eMaRC Plus
Physician Reporting Module
User's Manual

Version 9.0

(Based on eMaRC Plus Version 9.0.0.X, NAACCR v220)

Centers for Disease Control and Prevention

National Center for Chronic Disease Prevention and Health Promotion

Division of Cancer Prevention and Control

National Program of Cancer Registries

Registry Plus™ Software for Cancer Registries

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

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Chapter 1: Introduction

Overall Learning Objectives

These are the overall learning objectives for the eMaRC Plus Physician Reporting Module User's Guide:

- Learn the major functions of the eMaRC Plus Physician Reporting Module
- Become familiar with the various available menu and toolbar items and the functions they execute
- Understand how physician reports generated by Electronic Health Record (EHR) vendor software and submitted to central cancer registries by providers in the Clinical Document Architecture (CDA) are automatically processed through the application to generate abstracts in the NAACCR record layout for data exchange including:
  - Storing of CDA document data into associated section tables
  - Defaulting of values for NAACCR data items for which the CDA documents does not contain information
  - Mapping of values from the CDA document to the associated NAACCR data item
  - Translating values in the CDA document to the standard NAACCR data item codes and format
  - The Multiple Record Management Process by which information included in multiple CDA documents received by the central cancer registry from the same reporting entity for the same patient and tumor will be automatically processed and consolidated in eMaRC Plus
  - When and what types of messages are written to the Processing Log
- Importing CDA documents
- Searching for and concurrently viewing CDA documents and NAACCR abstracts side-by-side on the CDA Workbench
- Learning about the CDA Workbench and how to use it
- Exporting abstracts in NAACCR file format
- Become familiar with the Administrative features of the program, including:
  - Managing user accounts
  - Managing the Abstract Display
  - Managing the CDA document Display
  - Managing Facilities
  - Setting system configuration preferences
  - Deleting CDA documents
- Running the application from the DOS Command line
- Understanding the different ways the Physician Reporting Module can be used by central cancer registries

- Viewing Reports

Overview of the eMaRC Plus Physician Reporting Module User's Guide

The eMaRC Plus Physician Reporting Module User's Guide provides you with the information necessary to fully understand and use the application. Through this manual, users will be introduced to eMaRC Plus Physician Reporting Module menu items, user interfaces, and software functions and capabilities in a detailed, step-by-step manner. The intent of this user's guide is to relate all information about the application to the user, including the granular details of data processing, in a completely transparent fashion and provide an avenue for feedback to CDC regarding all aspects of the application.

Background

The eMaRC (Electronic Mapping, Reporting and Coding) Plus software was initially developed for the NPCR- Advancing E-cancer Reporting and Registry Operations' ePath Project by the Registry Plus Development Team of the U.S. Centers for Disease Control and Prevention (CDC) in 2006. The eMaRC Plus ePath (electronic Pathology) Reporting Module reads Health Level 7 International (HL7) version 2.3.1 and 2.5.1 Observation Result (ORU 01) message batch files, parses messages, and stores HL7 data elements as discrete field values into tables in the Pathlab database. In a typical setting, the Public Health Information Network Messaging System (PHINMS) is used to securely send HL7 batch files from a laboratory to a cancer registry or some other agency working on the cancer registry's behalf. The eMaRC Plus resides at a cancer workstation and polls the worker queue of the PHINMS receiver for any new incoming files. When a new file arrives in the queue, the application selects it based on the text containing cancer terms, processes it, and then goes back in the waiting mode until another new file arrives. eMaRC Plus ePath Reporting Module can be used in an interactive mode where the user manually selects a file to import into the Pathlab database.

During import, the ePath Module uses a terms table to search reports for potential cancer reports. Additionally, a built-in negation terms finder algorithm (NegEx) enhances the program's text interpretation capabilities by discriminating the cancer term when used in a negative manner. The program displays imported pathology reports in a user-readable format with cancer terms highlighted in red and negated terms highlighted in blue.

The ePath Module also creates partial abstracts from HL7 messages during import, translating coded values from the HL7 coding standard to the North American Association of Central Cancer Registries (NAACCR) standards. It allows you to view pathology report data items from the HL7 message side-by-side with abstract data items on the same screen. This allows the user to abstract NAACCR additional data items through review of the pathology report text.

Beginning in 2012, the CDC's Cancer Surveillance Branch staff developed a prototype of a new, separate, Physician Reporting Module that was included in the eMaRC Plus application in addition to the ePath module. The Physician Reporting Module receives and processes HL7 Clinical Document Architecture (CDA) documents from physician office electronic health record (EHR) or electronic medical record (EMR) systems as part of Meaningful Use (MU) Stages 2 and 3.

The CDA is a markup standard developed by the organization Health Level 7 International to define the structure of clinical documents such as discharge summaries and progress notes. CDA is based on XML, the Extensible Markup Language. The CDA uses HL7's Reference Information Model, the goal of which is to put data in a clinical or administrative context, to define how pieces of data are associated, and to take advantage of coding systems such as Systematized Nomenclature of Medicine -- Clinical Terms (SNOMED CT) and Logical Observation Identifiers Names and Codes (LOINC). CDA enables the creation of patient records that can be read by any EHR/EMR software system. CDA is a flexible standard and is unique in that it can be read by the human eye or processed automatically by computer.

Functionality has now been added to eMaRC Plus to enable the processing of physician reports generated by the EHR and received by the cancer registry in CDA document format, and mapping from the CDA data elements and codes to the NAACCR record layout and codes. A beta version of the eMaRC Plus Physician Reporting Module was released on September 30, 2013. This document is intended for use with the production version of the Physician Reporting Module, first released in October of 2015.

eMaRC Plus Physician Reporting Module Features

The Physician Reporting module of eMaRC Plus was developed collaboratively by participants in the National Association of Central Cancer Registries (NAACCR) Physician Reporting Workgroup and programmed by the Registry Plus Development Team.

The program includes functions to import HL7 CDA documents (manually, from a specific folder; through the DOS Command Line Interface; or via PHINMS), parse out codes and text from specific sections of the HL7 CDA document, and map or translate HL7 CDA data elements to NAACCR data items and coding conventions to automatically generate a NAACCR abstract. Default values can also be set for standard, required NAACCR data items for which no information is found in the CDA document.

The Physician Reporting module of eMaRC Plus builds onto the already existing ePath database, so that a single database will have tables for both ePath and the Physician module. When updating to this new production version, CDC will distribute SQL scripts to add physician module tables to the existing pathlab database for SQL server users. Various HL7 data elements will be stored as discrete field values into tables in the database. The program creates NAACCR formatted abstract records from physician reports during import into the database. If multiple CDA documents are received by the central cancer registry from the same reporting entity for the same patient and tumor, the application will automatically consolidate all abstract values for each data item to generate a single, consolidated abstract.

The eMaRC Plus Physician Reporting Module allows the user to concurrently examine a user-friendly view of each CDA document and its associated automatically generated abstract side-by-side so that the user can review the automated mapping decisions and provide feedback to the CDC. The program also offers a report which displays a user-specified view of NAACCR data items across all abstracts generated from multiple CDA documents received by the central cancer registry from the same reporting entity for the same patient and tumor along with the consolidated value automatically selected by the application, allowing the user to review the automated consolidation decisions and provide feedback to CDC.

System Requirements

eMaRC Plus programs work with 64-bit Microsoft® Windows® operating systems on x86-compatible processors. The minimum hardware requirements are the same as those of the Microsoft Windows operating system used.

System requirements include:

- Minimum Processor 1 GHz, but recommended Intel i5 with 1.9 GHz or better processor
- Microsoft operating system Window 7, 8, and 10 or newer version.
- Minimum of 2 GB but recommended 4 GB memory for smooth user experience.
- Latest version of Microsoft Internet Explorer (recommended).
- A minimum of 200 MB free hard drive space is required, which excludes eMaRC Plus database.
- Microsoft .NET Framework Version 4.52 Full Version or newer version
- Application comes with a default Microsoft Local DB Database for configuration and low budget use. For enterprise/production use, database must be reconfigured to work with SQL Server 2012 R2 or newer version.

It is highly recommended to use a professional grade database server to avoid data loss (e.g., Database hosted on separate server gives you a more reliable platform. It is strongly recommended to do a back-up periodically, etc.).

Downloading and Installing eMaRC Plus Version 9.0.0.X

If you previously used eMaRC, you will receive a link via email with instructions to download and install eMaRC Plus Version 9.0.0.0. First time users, please contact the **Helpdesk** at cancerinformatics@cdc.gov for download and to be added to the distribution list.

User Support

For technical support via e-mail, contact cancerinformatics@cdc.gov. The CDC Registry Plus Development group is funded primarily to support NPCR-funded state central cancer registries. As a result, CDC helps state central cancer registries set up the software and perform basic customizations. CDC also provides periodic software updates and problem-solving to the extent of available resources.

CDC does not provide on-site services, and does not support hospitals, clinics, laboratories, or other private users. eMaRC Plus is intended for distribution to central cancer registries after as-needed customization by the central registry. The state central cancer registry using eMaRC Plus is responsible for providing all support to end users submitting data to the system. State registry contact information can be found at the National Program of Cancer Registries Web site: Contact a Local Registry.

Other users of eMaRC Plus will need to independently understand and maintain the software application.

Chapter 2: The Basics

Learning Objectives

In this chapter, you will learn to:

- Launch eMaRC Plus
- Log in and out of the eMaRC Plus Physician Reporting module
- Familiarize yourself with the Physician Reporting module main window and identify the various menu items and toolbar icons
- Generate your own user account
- Change your password
- Delete a user account
- View important application contact and versioning information

Overview

This chapter covers the basics of the eMaRC Plus Physician Reporting module. You'll learn about all of the ongoing, automated data processing that occurs in the modules, how to log in and out of the eMaRC Plus Physician Reporting module, and helpful information about generating and maintaining your user account.

Launching eMaRC Plus

Once installed, you can launch eMaRC Plus:

1. From the Start menu, select **All Programs → Registry Plus → eMaRC Plus → eMaRC Plus**.
2. The Administrator now has an option to sign into the System Configuration from the initial login dialog box.

Logging Into the eMaRC Plus Physician Reporting Module

After installing eMaRC Plus, upon initial launch of the program, you will be prompted to enter the default User ID of **doe**, the default password of **guest**, and **select the eMaRC Plus module** with which you would like to work (i.e., Physician Reporting rather than ePath Reporting). Once you have logged into the application, you will generate a new user account for yourself.

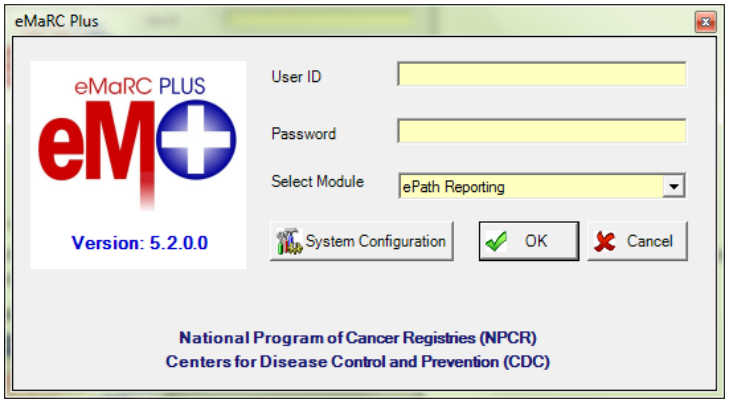
Once all users at your central registry have their own user accounts, for security purposes, the **doe** user account should be deleted.

When logged in with your own user ID and password, your User ID will be recorded in the Abstracted By NAACCR data item for all abstracts generated from any CDA documents that you import.

To log in to the Physician Reporting module of eMaRC Plus, complete these steps:

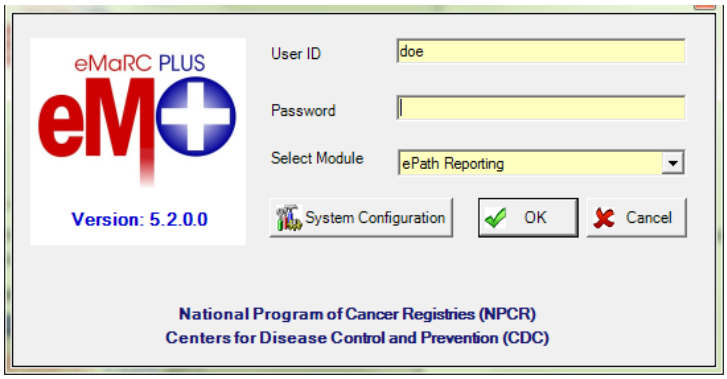
1. **Launch** eMaRC Plus.

   Result: The **eMaRC Plus Login** window opens.



2. Enter the default User ID of **doe** into the **User ID** field and press the **Tab** key or use your mouse to click into the Password field.

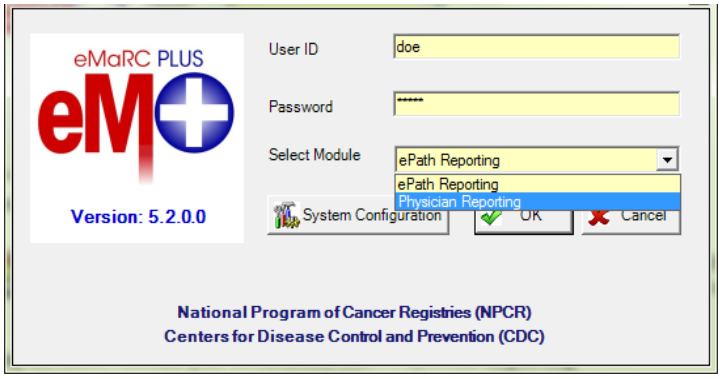
   Result: The cursor will move to the **Password** field.



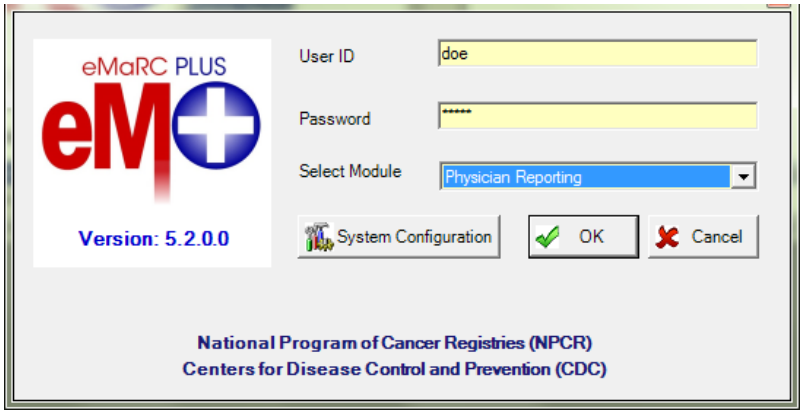
3. Enter the default Password of **guest** into the **Password** field.

   If you already have a User ID and password for eMaRC Plus, you would enter your own User ID and password rather than the above-specific default values. If you have an existing ePath Reporting User ID and password, these can be used to login to the Physician Reporting Module as well.

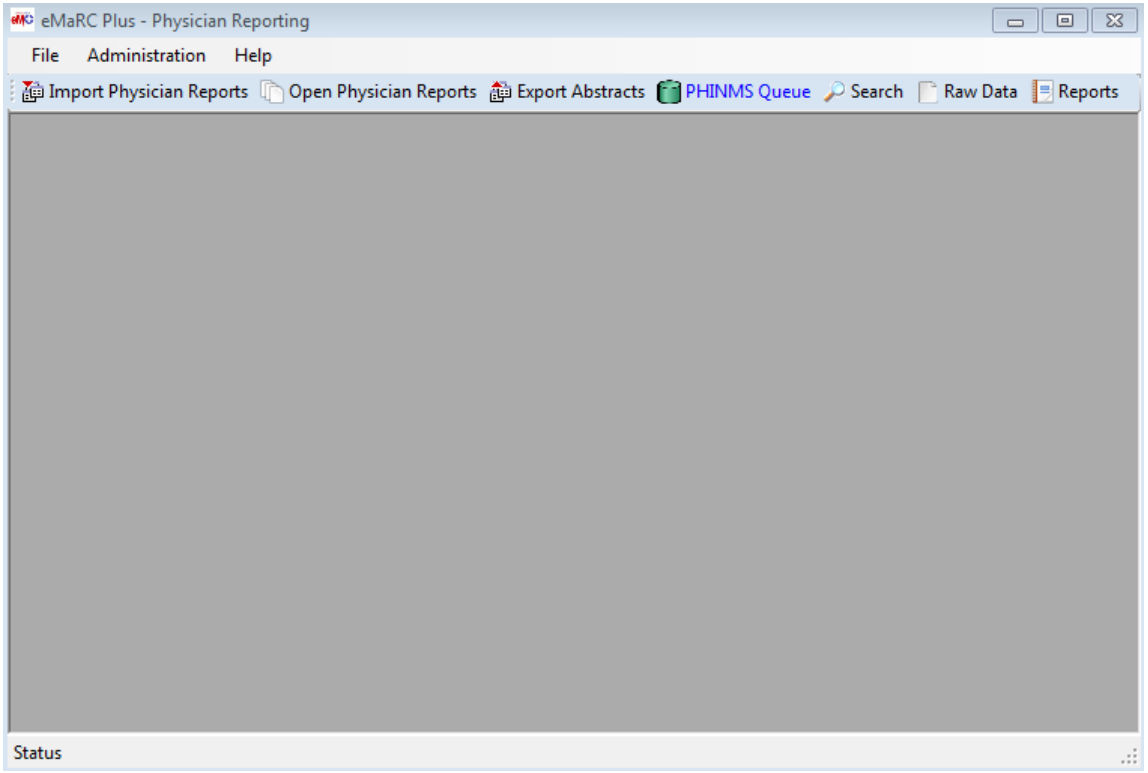
4. Using the **Select Module** pull-down menu, select **Physician Reporting**.



5. Click **OK**.



Result: The **main eMaRC Plus Physician Reporting window** opens.

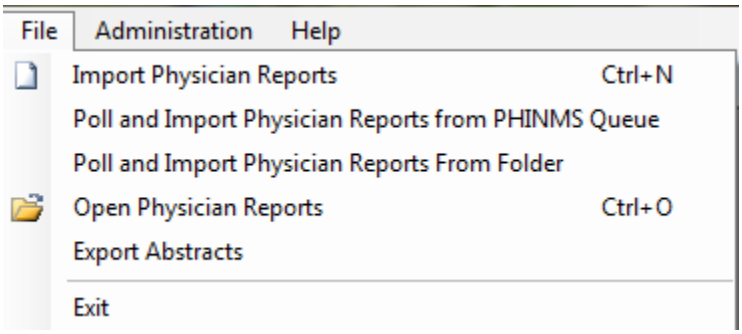


The eMaRC Plus Physician Reporting Main Window

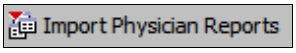
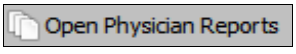
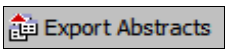
The eMaRC Plus Physician Reporting main window provides access to all of the application's features. Important system messages are displayed in the lower left-hand corner of the window. When logged in, you will automatically have access to the majority of the application's features via the main menu items. In addition, some functions are available via icons on the toolbar in the main window as described below.

The File Menu

The File menu is used to access the majority of features that are used to work with CDA documents and auto-generated abstracts. To access the File menu items, click on the **File** menu item, and select the desired sub-option, or use the appropriate keystroke combination for the desired sub-option when available.



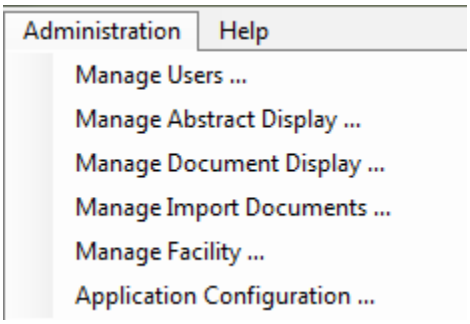
The following table describes the eMaRC Plus Physician Reporting module File menu sub-options:

Sub-option (Keystroke)	Toolbar Icon	Function
Import Physician Reports (Ctrl+N)		Manually import CDA documents
Poll and Import Physician Reports from PHINMS Queue		Check for and import CDA documents from the PHINMS queue
Poll and Import Physician Reports from Folder		Check for and import CDA documents from a user-specified folder
Open Physician Reports (Ctrl+O)		Open and view an individual CDA document in the CDA workbench
Export Abstracts		Export abstracts out of the eMaRC Plus database in NAACCR-formatted files

Sub-option (Keystroke)	Toolbar Icon	Function
Exit		Log out of eMaRC Plus

The Administration Menu

The Administration menu is used to access the administrative features of the program, such as managing user accounts, setting up the display type for auto-generated abstracts, and configuring system preferences. No toolbar icons or keystrokes are available for any Administration menu options. To access the Administration menu items, click on the **Administration** menu item, and select the desired sub-option.



Important

The Physician Reporting module of eMaRC Plus differs from other Registry Plus applications in that entry of a special Administrator password is **not** required in order to access the Administration menu items. The intent of the Physician Reporting module use is to be set up and run automatically in a production environment. Unlike the ePath module of eMaRC Plus, review of individual CDA documents and abstracts will eventually not be necessary, as the module is programmed to be fully automated. As many of the features of the application will be used for initial testing and setup, there is only a single User role that has access to all menu items.

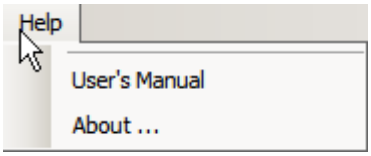
The following table describes the Physician Reporting module Administration menu sub-options:

Sub-option	Function
Manage Users…	Add, edit, or delete a user account or reset a password
Manage Abstract Display…	Create or edit the display type used when auto-generating abstracts from imported CDA documents, and for display of NAACCR data items on the CDA workbench
Manage Document Display…	Manage the CDA document data that is displayed and how it is displayed on the CDA workbench

Sub-option	Function
Manage Import Documents	Delete imported CDA documents from the system
Manage Facility	Ability to add/update and add multiple NPI numbers to one facility.
Application Configuration…	Set the name of your central registry on generated reports.

The Help Menu

The Help menu is used to access the User's Guide that comes with the program, as well as viewing important versioning and contact information. No toolbar icons or keystrokes are available for any Help menu options. To access the Help menu items, click on the **Help** menu item, and select the desired sub-option.



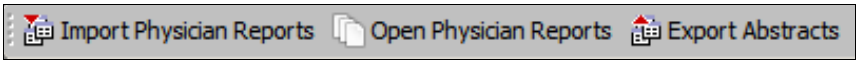
The following table describes the Physician Reporting modules Help menu sub-options:

Sub-option	Function
User's Manual	View the contents of the eMaRC Plus Physician Reporting Module User's Guide
About…	View important application versioning and contact information

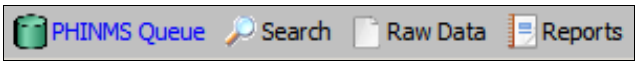
The Main Window Toolbar Icons

As mentioned earlier, the Import Physician Reports, Open Physician Reports and Export Abstract functions are available via both the File menu item and icons on the toolbar. However, some functions are available only through toolbar icons. To access any of the functions offered on the toolbar, simply click the icon for the function you would like to use.

Functions available via the File menu item and toolbar icons:



Functions available only via toolbar icons:



The following table describes the Physician Reporting module toolbar icons for those functions available only via toolbar icons:

Toolbar Icon	Function

Toolbar Icon	Function
PHINMS Queue	View CDA documents residing in the PHINMS queue, review for import errors, and export documents as desired
Search	Apply user-specified search parameters to dynamically generate a batch of CDA documents to open and review within the CDA Workbench
Raw Data	When a CDA document is open on the CDA workbench, click to view the CDA document in one of 2 ways: • The raw CDA document display in XML format, which is searchable by user-specified terms • The tree view display which is searchable by xpath
Reports	Click to view submission monitoring reports as well as a report documenting the Abstract Display, which can be very helpful when making revisions to the display type, and for display type documentation purposes

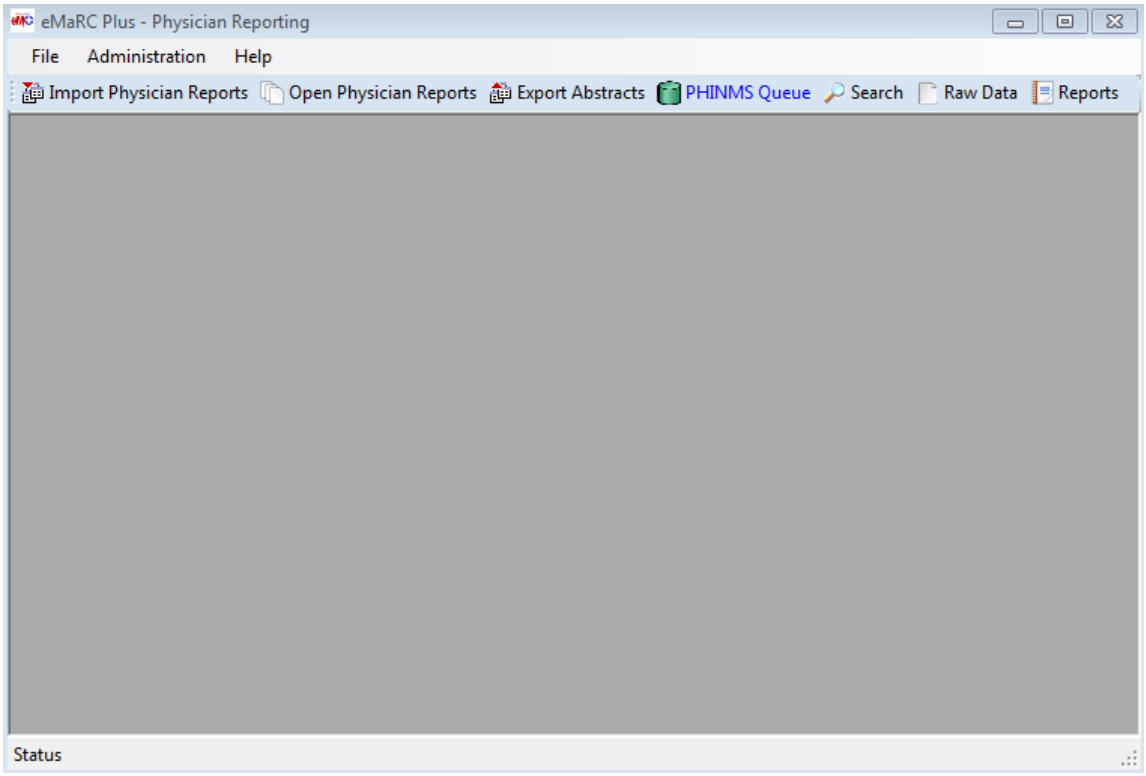
Generating a User Account

As mentioned earlier, upon initial launch of the program, you will be prompted to enter the default User ID of **doe**, the default password of **guest** to log into the application. Once you have logged into the application, you will need to generate a new user account for yourself.

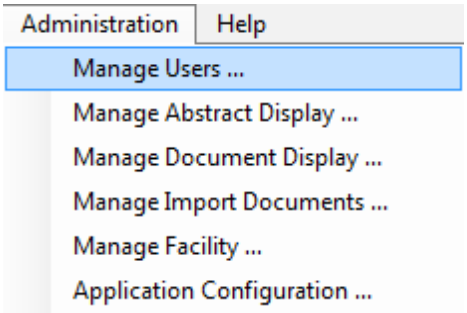
To create a new user account for the eMaRC Plus Physician Reporting module, complete these steps:

1. **Launch** eMaRC Plus and **log in** to the eMaRC Plus Physician Reporting module.

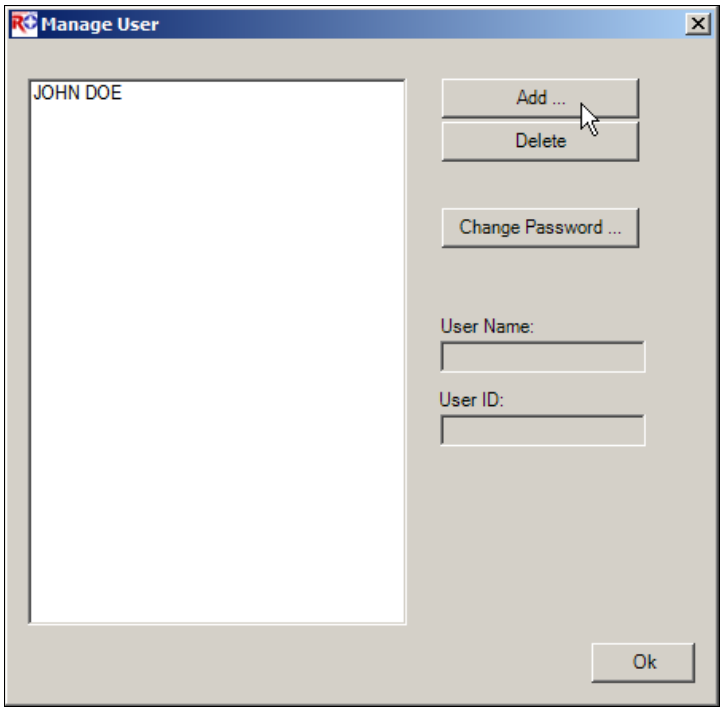
   Result: The **main eMaRC Plus Physician Reporting window** opens.



2. Open the **Manage User** window:
    a. From the **Administration** menu, select **Manage Users…**

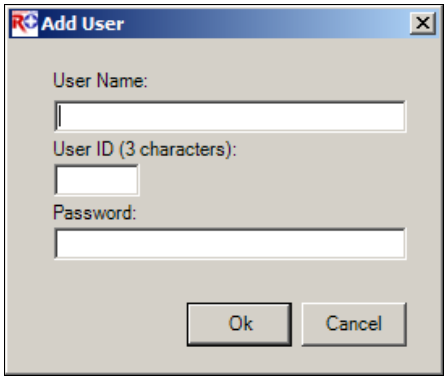


Result: The **Manage User window** opens:



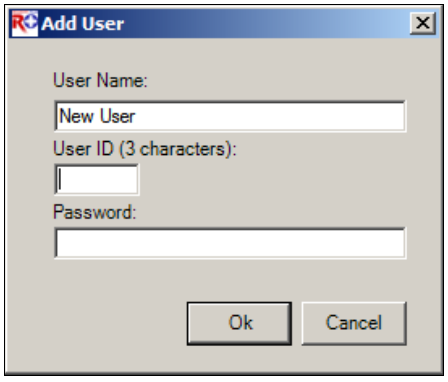
3. Click **Add**.

   Result: The **Add User** window opens.



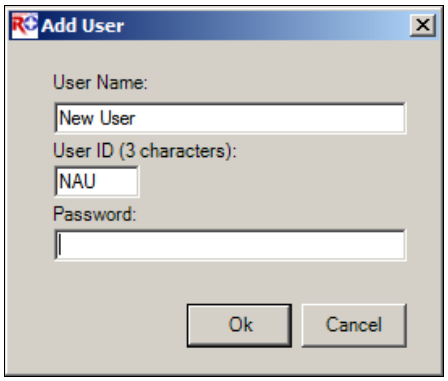
4. Enter a **User Name** in the User Name field, and press the **Tab** key. In the example shown the user name being entered is New User.

   Result: The cursor will move to the **User ID** field.



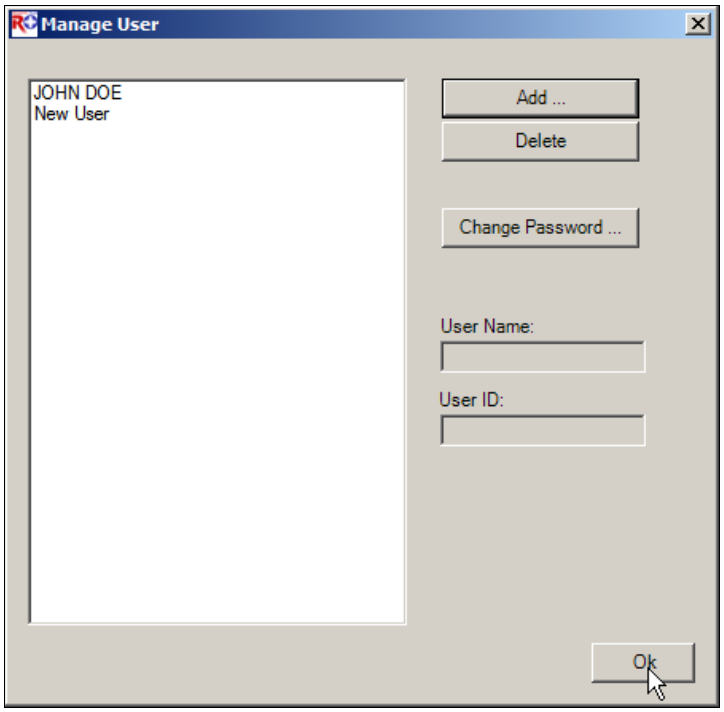
5. Enter a 3 character **User ID** in the User ID field, and press the **Tab** key. In the example shown the User ID being entered is NAU.

   Result: The cursor will move to the **Password** field.



6. Enter a **Password** in the Password field and Click **OK**.

   Result: You are returned to the Manage User window, where our new user account is displayed.



7. Click **OK**.

   Result: You are returned to the **main eMaRC Plus Physician Reporting window.**

To **delete a user account**, simply select the **User Name** from the list on the left and click **Delete**.

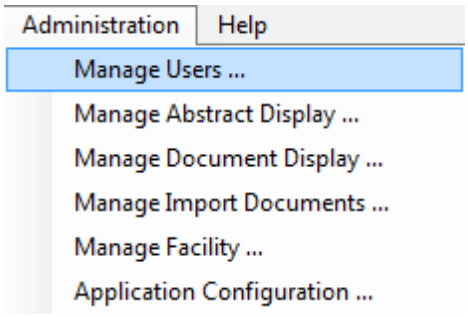
Changing your Password

For security purposes, you may be required to change your general user password periodically, based on your registry's password requirements.

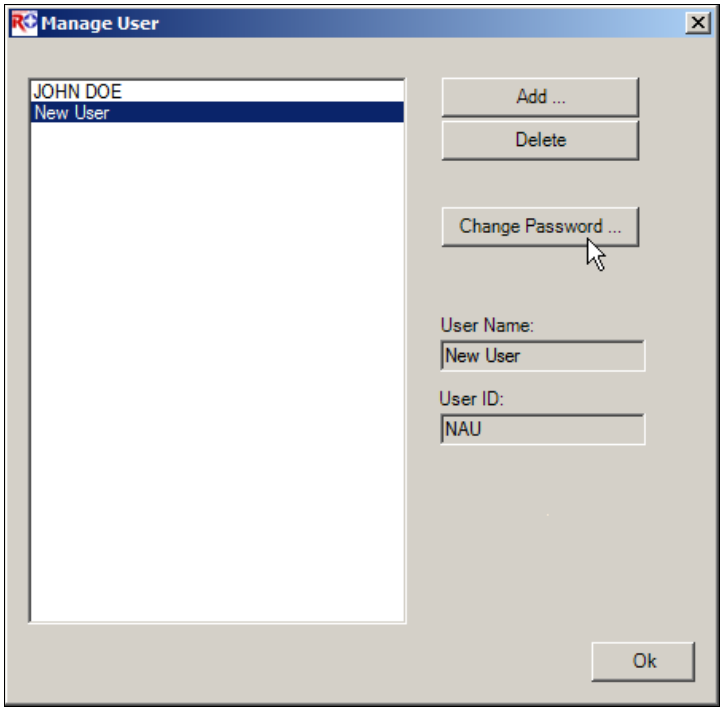
To change your password for your eMaRC Plus Physician Reporting module user account, complete these steps:

1. Open the **Manage User** window:

    b. From the **Administration** menu, select **Manage Users…**



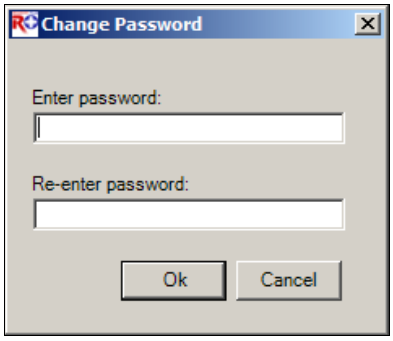
Result: The **Manage User window** opens:



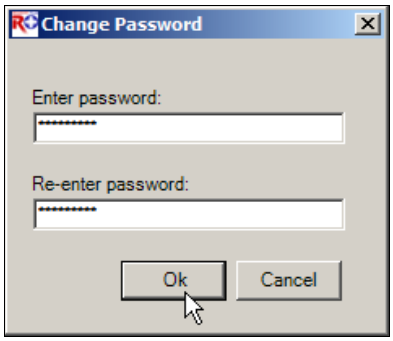
2. **Select your name** from the list of users on the left and click **Change Password.**

A user is only permitted to change their own password.

Result: The **Change Password** window opens.

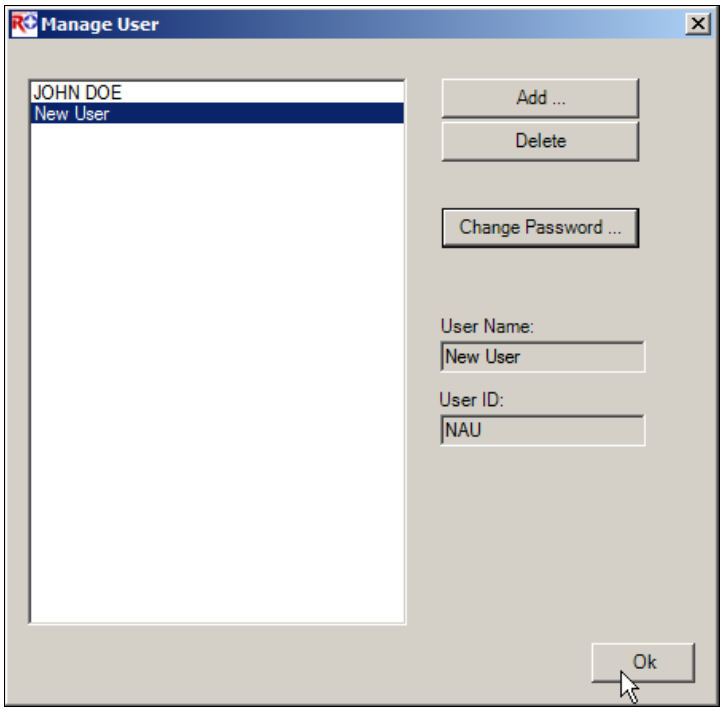


3. Enter your **new password** in the **Enter password** field and **re-enter** your new password in the **Re-enter password** field. The passwords must match, including capitalization and use of special characters.



4. Click **OK**.

   Result: you are returned to the Manage User window with your password successfully changed.



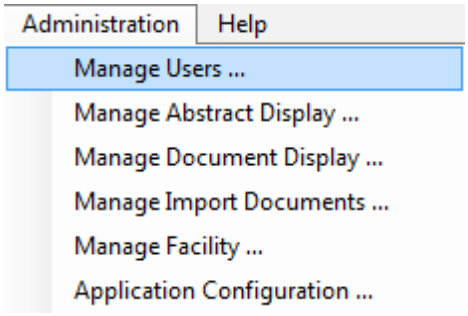
5. Click **OK**.

   Result: You are returned to the **main eMaRC Plus Physician Reporting window.**

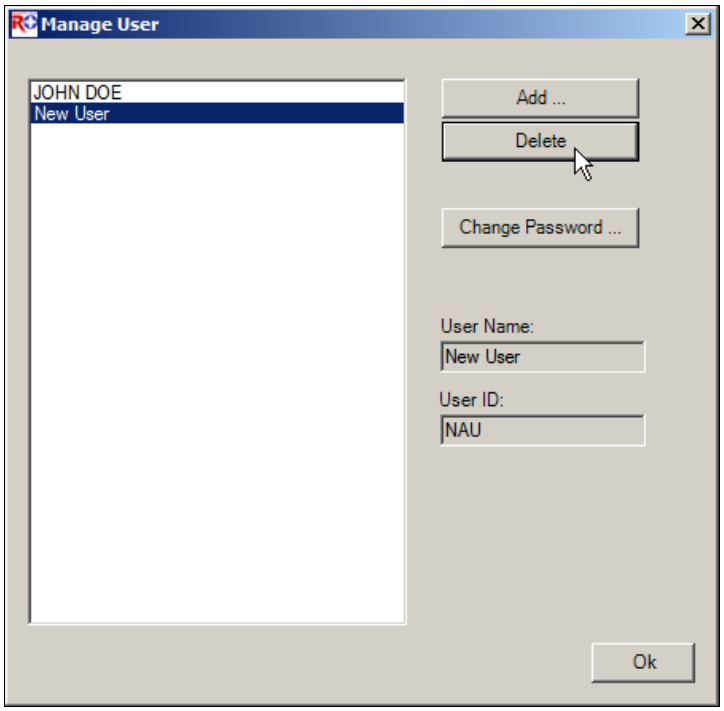
Deleting a User Account

To delete a user account from the eMaRC Plus Physician Reporting module, complete these steps:

1. Open the **Manage User** window. From the **Administration** menu, select **Manage Users…**

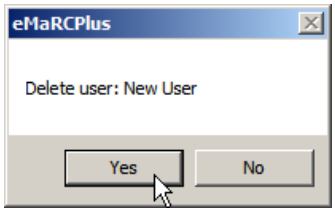


   Result: The **Manage User window** opens:



2. **Select the name of the user to be deleted** from the list of users on the left and click **Delete.**

   Result: The application asks you to **confirm the deletion** of the selected user account.



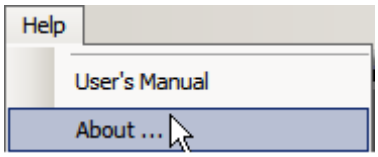
3. Click Yes.

   Result: The user account is deleted from the application.

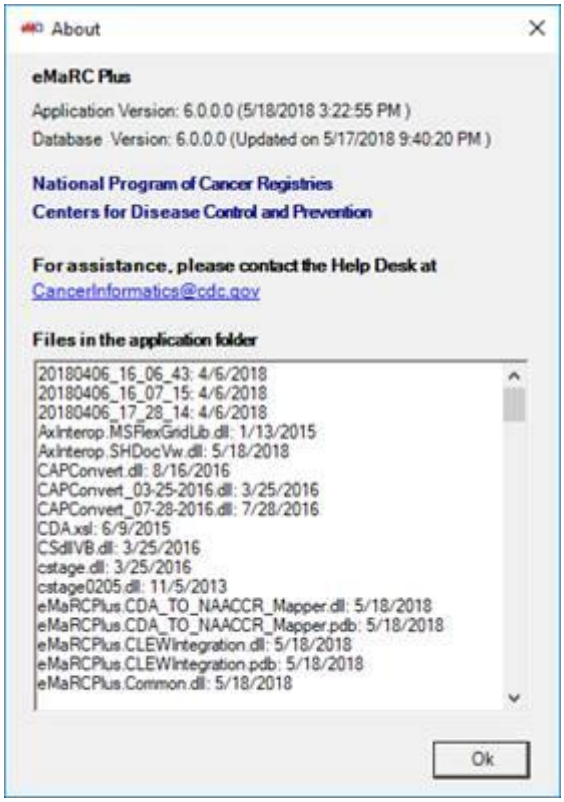
Viewing Versioning and Contact Information

To view eMaRC Plus CDA module versioning and contact information, complete these steps:

1. From the **Help** menu, select **About…**



   Result: A window opens with information about the application and database versions, as well as important contact information.



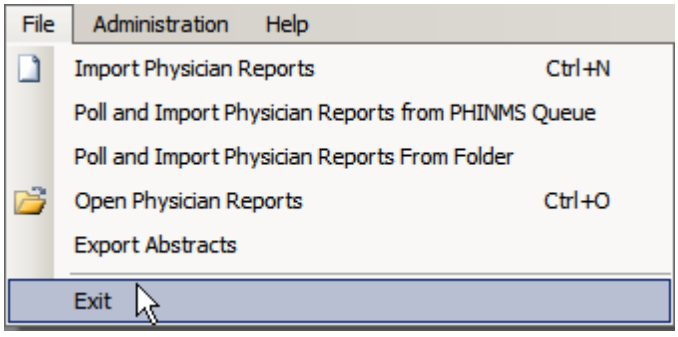
2. Click OK to close the **About** window.

Logging Out

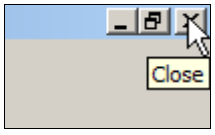
When logging out of and exiting eMaRC Plus, the application will ask you if you are sure you want to exit the program.

