. If you have answered "no," then you need only complete Question 7 and return the questionnaire)

Section II.

4) List all the physicians within your facility (attach additional sheet if needed):

_____
_____
_____
_____
_____
_____
_____

5) Designated individual(s) with whom SCCCR activities should be coordinated:

_____
_____
_____

6) Approximate number of pathology reports read by your laboratory per year (include all surgical, bone marrow, cytology, and autopsy specimens):

_____
_____
_____

7) Please list the name and telephone number for all reference laboratories used by your facility (in and out of state). You may attach an additional sheet if needed:

_____
Name of Reference Laboratory *Telephone Number*

_____
Name of Reference Laboratory *Telephone Number*

_____
Name of Reference Laboratory *Telephone Number*

_____
Name of Reference Laboratory *Telephone Number*

Section III (Facility Computerization Capabilities).
If there is an individual in charge of maintaining your laboratory's computer system, please have that individual complete the questions in this section.

8) Is there an individual responsible for maintaining your laboratory's computer system?_____

What is that person's name?_____

Telephone Number?_____

9) Are your laboratory reports computerized?_____

If you answered "yes" to Question 9, please list the name of the software vendor, vendor contact, and vendor's telephone number:

_____
Name of Software Vendor

_____
Name of Contact Person at the Software Vendor

_____
Vendor's Telephone Number

In what formats (if any) can your laboratory report data be saved, exported, and/or submitted?

_____
(Examples include: ASCII, HL7, and DBF)

If you answered "no" to Question 9, does your facility plan to implement a computerized system?

_____

When? _____

10) Are demographic data/information linked to or collected as part of your laboratory software?
_____

If you answered "no" to Question 10, are demographic data/information available (in an electronic format) through your laboratory's billing system? _____

11) Is your laboratory's billing system computerized? _____

If you answered "yes" to Question 11, list the diagnostic coding system in use: _____
_____

(Examples include: SNOMED, CPT, and ICD-9)

Can billing data be sorted by diagnosis code? _____

In what formats (if any) can your billing data be saved, exported, and/or submitted? _____
_____

(Examples include: ASCII, HL7, and DBF)

12) Do any of the computers in your facility have an Internet connection or capability? _____

If you answered "yes" to Question 12, is this connection established through a modem or through a local area network?
_____

If you answered "yes" to Question 12, can this Internet connection be used to submit laboratory or billing data electronically (see Questions 9 and 11)? _____

13) If only paper reports are used, are all reports kept onsite? _____

14) Convenient time for SCCCR visit to your facility (only if needed): _____

15) Please add any additional comments or suggestions you might have: _____
_____
_____
_____

Thank you for completing this questionnaire. Your cooperation is appreciated! Please return completed questionnaire using the enclosed envelope.