To log off /exit eMaRC Plus, complete these steps:

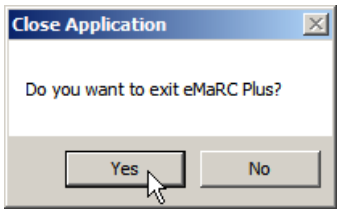
1. Exit eMaRC Plus. This can be done in 2 ways:
    a. Click on the **File** menu, and select **Exit.**



    b. Click the **X** in upper right corner of screen.



Result: The **Close Application** window opens, and asks if you are sure you want to exit the program.



2. Click **Yes**.

Result: The eMaRC Plus application **closes**.

Note

If you are logged into the Physician Reporting module and would like to switch to the ePath module, you must log out of eMaRC Plus and log back in, selecting the module within which you would like to work.

Chapter 3: Data Processing Flow

Learning Objectives

In this chapter, you will:

- Be made aware of data pre-processing requirements that must be carried out prior to importing CDA documents into the eMaRC Plus Physician Reporting module
- Become familiar with application-specific terms and abbreviations in order to fully understand each step of data processing
- Learn how CDA documents are automatically processed through the application to generate abstracts in the NAACCR record layout for data exchange including:
  - Storing of CDA document data into associated section tables
  - Defaulting of values for NAACCR data items for which the CDA documents does not contain information
  - Mapping of values from the CDA document to the associated NAACCR data item
  - Translating values in the CDA document to the standard NAACCR data item codes and format
  - The Multiple Record Management Process by which information included in multiple CDA documents received by the central cancer registry from the same reporting entity for the same patient and tumor will be automatically processed and consolidated in eMaRC Plus
- Learn about the purpose of the Processing Log and when and what type of warning messages get written to it

Overview

This chapter covers the basics of the eMaRC Plus Physician Reporting module. You'll learn about data pre-processing requirements, all of the ongoing, automated data processing that occurs in the module, and about what the Processing Log is.

Data Pre-processing Requirements

Prior to submitting data to a central cancer registry all EHR vendors MUST complete the testing and validation process with the Office of the National Coordinator - Authorized Testing and EHR Certification Bodies (ONC-ATCBs) to receive the required MU certifications. In addition, CDA documents received by central cancer registries from EHR vendors should be validated by CDA Validation Plus. CDA Validation Plus is a part of the Registry Plus software suite of publicly available free software programs for collecting and processing cancer registry data developed by CDC. CDA Validation Plus is a tool used to validate the structure, content, codes, and coding systems of CDA documents (based on XML) that are generated by EMR/EHR software systems and submitted to central cancer registries specifically for the purposes of cancer reporting. The application is used by EMR/EHR vendors to validate cancer CDA documents generated by their products and by central cancer registries to validate cancer CDA

documents during the on-boarding process for providers **and prior to subsequent processing in the Physician reporting module of eMaRC Plus**.

CDA Validation Plus performs validations based on the specifications in the Implementation Guide for Ambulatory Healthcare Provider Reporting to Central Cancer Registries, August 2012, Release 1.0 ("Cancer IG"), the standard identified for the MU Stage 2 cancer reporting objective and HL7 CDA ® Release 2 Implementation Guide: Reporting to Public Health Cancer Registries from Ambulatory Healthcare Providers, Release 1, DSTU Release 1.1 – US Realm, the standard identified for the MU Stage 3 cancer reporting objective.

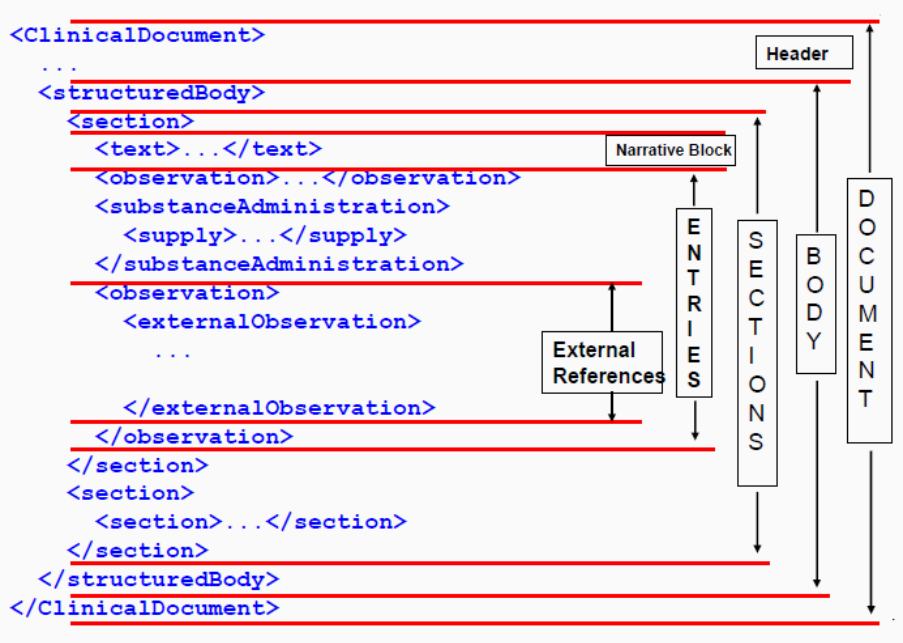
Glossary of Terms/Abbreviations

Cancer CDA document: The NAACCR Physician Reporting workgroup-specified Clinical Document Architecture document reported by the physician EHR to the central cancer registry. CDA is an XML document that consists of a header and a structured body. It is presented in this format: Header – includes patient information, author, creation date, document type, provider, etc. Body – includes diagnosis, patient details, medications, procedures, follow-up, etc. Information can be presented as free text in one or multiple sections, and also includes coded entries.

Major Components of a CDA document:

- A CDA document has a Header and a Body.
- A CDA document Body is comprised of Sections.
- A CDA Section contains one Narrative Block and zero to many Entries.
    - [1..1] Header
    - [1..1] Body
        - [1..*] Sections
            - [1..1] Narrative block
            - [0..*] Entries

Example of CDA XML Format Structure:



Section Record: A set of related data elements populated from the CDA document grouped by the various sections of the CDA document.

Section Table: The eMaRC Plus database location where section records are stored. There will be a section table for each set of related data elements, e.g., Demographic, Address, Payer, Social History, Cancer Diagnosis, Problems, Procedures, Results, Medications, etc.

CDA Document ID: A unique number assigned by the reporting entity that uniquely identifies the CDA document.

CDA Data Element Name: The name of the field in the CDA document.

CDA Cancer Diagnosis Entry: The component of the CDA document that contains the information about the patient's cancer (Diagnosis date, site, laterality histology, etc.).

NAACCR Data Item Name: The name of the mapped data item in the current NAACCR Standards for Cancer Registries, Volume II, Data Standards and Data Dictionary Record Layout. The NAACCR Data Item Number follows the Data Item Name in brackets, e.g., Date of Birth [#240].

Mapping: Transferring a data element in the CDA document as-is to a NAACCR data item in the NAACCR Record Layout.

Translating: Converting a data element value in the CDA document to the appropriate value NAACCR data item value via translation tables and/or algorithms.

Defaulting: Specifying a default value for any NAACCR data items for which the CDA document includes no information and can therefore not be populated with a value using information from the CDA document.

NAACCR Abstract Values: Coded values and textual information resulting from of a combination of mapping and translating to, and defaulting of coded NAACCR data items and

text fields from the Section Records (generated from the CDA document) using NAACCR coding conventions.

Abstract Reference Identifier (AbsRefID): A permanent unique identifier assigned to each NAACCR abstract generated by eMaRC Plus from imported CDA documents.

Facility Abstracts Table: The eMaRC Plus database location where mapped, translated, and defaulted NAACCR data item coded values and text fields are stored for each Section record generated by eMaRC Plus from imported CDA documents.

Processing Log: Document generated that includes warning messages and details pertinent to the mapping/translation process. Registries may choose to review this log and make corrections in eMaRC Plus or address any identified issues within the central registry software.

Multiple Record Management: The process by which information included in multiple CDA records received by the central cancer registry from the same reporting entity for the same patient and tumor will be automatically processed in eMaRC Plus. Although manual review of certain records may be suggested by information included in the Processing Log; no manual intervention will be required in eMaRC Plus (registries may choose to address identified issues in the central registry software).

Consolidated Abstract Values: Using the Multiple Record Management process (see Section 2), eMaRC Plus will automatically generate consolidated coded values/text from multiple NAACCR Abstract Values mapped from the same reporting entity for the same patient and tumor. The best Consolidated Value will be automatically determined on a data item by data item basis for all NAACCR data items to be consolidated across all Abstract Values mapped/translated from all CDA documents received. Consolidation is an on-going process as new reports are received.

Patient/Tumor/Reporting Entity Identifier (PTRID): A permanent unique identifier assigned to all abstract entries in the Facility and Consolidated abstracts tables for CDA records received from the same reporting entity for the same patient and tumor.

Consolidated Abstracts Table: The eMaRC Plus database location where consolidated NAACCR abstract values from multiple abstract values mapped from the same reporting entity for the same patient and tumor are stored.

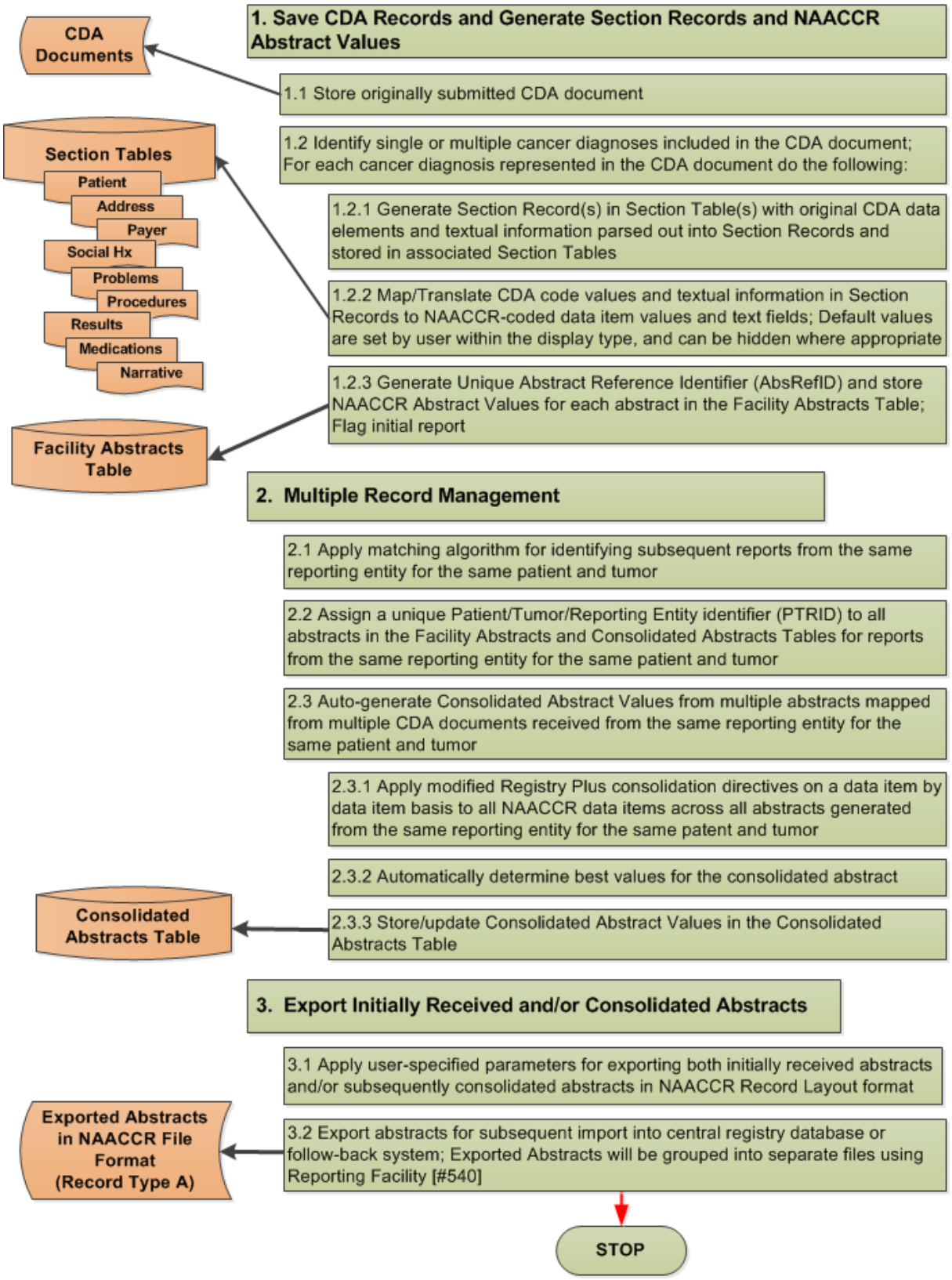
NAACCR Abstract: An abstract in standard NAACCR file format generated upon export of initially reported or consolidated abstracts out of eMaRC Plus:

Initially Reported Abstract: The abstract mapped from the first CDA report received from a reporting entity for a specific patient and tumor. eMaRC Plus will automatically generate Initially Reported Abstracts upon export from eMaRC Plus when specified by the user.

Consolidated Abstract: The abstract that is the culmination of the Multiple Record Management process (see Section 2 below). eMaRC Plus will automatically generate Consolidated Abstracts upon export from eMaRC Plus when specified by the user.

Technical Specifications

Data Flow Diagram for Processing CDA Physician Reports



Data Flow Detailed Description

1. Save CDA Records and Generate Section Records and NAACCR Abstract Values

1.1. Store originally submitted CDA document

All validation of CDA structure, content, codes systems will be performed using the Validation Tool prior to processing a CDA document within eMaRC Plus. An archived copy of the CDA document as originally submitted will be stored as a blob in a table in the eMaRC Plus database. eMaRC Plus provides functionality to archive and/or purge these documents as they accumulate over time.

1.2. Identify single or multiple cancer diagnoses included in the CDA document; For each cancer diagnosis represented in the CDA document do the following:

1.2.1. Generate Section Record(s) in Section Table(s) with original CDA information parsed out into Section Records and stored in associated Section Tables

For each Cancer Diagnosis Entry in the CDA document CDA data elements will be parsed out and Section Records will be generated which are stored in the appropriate Section Tables.

Section Record Tables store the data elements (or groups of related elements such as address) as individual rows. Section Tables include the data element, identifiers, value, code, code system, and other supporting information about the data element. They will all be linked to the same CDA document through the CDA Document ID. All Section Tables have a naming convention of DATA_ in the eMaRC Plus database. Please see Appendix A for documentation of the various Section Tables and the records and data with which they are populated.

Section Records include the CDA information to be mapped and translated as well as supplemental information that has no associated NAACCR data item, such as medication Name and Route of Administration. Separate rows are inserted into a table for elements that are repeated in the CDA document so that historical information is retained. For example, if multiple addresses for a patient are provided in a single CDA report, each address will create a separate row in the Address Section Table. Other examples include occupation and industry. Please see Appendix A for documentation of each of the Section Tables in the eMaRC Plus database and the data that they store.

If multiple cancer diagnoses exist within the CDA record, multiple Section Records will be generated. In the event that the CDA document includes multiple cancer Diagnosis Entries but does not provide any method of linkage between each Cancer Diagnosis Entry and data in other sections, then all data elements will be repeated in each Section Record generated.

1.2.2. Map/Translate CDA code values and textual information to NAACCR-coded data item values and text fields; Default values are set by user within the display type, and can be hidden where appropriate

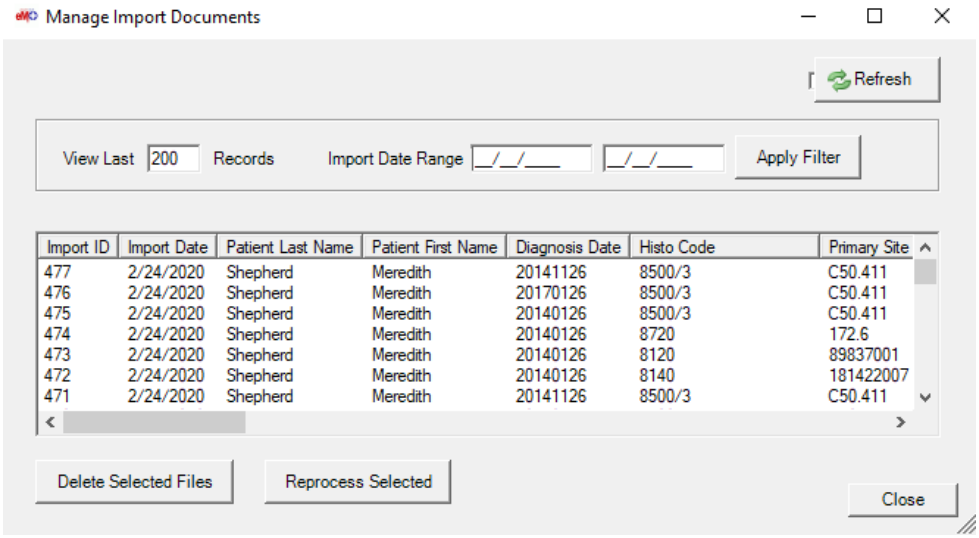
eMaRC Plus parses out individual data elements and textual information from each CDA document and maps each element to a corresponding NAACCR data item and/or text field when one exists. If a central registry wants to map supplemental

information in the CDA document to a non-standard data item, this data item will be defined as a state-specific data item in the State/Requestor area of the NAACCR record layout [#2220]. Each State-specific data item must be assigned a NAACCR Data Item Number in the range of 9550-9999, assigned to a columnar position(s) within the State/Requestor area (positions 2340 – 3339), and assigned a unique data item name.

To minimize the onus on the cancer registry of receiving the new physician CDA reporting source data stream, all mapping has been fully automated; no manual review of mapped information is required within eMaRC Plus. Defaulting, mapping, and translating of NAACCR data item values and text fields from the CDA document is accomplished using recommended user-specified default values (see Appendix B) and mapping and translation tables and rules (see **Mapping and Translation Guide**), developed by the Physician Reporting Workgroup.

Reprocessing Files (New Feature!)

Any files with diagnosis year of 2018 or later that were imported into eMaRC using version 6.0 were mapped to NAACCR Version 16.0 Record Layout. When upgrading eMaRC to version 7.0, the updater will automatically reprocess these files. Reprocessing will re-map content to NAACCR Version 18.0 Record Layout and apply other updated mapping and translation rules. A "Reprocess Selected" button has also been added as a new feature to enable users to manually reprocess files. To access, select Administration > Manage Import Documents.



1.2.3. Generate Unique Abstract Reference Identifier (AbsRefID) and store NAACCR abstract values for each abstract in the Facility Abstracts Table; Flag initial report

All NAACCR Abstract Values for individual NAACCR abstract entries will be generated from the Section Records containing mapped, translated, or defaulted

NAACCR Values and stored in the PHYSICIAN_FACILITYABSTRACT Table for each Cancer Diagnosis Entry with a unique AbsRefID assigned.

When a CDA document has more than one Cancer Diagnosis Entry, eMaRC Plus will create a separate abstract entry in the Facility Abstracts Table for each cancer diagnosis. Due to the fact that linkage and coding of procedures, treatment, and results for each of the multiple cancer diagnoses could possibly be incorrect and may warrant manual review (either within eMaRC Plus or the central registry software), eMaRC Plus will write a warning message to the Processing Log to indicate that multiple abstracts have been created representing the Multiple Cancer Diagnosis Entries.

It is quite possible that multiple CDA reports may be received from the same reporting entity for the same patient and tumor. eMaRC Plus assigns the abstract mapped from the first CDA report received a special "Initial Report" status code, enabling the registry to export the initial report, which may not be complete, for the purposes of Rapid Case Ascertainment (RCA), follow-back, etc.. A more complete consolidated abstract may be exported at a later date if desired (see Multiple Record Management, Section 2).

2. Multiple Record Management

2.1. Apply matching algorithm for identifying subsequent reports from the same reporting entity for the same patient and tumor

After receiving an initial CDA document for a patient and tumor from a particular reporting entity, eMaRC Plus will include a matching algorithm to identify and link any subsequent reports from that same facility for that patient and tumor. The matching algorithm will be applied to the following mapped NAACCR Data Item Values:

Medical Record Number [#2300] (patient identifier from the physician office), Date of Birth [#240], Social Security Number [#2320], Primary Site [#400], Behavior [#523], Histologic Type [#522], Laterality [#410], Diagnosis Date [#390], and NPI—Reporting Facility [#545].

The matching of tumor information will be accomplished using the **TLC Plus** (**T**umor **L**inkage and **C**onsolidation) logic utilized in the Registry Plus CRS Plus application, which is currently being enhanced to include automatic identification of the same tumor using the SEER Multiple Primary and Histology (MPH) rules. In the enhanced version, the set of directives (or "rules") that apply to a specific set of site/type combinations is called a rule set. At this time, we anticipate preparing rules sets to correspond to the following categories used in the SEER MPH rules: Head and Neck, Colon, Lung, Cutaneous Melanoma, Breast, Kidney, Renal Pelvis, Ureter, Bladder, and Other Urinary, Malignant Meninges, Brain, Spinal Cord, Cranial Nerves, Pituitary Gland, Craniopharyngeal Duct and Pineal Gland [Malignant Brain], Benign and Borderline Intracranial and CNS Tumors [Benign Brain], and Other sites.

Rule sets are being developed that will utilize the Site Pairs table, the generic HistoPairs table, any rule-set specific pairs (e.g., for Colon, pairs with a histology code indicating a polyp are handled differently than for other rule sets), as well as the time interval

between dates of diagnosis. The majority of MPH rules will be incorporated as time and resources allow.

In the meantime, a tumor will be deemed a match if all 4 characters of the ICD-O-3 Topography code, Behavior, Histologic Type, Laterality, and Diagnosis Date (within one month) are a match. This will result in a conservative approach which may generate separate abstract entries in the Facility Abstracts Table for subsequent reports received for the same patient and tumor from the same reporting entity. However, as the reports being linked are from the same reporting entity for the same patient and tumor, it is unlikely that these values will vary on subsequent reports with great frequency. Until the Enhanced MPH Tumor Linkage algorithms are developed and implemented in eMaRC Plus, it is anticipated that erroneously separated reports can be consolidated in the central registry software.

2.2. Assign a unique Patient/Tumor/Reporting Entity identifier (PTRID) to all abstracts in the Facility Abstracts and Consolidated Abstracts Tables for reports from the same reporting entity for the same patient and tumor

When the matching algorithm identifies any subsequent reports from the same facility for the same patient and tumor, a permanent unique Patient/Tumor/Reporting Entity identifier (PTRID) will be assigned to the initial abstract entry and all abstracts based upon subsequent reports in the PHYSICIAN_FACILITYABSTRACT Table as well as the consolidated abstract in the PHYSICIAN_CONSOLIDATEDABSTRACT Table.

2.3. Auto-generate consolidated abstract values from multiple abstracts mapped from multiple CDA documents received from the same reporting entity for the same patient and tumor

2.3.1. Apply modified Registry Plus consolidation directives on a data item by data item basis to all NAACCR data items across all abstracts generated from the same reporting entity for the same patient and tumor

The Registry Plus Central Registry Software (CRS Plus) has an extensive interface to answer the question, given multiple reports on the same patient and tumor, what is the best value for each data item to be stored in a consolidated record for the patient and for the tumor?

To complete data item consolidation, CRS Plus applies **consolidation directives** or automated “rules” for each data item. Consolidation directives define how data from two or more linked records are evaluated to select a final "best" value for each data item in the consolidated record. Consolidation compares values from the incoming record and all historical abstracts for the PTRID (the consolidated value is not utilized).

Directives may be used alone or in sequence to define an automated consolidation rule for each field. In CRS Plus, sequenced directives are applied in user-defined order until a consolidation decision is reached (only one value remains) or all directives are exhausted. When a string of directives is completed with no single value remaining, the record is placed in the CRS Plus pending file for manual review. However, the failure of a single field does not halt the consolidation

process. All fields proceed through the consolidation process with an outcome of a selected consolidated data value or manual review.

Modified consolidation directives have been developed for the CDA module of eMaRC Plus that address 2 factors**: 1) all abstract values to be consolidated will be reported by the same facility, and 2) all directives will successfully consolidate data items so that no manual review is required.** Thus no manual process will be needed for processing multiple reports on the same patient and tumor from the same provider.

To illustrate a successful consolidation directive requiring no manual review, the consolidation rule for Social Security Number [#2320] (SSN) is to select a known value over unknown, otherwise select the value occurring most frequently, otherwise select the value from the abstract with the most recent patient contact. This consolidation rule appears in directive form as: 'KnownOverUnknown;MostFrequent;MostRecent'. The following example illustrates how the consolidated SSN value is selected through the application of these directives:

AbsRefID	SocSecNum	DateLastContact
00000012	123456789	01/14/2013
00000301	987654321	01/15/2013
00000459	999999999	01/15/2013
00001010	123456789	01/24/2013
00002330	987654321	02/15/2013

Selected Value: 987654321

(99999999 eliminated as unknown value. Since 123456789 and 987654321 both occur twice, the value from abstract 00002330 is automatically selected based on the most recent Date of Last Contact).

As subsequent CDA documents are received for the same PTRID, data values for individual data items are compared and consolidation directives are applied to determine the best Consolidated Abstract Values to be stored in the in the Consolidated Abstracts Table; Consolidated Abstract Values will be continually and automatically updated with any new or revised information in the Abstract Values generated from the subsequent reports.

There is a library of general-purpose directives that can be selected. Directives are written in a special purpose vocabulary and syntax created for Registry Plus. Individual directives can be strung together and are then applied to data values in the specified order until only one data value remains. Please see the separate guide for a complete listing of individual eMaRC Plus CDA Module consolidation directives and their definitions.

2.3.2. Automatically determine best values for the consolidated abstract

As stated above, all consolidation directives for data items to be consolidated across multiple Abstract Values in the Facility Abstracts Table will be modified so that no manual review is ever required and all consolidation will occur

automatically. Currently, in the CDA Module of eMaRC Plus all fields that are included in the **TblConsolidationRules** table in the **pathlab.mdb** with an active status of "1" are being consolidated. If no consolidation directives exist for a particular data item, the Abstract Values from the initial abstract entry are retained in the PHYSICIAN_CONSOLIDATEDABSTRACT Table and never get updated by the automated consolidation process. Please see **eMaRC Plus Physician Reporting_Consolidation Directives** for a listing of selected columns of the eMaRC Plus CDA Module TblConsolidationRules table for the individual directives and directive strings currently specified for fields being automatically consolidated. The TblConsolidationRules table also defines unknown values for data items which include the KnownOverUnknown consolidation directive.

2.3.3. Store/update Consolidated Abstract Values in the Consolidated Abstracts Table

As subsequent CDA documents are received for the same patient and tumor from the same reporting facility, the Consolidated Abstract Values in the PHYSICIAN_CONSOLIDATEDABSTRACT Table will be continually and automatically updated with any new or revised information in the Abstract Values generated from the subsequent reports.

Section 2 Summary: This Multiple Record Management process along with highly-specific abstract export options (see Section 3) will accommodate registries that carry out RCA, or intend to follow-back on the initial report received, and/or allow the registry to wait a user-specified time period prior to exporting a single, consolidated (assumedly more complete) abstract.

3. Export Initially Received and/or Consolidated Abstracts

3.1. Apply user-specified parameters for exporting both initially received abstracts and/or subsequently consolidated abstracts in NAACCR Record Layout format

Export can be carried out manually or automatically from the DOS command Line. The Export Abstracts window allows for highly-specific export of abstracts to include only those abstracts of interest to the central registry.

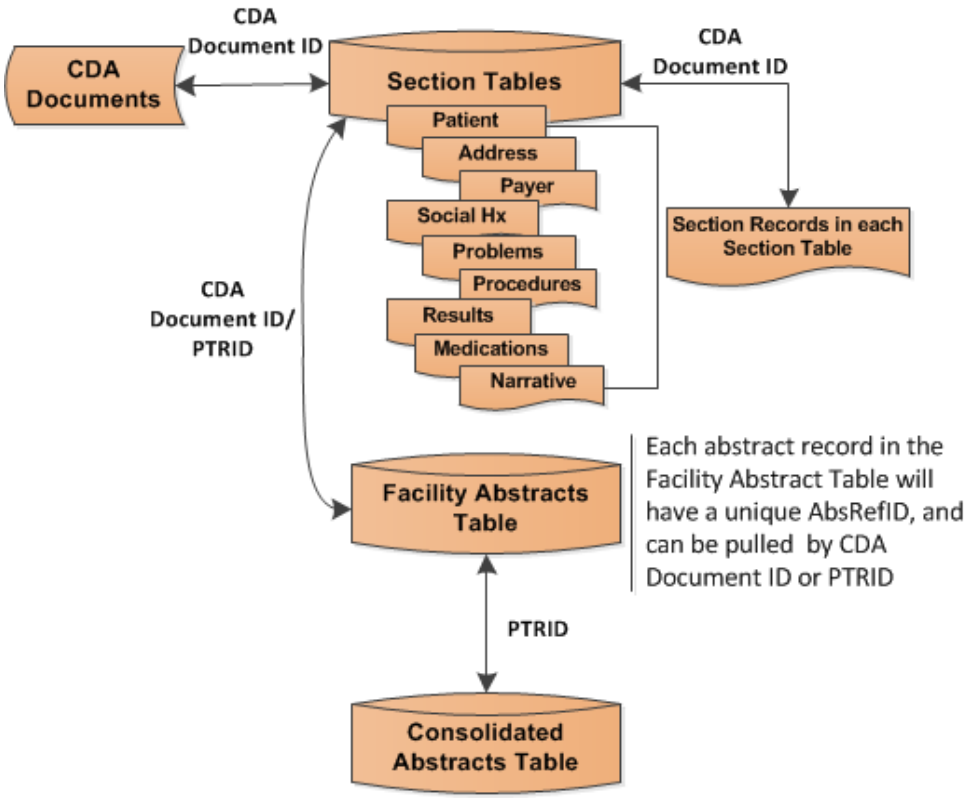
3.2. Export abstracts for subsequent import into central registry database or follow-back system; Exported Abstracts will be grouped into separate files using Reporting Facility [#540]

Regardless of any of the Specific Export Options selected (excluding the Export All Options) all abstracts exported out of the eMaRC Plus CDA module are in the NAACCR Record Type A format and are grouped into separate files by the mapped Reporting Facility ID. Users can utilize the File Save Option to specify whether or not they would like to manually enter a filename for each exported file of abstracts or if they would like eMaRC Plus to automatically name each exported file of abstracts using the Reporting Facility ID.

The PTRID will be exported with each abstract, enabling the central registry to link back to the eMaRC Plus CDA database for any patient or group of patients. The **PTRID will be 10 characters in length and located in positions 20911 to 20920 in the NAACCR Record Layout** in abstracts exported out of the eMaRC Plus CDA module.

Please note: Currently the only export of data from eMaRC Plus that is supported by a user interface is the export of NAACCR abstracts in the NAACCR Record Layout. As a result, extraction of original CDA information stored in Section Records and Tables can be achieved by querying the eMaRC Plus database. A relational key exists in each table/record that that can be used to link the various tables, as shown below.

eMaRC Plus CDA Database Relational Keys



A separate interface for directly querying the database may be considered for a future release.

Chapter 4: Importing CDA Documents

Learning Objectives

In this chapter, you will learn to:

- Manually import CDA documents into the Physician Reporting module of eMaRC Plus
- Check for and import CDA documents from the PHINMS queue
- Check for and import CDA documents from a user-specified folder
- Review any errors occurring upon import of CDA document

Overview

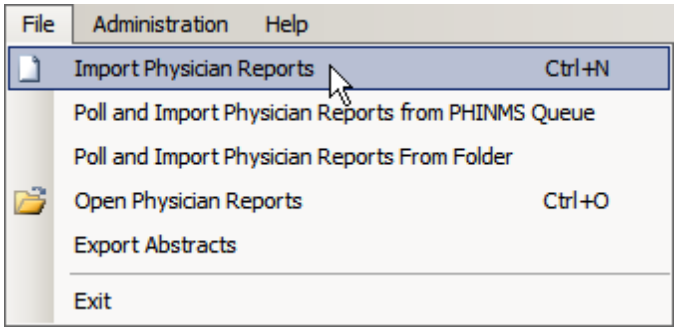
This chapter covers the import of CDA documents into the Physician Reporting module of eMaRC Plus. You can import CDA documents in three ways: manually, from PHINMS, or from a user-specified folder.

Importing Physician Reports Manually

Although CDA documents can be loaded automatically from a designated folder through or via the PHINMS queue, you may find yourself in a situation where you need to manually import CDA documents.

To import CDA documents manually, complete these steps:

1. Open the **Open File** window. This can be done in 3 ways:
    a. Click on the **File** menu, and select **Import Physician Reports**.

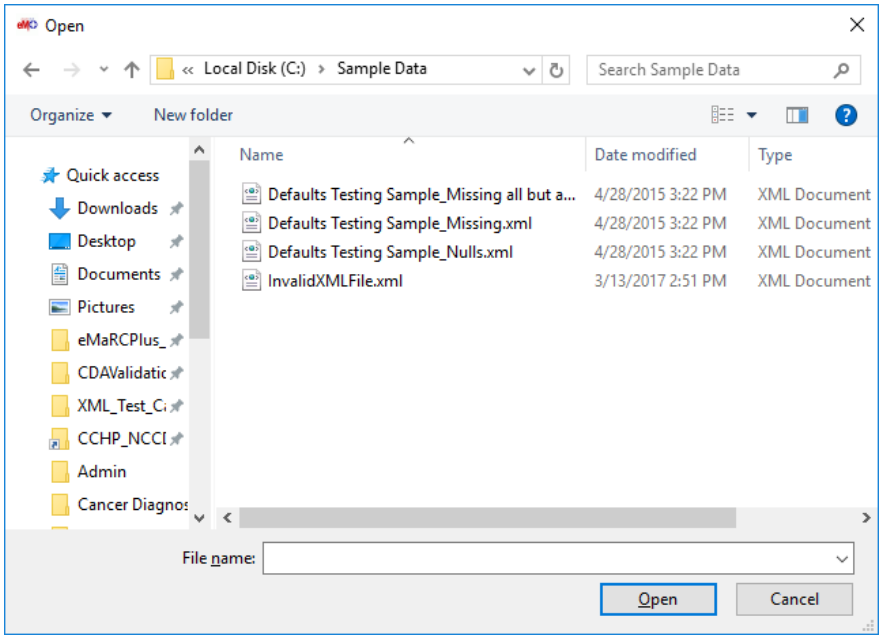


    b. Use the keystroke **Ctrl+N.**

    c. Click the **Import Physician Reports** 

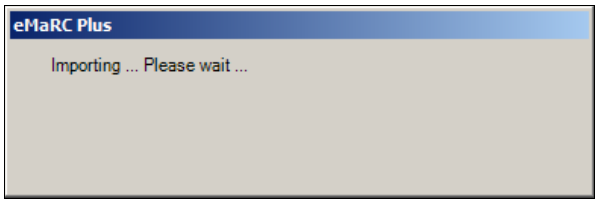
 icon on the toolbar.

Result: The **Open File** window opens.



2. **Navigate** to the CDA document on your computer or network, **select the file** and click **Open**. In the example shown, a CDA document named Test sample for physician.xml is being imported.

   Result: The application lets you know that it is importing the file.



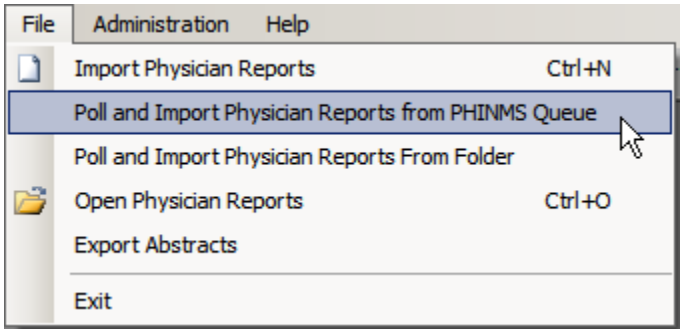
   Upon successful import the original CDA document will be stored in a "blob" in the eMaRC Plus database, will be automatically processed through all of the detailed Data Flow steps, and all of the appropriate fields in the Section, Facility Abstracts, and Consolidated Abstracts Tables will be populated. Once the import has completed, you are returned to the eMaRC Plus Physician Module main window, where you can proceed to use any of the available functions, or choose to manually import additional files.

Poll and Import Physician Reports from PHINMS Queue

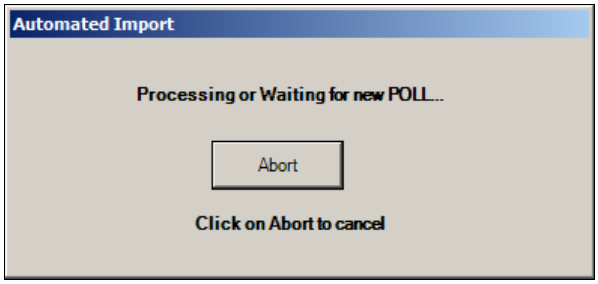
More commonly, multiple CDA documents will be automatically imported sequentially. If your state is receiving Physician reports via PHINMS, you can poll the PHINMS Queue for any CDA documents awaiting import.

To check for and import CDA documents from the PHINMS queue, complete these steps:

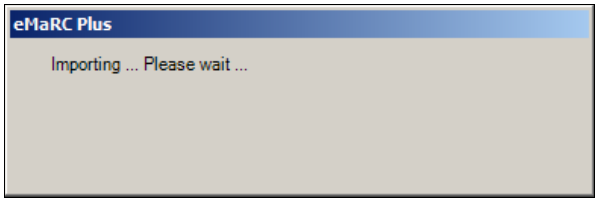
1. Click on the **File** menu, and select **Poll and Import Physician Reports from PHINMS Queue**.



Result: The **Automated Import** window opens, and the application checks the PHINMS queue table in the eMaRC Plus database for any new CDA documents received that may be waiting for import.

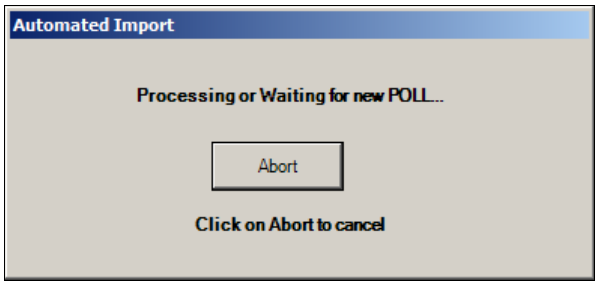


The Automated Import window stays open until the application finds a CDA document in the PHINMS queue table to import, when it finds a file to import, the application lets you know that it is importing the file.

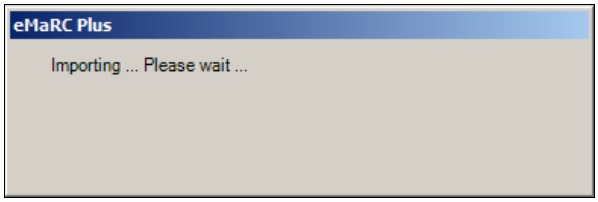


Upon successful import the original CDA document will be stored in a "blob" in the eMaRC Plus database, will be automatically processed through all of the detailed Data Flow steps, and all of the appropriate fields in the Section, Facility Abstracts, and Consolidated Abstracts Tables will be populated.

In addition, the file in the PHINMS Queue table will be flagged as imported to prevent redundant importing of the same CDA document. At this point, the Automated Import window **re-opens**, and the application checks the PHINMS queue table in the eMaRC Plus database for any other new CDA documents received that have not been flagged as imported.



Again, the Automated Import window stays open until the application finds a CDA document in the PHINMS Queue table that has not yet been imported, and then the following window is displayed to let you know when the file is being imported:



A reiterative process occurs; every few seconds the application will check the PHINMS Queue table in the database to see if there are any new documents to import and will import them one at a time.

Tip

Once initiated, this process reiterates until **Abort** is clicked on the **Automated Import** window. As a result, States using PHINMS can have this feature running in the background all of the time for 24 hours 7 days a week, to continually poll for any new documents received and automatically import and process them.

2. Click **Abort** to stop the polling and import process.

   Result: You are returned to the eMaRC Plus Physician Module main window, where you can proceed to use any of the available functions.

Viewing PHINMS Queue for Import Errors

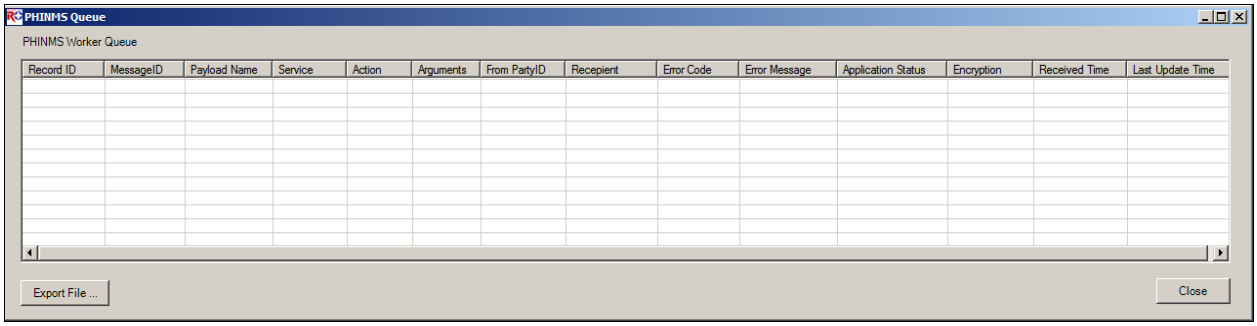
If the import of a CDA document from the PHINMS Queue encounters an error, eMaRC Plus will open a window with the error displayed to allow the user review the error, and then click **OK** to close the error message window. However, the application allows the user to view CDA documents residing in the PHINMS queue, review for import errors, and export errant documents as desired.

To obtain more information on the import error, and be able to export the errant CDA document, complete these steps:

1. Click on the **PHINMS Queue** 

icon on the toolbar.

   Result: The **PHINMS Queue** window opens, and displays all CDA documents in the PHINMS queue, with each row representing an individual CDA document. The documents that were unsuccessfully imported will have the error displayed in the **ApplicationStatus** column to facilitate the trouble-shooting of the error.



In general, this window is used only for troubleshooting purposes on the rare occurrence of an error when eMaRC Plus tries to import from the PHINMSQUEUE, To investigate the error, this window allows files to be exported out of the table, and also allows the user to examine the other columns of the PHINMS Queue table in the database.

2. To export a document for further examination, select the row corresponding to the DCDA document you would like to export and click **Export**.

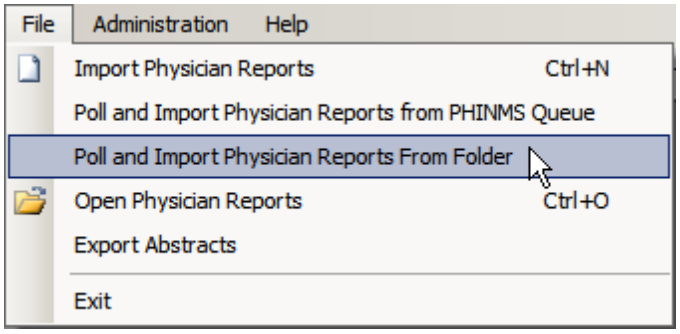
   Result: The selected file will be exported. Please note that you can export only one file at a time.

Poll and Import Physician Reports from Folder

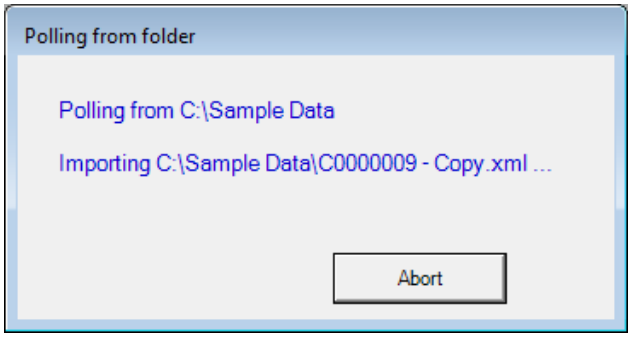
As mentioned earlier, multiple CDA documents can be sequentially imported automatically rather than manually. You can automatically import CDA documents via PHINMS if your state has PHINMS set up, or if not, you can specify and utilize a **folder** for the application to automatically poll for any CDA documents awaiting import (see Managing System Configuration Settings, in Chapter 7 of the is manual).

To check for and import CDA documents from a specified folder, complete these steps:

1. Click on the **File** menu, and select **Poll and Import Physician Reports from Folder**.



   Result: The **Automated Import** window opens, and the application checks the folder specified upon setup of the application any new CDA documents received that may be waiting for import.



   The Automated Import window stays open until the application finds a CDA document in the folder to import and when it finds a file to import, the files will be removed from that folder.

If the file(s) have already been imported and are in the database, they will remain in the folder. eMaRC checks for files already imported (those with the same file name).

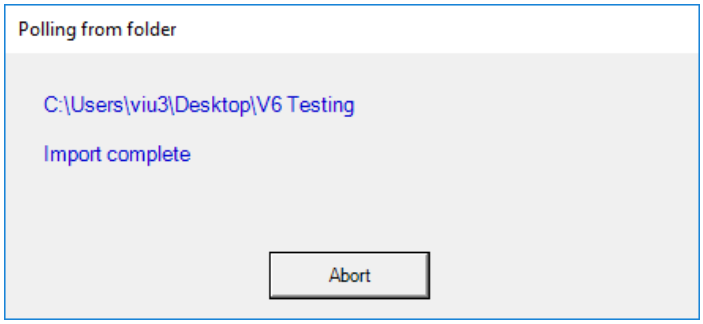
When using the **folder option** for automatic import, upon successful import the original CDA document will **be moved from the folder to an Archive folder** (specified upon setup of the application) to prevent redundant importing of the same CDA document. The document is also stored as a "blob" in the eMaRC Plus database, and will be automatically processed through all of the detailed Data Flow steps, and all of the appropriate fields in the Section, Facility Abstracts, and Consolidated Abstracts Tables will be populated.

As with automated import via PHINMS, at this point the Automated Import window **re-opens**, and the application checks the specified folder for any other new CDA documents loaded into the folder. As with the PHINMS option, a reiterative process occurs; every few seconds the application will check the folder see if there are any new documents to import and will import them one at a time.

Once initiated, this process reiterates until **Abort** is clicked on in the **Automated Import** window. As a result, you can have this feature running in the background for 24 hours 7 days a week, to continually check for any new documents received and automatically import and process them.

2. Click **Abort** to stop the polling and import process.

Result: You are returned to the eMaRC Plus Physician Module main window, where you can proceed to use any of the available functions.



Chapter 5: Automatically Importing Using DOS Command

Learning Objectives

In this chapter, you will learn to:

- Use the DOS Command Line to automatically import cancer CDA documents using the DOS Command Line.

Overview

This chapter covers instructions regarding running commands from the DOS prompt to import CDA documents. These imports can be scheduled so that they run automatically at a specified time.

Running Physician Imports from the DOS Command Line

1. The command line interface can be used to import HL7 files, PIPE delimited file, and PHINMS Queue.
2. If you are importing from a folder structure:
    a. We recommend that the source folder name **DOES NOT** contain spaces. The command line will not run properly.
        i. For example, you cannot have folder names like Documents/HL7 Files. Instead, name the folder Documents/HL7Files
3. Importing files may take several minutes depending upon the size of the files.
4. Some common mistakes are:
    a. Trying to import an already imported file
    b. Wrong file or format (e.g., Binary file)

How to import data using command line interface

1. Run command Prompt
    a. Windows XP user
        i. Click on Start, then select Run
        ii. Type cmd in “Open” input box and press enter
    b. Windows Vista/Windows 7/Windows server 2008 user
        i. Type cmd in the Vista Start Run box

ii. Use the keyboard shortcut combination Ctrl + Shift + Enter instead of just pressing Enter.

iii. This will open the Command Prompt in Administrator mode.

2. Once you are in command prompt

a. **Importing CDA Messages from a Folder**

i. Type CD\ and press enter key to get on root prompt (i.e. C:\ prompt)

ii. Type **CD eMaRCPlus** (or other folder name where eMaRCplus.exe is located) and press **enter** key

iii. Type the following command with parameters and press enter

eMaRCPlus.exe module=2 file=C:\YourFileLocation fileformat=CDA user=YourUserID pwd=YourPassword

(Replace "C:\YourFileLocation" with the folder location that you would like to import from, "YourUserID" with your user ID, etc.)

Chapter 6: Opening/Searching/Viewing Records

Learning Objectives

In this chapter, you will learn:

- How to open single or multiple CDA documents by manually selecting individual CDA documents from a list of all documents in the database and view CDA document(s) and NAACCR abstract(s) side-by-side on the CDA Workbench
- How to search for and concurrently view a user-generated batch of CDA documents and NAACCR abstracts side-by-side on the CDA Workbench
- About the various functions and features on the CDA Workbench and how to use them to review CDA documents and their associated auto-generated abstracts
- About the purpose of the Processing Log and when and what type of warning messages get written to it
- How to print displayed CDA document(s)
- How to view the CDA document raw data
- How to view/export automated abstract consolidation results
- How to print displayed auto-generated abstract(s)
- How to view and export automatic data item consolidation results

Overview

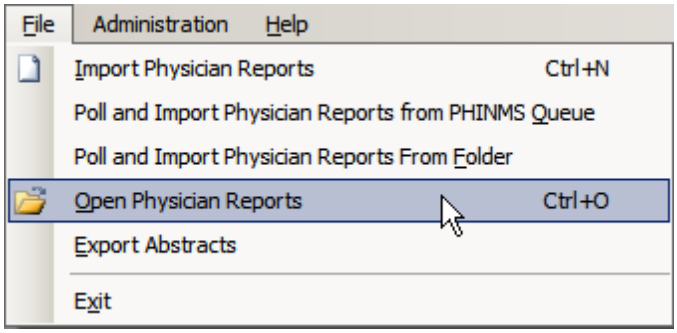
This chapter covers the basics of viewing and printing CDA documents and auto-generated abstracts in the eMaRC Plus Physician Reporting module. You'll learn about the different ways you can open CDA documents and abstracts, about the CDA Workbench and all of its features, as well as the functions available for the CDA documents and abstracts being viewed. There are two ways to open Physician Reports for viewing in eMaRC Plus:

- Opening individual CDA documents
- Searching for and generating batches of CDA documents and abstracts for review

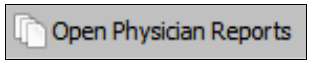
Opening Individual Physician Reports

To open individual CDA documents in the CDA Workbench, complete these steps:

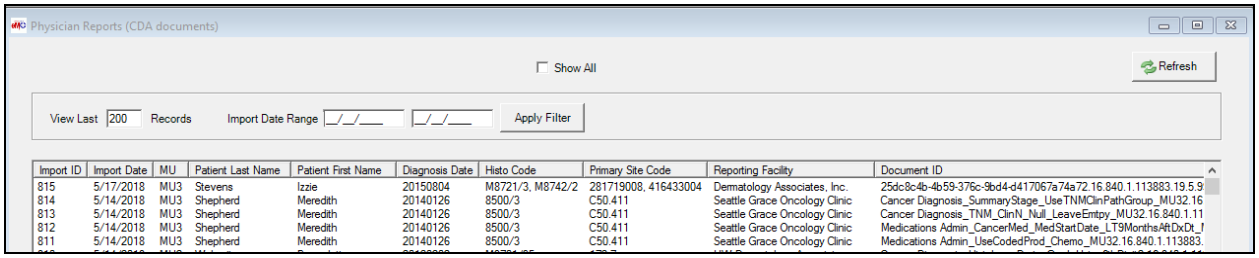
1. Open the **Physician Reports (CDA documents)** window. This can be done in 3 ways:
    a. Click on the **File** menu, and select **Open Physician Reports**.



b. Use the keystroke **Ctrl+O.**

c. Click the **Open Physician Reports**  icon on the toolbar.

Result: The **Physician Reports (CDA documents)** window opens.



The Physician Reports (CDA documents) window contains these columns for all of the CDA documents in the PHINMS Queue:

Column Heading	Description
Import ID	The eMaRC Plus internally-assigned number for the imported document
Import Date	A Date stamp of when the CDA document was imported into eMaRC Plus
MU	The Meaningful Use Implementation Guide version (MU2 or MU3)
Patient Last Name	Patient's last name
Patient First Name	Patient's first name
Reporting Facility	The name of the reporting facility that submitted the CDA document
Diagnosis Date	Date of diagnosis
Histology Code	The histology code value(s) in the CDA document
Primary Site Code	The primary site code value(s) in the CDA document

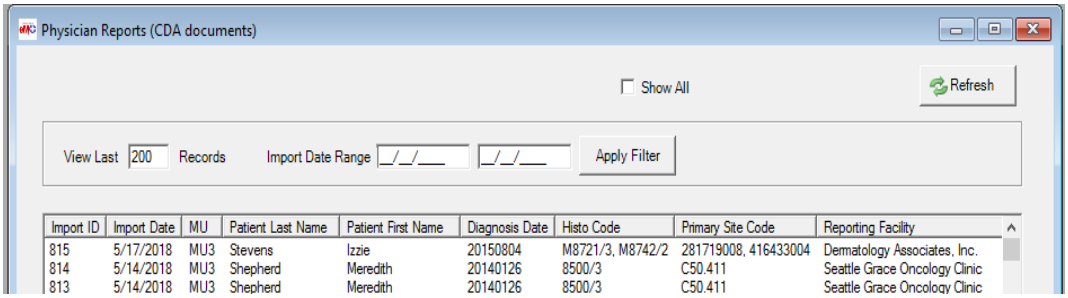
Column Heading	Description
Document ID	The identifier (root and extension) of the imported CDA document
Document Name/Path	The name and file location of the imported CDA document
Generated Date	The date the sending facility generated the file

Note

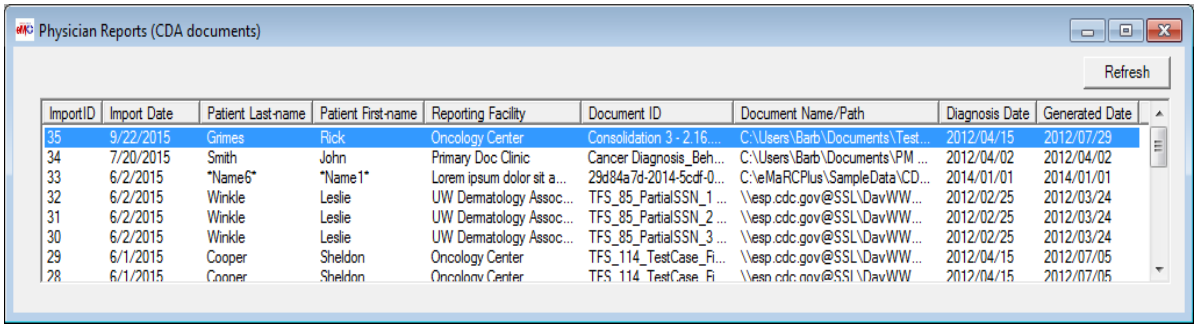
The displayed CDA documents are sorted be descending Import Date/Time by default. To sort the listed documents by any of the other columns, click on the column header of your choice. One click will sort the documents in ascending order of the values in the column, two clicks will sort the documents in descending order of the values in the column. Additionally, the order of the columns can be rearranged by clicking and dragging a column to move it to a different location.

Tip

If additional CDA documents are loaded into the application after you have opened the Physician Reports (CDA documents) window, simply click Refresh to view the new documents in the listing. Additionally, the window will default to displaying the last 200 reports imported. You can change this by: 1) checking the "Show All" box, which will display all of the CDA reports ever imported; 2) changing the number of records in the "View Last X Records" box; or 3) entering date ranges in the "Import Date Range" boxes:

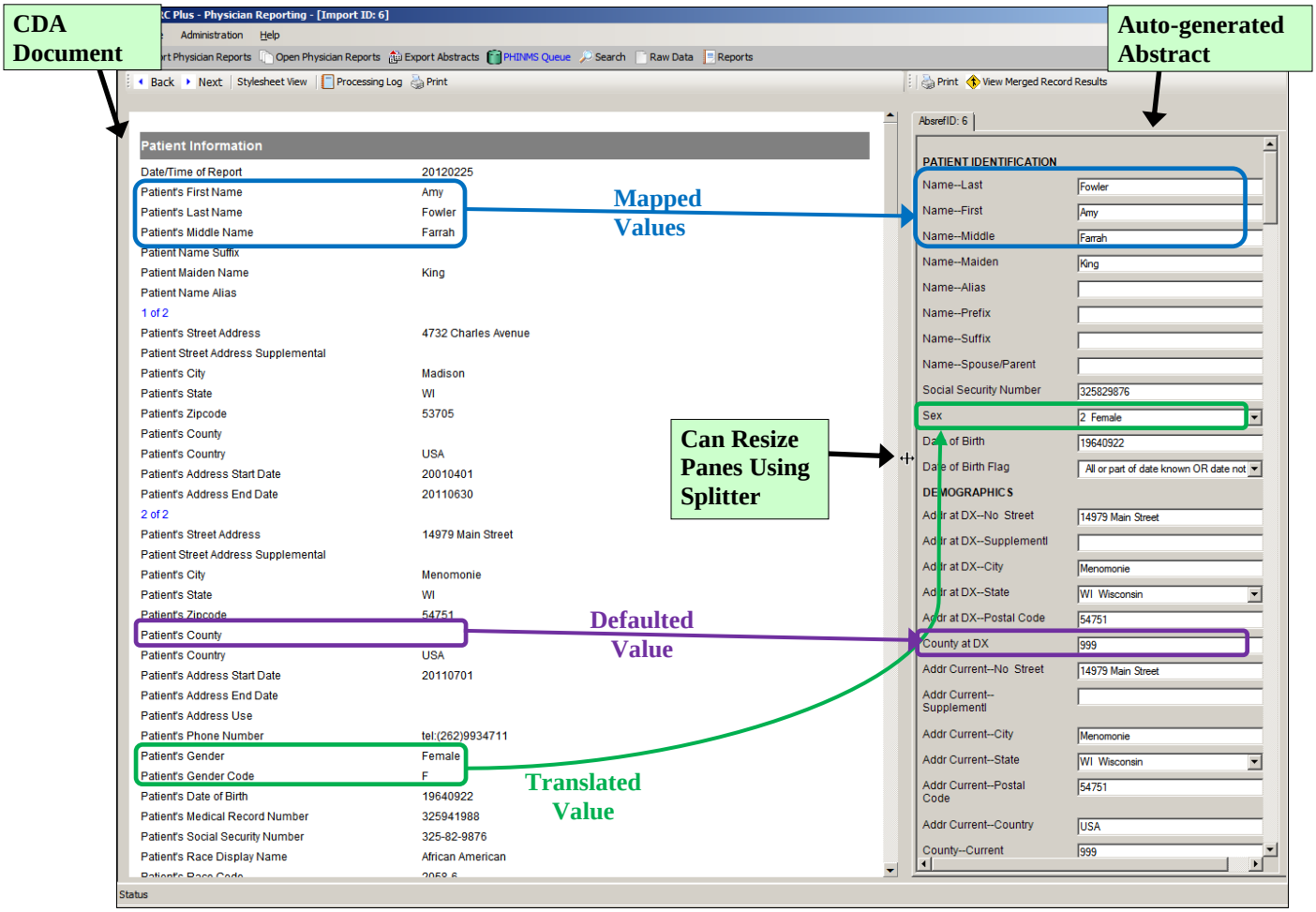


2. To view a CDA document and its associated auto-generated abstract in the CDA Workbench, **double click the row** of the document that you would like to open.



Result: The **selected CDA document** and its associated auto-generated **abstract** are opened in the **CDA Workbench**.

The CDA Workbench



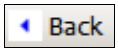
Upon import of CDA documents into the Physician Reporting module of eMaRC Plus the among many automated processing steps is the generation of NAACCR formatted abstract values that will eventually be exported out of the application in NAACCR file format. The window which is used to review the CDA document and auto-generated abstract in a side-by-side fashion is called the **CDA Workbench**.

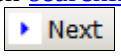
When you open a CDA document, the workbench opens and displays the Physician CDA document on the left and the auto-generated abstract on the right. The display of CDA document information on the right is generated by parsing the information directly from the CDA document. The display of abstract information on the right is generated by the **defaulting**, **mapping**, and **translation** processes that run in the background upon import into the application. In the CDA document and abstract displayed above, an example of the application of a default value is shown in **purple**, an example of mapping is shown in **blue**, and an example of translation is shown in **green.** See Appendix B and the Mapping and Translation Guide for granular level details of the defaulting, mapping, and translation processes.

When you left-click and hold your mouse on the vertical divider bar in the center of the window, a splitter is highlighted which you can drag to the left or right to resize the view

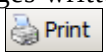
of the CDA document information or abstract information, and the application remembers your last placement of the divider bar.

As with all of the Registry Plus products, this interface is customizable; to a certain degree you can specify what CDA document data elements to display within the document window pane on the right, and the abstract window pane is basically a highly customizable "display type", where the user can specify what fields to display in in what order, can group fields into sections with customized headers, and can set properties for each of the fields, such as default values.

The icons located above the CDA document view apply to the CDA document. When searching for and opening multiple CDA documents, you can use the **Back** 

and **Next** 

icons to navigate through the CDA documents in the user-generated batch of documents. You can click the **Processing Log** 

icon to view any application-generated messages written to the processing Log upon import of the CDA document(s), and you can click the **Print** 

icon to print the CDA document(s). The icons located over the Abstract view apply to the abstract. You can print the abstract by clicking the **Print** 

icon, and you can view abstract consolidation results for multiple abstracts generated from multiple CDA documents submitted for the same PTRID by clicking the **View Merged Record Results** 

icon.

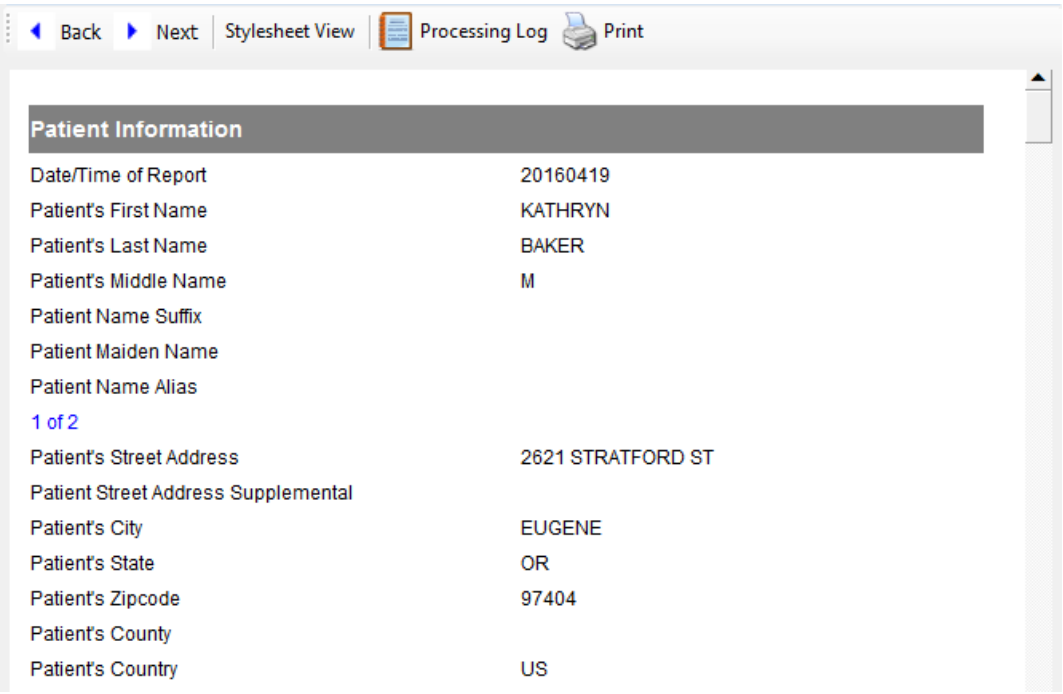
Within the ePath Module, coders use the ePath Workbench to review or code additional data items such as tumor primary site, histology, and grade by reviewing the text of path reports. As the intent of the Physician Reporting Module is to be entirely automated, after initial set up, verification, and testing there will be virtually no need for use of the CDA workbench.

The CDA Document Views

To facilitate review of the information in the CDA document, the document can be viewed in two different formats, the **Data View** and the **Stylesheet View**.

The Data View

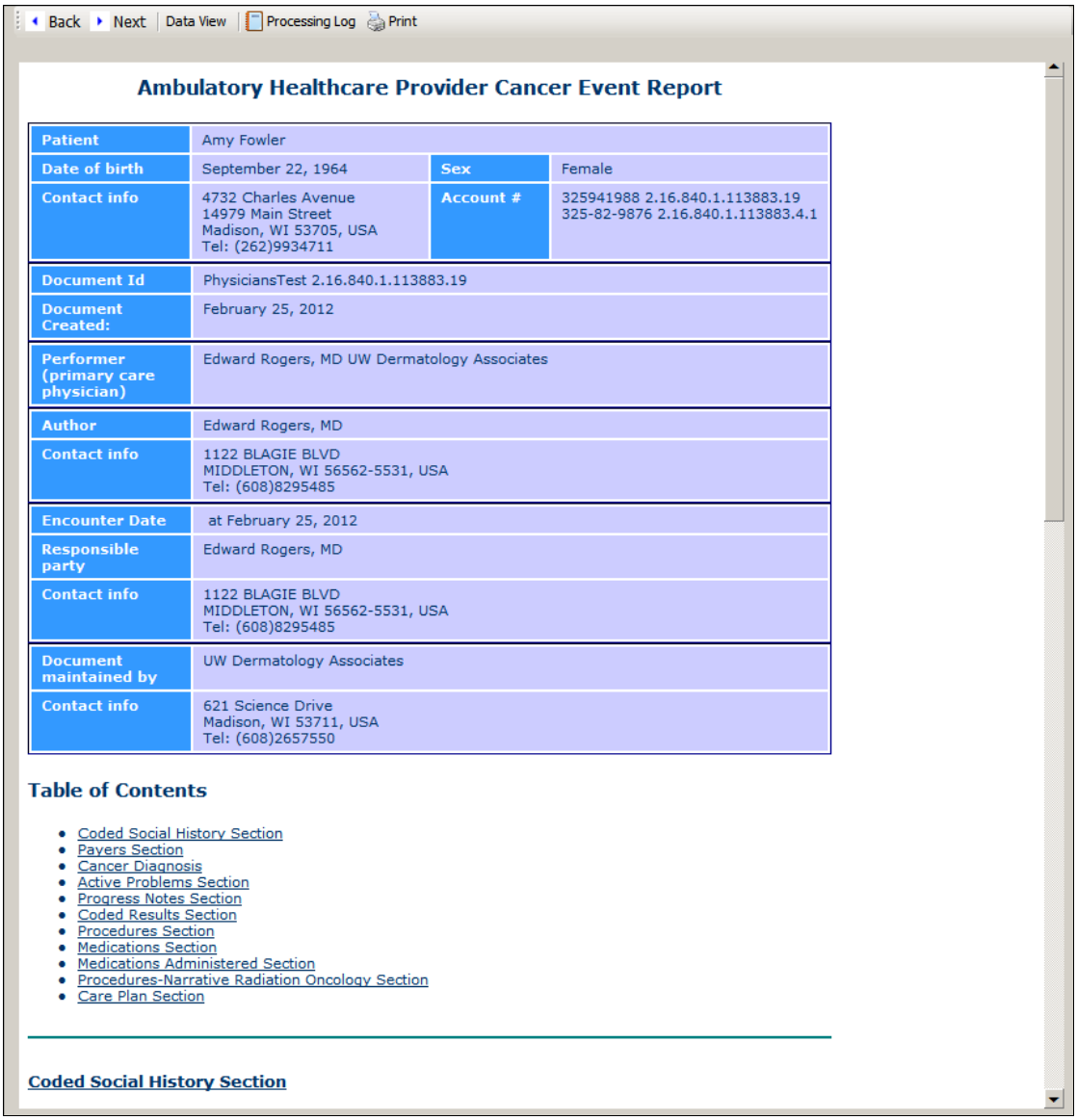
The parsed out CDA document information is displayed in the Data View by default. The Data View displays the CDA data elements in a single, easy-to-read column.



The Stylesheet View

To view the CDA document in the Stylesheet View, click on the View with stylesheet icon located above the CDA document view. In order to display XML documents, it is necessary to have a mechanism to describe how the document should be displayed. One of these mechanisms is Cascading Style Sheets (CSS), but XSL (eXtensible Stylesheet Language) is the preferred style sheet language of XML, and XSL is far more sophisticated than the CSS used by HTML. XSL consists of two parts:1) a method for transforming XML documents, and 2) a method for formatting XML documents. When viewing the CDA document using the Stylesheet mode the parsed out CDA document is displayed using the cda.xsl style sheet file. The Stylesheet View displays the CDA data elements in a user-friendly, nicely-formatted style which includes a hyperlinked Table of Contents to each section of the CDA document.

Note The Stylesheet View must be used with caution. It only shows content from the "Narrative Text" portion of the CDA document. It is possible that the coded values in the CDA document will not always match the narrative text content, so both views should reviewed if their discrepancies.



Note that when viewing the CDA document in the Stylesheet View the View with stylesheet icon on the toolbar is replaced with the Data View icon. To return to the Data View of the CDA document, click the Data View icon (and notice that the Data View icon on the toolbar is replaced with the View with stylesheet icon).

The Processing Log

During import of a CDA document into the eMaRC Plus Physician Reporting module, any warning messages and important details pertinent to the mapping/translation process are written to the Processing Log. Registries may choose to review this log and address any identified issues within the central registry software. The following table documents when and what types of messages are written to the Processing Log:

Section	Issue to Document	Processing Log Message
Active Problems	More than 10 Problems	Code <code+displayName> not mapped…more than 10 Active problems submitted.
Active Problems	Code not included in the NAACCR list of acceptable Comorbidities/Complications and Secondary Diagnoses	Code <code+displayName> not mapped…code not included in the NAACCR list of acceptable Comorbid/Compl or Secondary Diagnoses
Cancer Diagnosis	ICD10 CM does not have the morphology codes that were in ICD9 CM. Histology codes are derived from the ICD10 diagnosis codes	Histology code was an ICD-10-CM diagnosis code in CDA Report. Abstract has been populated with Histology Code derived from this code through crosswalk.
Cancer Diagnosis	Histology code null/missing; derived from primary site code	Histology code was unknown or null in CDA Report. Abstract has been populated with Histology Code derived from CDA primary site code ([ICD9 or ICD10 CM] diagnosis code) through crosswalk.
Cancer Diagnosis	Behavior code null/missing; derived from histology or primary site code. Behavior code not provided but free text is provided; mapped to text field.	Behavior code was unknown or null in CDA Report. Abstract has been populated with Behavior Code derived from CDA primary site code ([ICD9 or ICD10] CM diagnosis code) through crosswalk. Behavior code was unknown or null in CDA Report. Abstract has been populated with the fifth digit (Behavior Code) from the CDA Histologic Type. "Behavior code was unknown or null in CDA Report; original text behavior information is provided in Text--Histology Title [#2590]."
Cancer Diagnosis	Laterality code null/missing; derived from primary site code	Laterality code was unknown or null in CDA Report. Abstract has been populated with Laterality derived from NAACCR Primary Site [(ICD10 CM diagnosis code)] through crosswalk
Cancer Diagnosis	Grade code not provided; derived	Grade code was assigned from

Section	Issue to Document	Processing Log Message
	from histology code (6th digit)	the Abstract's histology code because it has grade as part of the definition.
Cancer Diagnosis	Diagnostic Confirmation null/missing but free text is provided; mapped to text field	Diagnostic Confirmation code was unknown or null in CDA Report; original text Diagnostic Confirmation information is provided.
Cancer Diagnosis	Invalid value for TNM Clinical or Pathologic Stage Group in CDA document	TNM [Clinical or Pathologic] Stage Group value cannot be translated.
Cancer Diagnosis	TNM Clinical or Pathologic Stage element is null/missing in CDA document or invalid value; defaults (99 or 88) are applied based on cancer type	TNM [Clinical or Pathologic] Stage Group value of '99' was derived based on primary site/histology because no value was present in CDA. TNM [Clinical or Pathologic] [Stage Group, T, N, or M] value of '88' was derived based on primary site/histology because no value was present in CDA and the site/histology does not have an AJCC schema.
Payer	Wrong coding system used	An unexpected Payer Code System was used to provide payer information <Code System OID+ Code System Name>
Procedures: RX-Summ RX-Hosp	Procedure code is in the translation table but doesn't match the tumor site	Code <code+displayName> is a cancer-related procedure but is not expected treatment for this cancer.
Procedures: RX-Summ RX-Hosp	When there are multiple procedures in the same CDA document, eMaRC maps the one that translates to the most extensive FORDS code, and provides a message in the log indicating that a less extensive procedure also exists	A procedure was submitted for this cancer that is less extensive than the Rx Summ--Surg Prim Site code.
Procedures	If procedure date or diagnosis date is null/missing, procedure code is not mapped	No procedure date was provided for the procedure code [ ] or no diagnosis is for the cancer is available.
Procedures	If procedure date is more than one year after diagnosis date, procedure	Procedure [ ] is more than one year after the cancer diagnosis

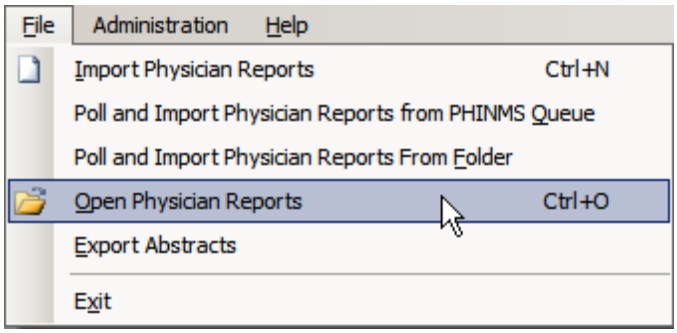
Section	Issue to Document	Processing Log Message
	code is not mapped	date.
Documented in the Procedures Rules	Two or more abstracts created RULE: If there is more than one cancer diagnosis entry, eMaRC will write a message to the processing log to indicate that multiple abstracts have been created representing the multiple cancer diagnoses due to the fact that linkage and coding of procedures, treatment, and results for each of the multiple cancer diagnoses could possibly be incorrect and may warrant manual review (either within eMaRC Plus or the central registry software)	Multiple Cancer Diagnosis entries found resulting in the creation of multiple abstracts. Procedures, medications, and radiation therapy may need review.
Procedures	RULE: If the cancer diagnosis is melanoma and the Active Problems Section contains one or more non-melanoma invasive or in situ skin cancer codes (Codes 173.n or 2xx.x (ICD-9-CM) OR C43.n or Dxx.n (ICD-10-CM) then eMaRC will write a message to the processing log indicating that the procedure assigned to the melanoma diagnosis may have actually been performed on a different non-reportable skin cancer.	The procedure assigned to the melanoma diagnosis may have actually been performed on a different non-reportable skin cancer.
Procedures	If more than one Radiation Regional code is provided in the Procedures Section, eMaRC maps the first instance in the CDA document to the Rad--Regional RX Modality NAACR item.	Radiation Oncology – More than one radiation procedure code was submitted
Radiation Oncology	If radiation treatment date or cancer diagnosis date is null/missing, radiation code is not mapped	No Radiation [Regional or Boost] Treatment Modality Date was provided or no Diagnosis Date is for the cancer is available

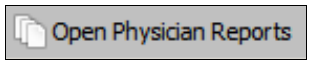
Section	Issue to Document	Processing Log Message
Radiation Oncology	If radiation treatment date is before or more than two years after cancer diagnosis date, radiation code is not mapped	A Radiation [Regional or Boost] Treatment Modality code was submitted that occurred before the diagnosis date. Radiation Regional Treatment Modality is more than two years after the cancer diagnosis date.
Radiation Oncology	If radiation treatment code is not in the translation table, it is not mapped	A Radiation [Regional or Boost] Treatment Modality code was submitted that is not in the RADIATIONTRANSLATION table
Radiation Oncology	If radiation treatment code is in the translation table but doesn't match the tumor site, it is not mapped	A Radiation [Regional or Boost] Treatment Modality code was submitted that does not correspond to the primary site
Radiation Oncology	If more than one Radiation treatment code is provided in the Radiation Oncology Section, eMaRC maps the first instance in the CDA document to the Rad--Regional RX Modality NAACR item.	Radiation Oncology – More than one radiation [Regional or Boost] RX therapy code was submitted.
Medications/Medications Administered	If medication treatment date or cancer diagnosis date is null/missing, medication code is not mapped	Medication [Code-DisplayName] was not used because either the Medication Start Date or the Diagnosis Date was unknown or null in CDA Report

Section	Issue to Document	Processing Log Message
Medications/Medications Administered	If medication treatment date or cancer diagnosis date is before or more than one year after diagnosis date, medication code is not mapped	Medication [Code-DisplayName] was not used because the Medication Start Date is either before or more than one year after the Diagnosis Date.

To view the Processing Log for an imported CDA document, complete these steps:

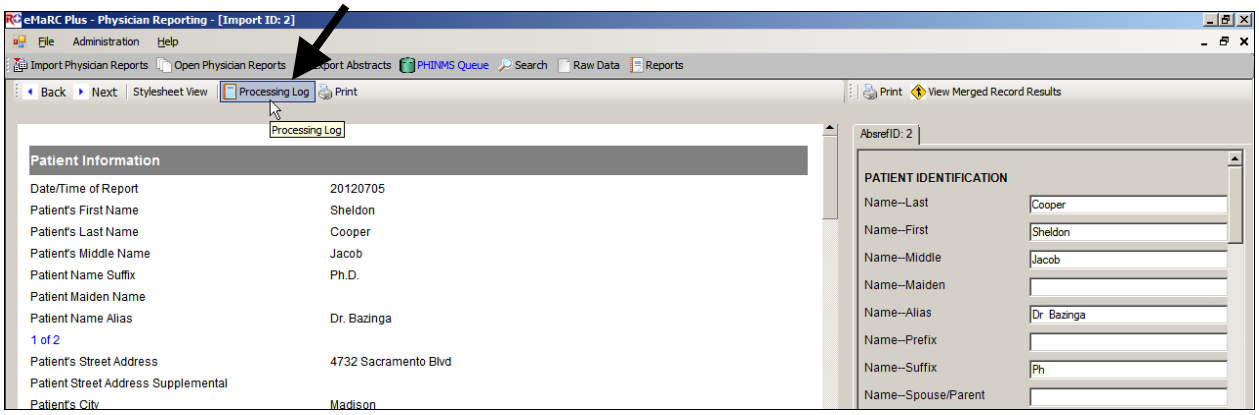
1. Open the **Physician Reports (CDA documents)** window. This can be done in three ways:
   a. Click on the **File** menu, and select **Open Physician Reports**.

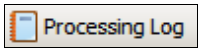


   b. Use the keystroke **Ctrl+O.**
   c. Click the **Open Physician Reports**  icon on the toolbar.

   Result: The **Physician Reports (CDA documents)** window opens.
2. **Double-click the row** of the CDA document for which you would like to view the processing log.

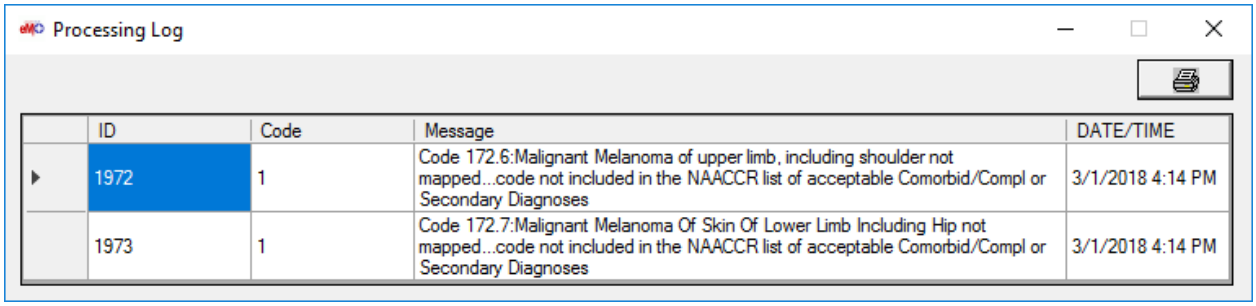
   Result: The **CDA Workbench** opens and displays the selected CDA document and its associated auto-generated abstract**.**



3. To view the Processing Log for the current CDA document, click the **Processing Log** 

icon on the CDA document toolbar.

Result: The **Processing Log** window opens.



The Processing Log window contains these columns for each message written to the Log:

Column Heading	Description
ID	The eMaRC Plus internally-assigned number for the Processing Log message
Code	The numerical code representing the type of Processing Log message: 1 = identified issue with data mapping 2 = invalid code (not currently used) 3 = identified issue with translation 4 = Error encountered during consolidation 5 = Indicates that the CDA document has multiple cancer diagnosis entries, and will have more than one abstract associated with it.
Message	The actual Processing Log message
Date/Time	A Date/Timestamp of when the Processing Log message was generated

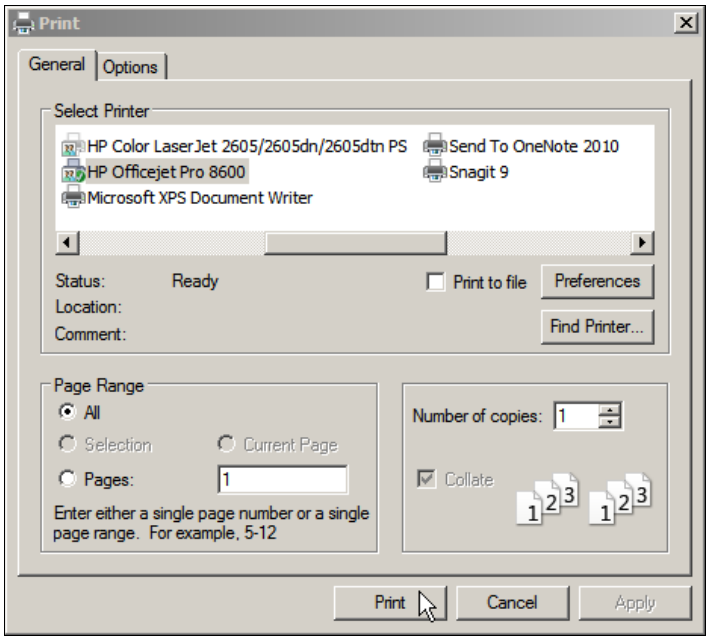
Printing the CDA Document

CDA document(s) can be printed in either of the view types provided: the Data View or the Stylesheet View.

To print a CDA document, complete these steps:

1. Open the CDA document of interest in the CDA Workbench.
2. Select the desired view of the document, by clicking either the **Data View** Data View or **View with Stylesheet** View with stylesheet icon on the CDA document toolbar.
3. Click the **Print** Print icon on the CDA document toolbar.

   Result: The **Windows Print** dialog box will appear.



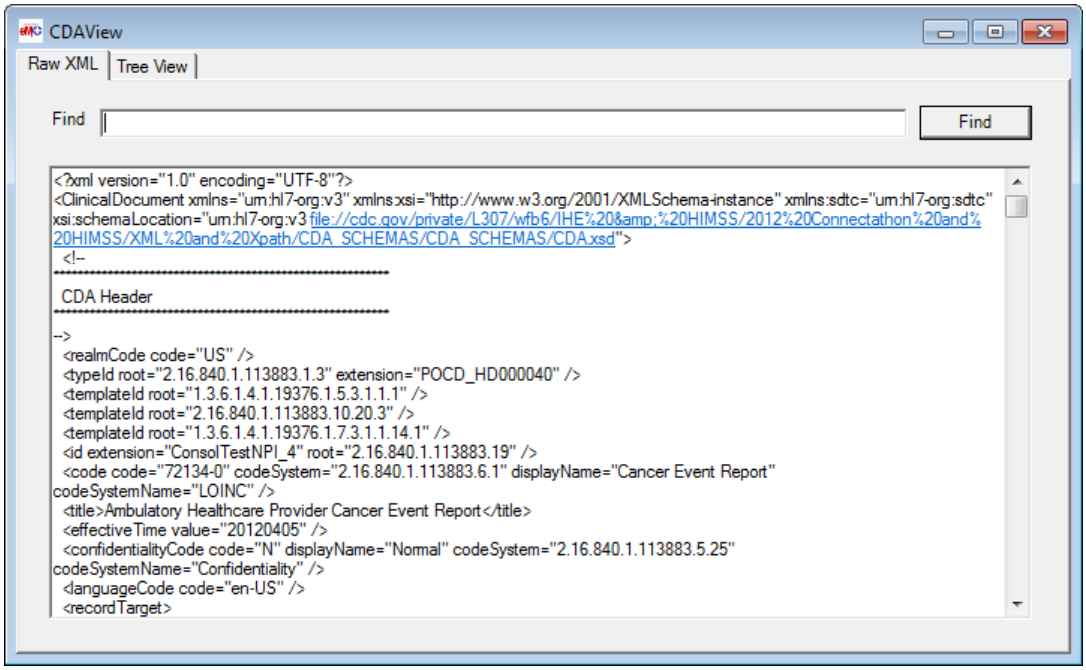
4. Click **Print** to print the document.

Viewing CDA Document Raw Data

In addition to the Data and Stylesheet views of the CDA document, you can also view the raw data of the document.

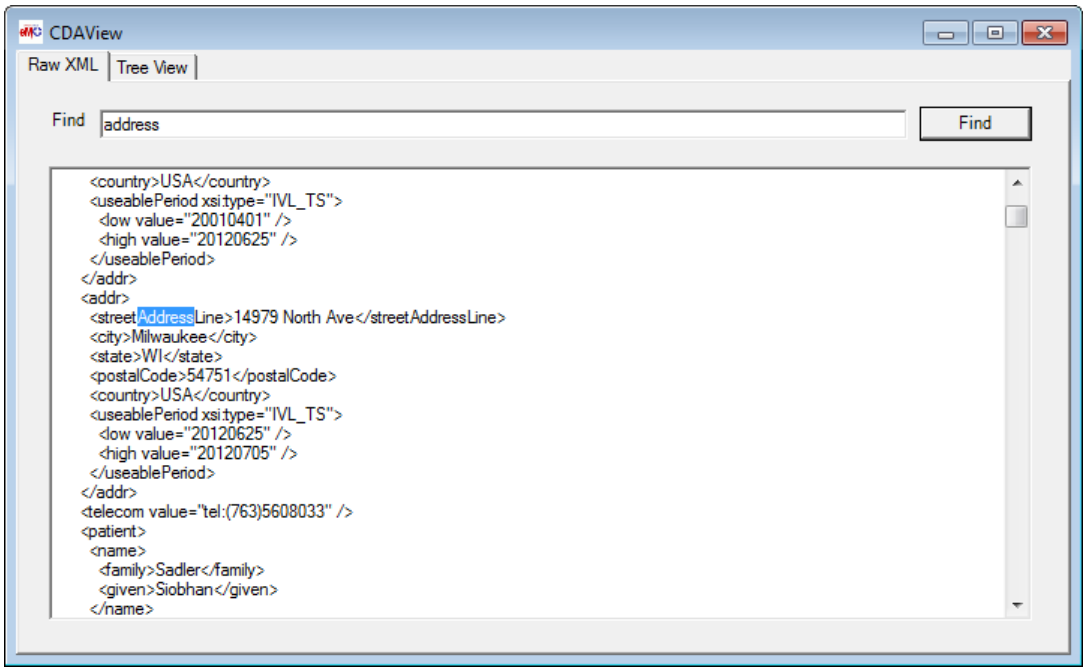
1. While the CDA document is open in the CDA Workbench, click the **Raw Data** Raw Data icon on the main eMaRC Plus window toolbar.

   Result: The **CDAView** window opens, and by default displays the CDA document in its raw XML format on the **Raw XML tab**. A helpful **text search** in included on the window; in the event that any issues are identified in the document, or you would like to review specific data, you can search the document for a particular term.



2. **Enter a search term** in the Find box, and click **Find**. In the example shown, the term address is being searched for.

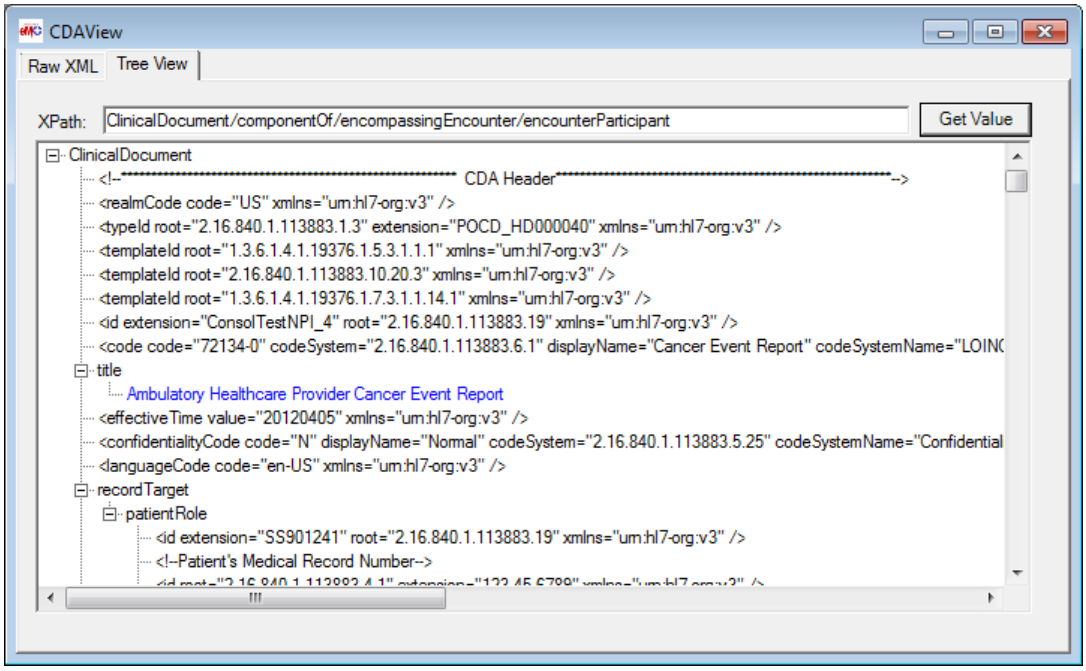
   Result: The first occurrence of the search term is located and highlighted in the raw XML message. To search for **additional occurrence**s of the same search term, just keep clicking **Find**.



The **CDAView** window also provides the option of viewing the document using a **Tree View** structure, which greatly facilitates the viewing of the document.

3. To view the raw message using the Tree View, on the CDAView window click the **Tree View tab.**

   Result: The raw data of the CDA document is displayed in a tree view format.



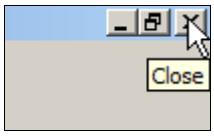
The Tree View option allows the user to search the CDA document for a specific XPath.

4. To search for a specific Xpath, copy and paste the XPath into the XPath box and click **Get Value**.

   Result: The application displays the value for the specified XPath.

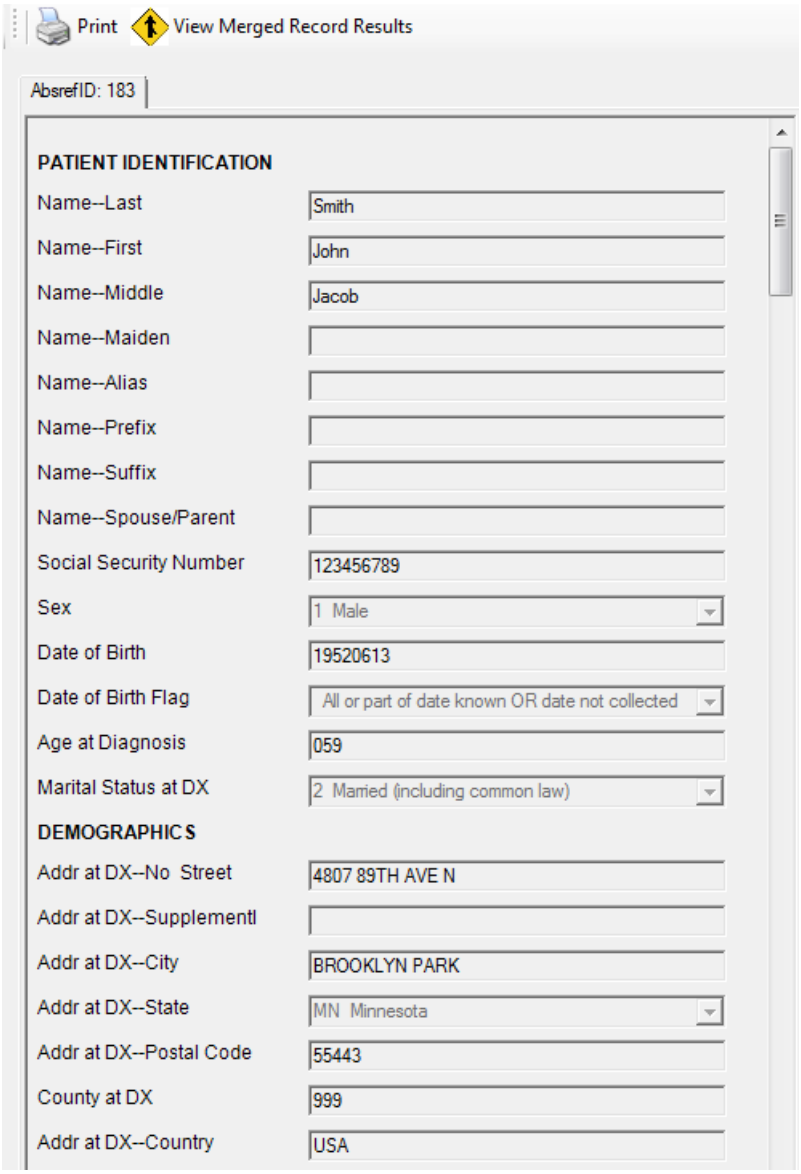
   Click **OK**.

5. To close the CDAView window, click the **X** in upper right corner of the window.



The Abstract Display

The Abstract Display on the CDA Workbench allows the user to review all of the automated defaulting, mapping and translating of information from the CDA document to the NAACCR file format and coding conventions. The data items included in the display are those that will be exported upon exporting of an abstract (initial or consolidated). Note that to facilitate viewing, some fields that are defaulted (e.g., the various coding system data items) are also hidden from view. As a result, the data items will not be displayed within the Abstract grid, but the values will be included in any abstract exports. See Appendix B for a listing of of all data items in the Abstract Display that comes with the application, including those that are hidden from view.

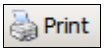


As mentioned earlier, the intent of the Physician Reporting Module is to be entirely automated, so after initial set up, verification, and testing there will virtually be no need for use of the CDA workbench to review the abstracts.

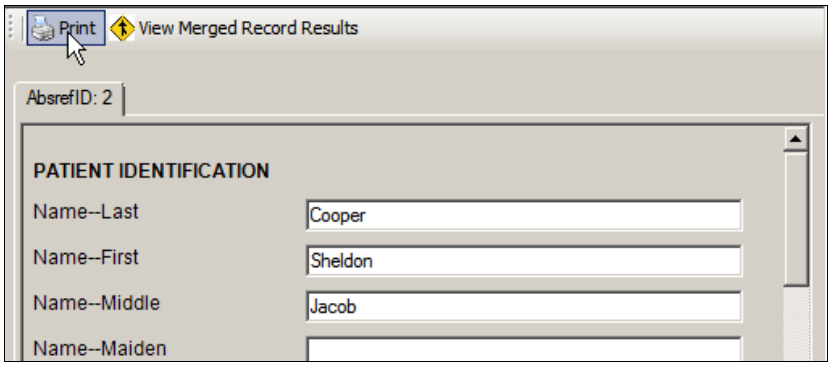
Printing Abstract Data

In addition to CDA documents, the auto-generated abstracts can be also be printed.

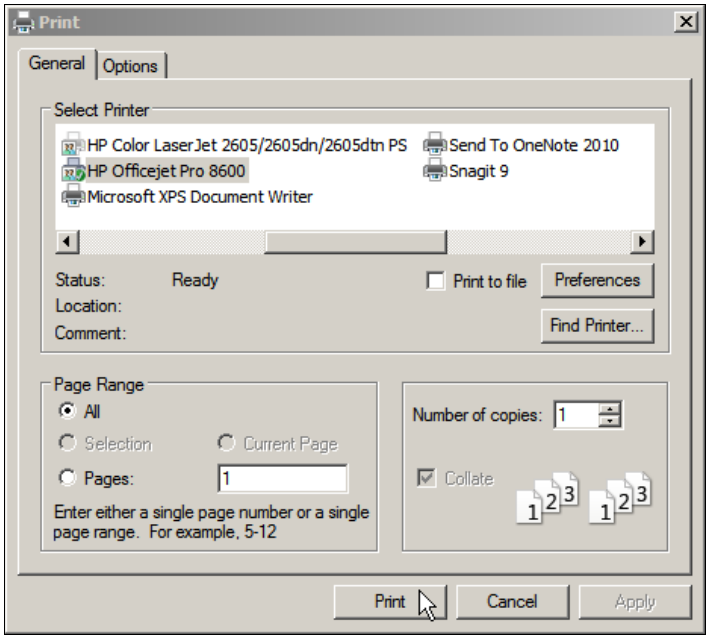
To print an abstract, complete these steps:

1. Open the CDA document associated with the abstract of interest in the CDA Workbench.
2. Click the **Print** 

icon on the Abstract Display toolbar.



Result: The **Windows Print** dialog box will appear.



3. Click **Print** to print the abstract.

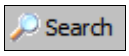
Note

When you print an abstract, only the visible fields on the display type are printed out. System fields, such as Morph Coding Sys-Current [#470] (defaulted to 8), NAACCR Record Version [#50], etc., that have been defaulted and hidden from view are not printed, but ARE included in any abstract that is exported out of eMaRC Plus.

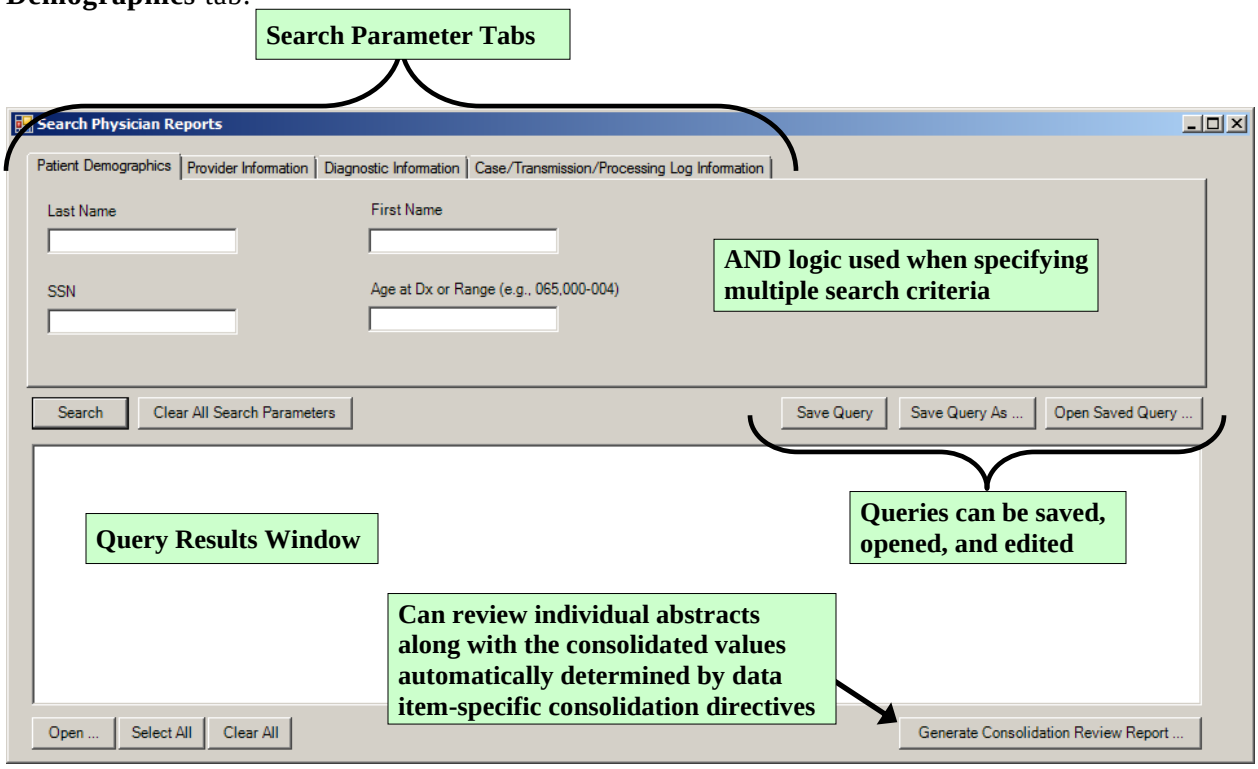
Searching for/Generating Batches of CDA Documents/Abstracts

The eMaRC Plus Physician Reporting module includes a query function that enables you to apply user-specified search parameters to dynamically generate a batch of CDA documents, open in them CDA Workbench, and review the automated mapping, translation, and consolidation decisions made by the program.

To search for and generate a batch of related CDA documents and open them in the CDA Workbench, complete these steps:

1. Open the **Search Physician Reports** window by clicking on the **Search**  icon on the eMaRC Plus main window toolbar.

   Result: The **Search Physician Reports** window opens, defaulted to the **Patient Demographics** tab.

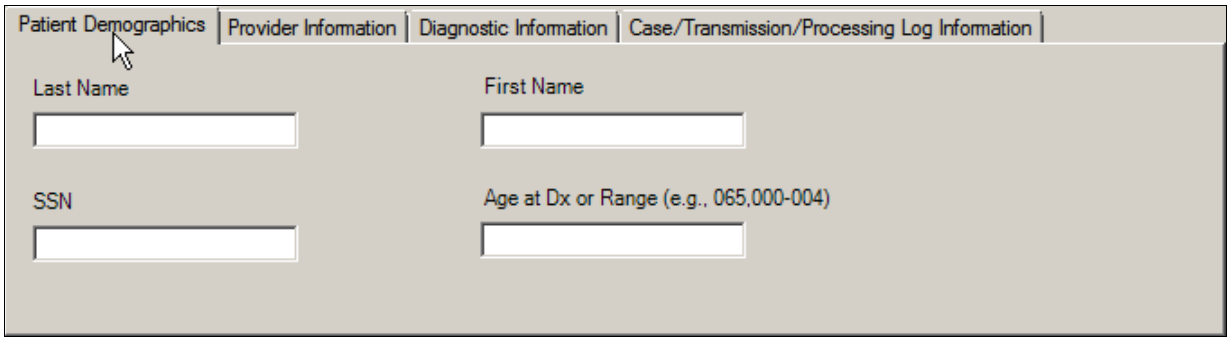


The Search Physician Reports window allows for review of user-specified batches of CDA documents along with their translated/mapped NAACCR abstract values using the CDA Physician Module Workbench. The Search Physician Reports window consists of a series of tabs which display individual search parameters that have been grouped logically on the various tabs into Patient Demographics, Provider Information, Diagnostic Information, and Case/Transmission/Processing Log Information. Multiple parameters may be specified simultaneously both within an individual tab and/or across multiple tabs. “AND” logic is applied to the entered search criteria, enabling very specific queries to be generated.

You can also use the Search window to generate batches of CDA documents for which you would like to review individual abstracts along with the consolidated values automatically determined by data item-specific consolidation directives (see eMaRC Plus Physician Reporting Consolidation Directives). For the users’ convenience, specific queries can be generated and saved, and re-opened and re-run.

The Search Physician Reports window includes the following search parameters that can be used alone or in combination to generate batches of CDA documents and abstracts for review on the CDA Workbench.

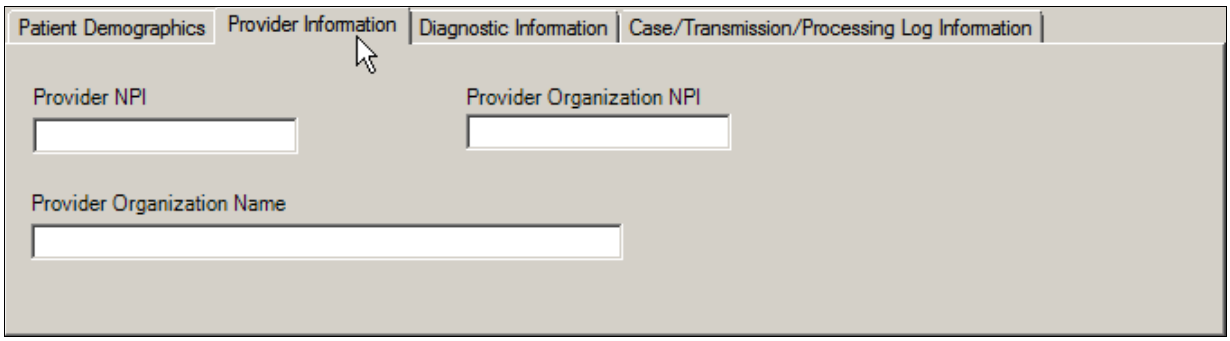
The Patient Demographics Tab



As mentioned, upon opening the Search Physician Reports window, the Patient Demographics tab is displayed by default. The following table describes the search parameters available on the Demographics tab:

Search Parameter	Description
Patient Last Name	This option allows the user to specify a particular patient last name, which when used in conjunction with the Patient First Name option, allows the user to open all CDA documents received for a specific patient
Patient First Name	This option allows the user to specify a particular patient first name, which when used in conjunction with the Patient Last Name option, allows the user to open all CDA documents received for a specific patient
SSN	This option allows the user to enter a specific Social Security Number to open all CDA documents received for a specific patient
Age at Diagnosis or Range	This option allows the user to enter a specific Age at Diagnosis or range of ages to open all CDA documents received for patients of specific ages (e.g., pediatric cases)

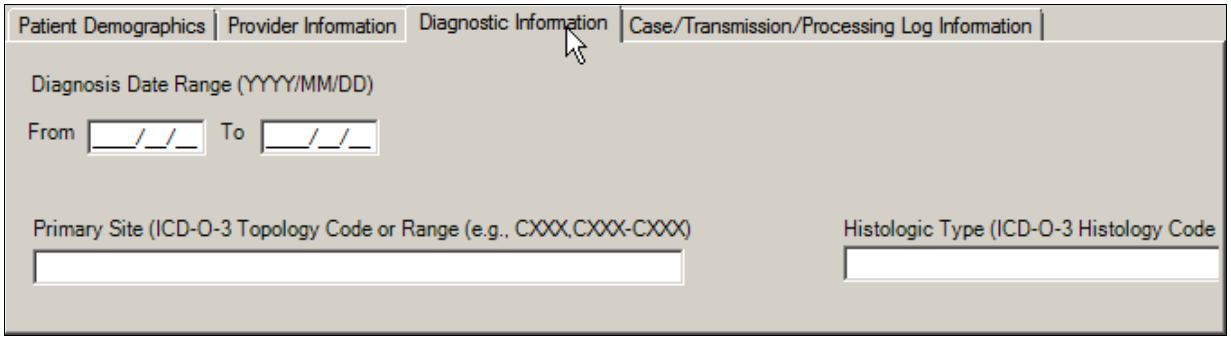
The Provider Information Tab



The next tab allows you to specify search criteria related to the submitting provider. The following table describes the search parameters available on the Provider Information tab:

Search Parameter	Description
Provider NPI	This option allows the user to enter a specific Provider NPI number to open CDA documents received from that provider
Provider Organization NPI	This option allows the user to enter a specific Provider Organization NPI number to open CDA documents received from that organization
Provider Organization Name	This option allows the user to enter a specific Provider Organization Name to open CDA documents received from that organization

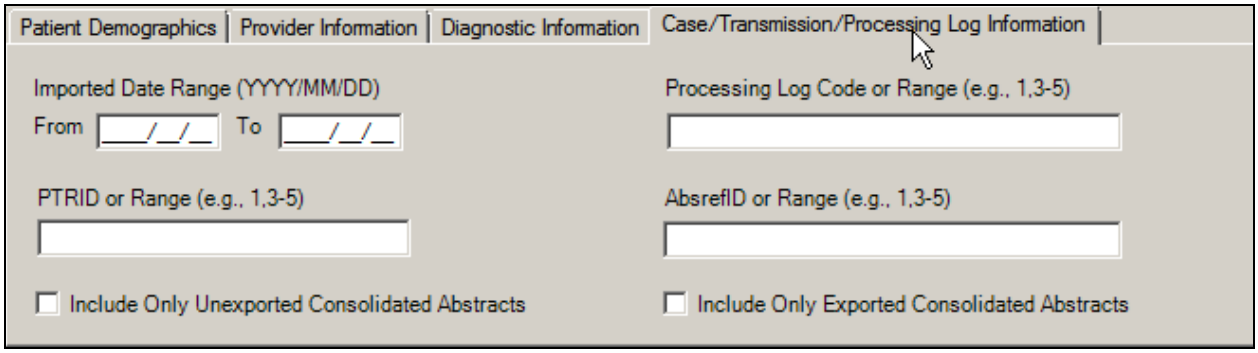
The Diagnostic Information Tab



The Diagnostic Information tab allows you to specify certain types of cancer and/or diagnosis dates as search criteria. The following table describes the search parameters available on the Diagnostic Information tab:

Search Parameter	Description
Diagnosis Date Range	This option allows the user to enter a date range to open all CDA documents by the diagnosis date of the tumors reported
Primary Site	This option allows the user to enter a ICD-O-3 Topography code or range of codes to open CDA documents received with the specified primary site(s)
Histologic Type	This option allows the user to enter a ICD-O-3 Histology code or range of codes to open CDA documents received with the specified histology (ies)

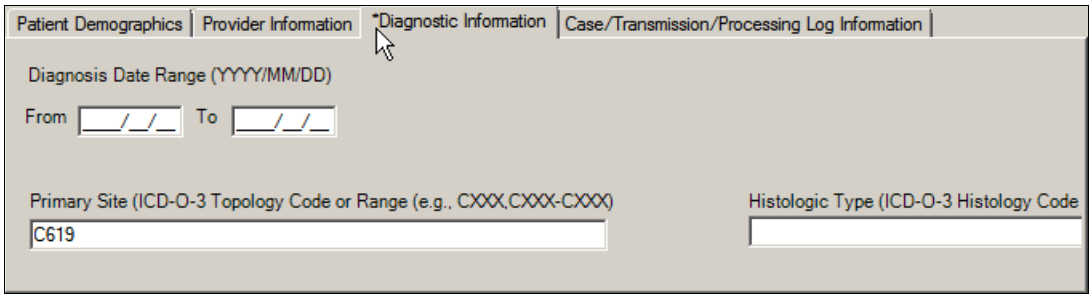
The Case/Transmission/Processing Log Information Tab



The final grouping of available search criteria are case- and data processing-specific, enabling you to review all submitted information from a particular provider facility for a specific patient and tumor, or to review batches of CDA documents/abstracts the generated the same message to the Processing Log when processed (e.g., CDA documents having multiple cancer diagnosis entries that will generate more than one abstract). The following table describes the search parameters available on the Case/Transmission/Processing Log Information tab:

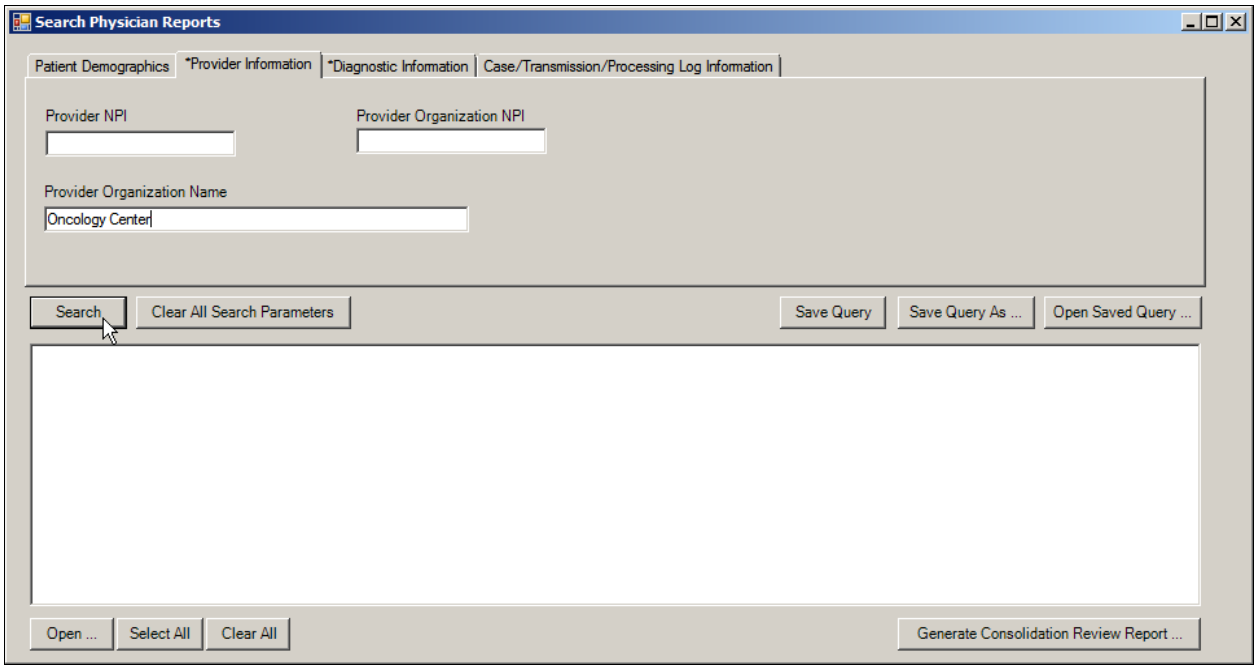
Search Parameter	Description
Imported Date Range	This option allows the user to enter a date range to open all CDA documents by the date the documents were imported into eMaRC Plus
Processing Log Code or Range	This option allows the user to enter a specific Processing Log Code or Codes to open CDA documents that when processed, generated the specific Processing Log Code
PTRID or Range	This option allows the user to enter a specific PTRID (or range of PTRIDs) to open all CDA documents received for a specific patient and tumor from a particular facility
AbsRefID or Range	This option allows the user to open CDA documents associated with a specific AbsRefID or Range of AbsRefIDs
Include Only Un-exported Consolidated Abstracts	These options enable the user to examine batches of abstracts that have already been exported to the central registry, or those yet to be exported
Include Only Exported Consolidated Abstracts	

2. Enter the search parameters of your choice, and click **Search**. In the example shown, the search parameters being entered will result in the selection of prostate cases reported from the facility named Oncology Center.

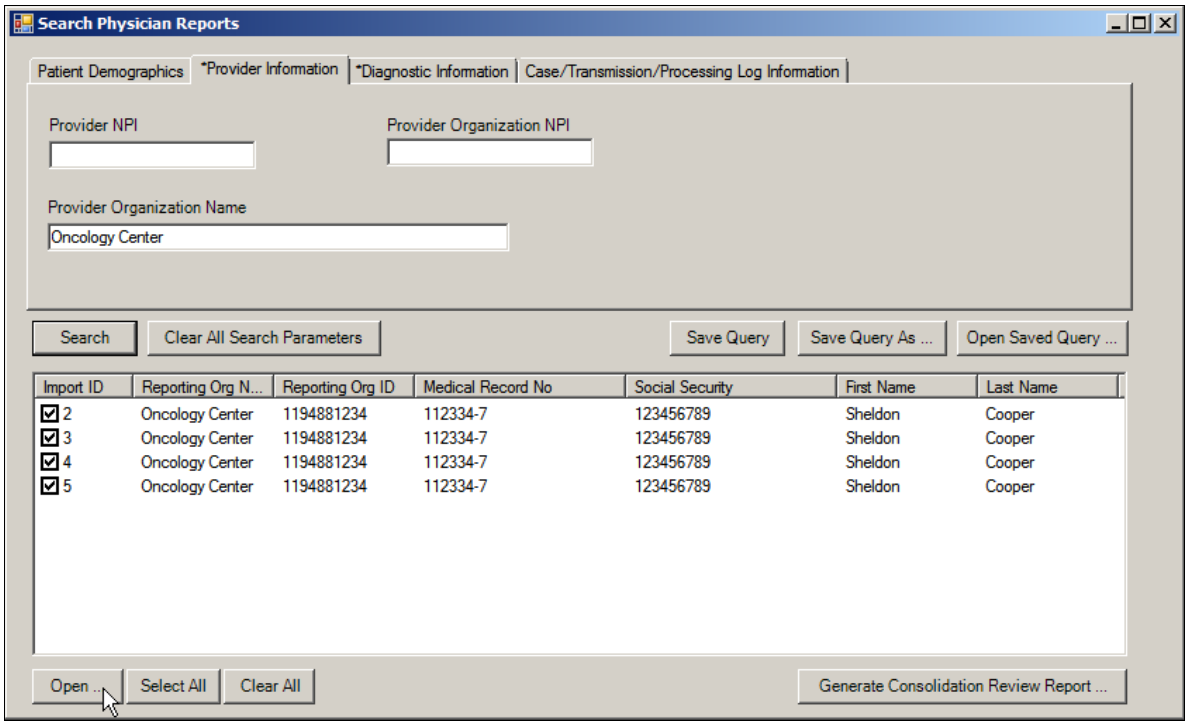


Important

Note that as soon as you enter search criteria on any of the tabs, an asterisk appears to the left of the tab name. As the search criteria are spread out across separate tabs, this serves as an important a visual cue that you have entered a search parameter on that tab, and helps you keep track of what parameters you have entered.

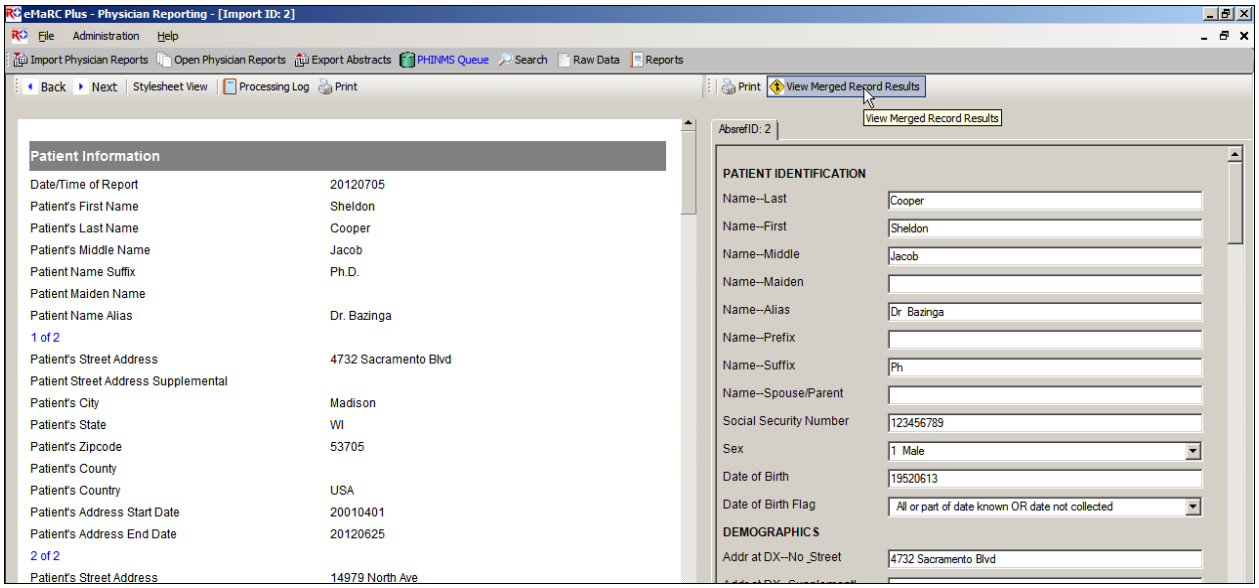


Result: The CDA documents meeting the search criteria are displayed in the **Query Results** window, where by all records are selected by default. You can de-select individual documents by unchecking the Import ID check box.

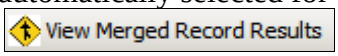


3. To open the listed CDA documents as a batch for review on the CDA Workbench, click **Open**.

   Result: The CDA Workbench opens with the specified CDA documents and their associated auto-generated abstracts displayed in order of ascending AbsRefID. You can now use all of the various features of the CDA Workbench to review the batch of related CDA documents.

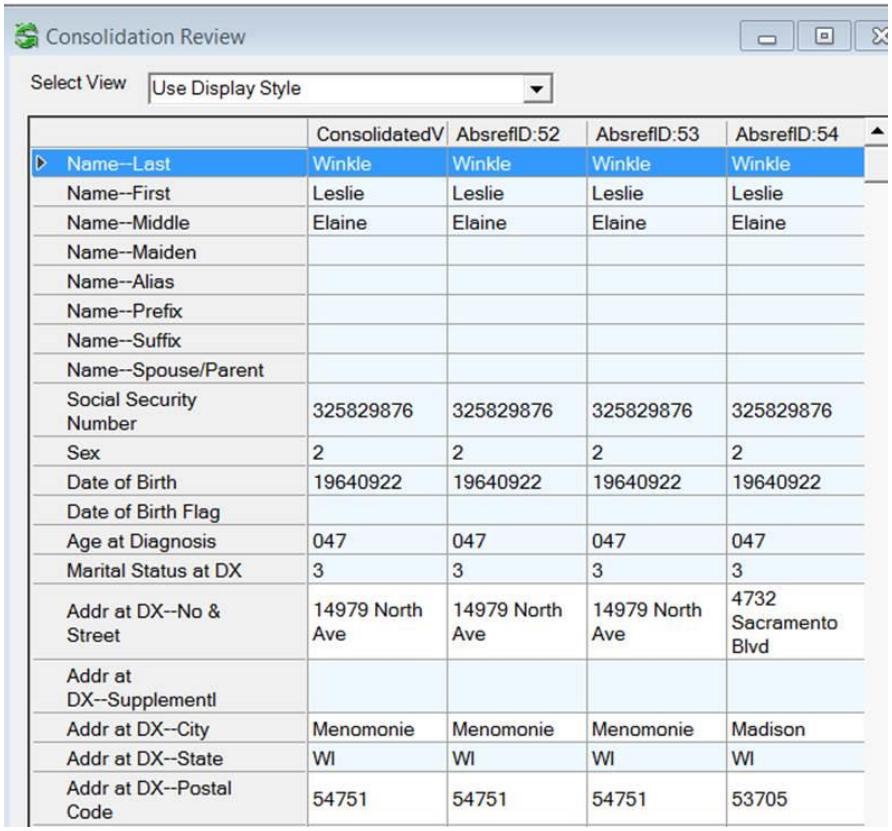


Viewing Abstract Consolidation Results

4. To review the individual abstracts and the values automatically selected for the consolidated abstract, click the **View Merged Record Results** 

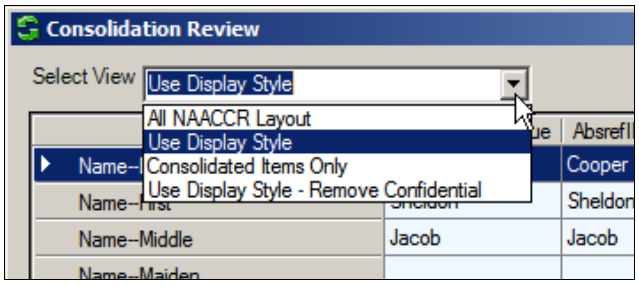
icon on the Abstract window toolbar.

   Result: The **Consolidation Review** window opens, with the consolidated abstract and all of the individual abstracts listed in columns in an extremely user-friendly fashion that facilitates review of the abstract values and the resulting consolidated values chosen by the automated consolidation directives.



	ConsolidatedV	AbsrefID:52	AbsrefID:53	AbsrefID:54
Name--Last	Winkle	Winkle	Winkle	Winkle
Name--First	Leslie	Leslie	Leslie	Leslie
Name--Middle	Elaine	Elaine	Elaine	Elaine
Name--Maiden				
Name--Alias				
Name--Prefix				
Name--Suffix				
Name--Spouse/Parent				
Social Security Number	325829876	325829876	325829876	325829876
Sex	2	2	2	2
Date of Birth	19640922	19640922	19640922	19640922
Date of Birth Flag				
Age at Diagnosis	047	047	047	047
Marital Status at DX	3	3	3	3
Addr at DX--No & Street	14979 North Ave	14979 North Ave	14979 North Ave	4732 Sacramento Blvd
Addr at DX--Supplementl				
Addr at DX--City	Menomonie	Menomonie	Menomonie	Madison
Addr at DX--State	WI	WI	WI	WI
Addr at DX--Postal Code	54751	54751	54751	53705

   By default the data on the Consolidation Review window are ordered in the same sequence as the Abstract Display, and include all data items in the display type, including defaulted and hidden data items. Basically this window displays what data items will be exported upon export of abstracts from the application. However, the application offers other views to choose from.

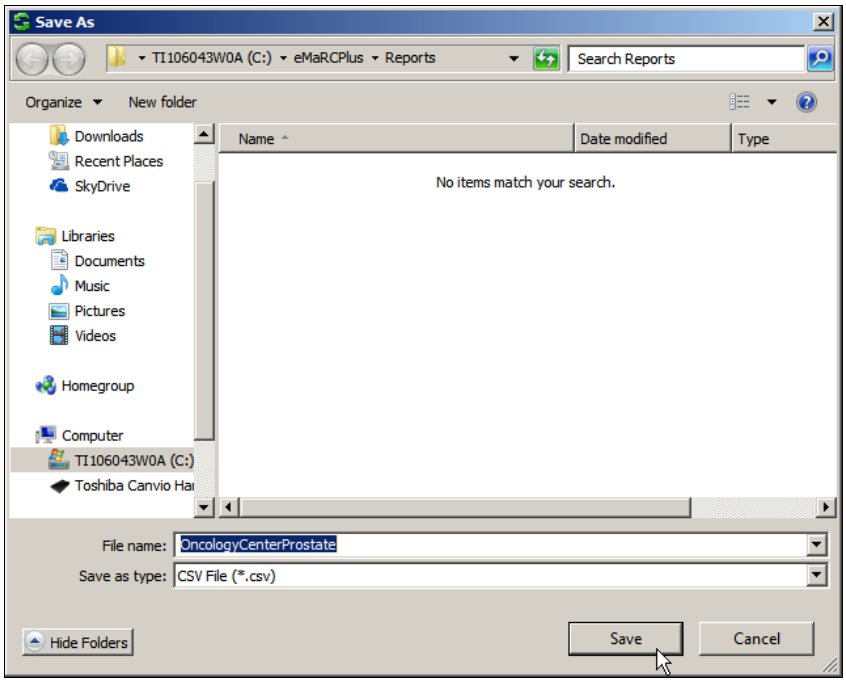


   You can use the **Select View** pull-down to specify the view of the data that you would like:

View	Description
All NAACCR Layout	Selecting this view will display every data item in the NAACCR record layout
Use Display Style	This view is the default view and displays only those data items included in the Abstract display, in the same order as the Abstract Display
Consolidated data items only	This view will display only those data items that are being automatically consolidated by the application
Use Display Style – Remove Confidential	This option allows the user to open CDA documents associated with a specific AbsRefID or Range of AbsRefIDs

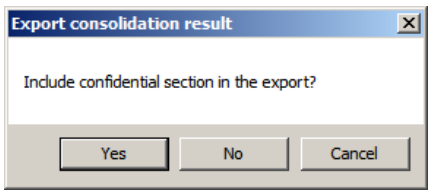
5. You can also export the consolidation results to a comma-delimited file that can then be opened in Excel. To export the consolidation results to a .CSV file, click **Export**.

   Result: The **Save As** window opens defaulted to the C:\eMaRCPlus\Reports folder.



6. Enter a name for the file, and click **Save**. In the example shown, the consolidation review report is being saved as OncologyCenterProstate.csv.

   Result: The application asks you whether or not you would like to generate the report with confidential patient identifiers, or as a de-identified report.

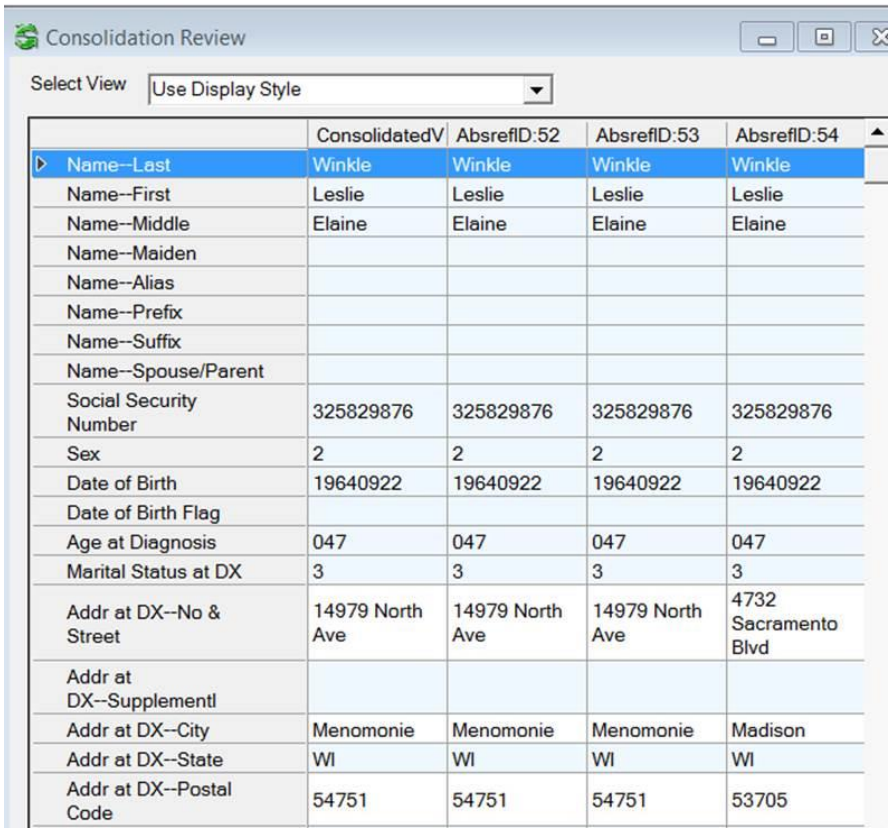


Tip

The de-identified report can be shared back to CDC to provide feedback on consolidation directives for the non-confidential data items.

7. Click **Yes**.

   Result: The application returns you to the **Consolidation Review** window.

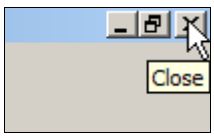


	ConsolidatedV	AbsrefID:52	AbsrefID:53	AbsrefID:54
Name--Last	Winkle	Winkle	Winkle	Winkle
Name--First	Leslie	Leslie	Leslie	Leslie
Name--Middle	Elaine	Elaine	Elaine	Elaine
Name--Maiden				
Name--Alias				
Name--Prefix				
Name--Suffix				
Name--Spouse/Parent				
Social Security Number	325829876	325829876	325829876	325829876
Sex	2	2	2	2
Date of Birth	19640922	19640922	19640922	19640922
Date of Birth Flag				
Age at Diagnosis	047	047	047	047
Marital Status at DX	3	3	3	3
Addr at DX--No & Street	14979 North Ave	14979 North Ave	14979 North Ave	4732 Sacramento Blvd
Addr at DX--Supplementl				
Addr at DX--City	Menomonie	Menomonie	Menomonie	Madison
Addr at DX--State	WI	WI	WI	WI
Addr at DX--Postal Code	54751	54751	54751	53705

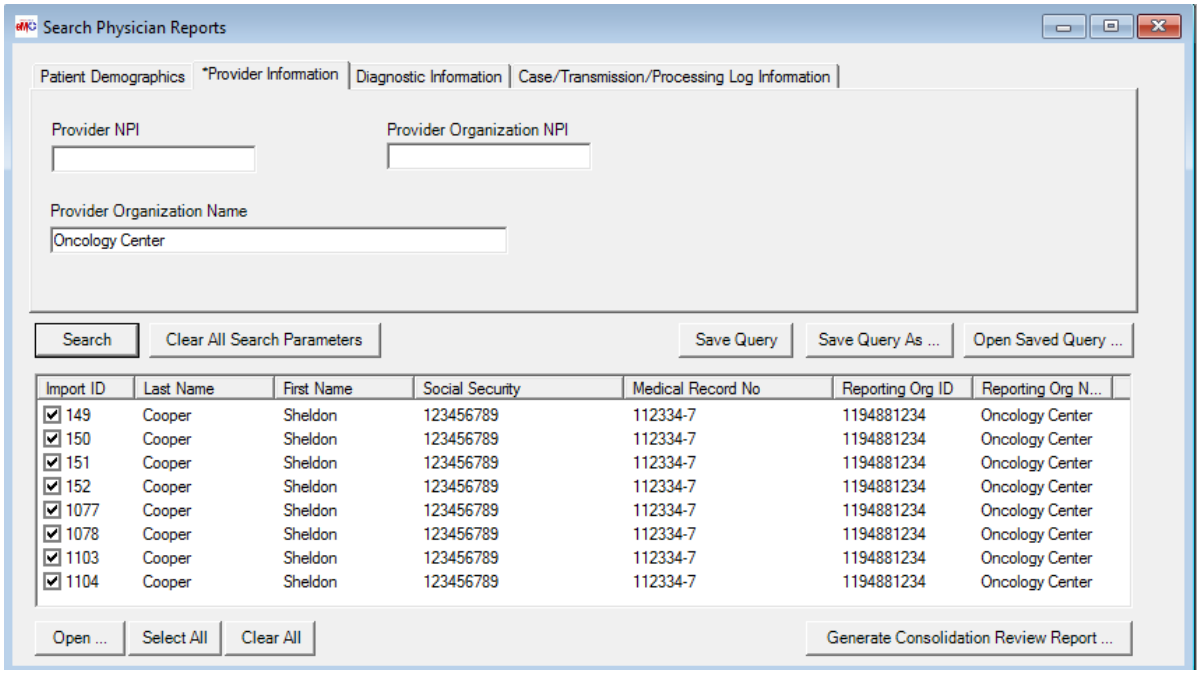
8. Click **Close** to close the Consolidation window.

   Result: The application returns you to the **CDA Workbench**.

9. To close the CDA Workbench, click the **X** in upper right corner of the window.

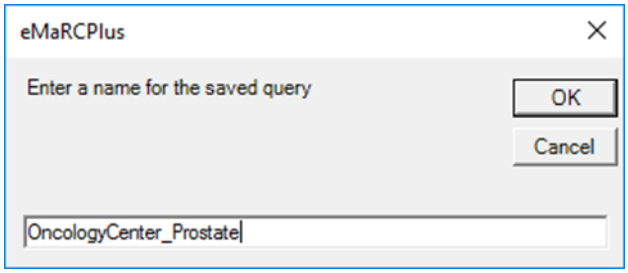


Result: The application returns you to the **Search Physician Reports** window.



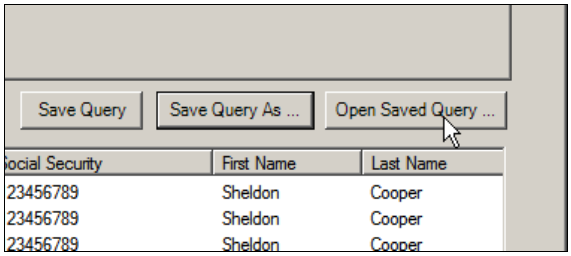
10. You can save your query and re-open it to re-run or edit at a later time. To save the query, click **Save Query As**.

    Result: The application prompts you to enter a name for the saved query. I the example shown the query is being named OncologyCenter_Prostate.

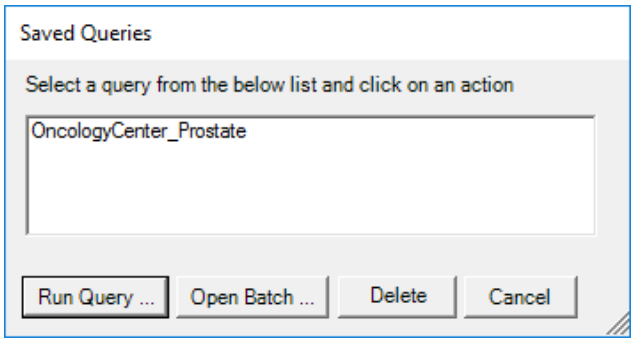


11. Click **OK**.

12. To open a saved query, click **Open Saved Query**.



    Result: The **Saved Queries** window opens and displays a list of all saved queries.



At this point you have 4 choices:

a. You can click **Run Query** to run the query, which would take to Search Physician Reports window with the query results displayed

b. You can click **Open Batch** to run the query and go directly to the Consolidation Review window.

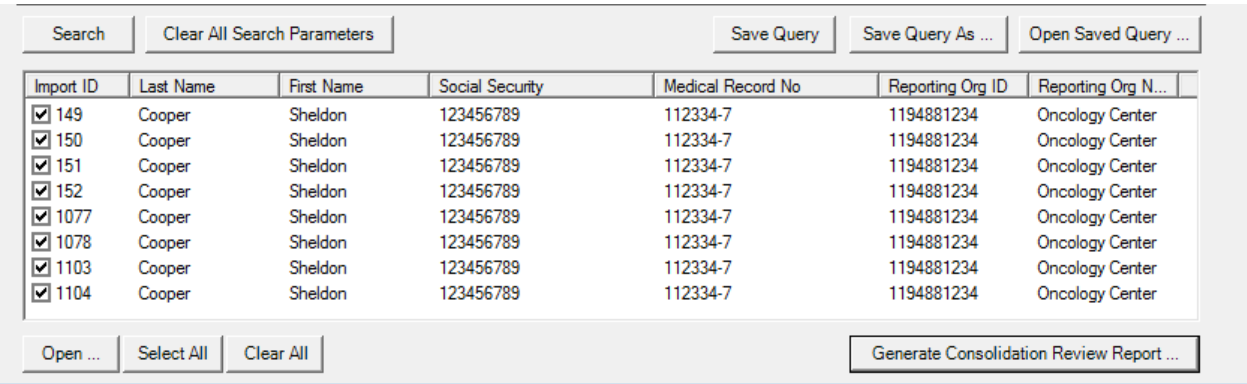
c. You can select the query from the list and click **Delete** to delete the query

d. Or, you can click **Cancel**.

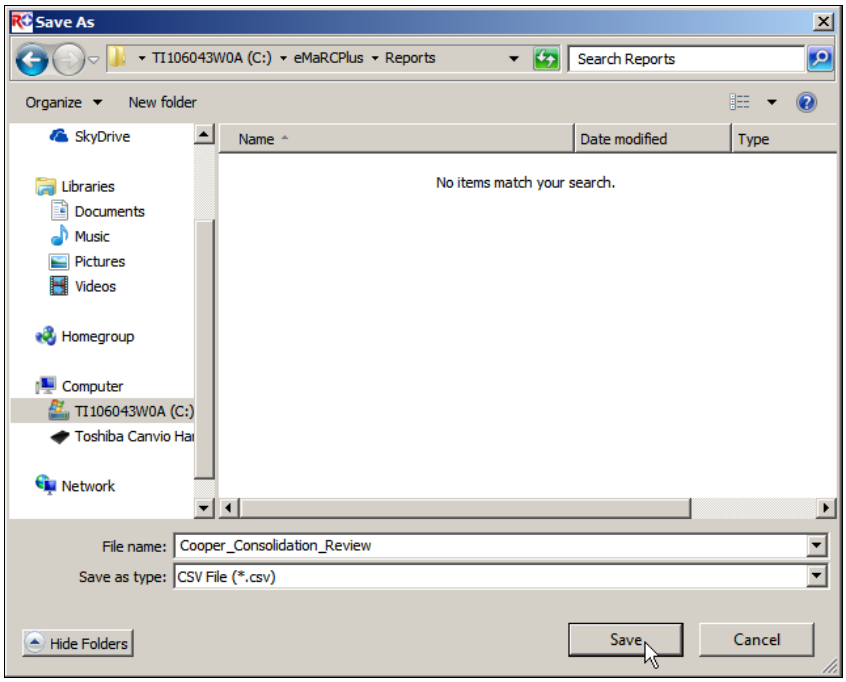
As you can see, via a combination of highly-specific search parameters, you can use the Search Physician Reports window to open only the particular CDA documents and abstracts that you would like to review. This feature of the program will most likely be heavily utilized upon initial setup and verification of the program, to assure the registry that the application is working as expected, or to assess what types of cases they may want to selectively export out of the application.

Directly Generating Consolidation Review Report

You do not have to open the Consolidation Review window in order to export the consolidation results to a comma-delimited file; you can do this directly from the Search Physician Reports window by clicking **Generate Consolidation Review Report**.



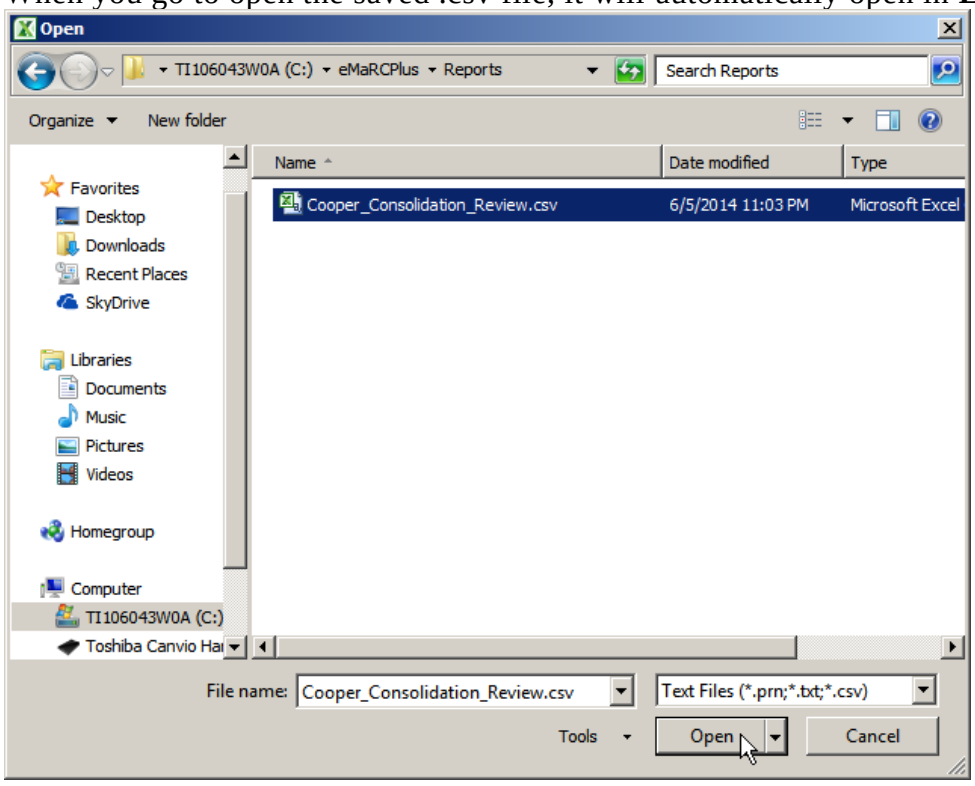
Result: The **Save As** window opens defaulted to the C:\eMaRCPlus\Reports folder.

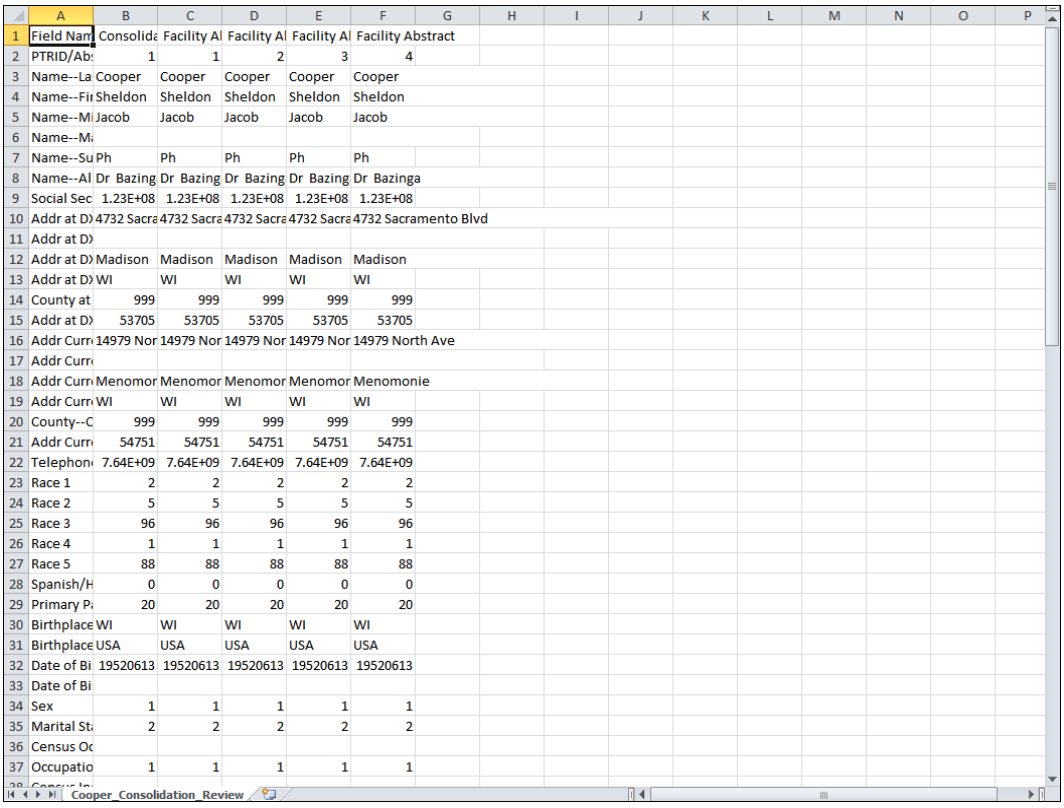


13. Enter a name for the file, and click **Save**. In the example shown, the consolidation review report is being saved as Cooper_Consolidation_Review.csv.

    Result: The application **saves** the report, and returns you to the **Search Physician Reports** window.

    When you go to open the saved .csv file, it will automatically open in **Excel**.

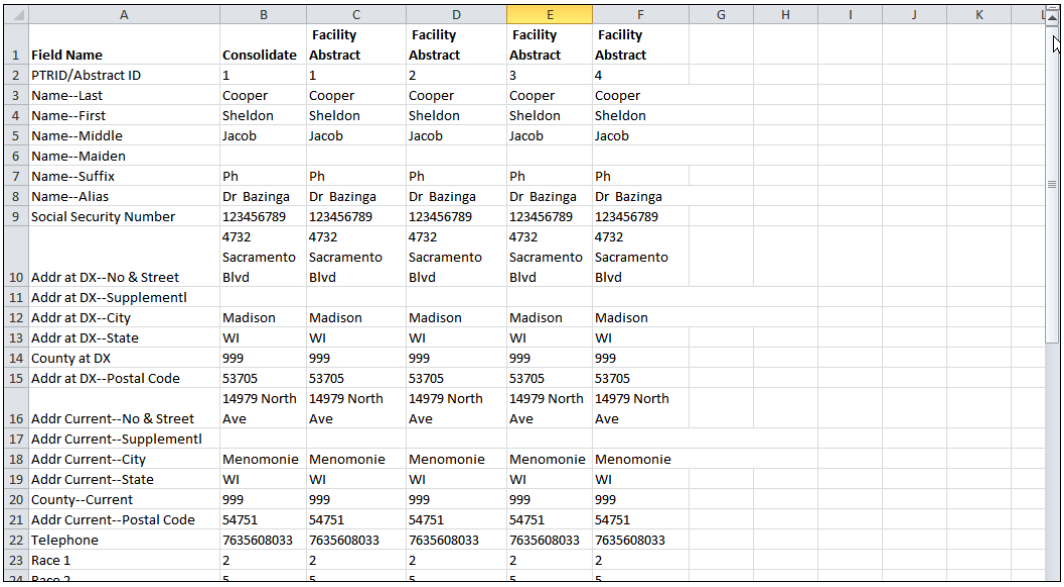




	A	B	C	D	E	F
1	Field Nam	Consolida	Facility Al	Facility Al	Facility Al	Facility Abstract
2	PTRID/Ab	1	1	2	3	4
3	Name--La	Cooper	Cooper	Cooper	Cooper	Cooper
4	Name--Fi	Sheldon	Sheldon	Sheldon	Sheldon	Sheldon
5	Name--Mi	Jacob	Jacob	Jacob	Jacob	Jacob
6	Name--Ma					
7	Name--Su	Ph	Ph	Ph	Ph	Ph
8	Name--Al	Dr Bazing	Dr Bazing	Dr Bazing	Dr Bazing	Dr Bazinga
9	Social Sec	1.23E+08	1.23E+08	1.23E+08	1.23E+08	1.23E+08
10	Addr at D)	4732 Sacra	4732 Sacra	4732 Sacra	4732 Sacra	4732 Sacramento Blvd
11	Addr at D)					
12	Addr at D)	Madison	Madison	Madison	Madison	Madison
13	Addr at D)	WI	WI	WI	WI	WI
14	County at	999	999	999	999	999
15	Addr at D)	53705	53705	53705	53705	53705
16	Addr Curr	14979 Nor	14979 Nor	14979 Nor	14979 Nor	14979 North Ave
17	Addr Curr					
18	Addr Curr	Menomor	Menomor	Menomor	Menomor	Menomonie
19	Addr Curr	WI	WI	WI	WI	WI
20	County--C	999	999	999	999	999
21	Addr Curr	54751	54751	54751	54751	54751
22	Telephon	7.64E+09	7.64E+09	7.64E+09	7.64E+09	7.64E+09
23	Race 1	2	2	2	2	2
24	Race 2	5	5	5	5	5
25	Race 3	96	96	96	96	96
26	Race 4	1	1	1	1	1
27	Race 5	88	88	88	88	88
28	Spanish/H	0	0	0	0	0
29	Primary P	20	20	20	20	20
30	Birthplace	WI	WI	WI	WI	WI
31	Birthplace	USA	USA	USA	USA	USA
32	Date of Bi	19520613	19520613	19520613	19520613	19520613
33	Date of Bi					
34	Sex	1	1	1	1	1
35	Marital St	2	2	2	2	2
36	Census Oc					
37	Occupatio	1	1	1	1	1

Cooper_Consolidation_Review

You format the report in Excel, expanding the column widths and aligning the data to make the report more presentable.



	A	B	C	D	E	F
1	**Field Name**	**Consolidate**	**Facility Abstract**	**Facility Abstract**	**Facility Abstract**	**Facility Abstract**
2	PTRID/Abstract ID	1	1	2	3	4
3	Name--Last	Cooper	Cooper	Cooper	Cooper	Cooper
4	Name--First	Sheldon	Sheldon	Sheldon	Sheldon	Sheldon
5	Name--Middle	Jacob	Jacob	Jacob	Jacob	Jacob
6	Name--Maiden					
7	Name--Suffix	Ph	Ph	Ph	Ph	Ph
8	Name--Alias	Dr Bazinga	Dr Bazinga	Dr Bazinga	Dr Bazinga	Dr Bazinga
9	Social Security Number	123456789	123456789	123456789	123456789	123456789
10	Addr at DX--No & Street	4732 Sacramento Blvd	4732 Sacramento Blvd	4732 Sacramento Blvd	4732 Sacramento Blvd	4732 Sacramento Blvd
11	Addr at DX--Supplementl					
12	Addr at DX--City	Madison	Madison	Madison	Madison	Madison
13	Addr at DX--State	WI	WI	WI	WI	WI
14	County at DX	999	999	999	999	999
15	Addr at DX--Postal Code	53705	53705	53705	53705	53705
16	Addr Current--No & Street	14979 North Ave	14979 North Ave	14979 North Ave	14979 North Ave	14979 North Ave
17	Addr Current--Supplementl					
18	Addr Current--City	Menomonie	Menomonie	Menomonie	Menomonie	Menomonie
19	Addr Current--State	WI	WI	WI	WI	WI
20	County--Current	999	999	999	999	999
21	Addr Current--Postal Code	54751	54751	54751	54751	54751
22	Telephone	7635608033	7635608033	7635608033	7635608033	7635608033
23	Race 1	2	2	2	2	2
24	Race 2	5	5	5	5	5

Note that in the first row of the report, the PTRID is listed for the Consolidated Abstract, and the Abstract ID (i.e., AbsRefID) is listed for the individual abstracts.

Chapter 7: Exporting Abstracts in NAACCR File Format

NOTE: The Export feature is currently being reviewed and will be updated in a future release.

Learning Objectives

In this chapter, you will learn:

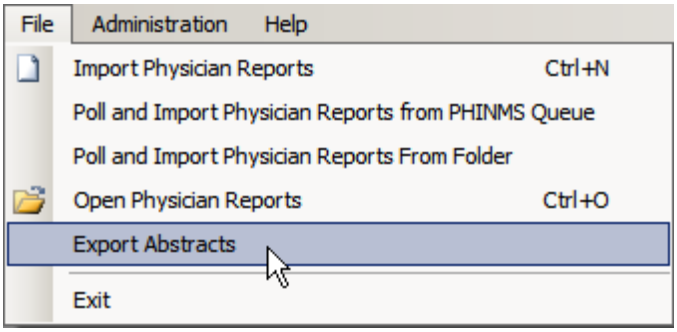
- About the highly-configurable abstract export features of the Physician Reporting Module of eMaRC Plus
- How to apply user-specified parameters for exporting both initially received abstracts and/or subsequently consolidated abstracts in NAACCR Record Layout format
- How to apply export timing criteria
- How to save export configurations

Overview

This chapter covers the abstract export features of the eMaRC Plus Physician Reporting module. You'll learn how to use the multitude of export options and how to best take advantage of the flexibility of the program for use in your registry.

To export Initially Received and/or Consolidated Abstracts out of the eMaRC Plus Physician Reporting module, complete these steps:

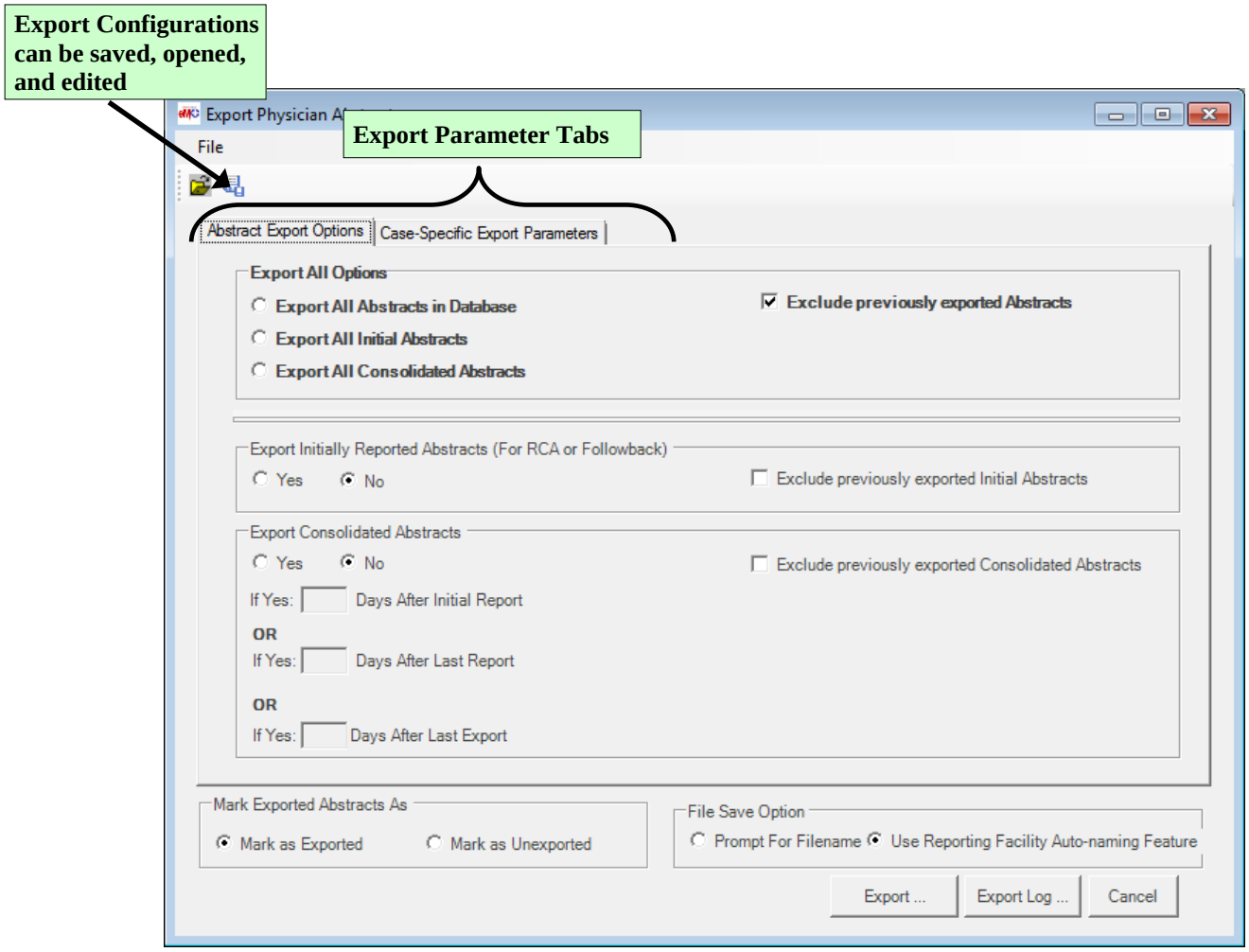
1. Open the **Export Physician Abstracts** window. This can be done in 2 ways:
    a. Click on the **File** menu, and select **Export Abstracts**.



    b. Click on the **Export Abstracts** 

icon on the eMaRC Plus main window toolbar.

    Result: The **Export Physician Abstracts** window opens defaulted to the **Abstract Export Options** tab.

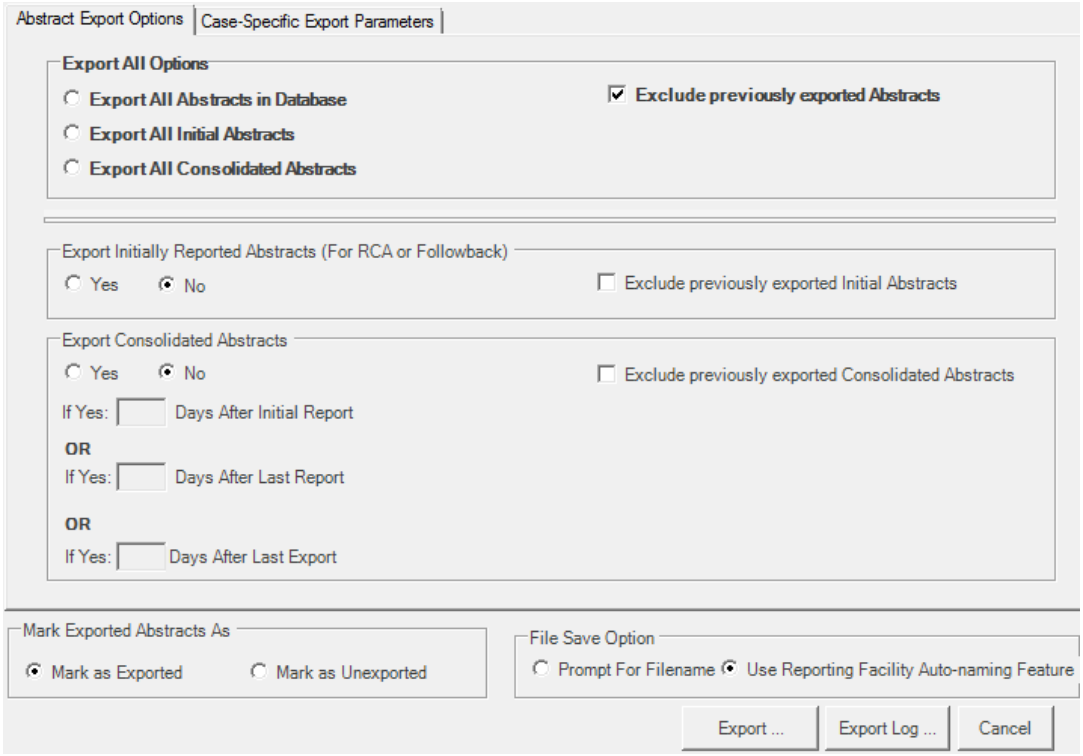


The Export Physician Abstracts window allows for the application of user-specified parameters for exporting both initially received abstracts and/or subsequently consolidated abstracts in NAACCR Record Layout format.

The Export Physician Abstracts window consists of 2 tabs which display, respectively, Abstract Export Options, and Case-Specific Export Parameters. Multiple parameters may be specified simultaneously both within an individual tab and/or on both tabs. “AND” logic is applied to the entered export criteria, enabling very specific exports to be generated. Export configurations can be generated and saved, and re-opened and re-run. Export may also be run automatically using the DOS Command Line.

The Export Physician Abstracts window includes the following export parameters that can be used alone or in combination to generate files of NAACCR abstracts to export.

The Abstract Export Options Tab



As mentioned, upon opening the Export Physician Abstracts window, the Abstract Export Options tab is displayed by default.

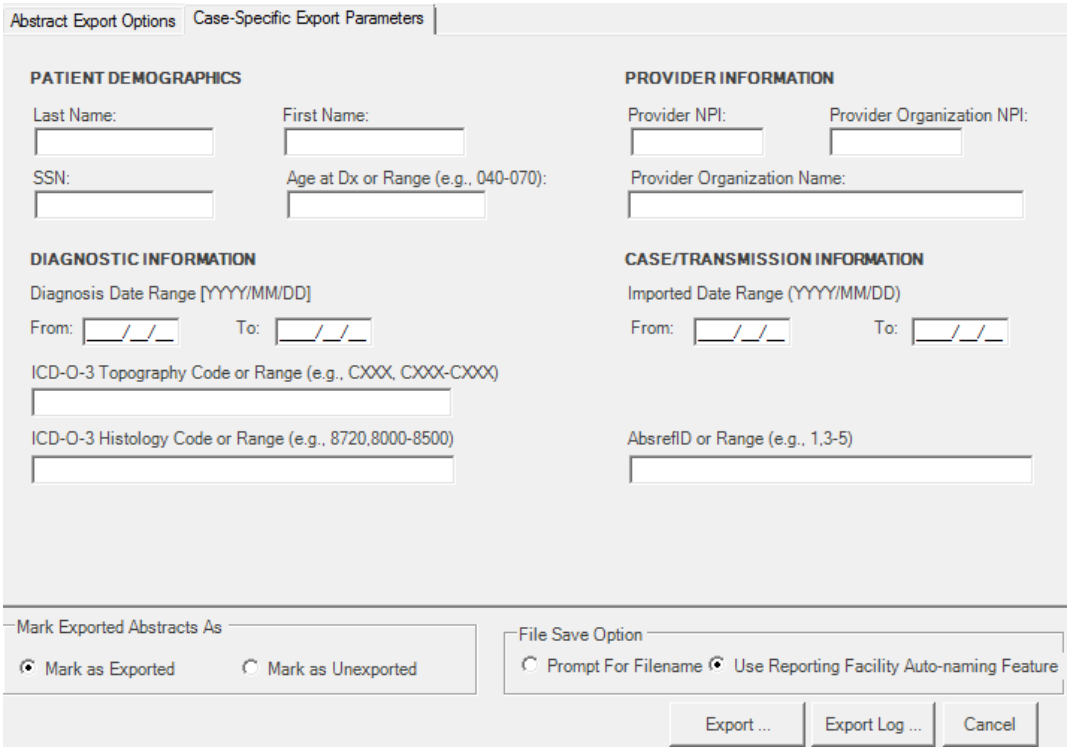
There are no export options defaulted on the Export Physician Abstracts window. This is so that registries will need to fully understand all the export features and configure their own exports. There are many export parameters and it is essential that you understand how they work, individually and in conjunction with one another. However, once you have setup a specific export configuration you can save it, and just open and run it on a regular basis or run it automatically from the DOS Command Line.

The following table describes the export parameters available on the Abstract Export Options tab:

Abstract Export Parameter	Description
Export All Options (These options are mutually exclusive; only 1 of these 3 options can be selected) (When using any of the Export All options no other export options may be applied)	**Export All Abstracts:** When selected, this option will export both initial and subsequently received abstracts in the database regardless of prior export status. Additionally, this option will: Include records meeting the criteria selected on the Case-Specific Criteria Tab Override any other export option on the Export All Options Tab **NOTE consolidated abstracts are NOT exported when using this option**
	Export All Initial Abstracts: When selected, this option will export all initially received abstracts in the database regardless of prior export status. Additionally, this option will: Include records meeting the criteria selected on the Case-Specific Criteria Tab Override any other export option on the Export All Options Tab
	Export All Consolidated Abstracts: When selected, this option will export all consolidated abstracts in the database regardless of prior export status. Additionally, this option will: Include records meeting the criteria selected on the Case-Specific Criteria Tab Override any other export option on the Export All Options Tab
Export Initially Reported Abstracts? [For RCA or Follow-back]	Yes/No option for exporting initially received abstracts (for Rapid Case Ascertainment or Follow-back efforts)
Exclude from Initial Abstracts Export	When the Previously Exported Initial Abstracts option is checked along with the Yes option for Export Initially Reported Abstracts, all initial abstracts that have not yet been exported will be exported, and will prevent re-export of previously exported initial abstracts.

Abstract Export Parameter	Description
Export Consolidated Abstracts?	Yes/No option for exporting consolidated abstracts; if Yes is selected, the user can specify 1 of 3 mutually exclusive parameters: i. **If Yes, XX Days After Initial Report (by PTRID)**: The number of days to wait after the i**nitial** Report for a PTRID was received; this option would be used when the registry would like for CDA documents to be received and auto-consolidated and then export the consolidated abstract after the specified number of days, (e.g., 180 days, the general length of time for treatment to be completed, or you could have multiple configurations by primary site for those cancers that generally take longer to complete the first course of treatment). ii. **If Yes, XX Days After Last Report (by PTRID)**: The number of days to wait after the l**ast** Report was received for a PTRID; this option would be used when the registry would like to export consolidated abstracts after it appears that no more CDA documents are being submitted for a PTRID (e.g., ~90 or 120 days), enabling the registry to export the consolidated record only once. iii. **If Yes, XX Days After Last Export**: The number of days to wait after the last **export** was performed for a PTRID; this option could be used when the registry would like to perform one final export to capture any potentially additional treatment and to update Date of Last Contact. (e.g., 365 days)
Exclude from Consolidated Abstracts Export	When the Previously Exported Consolidated Abstracts option is checked along with the any of the 3 Yes options selected for Consolidated Abstracts, all consolidated abstracts that have not yet been exported will be exported, preventing re-export of previously exported consolidated abstracts.
Mark Exported Abstracts as Exported/Unexported	When the Mark as Exported option is selected, all exported abstracts will be marked as exported--this prevents duplicate export of abstracts. When the Mark as Unexported option is selected, exported abstracts will not be marked as exported.

The Case-specific Export Parameters Tab



As mentioned, upon opening the Export Physician Abstracts window, the Abstract Export Options is displayed by default, where you specify global export options, such as whether you want to export initially received abstracts or consolidated abstracts as well as timing criteria. In addition, highly specific export criteria are available on the second tab, the Case-Specific Export Parameters tab.

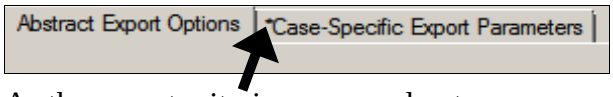
The following table describes the export parameters available on the Case-Specific Export Parameters tab:

Case-Specific Export Parameter	Description
Patient Demographics	**Last Name:** This option allows the user to specify a particular patient last name, which when used in conjunction with the Patient First Name option, allows the user to export abstracts for a specific patient **First Name** This option allows the user to specify a particular patient first name, which when used in conjunction with the Last Name option, allows the user to export abstracts for a specific patient **SSN:** This option allows the user to enter a specific Social Security Number to export abstracts for a specific patient **Age at Diagnosis or Range:** This option allows the user to enter a specific Age at Diagnosis or range of ages to export abstracts for patients of specific ages (e.g., pediatric cases)
Diagnostic Information	**Diagnosis Date:** This option allows the user to enter a date range to export abstracts by the diagnosis date of the tumors reported in the abstracts **Primary Site:** This option allows the user to enter a ICD-O-3 Topography code or range of codes to export abstracts having the specified primary site(s) **Histologic Type:** This option allows the user to enter a ICD-O-3 Histology code or range of codes to export abstracts having the specified histology (ies)
Provider Information	**Provider NPI:** This option allows the user to enter a specific Provider NPI number to export abstracts received from that provider **Provider Organization NPI:** This option allows the user to enter a specific Provider Organization NPI number to export abstracts received from that organization **Provider Organization Name:** This option allows the user to enter a specific Provider Organization Name to export abstracts received from that organization

Case-Specific Export Parameter	Description
Case/Transmission Information	**Imported Date Range:** This option allows the user to enter a date range to export abstracts by the dates that they were imported into eMaRC Plus **Abstract Reference ID or Range:** This option allows the user to enter a specific AbsRefID or range of AbsRefIDs to export specific abstracts

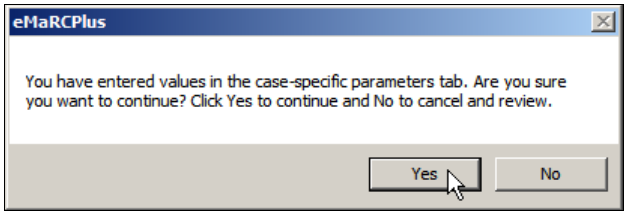
Important

Note that as soon as you enter export criteria on the Case-Specific Export Parameter tab, an asterisk appears to the left of the tab name:



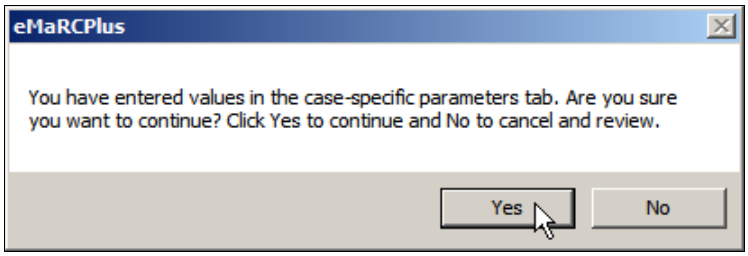
As the export criteria are spread out across separate tabs, this serves as an important a visual cue that you have entered an export parameter on that tab, and helps you keep track of what parameters you have entered.

In addition, whenever you do specify export criteria on the Case-Specific Export Parameter tab, the application will prompt you to confirm that you do indeed want to use these export criteria:



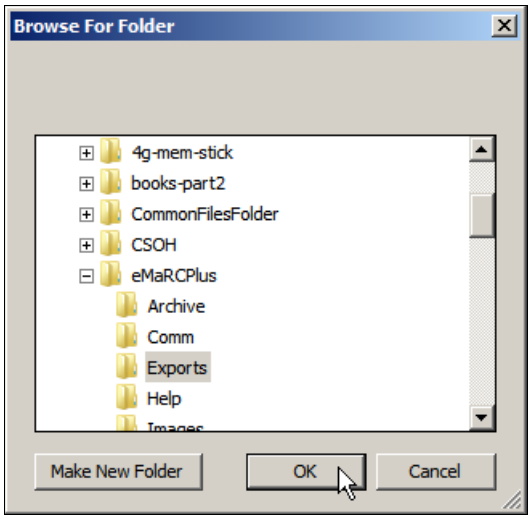
2. Specify all of your export parameters, and then click **Export**.

   Result: As stated above, if you have specified export criteria on the Case-Specific Export Parameter tab, the application will prompt you to confirm that you do indeed want to use these export criteria.



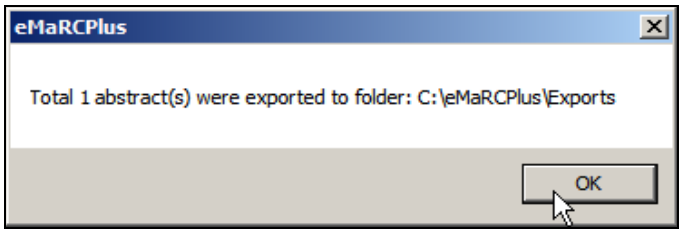
3. Click **Yes**.

   Result: The **Browse for Folder** window opens, defaulted to the **C:\eMaRCPlus\Exports** folder. You may navigate to a different location on your computer or network.



4. Click OK.

   Result: The application lets you know how many abstracts were exported to the specified folder



Export File Naming Options

Regardless of any of the Specific Export Options selected (excluding the Export All Options) all abstracts exported out of the eMaRC Plus Physician Reporting module are in the NAACCR Record Type A format. Users utilize the File Save Option to select whether to generate a single export file or individual files of abstracts:

- **Prompt for Filename:** When selected the user is prompted to enter a specific filename for a single generated single file of exported abstracts.
- **Use Reporting Facility Auto-naming Feature:** When selected eMaRC Plus generates individual files by Reporting Facility and automatically names the files using the naming convention of ep_xxxxxxxxxx_yy.dat, where the "ep_" prefix indicates an export out of eMaRC Plus, the x's represent the Reporting Facility ID [#540], and the y's represent a sequential number assigned to each file of abstracts exported for that facility (e.g., ep_1111111111_11.dat). A file of exported abstracts will be generated for each facility.

The PTRID will be exported with each abstract, enabling the central registry to link back to the eMaRC Plus CDA database for any patient or group of patients. The **PTRID will be 10 characters in length and located in positions 20911 to 20920 in the NAACCR Record Layout** in abstracts exported out of the eMaRC Plus Physician Reporting module.

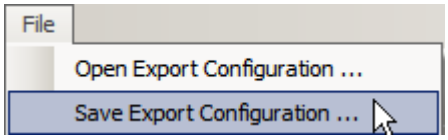
Saving Export Configurations

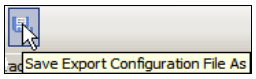
As mentioned earlier, once you have setup specific export configurations, eMaRC Plus allows you to save your export configurations so that all you have to do is open and run the export on a regular basis or run it automatically from the DOS Command Line.

To save an export configuration, complete these steps:

1. Open the Export **Save As** window. This can be done in 2 ways:

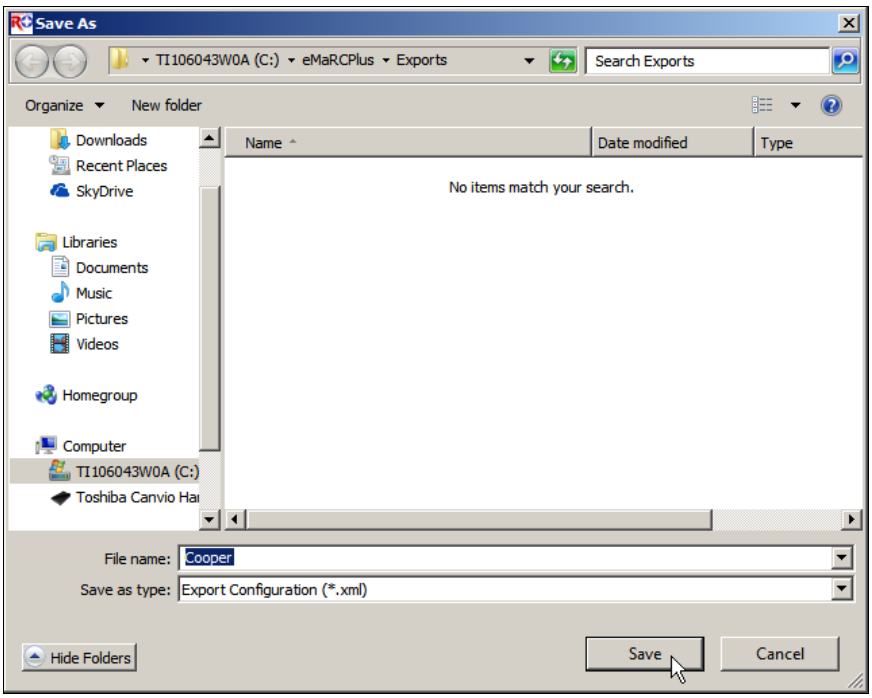
   a. On the Export Physician Abstract window, click on the **File** menu, and select **Save Export Configuration…**

   b. Click on the **Save Export Configuration As** 

   icon on the Export Physician Abstracts window toolbar.

   Result: The **Export Save As** window opens defaulted to the **C:\eMaRCPlus\Exports** folder.

2. **Enter a name** for the export configuration file and click **Save**. Export configuration files are stored in **XML format**. Be sure to give the name of the configuration a meaningful name, so that you will be able to know exactly what it exports when you open it at a later time. In the example shown, the export configuration file is being saved as Cooper_Consolidation_Review.xml.

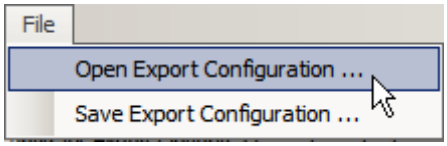
Result: The application **saves** the export configuration file and returns you to the **Export Physician Abstracts** window.

Note You can automatically run saved export configurations using the DOS Command Line.

Opening Saved Export Configurations

As mentioned earlier, once you have setup specific export configurations, eMaRC Plus allows you to save your export configurations so that all you have to do is open and run the export on a regular basis or run it automatically from the DOS Command Line. To open a saved export configuration, complete these steps:

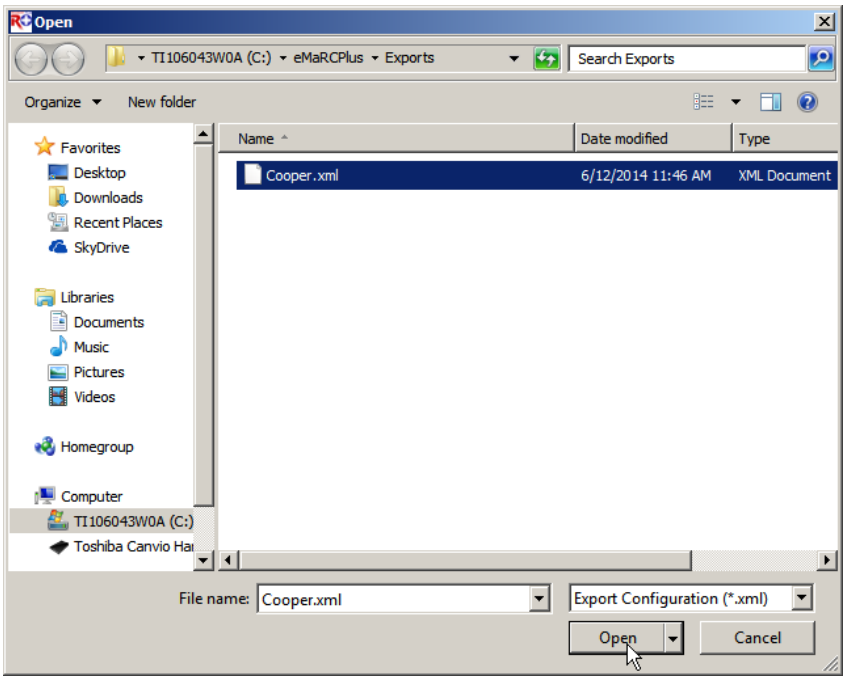
1. Open the **Open** Export window. This can be done in 2 ways:
   a. On the Export Physician Abstract window, click on the **File** menu, and select **Open Export Configuration…**



   b. Click on the **Open Export Configuration File** 

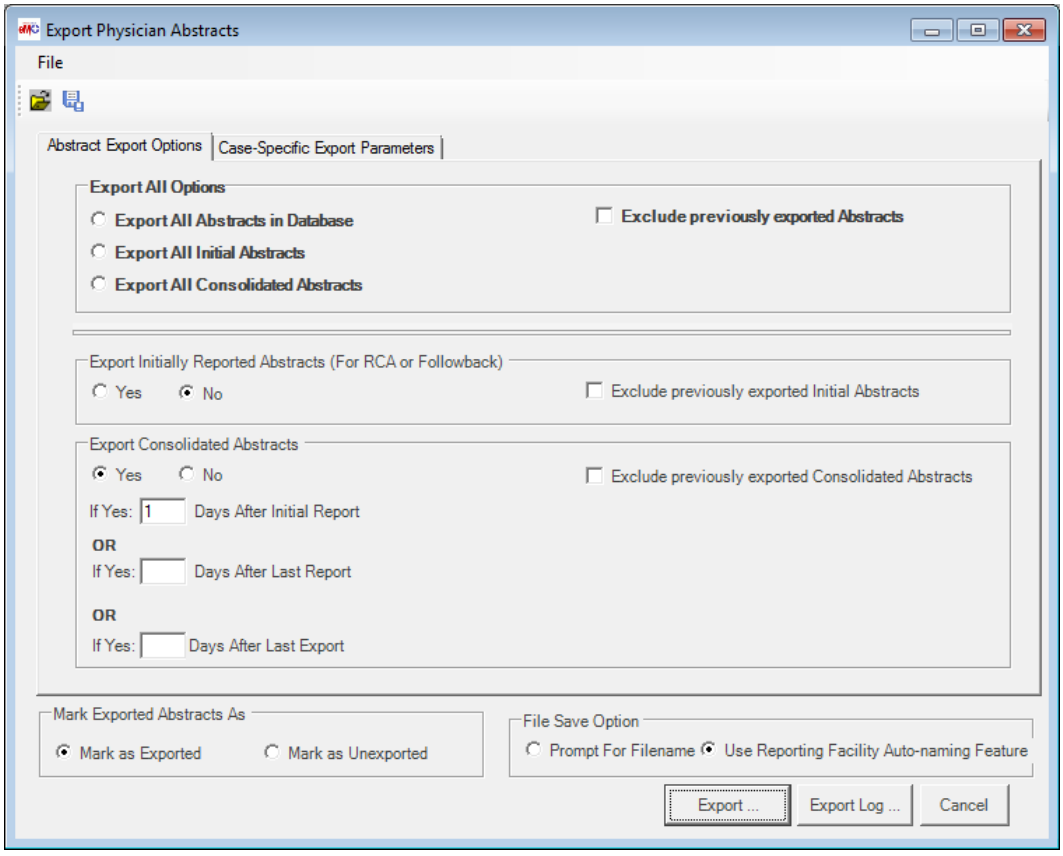
icon on the Export Physician Abstracts window toolbar.

Result: The **Open Export** window opens defaulted to the **C:\eMaRCPlus\Exports** folder.



2. **Select the export configuration file** you would like to open and click **Open**. In the example shown, the export configuration file being opened is Cooper_Consolidation_Review.xml.

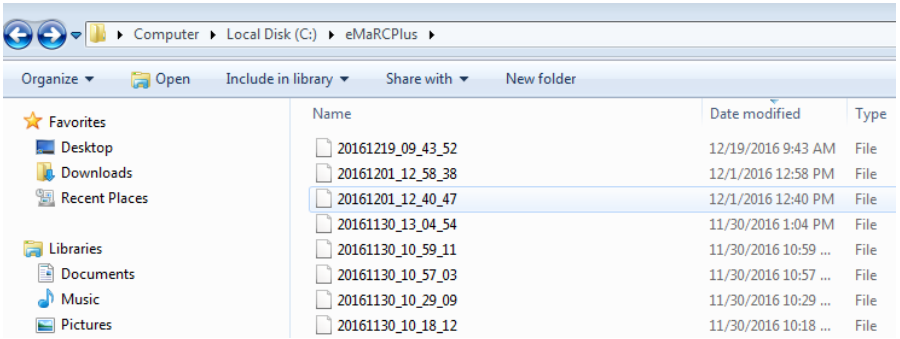
   Result: The application **opens** the selected export configuration file on the **Export Physician Abstracts** window.



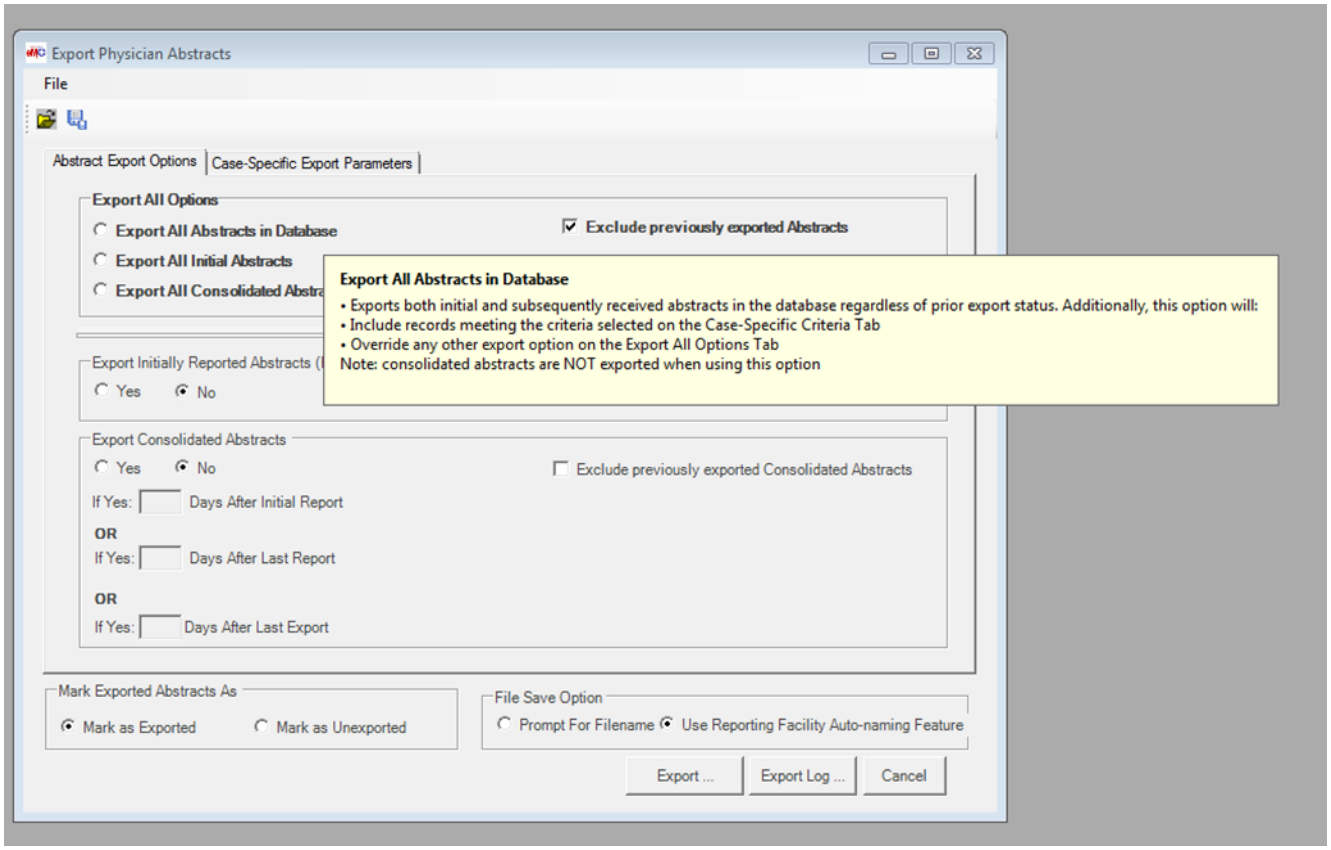
3. To run the export, click **Export**.

Export Files

The eMaRC Plus Physician Reporting module includes an electronic export file, so that you can track your exports. The files are located in C:\eMaRCPlus.



The export window includes “tool tips”, which gives you a brief description of the **Export All Options** and **the File Save Option**. Simply hover your cursor over each function to display tool tips. This feature will include additional export options in a future release.



Chapter 8: Automatically Exporting Using DOS Command

Learning Objectives

In this chapter, you will learn to:

- Use the DOS Command Line to automatically export batches of abstracts out of the eMaRC Plus the Physician Reporting module

Overview

This chapter covers instructions regarding running commands from the DOS prompt to export batches of abstracts. These exports can be scheduled so that they run automatically at a specified time. In addition, the commands include specification of which saved export configuration to use, so you can run multiple export configurations in this manner.

Running Physician Abstract Exports from the DOS Command Line

To enable automation of the export process, the DOS command line interface can be used to automatically export abstracts using a saved export configuration file and export location. You also have the option of naming the export file, or letting the application use the auto-naming feature.

To use the DOS command line prompt to export physician abstracts, complete these steps:

3. Open the DOS command prompt window.
    a. **On Windows XP:**
        i. Click on **Start** then select **Run**.
        ii. Type **cmd** in **Open** box and press **Enter**.
    b. **On Windows Vista/ Windows 7/ Windows 8.0/Windows server:**
        i. Type **cmd** in the **Start---> Run** box.
        ii. Press the keystrokes **Ctrl+Shift+Enter** (this will open the command prompt in Administrator mode).
4. At the command prompt, type **cd** and **press Enter** to go to the root directory (i.e., C:\)
5. Type **CD C:\eMaRCPlus**and press **Enter**.
6. Enter the following command at the prompt:

    eMaRCPlus.exe action=export folder=<folder to export file to> File=<File to export file to> config=<filename and location of export configuration file> user=<eMaRC Plus userid> pwd=<eMaRC Plus user password>

    See Saving Export Configurations to learn how to save the export configuration that is specified in the above DOS Command.

When the File= parameter is not specified, the export filenames will be auto-generated based on the Report Facility ID [#540].

Example 1: Exporting and specifying a file name for the export file (MyExport.dat)

eMaRCPlus.exe action=export folder=C:\eMaRCPlus\Exports File=MyExport.dat config=C:\eMaRCPlus\export.xml user=doe pwd=guest

Example 2: Exporting and letting eMaRC Plus auto-generate the exported file name

eMaRCPlus.exe action=export folder=C:\eMaRCPlus\Exports config=C:\eMaRCPlus\export.xml user=doe pwd=guest

Chapter 9: Various Application Use Scenarios

Learning Objectives

In this chapter, you will:

- Familiarize yourself with the different ways the Physician Reporting Module can be used by central cancer registries

Overview

It is well-known that certain cancers, such as prostate and melanoma of the skin, are under-reported to state central cancer registries due to the fact that hospitals and pathology laboratories serve as the main source of cancer reports for the majority of registries, and many of these tumors are diagnosed and treated in physician offices and other outpatient settings. As a result, the implementation of physician reporting via the eMaRC Plus Physician Reporting module has the potential to increase case completeness for these under-reported tumors, enabling the registry to generate more accurate incidence rates and provide more complete data to researchers.

However, implementing a new source of cancer reporting with no increase in registry resources or staffing to address the processing of the resulting additional caseload can be quite daunting for a central registry. However, registries may choose one of many different approaches to integrate the Physician Reporting Module of eMaRC Plus into their registry operations to facilitate the implementation of Physician Reporting from the EHR, The approach taken by the registry will depend largely on the following factors:

- Staff time and available computing resources
- Accuracy of incoming data
- The registry's percent case completeness and need to increase it overall and/or for various primary sites
- The registry's percent of cases identified by Death Certificate Only (DCOs)
- How many physicians are reporting to the registry from the EHR (% of overall caseload)

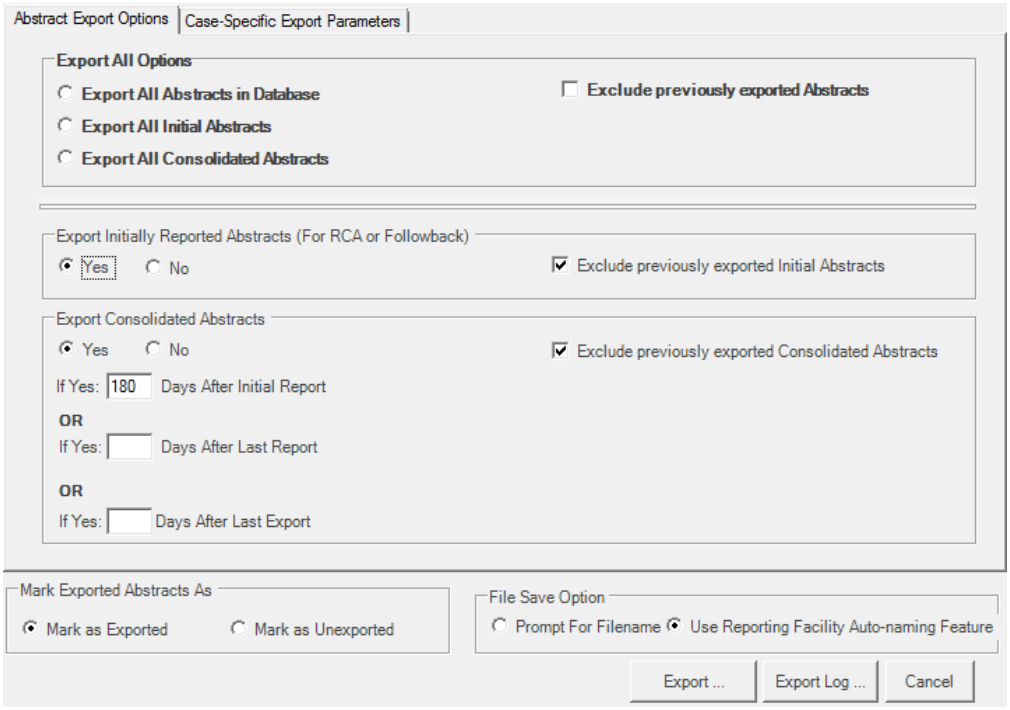
As a result, central cancer registries can make registry operations decisions regarding how they use the eMaRC Plus Physician Reporting module and the supplementary data that it can potentially provide to the registry:

Rapid Case Ascertainment (RCA)

Central registries that perform RCA will want to export all initially-received cancer abstracts immediately for import into central database, and then perform a subsequent export of the consolidated abstracts once the first course of treatment has been completed.

The export options that are selected below (Export Initially Reported Abstracts; Exclude Previously Exported Initial Abstracts and Export Consolidated Abstracts 180 Days after Initial Report; Exclude Previously exported Consolidated Abstracts, as well as Mark Exported Abstracts as Exported) would allow a registry that performs RCA to export all un-exported

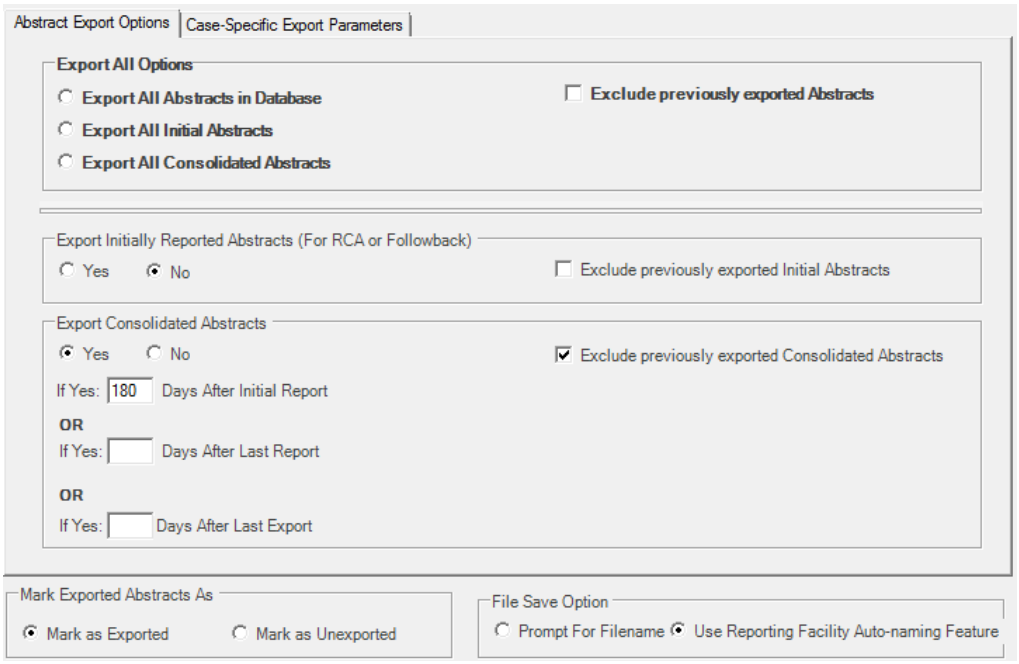
abstracts to-date (both RCA cases and more complete consolidated reports) automatically, and will prevent re-export of previously exported abstracts, thus preventing reporting of unwanted duplicate abstracts to the central registry. Recall that the initially reported abstract is assigned a special "Initial Report" status code and is stored in both the Facility Abstracts Table and the Consolidated Abstracts Table (serving as the base abstract for consolidation).



Regular Reporting

Some registries will want to set up eMaRC Plus Physician reporting to mimic a regular reporting scenario, such as from a hospital, waiting until the first course of treatment is complete, and export a single consolidated abstract for import into central database.

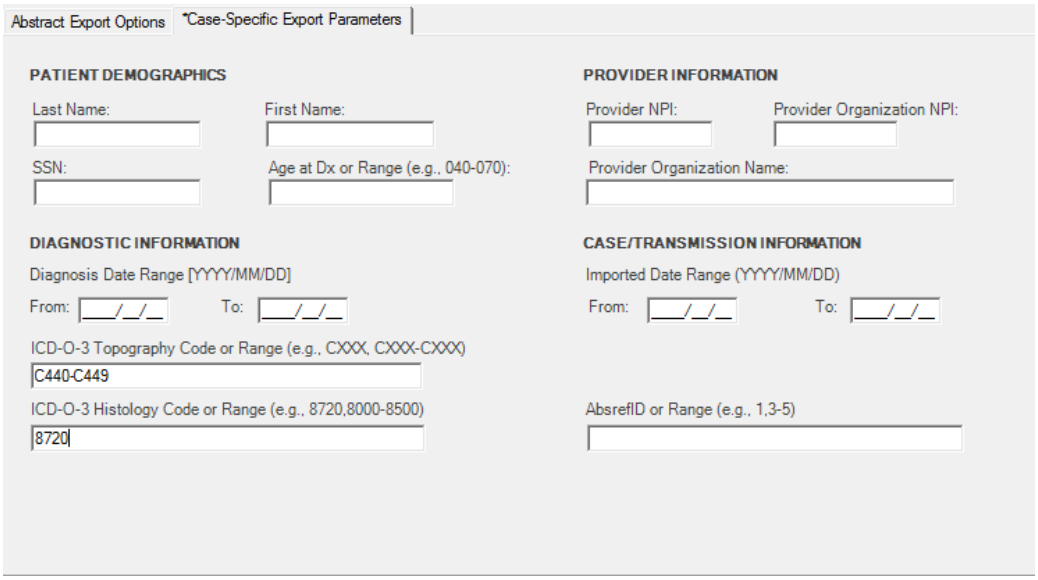
The export options that are selected below (Export Consolidated Abstracts 180 Days after Initial Report; Exclude Previously exported Consolidated Abstracts, as well as Mark Exported Abstracts as Exported) would allow a registry to export all un-exported consolidated abstracts with first course of treatment complete (estimated at 180 days) to-date automatically, and will prevent re-export of previously exported abstracts, thus preventing reporting of unwanted duplicate abstracts to the central registry.



Regular Reporting for Under-reported Cancers Only

Some registries will not have the resources to process all physician reports received from the EHR. These registries may choose to set up eMaRC Plus Physician reporting to mimic a regular reporting scenario, such as from a hospital, waiting until the first course of treatment is complete, and export a single consolidated abstract for import into central database, but only for specific types of cancer that they know are under-reported to their registry, such as melanoma, prostate, and leukemia.

In this case, the export options that are selected above for regular reporting would be the same, only supplemented with additional Case-Specific Export Parameters:

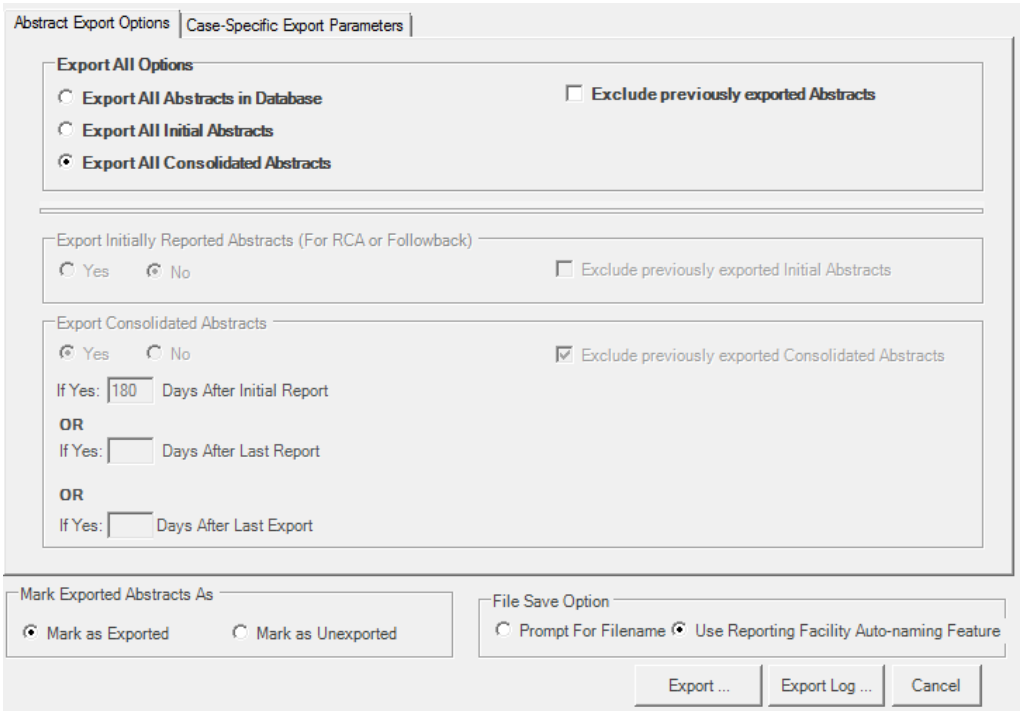


In the example shown, only melanomas of the skin would be exported with estimated first course of treatment completed within 180 days. One of the excellent features of the program is that you can specify differing numbers of Days After Initial Import for different types of cancers. Some types of cancers are known to have a first course of treatment longer than 180 days, and so a separate export configuration could be specified for the type of cancer with a greater number of Days After Initial Report.

Casefinding Only

Some may just conduct an annual linkage of their central registry database with an extract of all consolidated cases from the Physician Reporting module to be able to process only those cases for which they have no other report (i.e., use the Physician module as a case-finding tool).

These registries would want to utilize the Export All options if, for example, the registry would like to generate an extract and perform a linkage with their entire central registry database, they may choose to export all consolidated abstracts.



If desired, additional Case-Specific Export parameters could be used to restrict the file being exported for linkage to certain types of cancers, or diagnosis dates.

Reducing Percent Death Certificate Only (DCO) Cases

Some registries may want to just use the application to reduce the percent of DCOs. These registries would want to utilize the Export All Consolidated option, and perform a linkage with a file including the DCO cases on their database.

These are just a few examples of how the highly configurable export features of the eMaRC Plus Physician Reporting module can be utilized to address the diverse needs of, and resources available to process this new reporting source by, central cancer registries.

Chapter 10: Physician Module Administrative Features

Learning Objectives

In this chapter, you will learn about the Administrative features of the eMaRC Plus Physician Reporting Module, including:

- Managing the Abstract Display Type
- Managing the CDA document display
- Specifying system configuration settings
- Deleting CDA documents

Overview

This chapter covers the features available under the Administration menu item, including managing the Abstract Display, the Document display, and system configuration options.

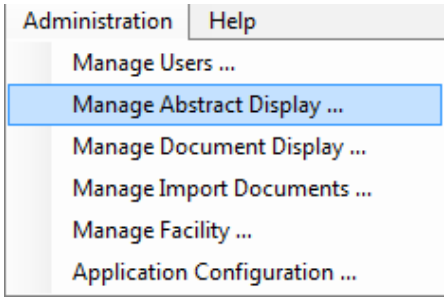
Managing the Abstract Display

A "display type" is a feature common to the majority of Registry Plus applications, and is basically the user interface where cancer data are abstracted and viewed, or in the case of the Physician Reporting Module, automatically populated and viewed on the CDA Workbench. Display types are highly customizable, and delineate what data items are collected/required, etc. Any standard data items and state-specific fields can be included in a display type, can be logically ordered into sections to facilitate the viewing of the data, and have various properties that can be set such as default values.

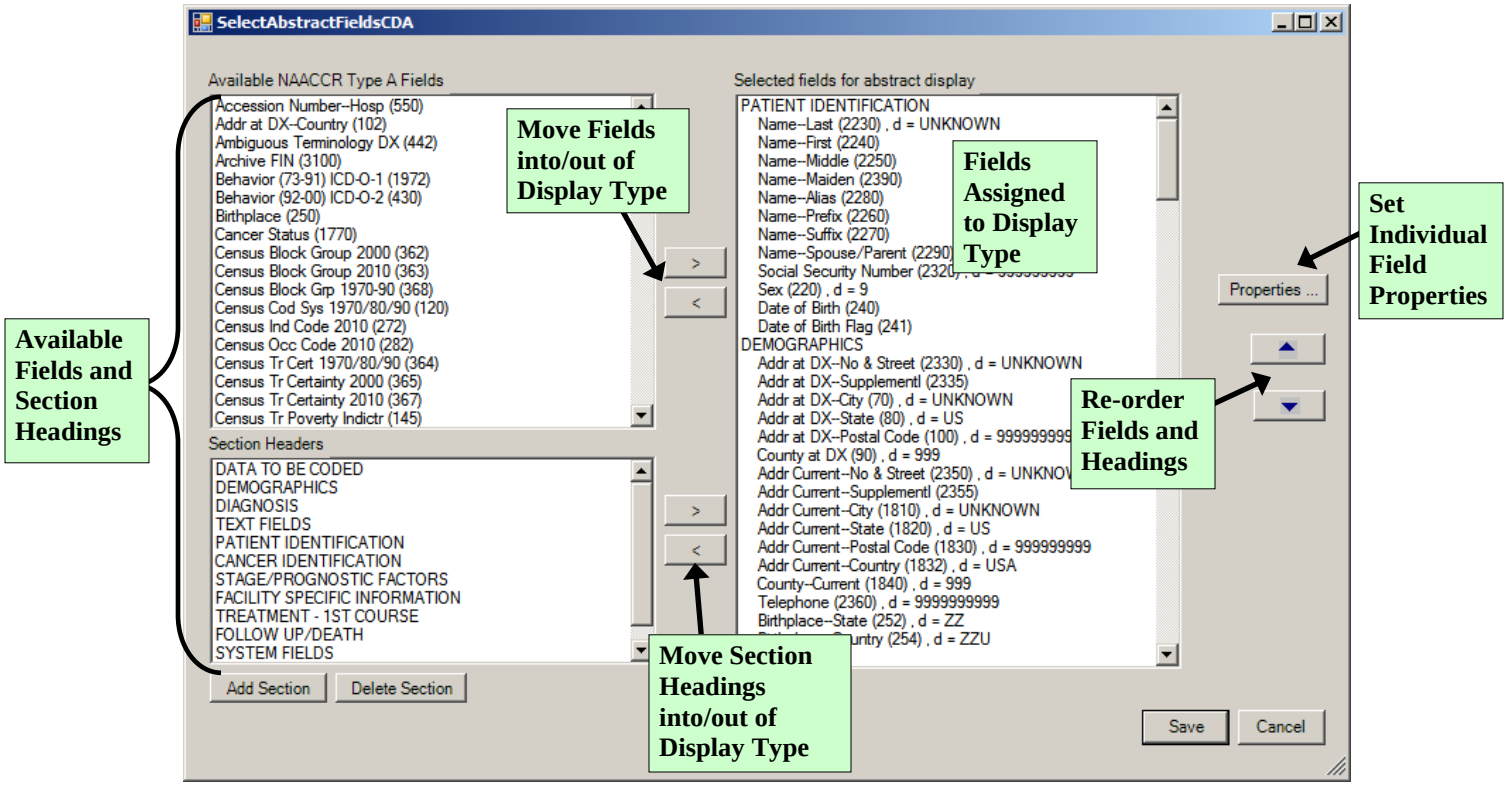
The default Abstract Display that is included with the application is set up to accommodate all of the mapped and translated CDA data elements, and includes defaults for those NAACCR data items that are required, but not available with the CDA document. However, states may want to revise the default Abstract Display, in particular the suggested default values for those NAACCR data items that are required but not available within the CDA document. They may also want to add state-specific data items to the application/Display, re-order fields in the Display, re-label sections, etc.

To manage the Abstract Display, complete these steps:

1. Open the **SelectAbstractFieldsCDA** window. Click on the **File** menu, and select **Manage Abstract Display…**



Result: The **SelectAbstractFieldsCDA** window opens.



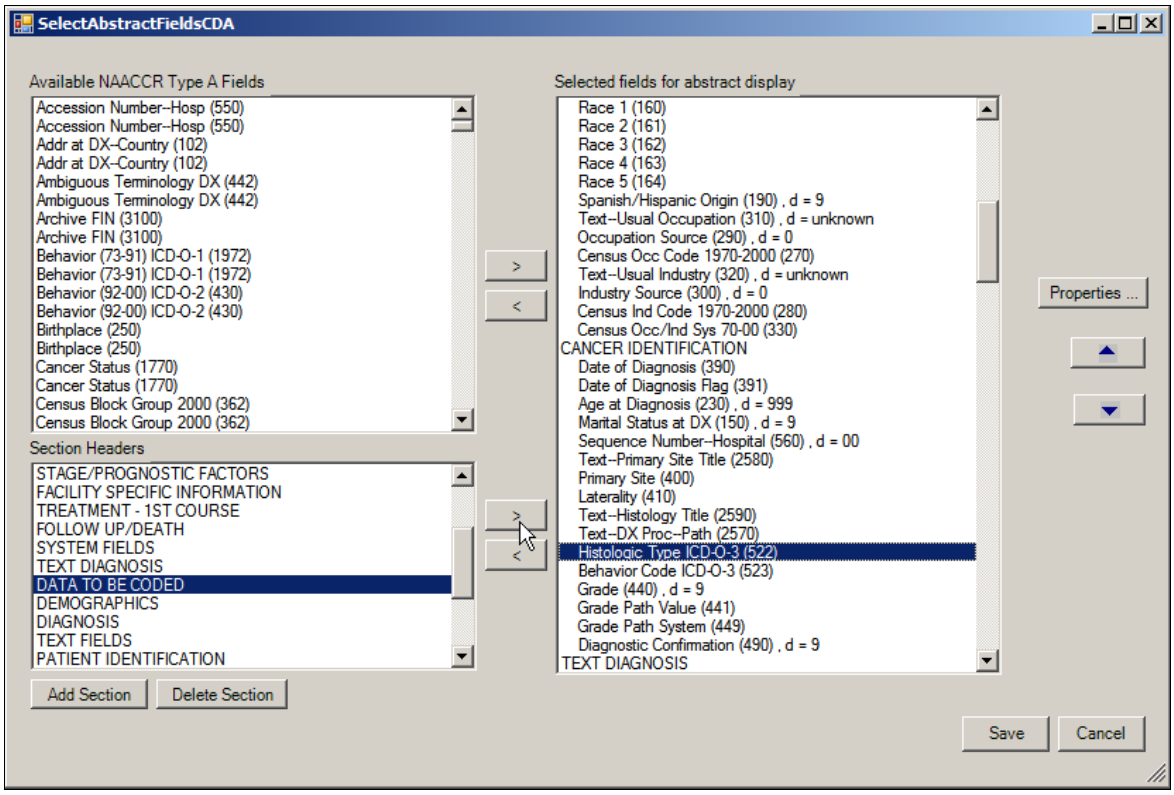
You can select the fields for which data is to be defaulted, mapped or translated into or out of the display type, and group the fields into sections if desired. Using the left and right arrow buttons, fields and section headings are moved from the lists of available data fields and section headings on the left side of the window to the list of data fields and section headings on the right to include them in the selected display type. The Sequence up and down arrow buttons are used to re-order the fields and section headings once they have been added to the display type.

Adding Section Headings to a Display Type

Section headings are added to a display type to organize the fields in the display type into logical groups of related fields.

To add an existing section heading to a display type, complete these steps:

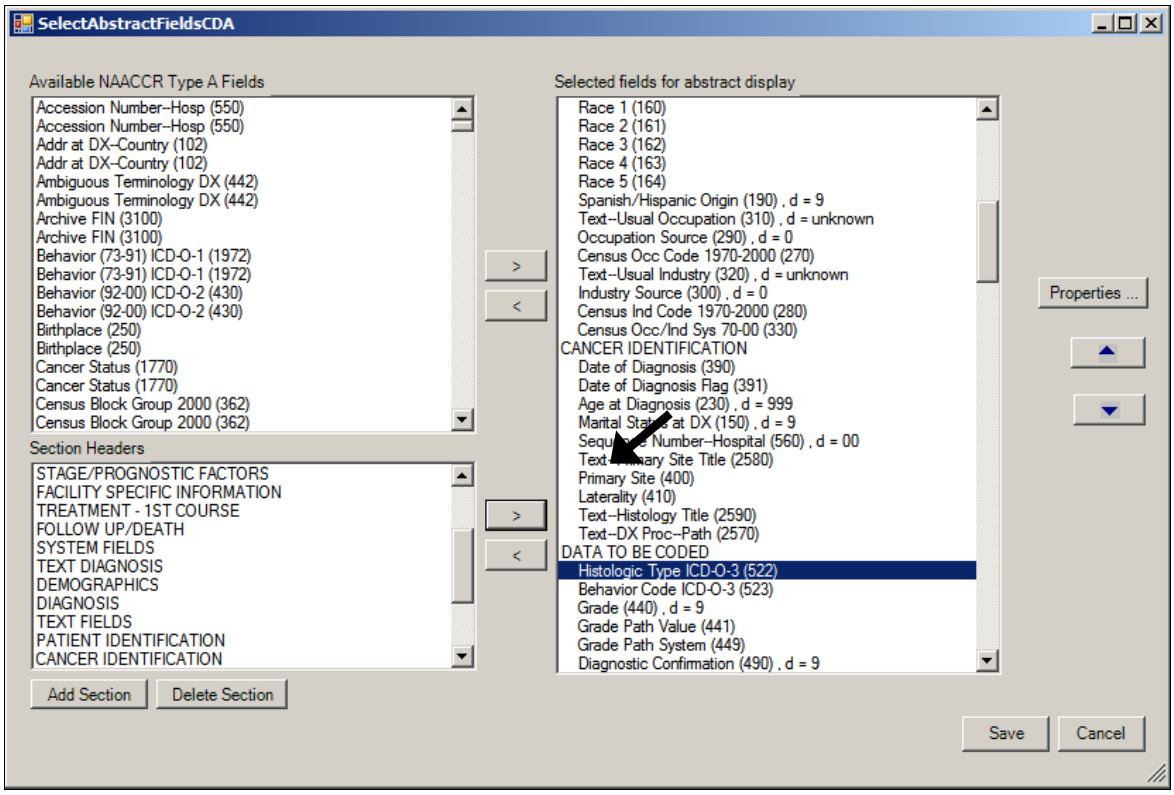
1. In the Selected fields for abstract display list, select the field above which you would like to place the Section header. In the example shown, the section heading of DATA TO BE CODED is being moved into the display type above the field of Histologic Type ICD-O-3, so the field of Histologic Type ICD-O-3 is selected from the Selected fields for abstract display list.



2. In the **Section Headers** list on the lower left pane of the window, select the section heading that you would like to move into the display type. In the example shown, the section heading of DATA TO BE CODED is selected.

3. Click the right-pointing arrow  to move the heading into the display type.

   Result: The section heading is removed from the Section Headings for Display Type list on the left, and is moved into the Selected fields for abstract display list on the right, above the currently-selected field in the list.

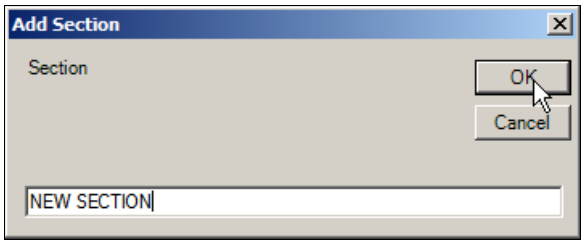


Adding a New Section Heading

To add a new section heading to the application, complete these steps:

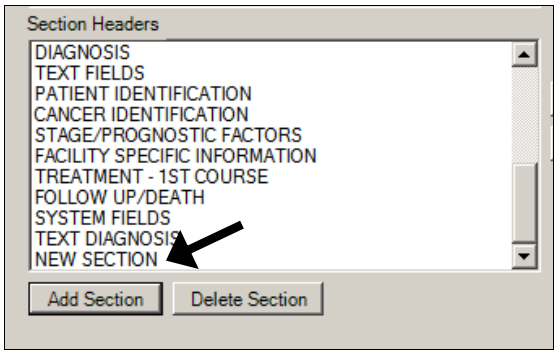
1. Below the In the **Section Headers** list on the lower left pane of the window, click **Add Section**.

   Result: The **Add Section** window opens.



2. Enter a name for the new section header and click **OK**. In the example shown, a section header named NEW SECTION is being added.

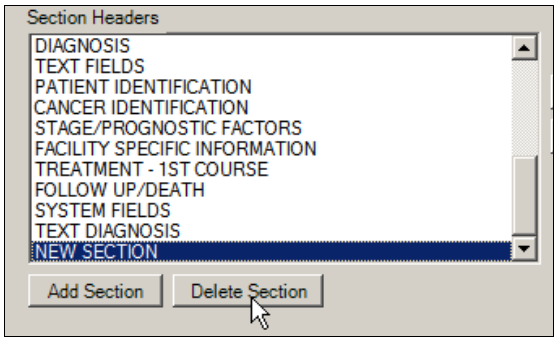
   Result: The new section is **added** to the list of existing section headings.



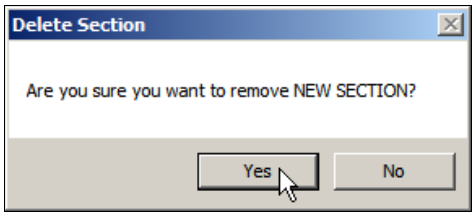
Deleting a Section Heading

To delete a section heading, complete these steps:

1. **Select** the section heading that you would like to delete from the **List Section Headers** on the left, and click **Delete**. In the example shown, the section heading being deleted is named NEW SECTION, so it is selected from the List of Available Section Headings.



Result: The application prompts you to confirm that you would like to delete the currently selected section heading.



2. Click **Yes**.

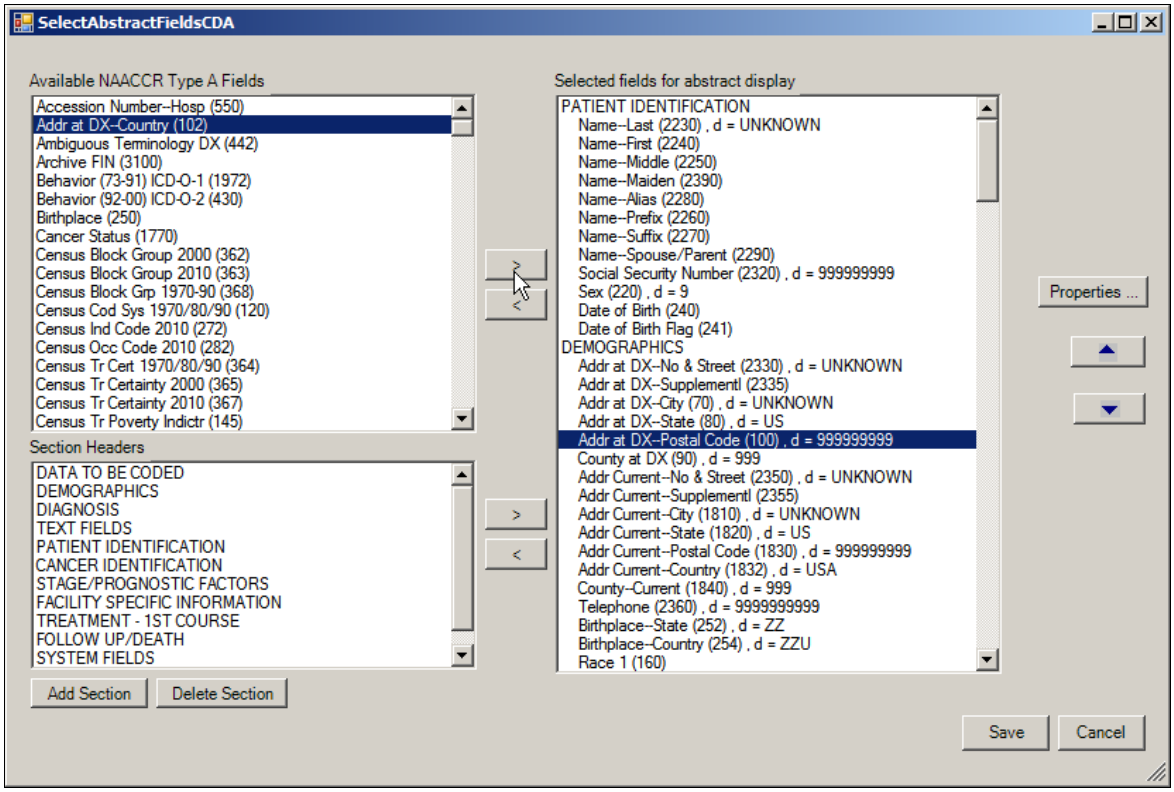
Result: The section heading is deleted from the application, and is no longer listed in the List of Section Headers.

Adding Fields to a Display Type

After adding section headings to the Selected fields for abstract display list, you then add fields to the display type. When adding fields to a display type it is important to keep in mind which data items you would like to collect, and of those data items, which you would like to require (i.e., make a critical field, cannot be blank), as well as which data items you would like to fill with a default value. It is also important to know which data items your central registry system will require when the abstracts exported out of eMaRC Plus are imported into your central registry system, for example, system fields such as Morph Coding Sys-Current.

To add fields to a display type, complete these steps:

1. In the **Selected fields for abstract display** list, **select the field or section heading below which** you would like to **place the field** that you are adding to the display type. In the example shown, the Addr at DX Country [#102] field is being added to the display type below the field of Addr at DX—Postal Code [#100], so the field of Addr at DX—Postal Code is selected from the Selected fields for abstract display list.

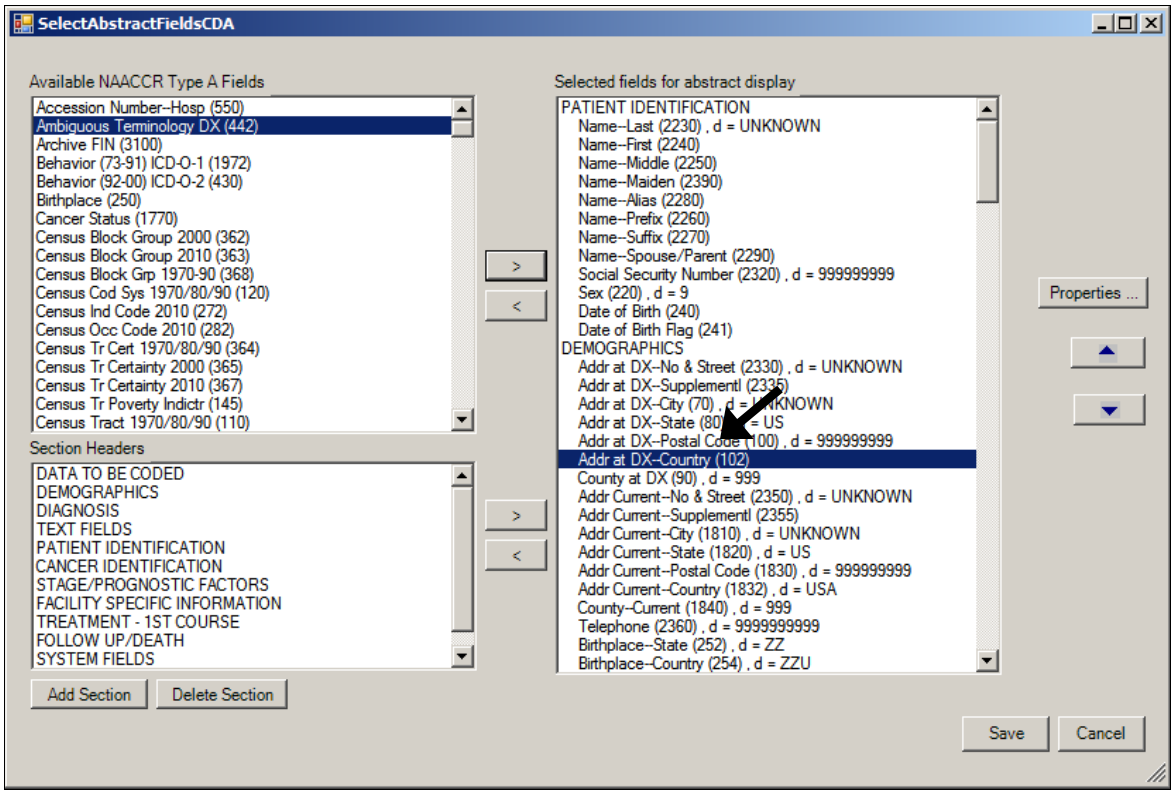


2. In the **Available NAACCR Type A Fields** list on the left, select the field or fields that you would like to move into the display type. In the example shown, the Addr at DX Country field is being added to the display type.

To select one field, click the name of the field. To select a group of fields together, click the first field, press and hold the SHIFT key, and then click the last field in the group. To select multiple fields that are not in order, press and hold the CTRL key and click each field.

3. Click the right-pointing arrow  to move the field or fields into the display type.

Result: The field(s) is removed from the Available NAACCR Type A Fields on the left, and is moved into the Selected fields for abstract display list on the right, below the currently-selected field in the list.



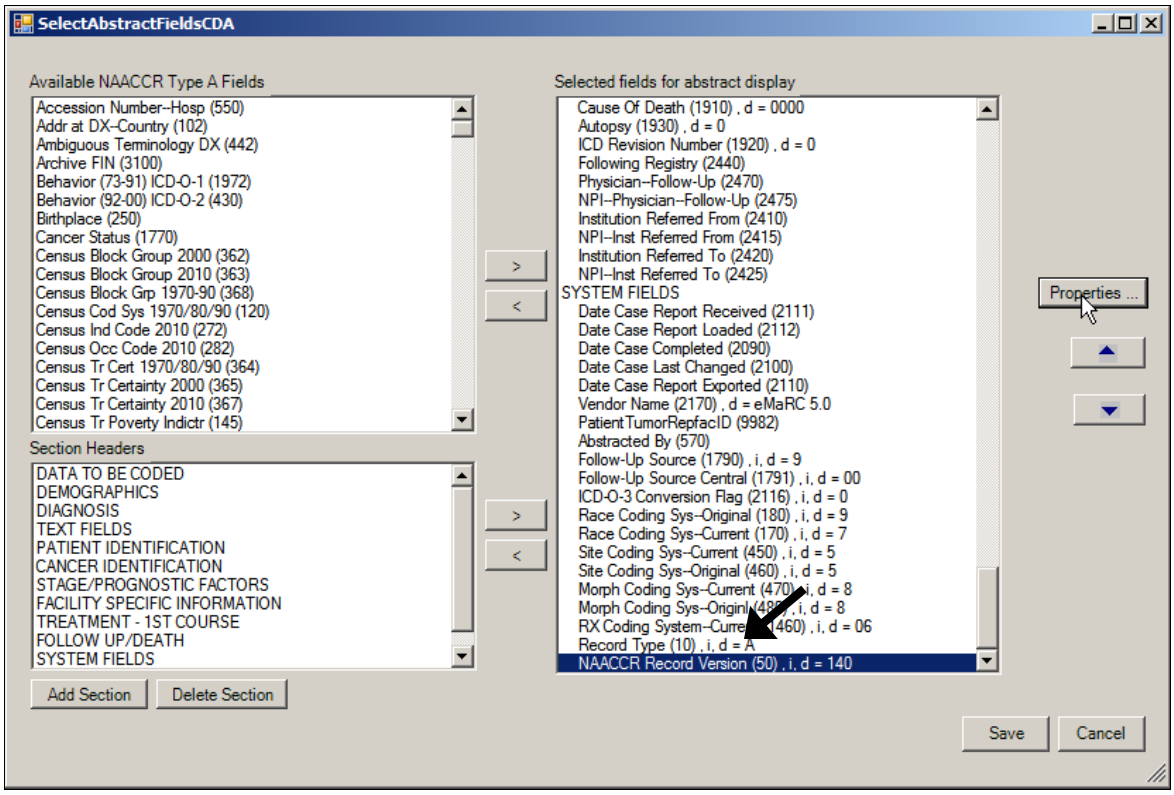
4. If the order of the placed fields is not as desired, use the SEQUENCE up  and down  arrows to move the field or fields up or down in the order of the display type to the desired position.
5. Save updates to the display type by clicking **Save**.

Assigning Property Values to Individual Fields

Once a field has been added to a display type, special properties may be specified for the field, such as a default value.

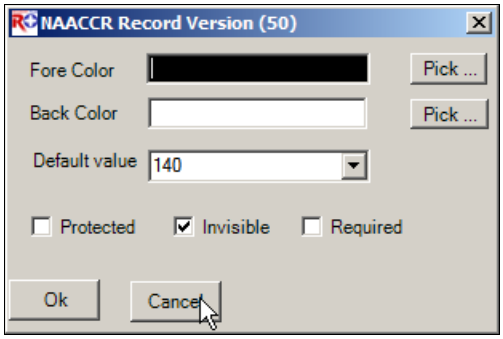
To assign property values to a field, complete these steps:

1. In the **Selected fields for abstract display** list, locate and **select the data item** for which you would like to specify field properties. In the example shown, properties are being reviewed for the field of NAACCR Record Version.



2. Click **Properties**.

Result: The **Properties** window opens for the selected field.



These are the fields in the Properties window:

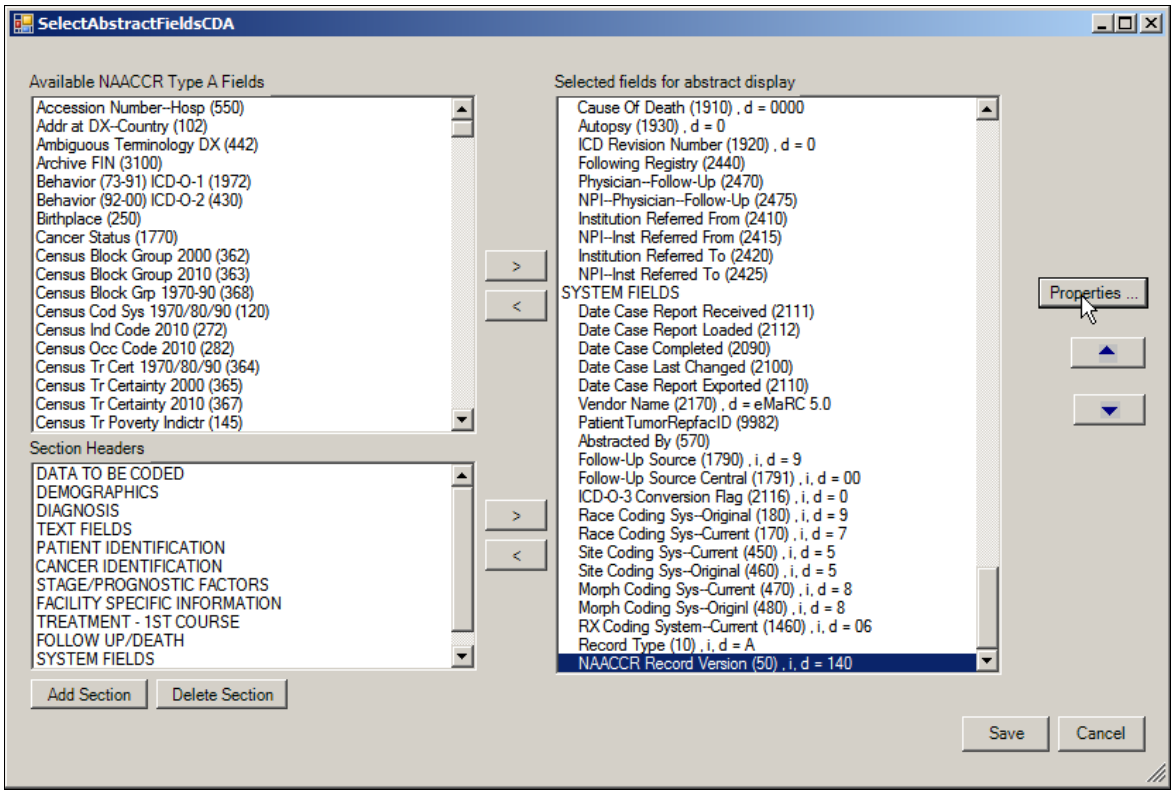
Property	Description
Fore Color	Adjusts the font color of the field
Back Color	Adjusts the background color of the field
Field Default Value	Value that is initially displayed in the field
Protected	When check box is checked, value of field is displayed to the Abstractor, but cannot be edited

Property	Description
Invisible	When check box is checked, the field is not visible to the user, but a defaulted value is edited and transmitted with the abstract
Required	When check box is checked, the field is considered a "Required Field", i.e., cannot be blank; the abstract will not be marked as Complete if this field is blank

In the example shown, the field of NAACCR Record Version has been set to invisible and defaulted to a value of 140.

3. Click **Cancel**.

Result: You are returned to the SelectAbstractFieldsCDA window.



Now take notice of the **symbols** to the right of the NAACCR Record Version field name. These symbols represent the **properties** assigned to the field.

Field property definitions are displayed to the right of the field name and NAACCR Data Item Number in parentheses in the Selected fields for abstract display list. In addition, they are separated with commas and are always listed in the same order, as defined in the following table:

Property Symbol	Description
p	Protected – value cannot be changed by the user

Property Symbol	Description
i	Invisible – value cannot be seen by the user in the display type
d =	Default Value Follows equal sign – value that will automatically be populated in this field in the display type

The following table illustrates some examples of set properties and the symbols that are displayed for the set properties in the Selected fields for abstract display list:

Property Setting	Description
Record Type (10) =A	The field of Record Type, NAACCR item #10, will be defaulted to a value of A; the field may be modified by the user
Record Type (10) i, d = A,	The field of Record Type, NAACCR item #10 is set to invisible, and defaulted to a value of A; the field cannot be modified by the user because it will not be visible in the display type
Record Type (10) p, i, d = A	The field of Record Type, NAACCR item #10 is set to protected, invisible, and assigned a default value of A

System Fields and Display Types

A final consideration when generating abstracting display types is the inclusion of and provision of default values to any system- or coding system-related fields that your central registry system may require when the completed abstract is eventually submitted for processing at your central registry. The below table contains a list of NAACCR data items, along with their suggested default values, that are recommended for inclusion in display types. If you do not want the user to see these fields or their values, you can assign default values to the fields, and then set the fields to protected and invisible. In this way, the fields will be transmitted with the exported abstract, but the user will not have to abstract or even be aware of the fields.

NAACCR Data Item Name	Data Item #	Column #	Suggested Default Value
Record Type	10	001	A
NAACCR Record Version	50	017	150
Race Coding Sys-Current	170	187	7
Race Coding Sys-Original	180	188	7
Site Coding Sys-Current	450	558	5
Site Coding Sys-Original	460	559	5

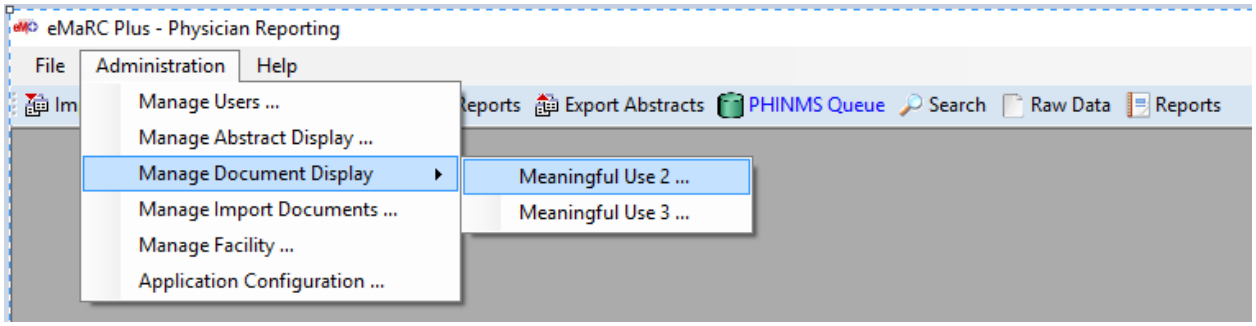
NAACCR Data Item Name	Data Item #	Column #	Suggested Default Value
Morph Coding Sys-Current	470	560	8
Morph Coding Sys-Original	480	561	8
RX Coding System-Current	1460	1593	06
SEER Coding Sys-Current	2120	1930	E
SEER Coding Sys-Original	2130	1931	E
COC Coding Sys-Current	2140	1932	08
COC Coding Sys-Original	2150	1934	08
ICD-O-3 Conversion Flag	2116	2015	0

See Appendix B for the Display Type Report for the Abstract Display included in the eMaRC Plus Physician Reporting module. This report lists all the fields that have been included in the display type as well as any field properties that have been set, including default values.

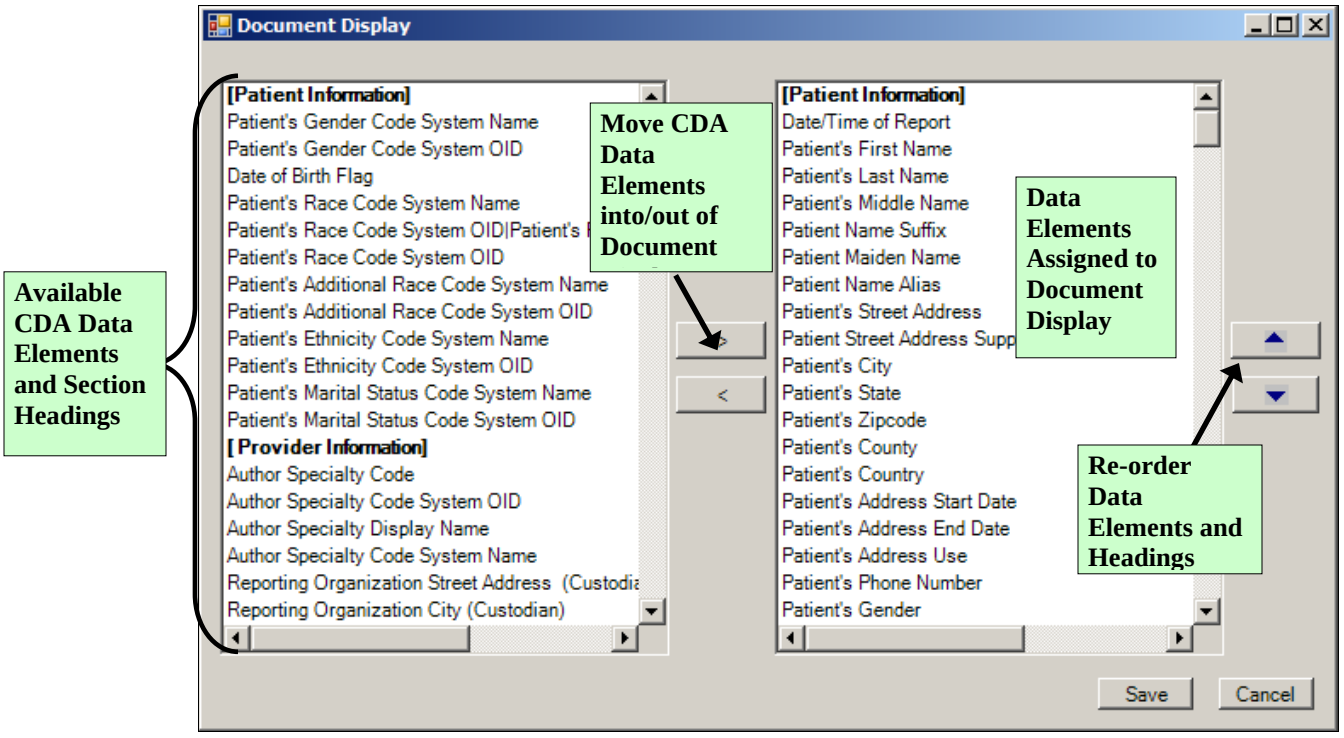
Managing the Document Display

The CDA Document Display is managed in a similar manner as that of the Abstract Display. There are separate document displays for MU2 and MU3 documents, as they have some data elements that are not the same.

To manage the Document Display, complete these steps:Open the **Document Display** window. Click on the **File** menu, select **Manage Document Display,** and select **Meaningful Use 2 or Meaningful Use 3…**



Result: The **Document Display** window for the selected MU version opens.



The CDA Document data elements can be moved into and out of the Document display, and can be logically ordered into sections to facilitate the viewing of the data. However, the Document Display is not as flexible as that Abstract Display. No field properties can be set for the data elements, and the user is limited in the data elements that can be transferred into and out of the Display as well as re-ordered. The Document Display window will be made more functional in a future release of the program.

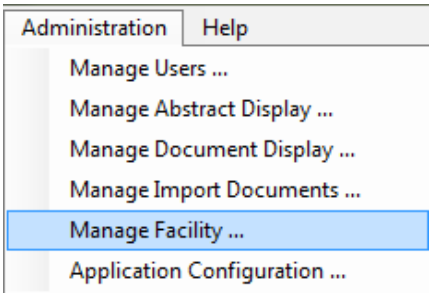
Manage Facility

Mapping of NPI/Facility Name to Local Facility ID

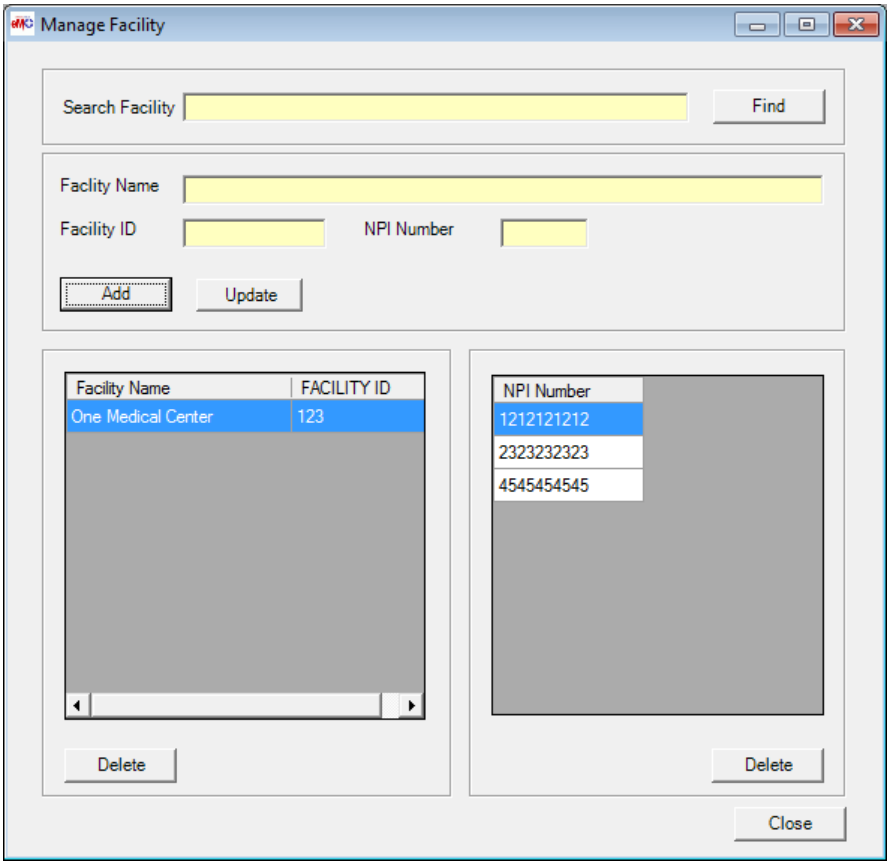
Manage facility allows the option to have the NPI and/or facility name provided in the CDA document mapped to your state specific local ID. This includes the ability to associate multiple NPI numbers with a single facility.

To manage facility settings, complete these steps:

1. Open the **Manage Facility** window. Click on the **Administration** menu, and select **Manage Facility…**



Result: The **Manage Facility** window opens



Manage Facility will be used if the state assigns a local ID (FIN) to facilities.

Steps to Find, Add, Update, Add NPI Numbers, and Delete within Manage facility:

To find a facility, enter a portion of the facility name in the **Search Facility** field and click the **Find** button. All facilities with the search text are displayed in the list pane.

To Add a new facility:

Enter the new Facility's ID in the **Facility ID** field.
Enter the new Facility's Name in the **Facility Name** field.
Enter the new Facility's NPI number in the **NPI** field. (Note: In the CDA document, the **Custodian** NPI will be mapped)
Click the **Add** button.

To Edit an existing facility:

Select it in the list and edit the ID or NPI number as required and click the **Update** button.

To add multiple NPIs to a single facility ID:

Enter the Facility Name in the **Facility Name** filed.
Enter the Facility ID in the **Facility ID** field.
Enter the NPI number in the **NPI Number** field.
Click the **Add** button.

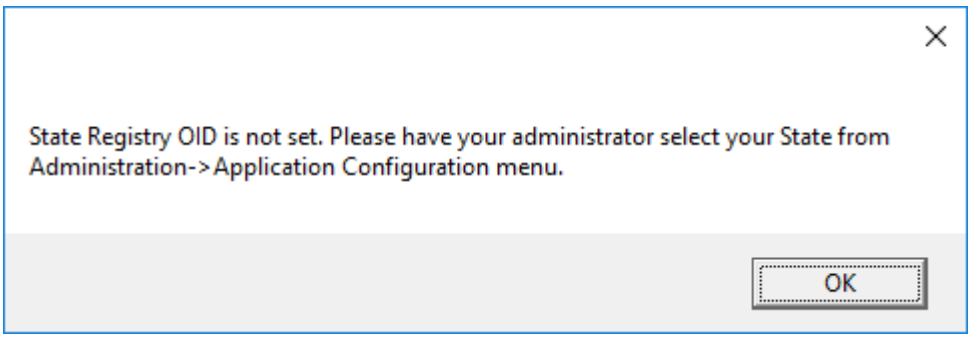
To Remove a facility from eMaRC Plus:

Select the Facility in the list pane and click the **Delete** button.
When all Facilities have been added and edited as desired, click the **Close** button.

Directly Provided Local Facility ID (New Feature!)

eMaRC also enables direct mapping of the state's local facility ID if provided when it is provided in the CDA document. States will need to give your state-specific Object Identifier (OID) to each provider with an EHR capable of implementing this feature. See Appendix C for table of state-specific OIDs.

You will also need to configure eMaRC to recognize this OID. Please following the instructions you see the first time you open eMaRC after the update/install:

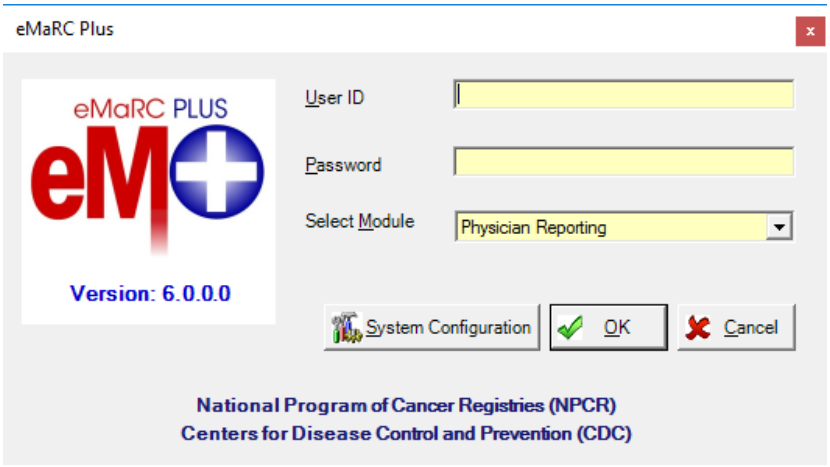


Managing System Configuration Settings

Prior to using the Physician Reporting module of eMaRC Plus you must first configure the application for use, including specifying database connection strings and other various database options, configuring import from PHINMS or a specified folder, and entering the formal name of your central registry for use on reports.

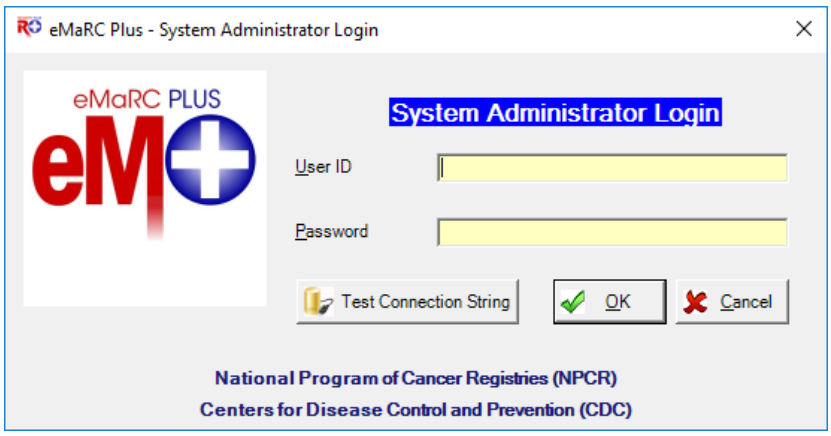
To manage system configuration settings, complete these steps:

2. Using the Login window. Click on **System Configuration…**

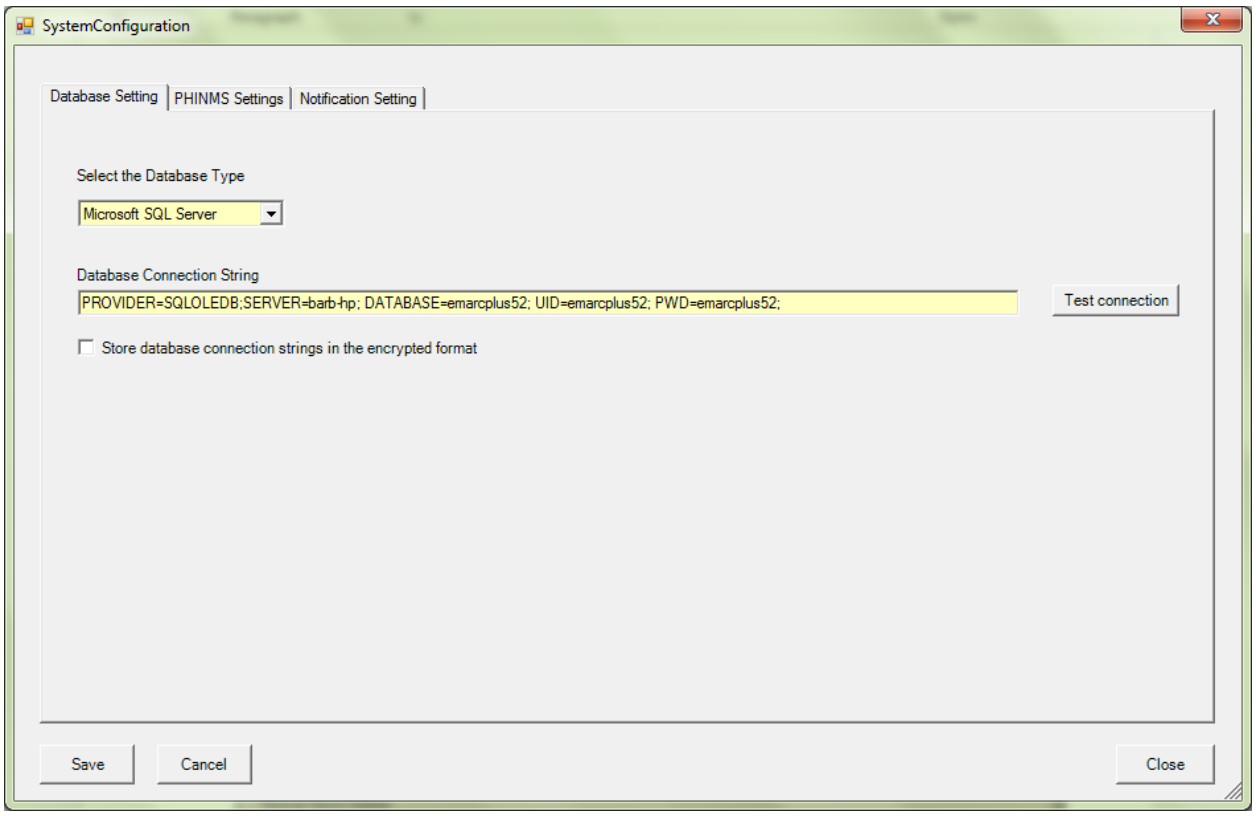


Result: The **System Administrators Login** window will appear.

3. An administrator will login with a user name and password…



Result: The **System Configuration** window will appear.



System configuration has three tabs; Database Setting, PHINMS Setting, and Notification Setting.

System Configuration Tab	Description
Database Setting	Tab is used to specify database options for eMaRC Plus.
PHINMS Setting	PHINMS configuration options.
Notification Setting	File import notification settings.

Basically, you will be setting the application up to either look to PHINMS (i.e., use the Poll and Import Physician Reports from PHINMS Queue option) when checking for CDA documents to import or to look to a specified folder (i.e., use the Poll and Import Physician Reports from Folder option) when checking for CDA documents to import.

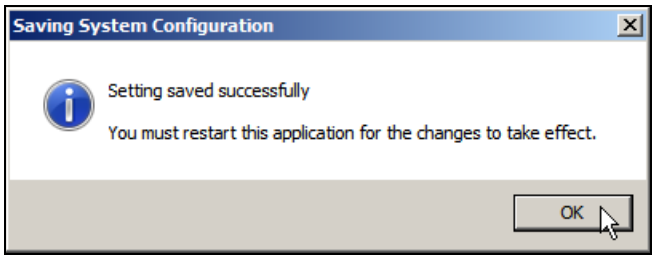
The following table describes the configuration fields available on the Configuration window:

Field	Description
Select Database Type	Use this option to specify the database type; Although the Physician Reporting module of eMaRC Plus comes defaulted to the Microsoft Access database type, when moved into a production environment, you will need to set the application database to SQL Server
Physician Reports Database	Enter the connection string to the eMaRC Plus pathlab.mdb Access database/SQLserver database
PHIN Worker Queue Connection String	Enter the connection string to the eMaRC Plus pathlab.mdb Access database/SQLserver database where the PHINWorkerQueue table resides
Worker Queue Name	WorkerQueueName is the table in the database that PHINMS fills with new CDA documents; can be same table as used for the ePath module or not; depends on how your registry sets up the database (defaulted to testworkerqueue in the pathlab.mdb Access database); If the application is set up to look to a specified folder for importing new CDA documents, this table will only store the actual name of the CDA document file (the file itself will be physically placed into the folder specified in the PHINMS Receive Folder Path field)
Read File from PHINMS Queue	Specifies whether the application is to look to PHINMS to poll for new reports or to a specified folder; this option is checked by default, if you would like to setup the application to check a specified folder from which to import CDA Documents you will need to un-check this check box

Field	Description
PHINMS Receive Folder Path	If the Read file from PHINMS Queue option is un-checked (indicating you would like the application to check a specified folder from which to import CDA documents), this option becomes active and then the path to the specified folder is entered into this field
Service code	If the same WorkerQueueName table is specified for both ePath and the Physician Reporting module, the service code specifies which type of file to poll for and import (e.g.., HL7 [ePath] or CDA [physician report]); Services codes are state-specific and are specified by the state upon set up of PHINMS
Archive Folder	If the Read file from PHINMS Queue option is un-checked (indicating you would like the application to check a specified folder from which to import CDA documents rather than PHINMS), this option specifies the archive folder to which the imported CDA documents will be moved to after import If the application is set up to look to PHINMS, upon import CDA documents physically are stored as a "blob" in the WorkerQueueTable, however, if the application is set up to read from a specified folder then the WorkerQueueTable will only store the actual name of the CDA document
Registry Name for Report Titles	Enter the formal name of your central registry as you would like it to appear on the reports generated by the Physician Reporting Module

4. For troubleshooting purposes, you can select **Test Connection** on the Physician Reports Database Connection String, which will provide feedback to determine if the connection was successful or if it failed.
5. **Specify** your system **configuration settings** and click **Save**.

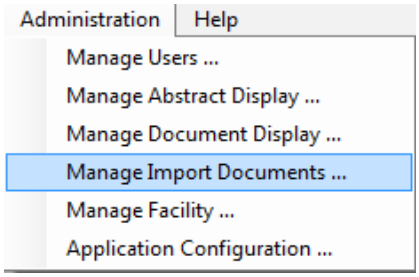
   Result: The **Saving System Configuration window** opens and notifies the user that the system configuration settings have been saved and that the application must be restarted for the settings to take effect.



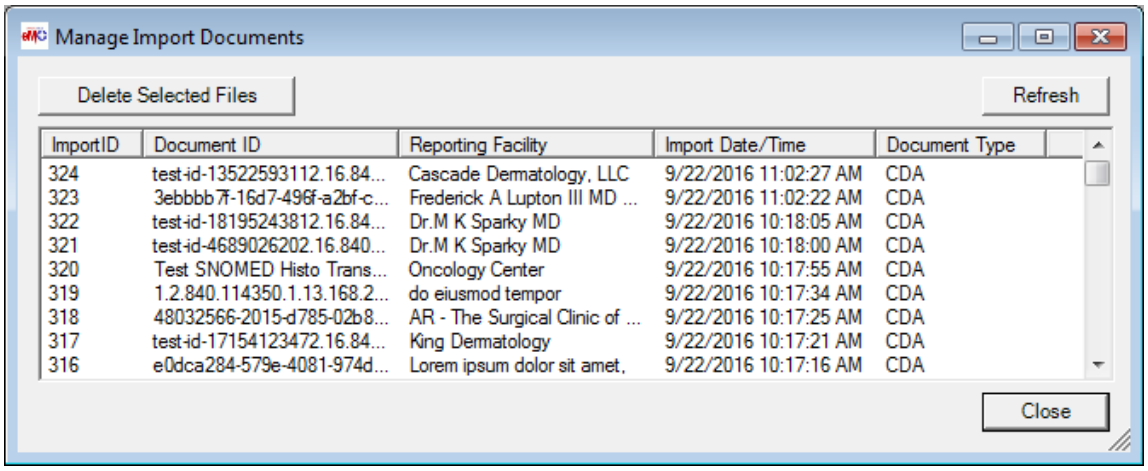
Deleting Imported CDA Documents

To delete CDA documents that have been imported, complete these steps:

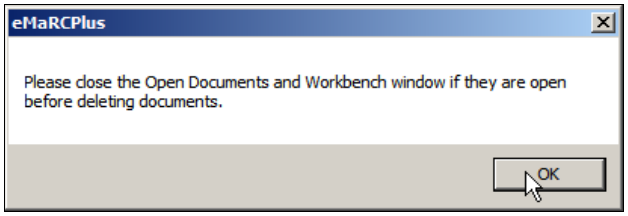
1. Open the **Document Display** window. Click on the **File** menu, and select **Manage Import Documents…**



Result: The **Manage Import Documents** window opens.



You will need to close any other windows you may have opened in the application prior to opening the Manage Import Documents window. If you forget, the application will prompt you to do so:



2. To **delete** one or more files, select one or more files from the list of displayed CDA documents and click **Delete Selected Files**.
3. Click Refresh, and the deleted files will no longer be listed.
4. To **close** the Manage Import Documents dialog box, click **Close**.

The Manage Import Documents window doesn't really serve any purpose other than for testing the features of the program, because eMaRC Plus will only let you import the same CDA Document only once. As a result, if you want to re-load a CDA document, you need to delete it from the application first.

If you delete a single CDA document that is the only document that has been submitted for a particular PTRID, and therefore only has a consolidated abstract based on a single CDA document/abstract, all entries will be deleted from the database. However, if more than one CDA document was received for a PTRID, and only one of those documents is deleted, the specified CDA document will be deleted, but consolidation process will not re-run (to be addressed in a future version).

Chapter 11: Running and Viewing Reports

Learning Objectives

In this chapter, you will learn to:

- Identify the different reports you can run within the eMaRC Plus Physician Reporting module
- Open an eMaRC Plus Physician Reporting module report, and use the various Report Viewer window options to maximize your report viewing experience
- Become familiar with the all of the different file formats in which reports can be saved

Overview

This chapter covers general information about eMaRC Plus Physician Reporting module reports. It includes a description of all reports offered by the application, how to open the reports, how to use the Report Viewer window, and how to print and save reports.

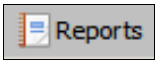
Available Reports

The monitoring of the physician reporting data submission process are supported in the eMaRC Plus Physician Reporting module by a few standard, easy-to-understand reports that can help facilitate the tracking of submissions. In addition, the Display Type Report helps with management and documentation of the Abstract Display in the Physician Reporting module. The reports included can be opened upon request using the Reports icon on the main eMaRC Plus window toolbar. The available reports are described in the table below.

Report	Description
Total Number of Physician Reports Received by Provider	Lists the overall total number of CDA documents received by submitting Provider during the user-specified date range
Number of Physician Reports Received by Provider and PTRID	Lists the total number of CDA documents received by submitting Provider and PTRID during the user-specified date range
Display Type Report	Line listing report which includes abstracts based on user-specified criteria

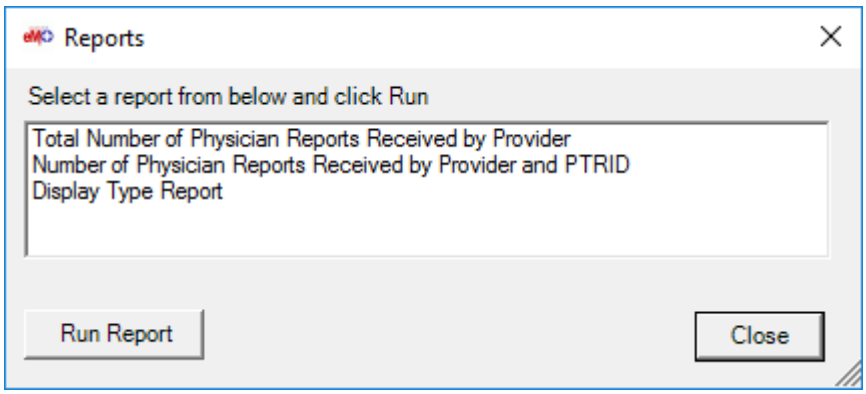
Opening Reports

To open any of the reports, complete these steps:

1. Click on the Reports icon 

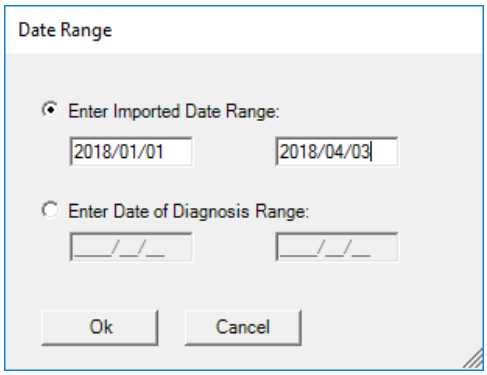
on the toolbar.

   Result: The **Reports** window opens.



2. Select the report you would like to view and click **Run Report**. In the example shown, the Total Number of CDA Messages Received by Provider report is being selected.

   Result: If the report requires entry of a user-specified date range, the **Date Range** window opens.

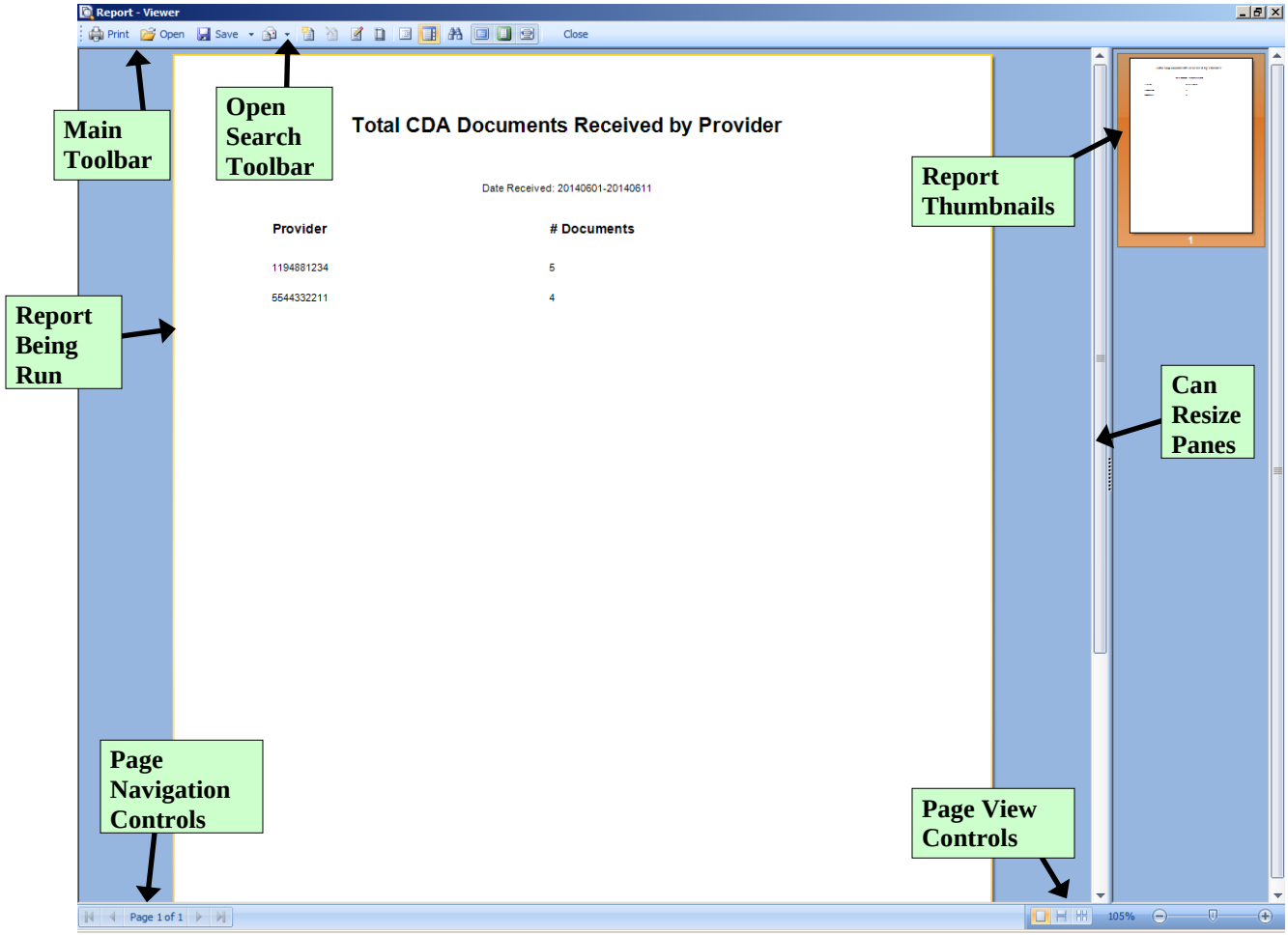


   You can choose to enter a range of dates by **Date Case Received** or **Diagnosis Date**.

3. **Enter the desired date range** for the date field of your choice and Click **OK**. In the example shown the date range of 2014/06/01 to 2014/06/11 is being entered for the Date Case Received.

   Result: The report of interest opens in the eMaRC Plus **Report Viewer** window.

Viewing Reports – The Report Viewer Window

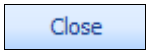


The Report Viewer window is divided into 2 main sections: a window in which to view reports on the left, and a pane for viewing report thumbnails on the right. When you left-click and hold your mouse on the vertical divider bar in the center of the window, a splitter appears which you can drag to the left or right to resize the view report and thumbnails views.

The Main Toolbar

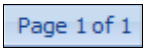
The Report Viewer Main Toolbar includes icons to print and save the report being viewed, as well as modify the current view of the report. The following table describes the function of each of the icons on the Main Toolbar, as well as listing keystroke equivalents where available for each function.

Icon	Keystroke	Function
Print	Ctrl+P	Print the report being viewed; opens the print dialog window

Icon	Keystroke	Function
	Ctrl+O	Save the report being viewed to various file formats
	Ctrl+Shift+S	Change report page setup: size, orientation and margins
	Ctrl+B	Show/hide the tree of bookmarks of the report being viewed; bookmarks are displayed by default---if there are no bookmarks in the report the Report Viewer will automatically hide the tree of bookmarks
	Ctrl+T	Show/hide the thumbnail view of reports in the pane on the right
	Ctrl+F	Search; Open the Search Toolbar
	F2	View the report in full screen mode
	F3	View the report one page at-a-time
	F5	Control page width; when clicked report will enlarge to the page width of Report Viewer window
	No keystroke	Close a report

Page Navigation Controls

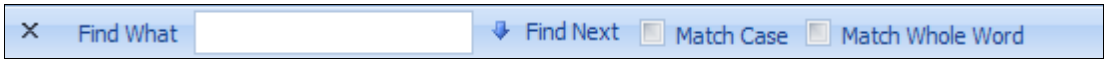
Report page navigation controls are located in the lower left-hand corner of the Report Viewer window and help you navigate through the various pages of the report being viewed. The following table describes the function of each of the page navigation controls.

Control	Function
	View the first page of the report being viewed
	View the previous page of the report being viewed
	Lists the page number of the current page of the report being viewed
	View the next page of the report being viewed

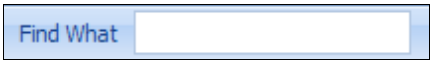
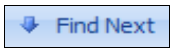
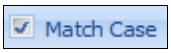
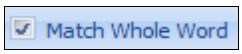
Control	Function
	View the last page of the report being viewed

The Search Toolbar

The search panel is used to search for specific text within the report. To access feature, click the binocular icon  on the main toolbar.



When opened, the Search Toolbar is located in the lower left-hand corner of the Report Viewer window directly over the Page Navigation controls. The following table describes the function of each of the Search toolbar icons.

Icon	Function
	Closes the Search Toolbar
	Enter the term being searched for in the Find What box
	When clicked, searches the report and finds the next occurrence of the search term entered in the Find What box
	When checked, the search is repeated with case of the search term considered
	When checked, the search is repeated with only whole words of the search term considered

Page View Controls

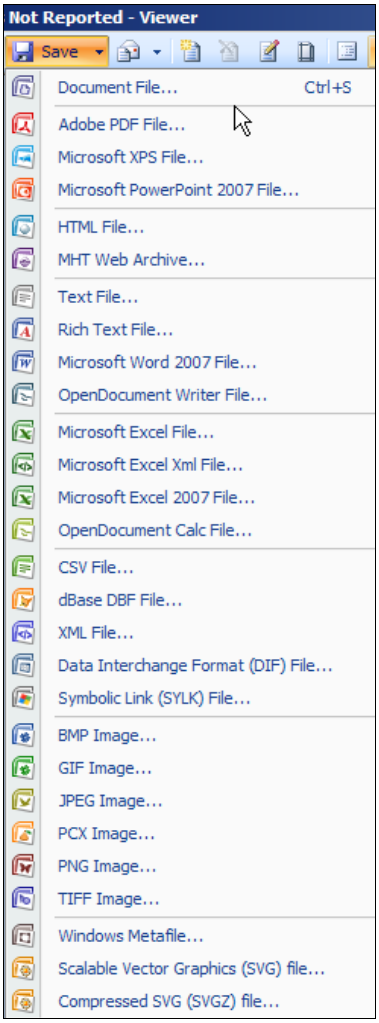
Report page view controls are located in the lower right-hand corner of the Report Viewer window, and include icons to help you control how many pages of the report to view, as well as to zoom in or out on the current report being viewed. The following table describes the function of each of the page view controls.

Control	Keystroke	Function
	Shift+F2	Single Page: View the report one page at-a-time
	Shift+F3	Continuous: View the report with all pages

		displayed continuously
	Shift+F4	Multiple Pages: based on the selected zoom, all possible pages are displayed to fill the viewer window
	No keystroke	Selected Zoom: View the report at the percent size specified

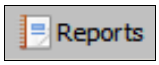
Saving Reports

In order to facilitate the utilization of the information included in the eMaRC Plus Physician Reporting module reports, eMaRC Plus offers an extensive number of file formats in which the reports can be saved. You can save the reports in different file formats in order to further analyze or format the data included differently or you can save the report as an image file to be placed in documents and presentations. You can save reports in any of the file formats listed under the Save As icon on the Main Toolbar of the Report Viewer:



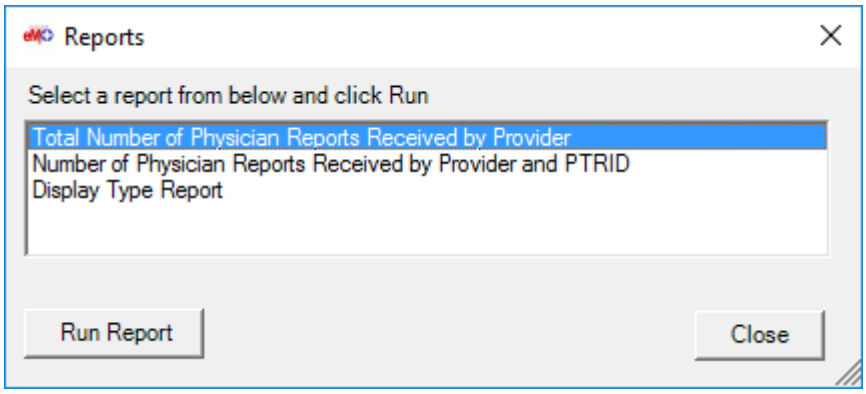
Total Number of Physician Reports Received by Provider Report

To run the **Total Number of Physician Reports Received by Provider** report, complete these steps:

1. Click on the Reports icon 

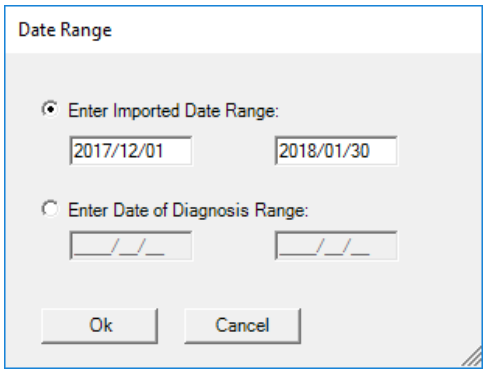
on the toolbar.

   Result: The **Reports** window opens.



2. Select the **Total Number of Physician Reports Received by Provider** report and click **Run Report**.

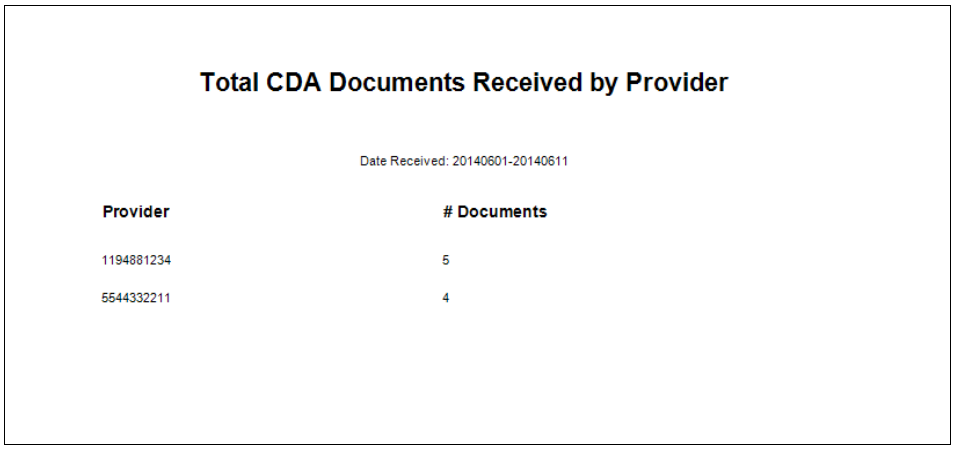
   Result: The **Date Range** window opens.



   You can choose to enter a range of dates by **Date Case Received** or **Diagnosis Date**.

3. **Enter the desired date range** for the date field of your choice and Click **OK**. In the example shown the date range of 2014/06/01 to 2014/06/11 is being entered for the Date Case Received.

   Result: The report opens in the eMaRC Plus **Report Viewer** window.



Total CDA Documents Received by Provider

Date Received: 20140601-20140611

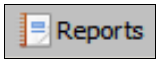
Provider	# Documents
1194881234	5
5544332211	4

The Total Number of Physician Reports Received by Provider lists the overall total number of CDA documents received by submitting Provider during the user-specified date range

4. When you are done viewing the report, click **Print** to print the report, **Save** to save the report, or **Close** to close the report.

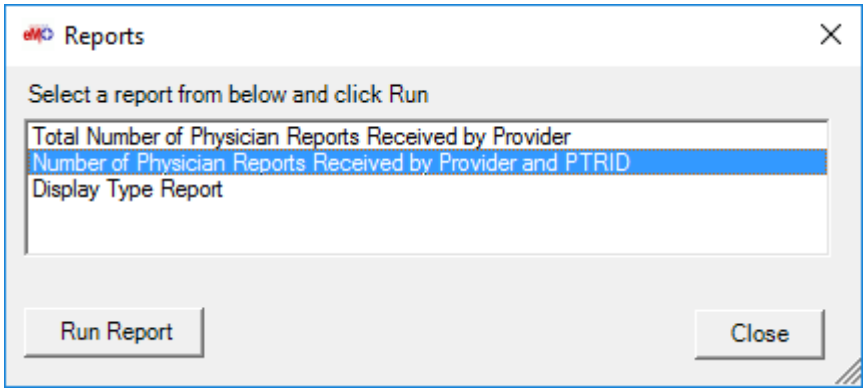
Number of Physician Reports Received by Provider and PTRID Report

To run the **Number of Physician Reports Received by Provider and PTRID** report, complete these steps:

1. Click on the Reports icon 

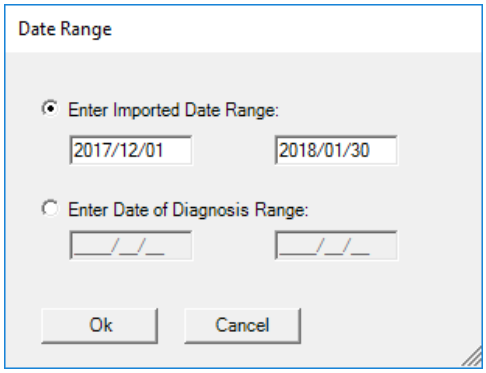
on the toolbar.

   Result: The **Reports** window opens.



2. Select the **Number of Physician Reports Received by Provider and PTRID** report and click **Run Report**.

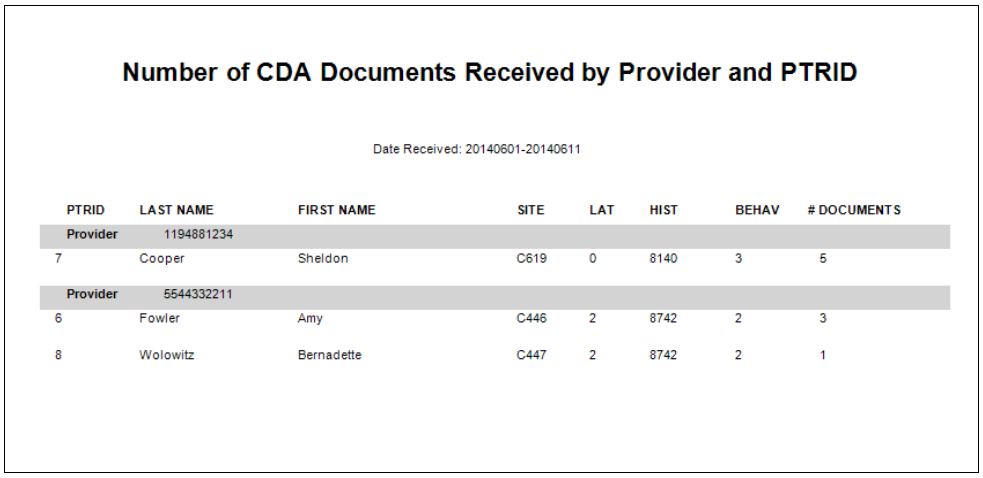
   Result: The **Date Range** window opens.



You can choose to enter a range of dates by **Date Case Received** or **Diagnosis Date**.

3. **Enter the desired date range** for the date field of your choice and Click **OK**. In the example shown the date range of 2014/06/01 to 2014/06/11 is being entered for the Date Case Received.

   Result: The report opens in the eMaRC Plus **Report Viewer** window.



Number of CDA Documents Received by Provider and PTRID

Date Received: 20140601-20140611

PTRID	LAST NAME	FIRST NAME	SITE	LAT	HIST	BEHAV	# DOCUMENTS
Provider	1194881234						
7	Cooper	Sheldon	C619	0	8140	3	5
Provider	5544332211						
6	Fowler	Amy	C446	2	8742	2	3
8	Wolowitz	Bernadette	C447	2	8742	2	1

   The Number of Physician Reports Received by Provider and PTRID lists the overall total number of CDA documents received by submitting Provider and PTRID during the user-specified date range

4. When you are done viewing the report, click **Print** to print the report, **Save** to save the report, or **Close** to close the report.

Display Type Report

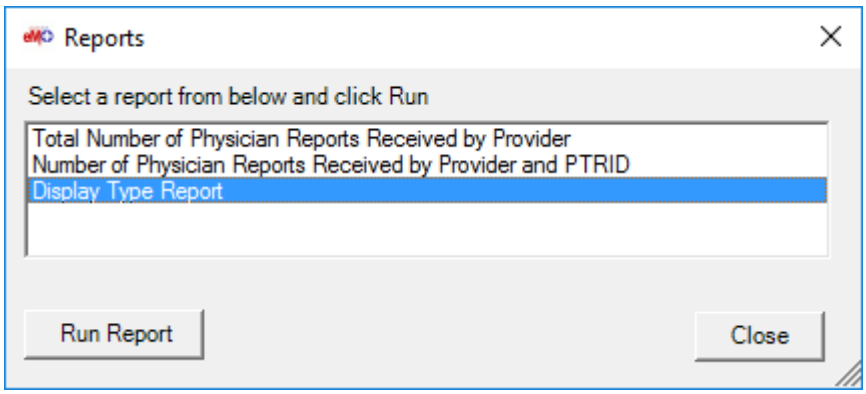
The eMaRC Plus Physician Reporting module Display Type Report includes an at-a-glance overview of information for the Abstract Display and lists the field properties specified for each field included in the display type.

To open the Display Type Report, complete the following steps:

1. Click on the Reports icon 

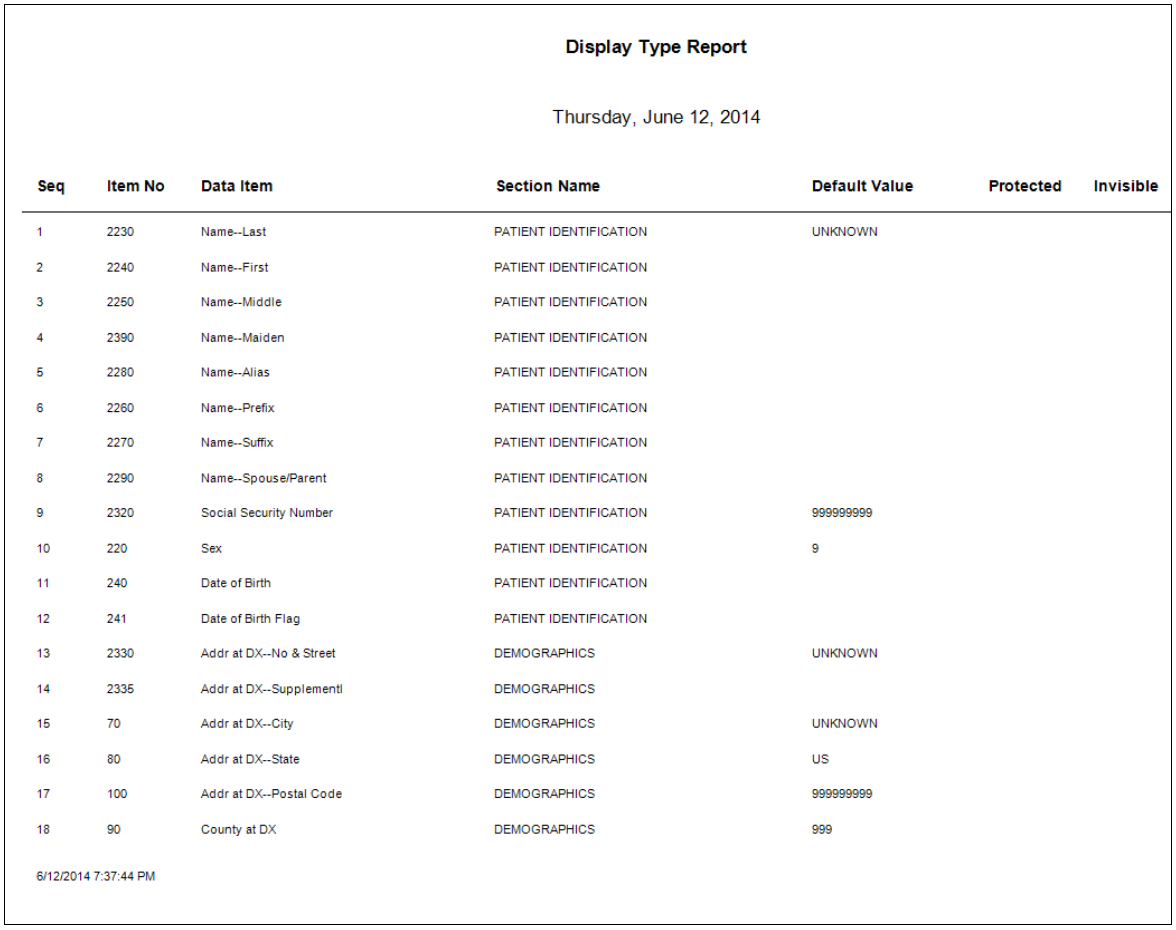
on the toolbar.

Result: The **Reports** window opens.



2. Select the **Display Type Report** and click **Run Report**.

   Result: The report opens in the eMaRC Plus **Report Viewer** window.



Display Type Report

Thursday, June 12, 2014

Seq	Item No	Data Item	Section Name	Default Value	Protected	Invisible
1	2230	Name--Last	PATIENT IDENTIFICATION	UNKNOWN		
2	2240	Name--First	PATIENT IDENTIFICATION			
3	2250	Name--Middle	PATIENT IDENTIFICATION			
4	2390	Name--Maiden	PATIENT IDENTIFICATION			
5	2280	Name--Alias	PATIENT IDENTIFICATION			
6	2260	Name--Prefix	PATIENT IDENTIFICATION			
7	2270	Name--Suffix	PATIENT IDENTIFICATION			
8	2290	Name--Spouse/Parent	PATIENT IDENTIFICATION			
9	2320	Social Security Number	PATIENT IDENTIFICATION	999999999		
10	220	Sex	PATIENT IDENTIFICATION	9		
11	240	Date of Birth	PATIENT IDENTIFICATION			
12	241	Date of Birth Flag	PATIENT IDENTIFICATION			
13	2330	Addr at DX--No & Street	DEMOGRAPHICS	UNKNOWN		
14	2335	Addr at DX--Supplementl	DEMOGRAPHICS			
15	70	Addr at DX--City	DEMOGRAPHICS	UNKNOWN		
16	80	Addr at DX--State	DEMOGRAPHICS	US		
17	100	Addr at DX--Postal Code	DEMOGRAPHICS	999999999		
18	90	County at DX	DEMOGRAPHICS	999		

6/12/2014 7:37:44 PM

The Display Type Report contains these columns for each field included in the Abstract Display:

Field	Description
Seq	The standard NAACCR data item name for the field

Field	Description
Item No	The standard NAACCR data item number for the field
Data Item	The standard NAACCR data item name for the field
Section Name	The name of the Section in which the field resides in the display type
Default	The user-specified default value (if any) that is initially displayed in the field
Protected	Denotes whether the field was specified as protected (i.e., value of field cannot be edited by user)
Invisible	Denotes whether the field was specified as invisible (i.e., included in the display type but not visible to the user)

3. **Close** the report window.

Appendix A: Documentation of CDA Document Section Tables in eMaRC Plus Database

Data_ActiveProblems

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
ConcernID_Root	Allows related acts to be grouped. Can represent history of problem as a series of observations over time
ConcernID_Extension	Extension that allows related acts to be grouped. Can represent history of problem as a series of observations over time
Concern_Status_Code	Active (ongoing clinical activity is expected), suspended (concern that is set aside, period of remission), aborted (left against Medical Advice) completed (resolved, no longer tracked except for historical purposes)
Concern_Effect_Time_Low	Earliest time that the concern was active
Concern_Effect_Time_High	Date the concern was completed or aborted
Problem_Ref_Root	Unique ID Root that identifies the problem
Problem_Ref_Ext	Unique ID Extension that identifies the problem
Problem_Code	Coded value for the condition (e.g., diabetes, apnea, low blood count etc.)
Problem_DisplayName	Name given to the coded problem value (e.g., diabetes, apnea, low blood count etc.)
Problem_CodesystemOID	Code System OID for the problem code
NAACCRProblem_Code_ICD9	NAACCR problem code translation (before Version 13, Comorbidities)
NAACCRProblem_Code_ICD10	NAACCR problem code translation (Version 13, Secondary Diagnoses)
Problem_ProblemType	Indicates the type of problem (e.g., Symptom, Problem, Finding, Diagnosis, etc.)
Problem_Effect_Time_Low	Earliest point for which the condition is known to have existed (implied: Date of onset)
Problem_Effect_Time_High	Time at which the condition was no longer known to be true (implied: Date of resolution)

Data_Address

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
PatientStreetAddress1	Patient's street address, first line
PatientStreetAddress2	Patient's street address, second line
PatientCity	Patient's city
PatientState	Patient's state
PatientZipcode	Patient's zip code
PatientCounty	Patient's county
PatientCountry	Patient's country
PatientAddressBegin_Date	The date the patient began living at the address
PatientAddressEnd_Date	The date the patient stopped living at the address

Data element name	Data element description
PatientAddressUse_Code	How the address is used by the patient (e.g., home, work, vacation)
PatientPhone_Number	Patient's phone number
PatientEmail	Patient's email address

Data_CancerDiagnosis

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
Dx_Effect_Time_Low	Cancer diagnosis date
Histo_Code	Coded value for the histology
Histo_DisplayName	Name given to the coded histology value
Histo_OID	Code System Object Identifier (OID) for the histology code
NAACCRHisto_Code	NAACCR histology code translation
Behavior_Code	Coded value for the behavior
Behavior_DisplayName	Name given to the coded behavior value
Behavior_OID	Code System OID for the behavior code
DiagConf_Code	Coded value for diagnostic confirmation (best method used to confirm the presence of the cancer being reported)
DiagConf_DisplayName	Name given to the coded diagnostic confirmation value
DiagConf_OID	Code System OID for the diagnostic confirmation code
PrimarySite_Code	Coded value for primary site (anatomic location where the primary tumor originated)
PrimarySite_DisplayName	Name given to the coded primary site value
PrimarySite_OID	Code System OID for the primary site code
NAACCRPrimarySite_Code	NAACCR primary site code translation
Laterality_Code	Coded value for the laterality (side of a paired organ or side of the body on which the reportable tumor originated) code
Laterality_DisplayName	Name given to the coded laterality value
Laterality_OID	Code System OID for the laterality code
TNMGroup_Code	Coded value for the TNM Clinical Stage Group of the tumor/cancer
TNMGroup_DisplayName	Name given to the coded TNM Clinical Stage Group value
TNMGroup_OID	Code System OID for the TNM Clinical Stage Group code
TNMDescriptor_Code	Coded value for the TNM Clinical Stage Descriptor (identifies special cases that need separate data analysis)
TNMDescriptor_DisplayName	Name given to the coded TNM Clinical Stage Descriptor value
TNMDescriptor_OID	Code System OID for the TNM Clinical Stage Descriptor code
TNMEdition_Code	Coded value for the TNM Edition Number of the AJCC Staging Manual
TNMEdition_DisplayName	Name given to the coded TNM Edition Number value
TNMEdition_OID	Code System OID for the TNM Edition Number code
TNMStagedBy_Code	Coded value for TNM Clinical Staged By (the person who recorded the AJCC staging elements and stage group in the patient's medical record)
TNMStagedBy_DisplayName	Name given to the coded TNM Clinical Staged By value

Data element name	Data element description
TNMStagedBy_OID	Code System OID for the TNM Clinical Staged By code
TNMClinicalT_Code	Coded value for the TNM Clinical Tumor
TNMClinicalT_DisplayName	Name given to the coded TNM Clinical Tumor value
TNMClinicalT_OID	Code System OID for the TNM Clinical Tumor Code
TNMClinicalN_Code	Coded value for the TNM Clinical Node
TNMClinicalN_DisplayName	Name given to the coded TNM Clinical Node value
TNMClinicalN_OID	Code System OID for the TNM Clinical Node Code
TNMClinicalM_Code	Coded value for the TNM Clinical Metastasis
TNMClinicalM_DisplayName	Name given to the coded TNM Clinical Metastasis value
TNMClinicalM_OID	Code System OID for the TNM Clinical Metastasis Code
TNMPATHGROUP_OID	Code System OID for the TNM Pathologic Stage Group code
TNMPATHGROUP_DISPLAYNAME	Name given to the coded TNM Pathologic Stage Group value
TNMPATHGROUP_CODE	Coded value for the TNM Pathologic Stage Group of the tumor/cancer
TNMPATHDESCRIPTOR_CODE	Coded value for the TNM Pathologic Stage Descriptor
TNMPATHDESCRIPTOR_DISPLAYNAME	Name given to the coded TNM Pathologic Stage Descriptor value
TNMPATHDESCRIPTOR_OID	Code System OID for the TNM Pathologic Stage Descriptor code
TNMPATHSTAGEDBY_CODE	Coded value for TNM Pathologic Staged By
TNMPATHSTAGEDBY_DISPLAYNAME	Name given to the coded TNM Pathologic Staged By value
TNMPATHSTAGEDBY_OID	Code System OID for the TNM Pathologic Staged By code
TNMPATHT_CODE	Coded value for the TNM Pathologic Tumor
TNMPATHT_DISPLAYNAME	Name given to the coded TNM Pathologic Tumor value
TNMPATHT_OID	Code System OID for the TNM Pathologic Tumor Code
TNMPATHN_CODE	Coded value for the TNM Pathologic Node
TNMPATHN_DISPLAYNAME	Name given to the coded TNM Pathologic Node value
TNMPATHN_OID	Code System OID for the TNM Pathologic Node Code
TNMPATHM_CODE	Coded value for the TNM Pathologic Metastasis
TNMPATHM_DISPLAYNAME	Name given to the coded TNM Pathologic Metastasis value
TNMPATHM_OID	Code System OID for the TNM Pathologic Metastasis Code
HealthStatus_Code	Coded value that represents the general health status of the patient (e.g., “alive and well”, “in remission”, “deceased”, etc.)
HealthStatus_DisplayName	Name given to the coded health status value
HealthStatus_OID	Code System OID for the health status code

Data_Family_History

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
FamilyMember_Code	Coded value that indicates the familial relationship of a person to the patient
FamilyMember_DisplayName	Name given to the coded family member value
FamilyMember_OID	Code System OID for the family member code
FamilyMemberProblem_Code	Coded value for the condition (e.g., diabetes, apnea, low blood count etc.) of the patient’s family member
FamilyMemberProblem_DisplayName	Name given to the coded family member problem value

Data element name	Data element description
FamilyMemberProblem_OID	Code System OID for the family member problem code

Data_Medications

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
Med_Effect_Time_Low	Start time of the medication
Med_Effect_Time_High	End time of the medication regimen according to the information provided in the prescription or order
Med_FreqValue	Value that indicates the frequency of administration of the medication (taken together with the frequency units. E.g., Value=4, Units=Hours)
Med_FreqUnit	Units that indicate the frequency of administration of the medication (taken together with the frequency value. E.g., Value=4, Units=Hours)
Med_RouteCode	Coded value that indicates how the medication is received by the patient (by mouth, IV, etc.)
Med_RouteDisplayName	Name given to the coded route value
Med_RouteOID	Code System Object Identifier (OID) for the route code
Med_SiteCode	Coded value for the site of the body where the medication is administered
Med_SiteDisplayName	Name given to the coded body site value
Med_SiteOID	Code System Object Identifier (OID) for the body site code
Med_DoseValue	Value that indicates medication dose when a single dose is taken (used together with dose units. E.g., Value=2, Units=mg)
Med_DoseUnit	Units that indicate medication dose when a single dose is taken (used together with dose value. E.g., Value=2, Units=mg)
Med_DoseLow	Low value that indicates a medication dose range (used together with high dose value and units. E.g., Low value=1, High value=2, Units=Tablet)
Med_DoseHigh	High value that indicates a medication dose range (used together with low dose value and units. E.g., Low value=1, High value=2, Units=Tablet)
Med_DoseLowUnits	Units that indicate a medication dose range (used together with low and high dose values. E.g., Low value=1, High value=2, Units=Tablet)
Med_DoseHighUnits	Units that indicate a medication dose range (used together with low and high dose values. E.g., Low value=1, High value=2, Units=Tablet)
Med_RateLow	Low value that indicates a measurement of how fast the dose is given to the patient over time
Med_RateHigh	High value that indicates a measurement of how fast the dose is given to the patient over time
Med_RateLowUnits	Time unit for the low value that indicates a measurement of how fast the dose is given to the patient over time
Med_RateHighUnits	Time unit for the high value that indicates a measurement of how fast the dose is given to the patient over time
Med_ProductCode	Coded value that represents the generic medication name (and strength if relevant)
Med_ProductDisplayName	Name given to the coded medication value
Med_ProductOID	Code System Object Identifier (OID) for the medication (product) code
Med_BrandName	Free text that indicates the brand name of the medication
Med_NameOriginalText	Corresponding narrative text for coded medication name
Med_Category	Indicates whether the medication has been determined to be chemo, BRM, or hormone according to NAACCR translation

Data_Medications_Admin

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
MedAdmin_Effect_Time_Low	Start time of the medication administered
MedAdmin_Effect_Time_High	End time of the medication admininstered according to the information provided in the prescription or order
MedAdmin_FreqValue	Value that indicates the frequency of administration of the medication (taken together with the frequency units. E.g., Value=4, Units=Hours)
MedAdmin_FreqUnit	Units that indicate the frequency of administration of the medication (taken together with the frequency value. E.g., Value=4, Units=Hours)
MedAdmin_RouteCode	Coded value that indicates how the medication administered is received by the patient (by mouth, IV, etc.)
MedAdmin_RouteDisplayName	Name given to the coded route value
MedAdmin_RouteOID	Code System Object Identifier (OID) for the route code
MedAdmin_SiteCode	Coded value for the site of the body where the medication is administered
MedAdmin_SiteDisplayName	Name given to the coded body site value
MedAdmin_SiteOID	Code System Object Identifier (OID) for the body site code
MedAdmin_DoseValue	Value that indicates medication dose when a single dose is administered (used together with dose units. E.g., Value=2, Units=mg)
MedAdmin_DoseUnit	Units that indicate medication dose when a single dose is administered (used together with dose value. E.g., Value=2, Units=mg)
MedAdmin_DoseLow	Low value that indicates a medication dose range (used together with high dose value and units. E.g., Low value=1, High value=2, Units=Tablet)
MedAdmin_DoseHigh	High value that indicates a medication dose range (used together with low dose value and units. E.g., Low value=1, High value=2, Units=Tablet)
MedAdmin_DoseLowUnits	Units that indicate a medication dose range (used together with low and high dose values. E.g., Low value=1, High value=2, Units=Tablet)
MedAdmin_DoseHighUnits	Units that indicate a medication dose range (used together with low and high dose values. E.g., Low value=1, High value=2, Units=Tablet)
MedAdmin_RateLow	Low value that indicates a measurement of how fast the dose is given to the patient over time
MedAdmin_RateHigh	High value that indicates a measurement of how fast the dose is given to the patient over time
MedAdmin_RateLowUnits	Time unit for the low value that indicates a measurement of how fast the dose is given to the patient over time
MedAdmin_RateHighUnits	Time unit for the high value that indicates a measurement of how fast the dose is given to the patient over time
MedAdmin_ProductCode	Coded value that represents the generic name (and strength if relevant) of the medication administered
MedAdmin_ProductDisplayName	Name given to the coded medication value
MedAdmin_ProductOID	Code System Object Identifier (OID) for the medication (product) code
MedAdmin_BrandName	Free text that indicates the brand name of the medication administered
MedAdmin_NameOriginalText	Corresponding narrative text for coded name of the medication administered
MedAdmin_Category	Indicates whether the medication has been determined to be chemo, BRM, or hormone according to NAACCR translation

Data_Narrative

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
CancerDiagnosis_Text	Narrative description of the information about cancer diagnosis(es) that are currently being monitored for the patient
TNMStageGroup_Text	Narrative description of the Stage Group for the cancer diagnosis
ActiveProblems_Text	Narrative description of the conditions currently being monitored for the patient
CodedResults_Text	Narrative description of the relevant diagnostic procedures the patient received in the past
Procedures_Text	Narrative description of all interventional, surgical, diagnostic, or therapeutic procedures or treatments, pertinent to the patient historically at the time the document is generated
RadiationOncology_Text	Narrative description of the radiation treatment performed by a Radiation Oncologist
Medications_Text	Narrative description of the relevant medications for the patient, e.g., an ambulatory prescription list
MedicationsAdministered_Text	Narrative description of the relevant medications administered to a patient during the course of an encounter
ProgressNote_Text	Narrative description of the sequence of events from initial assessment to discharge for an encounter
CarePlan_Text	Narrative description of the expectations for care including proposals, goals, and order requests for monitoring, tracking, or improving the condition of the patient
CodedSocialHistory_Text	Narrative description of the person's beliefs, home life, community life, work life, hobbies, and risky habits
Payers_Text	Narrative description of the patient's payers, whether a 'third party' insurance, self-pay, other payer or guarantor, or some combination
Assessment_Text	Narrative description of the clinician's conclusions and working assumptions that will guide treatment of the patient.
FamHist_Text	Narrative description of the patient's genetic relatives in terms of possible or relevant health risk factors that have a potential impact on the patient's healthcare risk profile
VitalSigns_Text	Narrative description of the patient's relevant vital signs for the context and use case of the document type, such as height, weight, and body mass index.

Data_Patient

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
Patient_FN	Patient's first name
Patient_LN	Patient's last name
Patient_MN	Patient's middle name
Patient_Suffix	Patient's name suffix
Patient_Maiden	Patient's maiden name
Patient_Alias	Patient's name alias
Patient_GenderCode	Coded value for patient's gender
Patient_GenderDisplayName	Name given to the coded gender value
Patient_GenderOID	Coding System Object Identifier (OID) for the gender code

Data element name	Data element description
NAACCRPatient_GenderCode	NAACCR gender code translation
Patient_DOB	Patient's date of birth
Patient_DOB_NullFl	Null flavor value provided for patient's date of birth, if no date value provided
Patient_SSN	Patient's social security number
Patient_EthnicCode	Coded value for patient's ethnicity
Patient_EthnicDisplayName	Name given to the coded ethnicity value
Patient_EthnicOID	Coding System Object Identifier (OID) for the ethnicity code
NAACCRPatient_EthnicCode	NAACCR ethnicity code translation
Patient_StateOfBirth	Patient's state of birth
Patient_CountryOfBirth	Patient's country of birth
Patient_MaritalCode	Coded value for patient's marital status
Patient_MaritalDisplayName	Name given to the coded marital status value
Patient_MaritalOID	Coding System Object Identifier (OID) for the marital status code
NAACCRPatient_MaritalCode	NAACCR marital status code translation
Patient_DecDate	The date the patient died (if applicable)
Patient_DecInd	Indicates whether the patient is alive ("false") or deceased ("true")

Data_Payers

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
SeqNum	Number that indicates the priority of the payment source (with 1 as the highest priority)
Payer_Type_Code	Coded value for the type of payer
Payer_Type_DisplayName	Name given to the payer type value
Payer_Type_CodeSystemOID	Code System Object Identifier (OID) for the payer type code
NAACCRPayer_Type_Code	NAACCR payer type code translation

Data_Procedures

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
Procedure_Code	Coded value for the procedure
Procedure_DisplayName	Name given to the coded procedure value
Procedure_CodeSystemOID	Coding System Object Identifier (OID) for the procedure code
NAACCRProcedure_Code	NAACCR procedure code translation
Procedure_Status	Indicates whether the procedure is completed, active (in progress), aborted, or cancelled

Data element name	Data element description
Procedure_EffectTime_Low	Date/time the procedure began
Procedure_EffectTime_High	Date/time the procedure ended
Procedure_EffectiveTime	Date/time the procedure occurred
Procedure_TargetSite_Code	Coded value for the part of the body where the procedure was performed
Procedure_TargetSite_DisplayName	Name given to the coded body site value by the Coding system
Procedure_TargetSite_CodeSystemOID	Code System Object Identifier (OID) for the body site code
Procedure_Problem_Ref_Root	ID root that links the procedure to the problem
Procedure_Problem_Ref_Ext	ID extension that links the procedure to the problem
Procedure_Performer_Entity_NPI	NPI of individual provider who performed the procedure
Procedure_Performer_Organization_NPI	NPI of organization that performed the procedure

Data_Provider

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
Author_NPI	NPI number of the human that authored the document
Author_FirstName	First name of the human that authored the document
Author_LastName	Last name of the human that authored the document
Author_Name_Person	Full name of the human that authored the document (when not split out into first and last name)
Author_Suffix	Name suffix of the human that authored the document
Author_Specialty_Code	Coded value for the specialty of the human that authored the document
Author_Specialty_DisplayName	Name given to the specialty value of the human that authored the document
Author_Specialty_OID	Code System Object Identifier (OID) for specialty code of the human that authored the document
Author_StreetAddress_Person	Street address of the human that authored the document
Author_City_Person	City of the human that authored the document
Author_State_Person	State of the human that authored the document
Author_Zip_Person	Zip code of the human that authored the document
Author_Country_Person	Country of the human that authored the document
Author_Phone_Person	Phone number of the human that authored the document
Author_Organization_NPI	NPI number for the organization that authored the document
Author_Organization_Name	Name of the organization that authored the document
Author_StreetAddress_Organization	Street address of the organization that authored the document
Author_City_Organization	City of the organization that authored the document
Author_State_Organization	State of the organization that authored the document
Author_Zip_Organization	Zip code of the organization that authored the document
Author_Country_Organization	Country of the organization that authored the document
Author_Phone_Organization	Phone number of the organization that authored the document

Data element name	Data element description
Custodian_NPI	NPI number of the organization that is in charge of maintaining the document
Custodian_Name	Name of the organization that is in charge of maintaining the document
Custodian_StreetAddress	Street address of the organization that is in charge of maintaining the document
Custodian_City	City of the organization that is in charge of maintaining the document
Custodian_State	State of the organization that is in charge of maintaining the document
Custodian_Zip	Zip code of the organization that is in charge of maintaining the document
Custodian_Country	Country of the organization that is in charge of maintaining the document
Custodian_Phone	Phone number of the organization that is in charge of maintaining the document
ServiceEv_Effect_Time_Low	Start time of the main act being documented
ServiceEv_Effect_Time_High	End time of the main act being documented
ServiceEv_PhysNPI	NPI number of the clinician who actually and principally carried out the service event
ServiceEv_PhysLastName	Last name of the clinician who actually and principally carried out the service event
ServiceEv_PhysFirstName	First name of the clinician who actually and principally carried out the service event
ServiceEv_PhysName	Full name of the clinician who actually and principally carried out the service event (when not split out into first and last name)
ServiceEv_PhysSuffix	Name suffix of the clinician who actually and principally carried out the service event
ServiceEv_PhysSpecialty_Code	Coded value for the specialty of the clinician who actually and principally carried out the service event
ServiceEv_PhysSpecialty_DisplayName	Name given to the coded specialty value of the clinician who actually and principally carried out the service event
ServiceEv_PhysSpecialty_OID	Code System Object Identifier (OID) for the specialty code of the clinician who actually and principally carried out the service event
ServiceEv_Phys_StreetAddress	Street address of the clinician who actually and principally carried out the service event
ServiceEv_Phys_City	City of the clinician who actually and principally carried out the service event
ServiceEv_Phys_State	State of the clinician who actually and principally carried out the service event
ServiceEv_Phys_Zip	Zip code of the clinician who actually and principally carried out the service event
ServiceEv_Phys_Country	Country of the clinician who actually and principally carried out the service event
ServiceEv_Phys_Phone	Phone number of the clinician who actually and principally carried out the service event
ServiceEv_OrgNPI	NPI number of the organization of the clinician who actually and principally carried out the service event
ServiceEv_OrgName	Name of the organization associated with the clinician who actually and principally carried out the service event
ServiceEv_Org_StreetAddress	Street address of the organization associated with clinician who actually and principally carried out the service event
ServiceEv_Org_City	City of the organization associated with the clinician who actually and principally carried out the service event
ServiceEv_Org_State	State of the organization associated with the clinician who actually and principally carried out the service event

Data element name	Data element description
ServiceEv_Org_Zip	Zip code of the organization associated with the clinician who actually and principally carried out the service event
ServiceEv_Org_Country	Country of the organization associated with the clinician who actually and principally carried out the service event
ServiceEv_Org_Phone	Phone number of the organization associated with the clinician who actually and principally carried out the service event
Encounter_EffectiveTime	Date/time of the encompassing encounter, which represents the setting of the clinical encounter during which the documented act(s) or ServiceEvent occurred
Encounter_Effect_Time_Low	Start date/time of the encompassing encounter
Encounter_Effect_Time_High	End date/time of the encompassing encounter
Encounter_PhysNPI	NPI number of the provider having primary legal responsibility for the encompassing encounter
Encounter_PhysLastName	Last name of the provider having primary legal responsibility for the encompassing encounter
Encounter_PhysFirstName	First name of the provider having primary legal responsibility for the encompassing encounter
Encounter_PhysName	Full name of the provider having primary legal responsibility for the encompassing encounter (when not split out into first and last name)
Encounter_PhysSuffix	Name suffix of the provider having primary legal responsibility for the encompassing encounter
Encounter_PhysSpecialty_Code	Coded value for the specialty of the provider having primary legal responsibility for the encompassing encounter
Encounter_PhysSpecialty_DisplayName	Name given to the coded specialty value of the provider having primary legal responsibility for the encompassing encounter
Encounter_PhysSpecialty_OID	Code System OID for the specialty code of the provider having primary legal responsibility for the encompassing encounter
Encounter_Phys_StreetAddress	Street address of the provider having primary legal responsibility for the encompassing encounter
Encounter_Phys_City	City of the provider having primary legal responsibility for the encompassing encounter
Encounter_Phys_State	State of the provider having primary legal responsibility for the encompassing encounter
Encounter_Phys_Zip	Zip code of the provider having primary legal responsibility for the encompassing encounter
Encounter_Phys_Country	Country of the provider having primary legal responsibility for the encompassing encounter
Encounter_Phys_Phone	Phone number of the provider having primary legal responsibility for the encompassing encounter
Encounter_OrgNPI	NPI number of the organization having primary legal responsibility for the encompassing encounter
Encounter_OrgName	Name of the organization having primary legal responsibility for the encompassing encounter
Encounter_Org_StreetAddress	Street address of the organization having primary legal responsibility for the encompassing encounter
Encounter_Org_City	City of the organization having primary legal responsibility for the encompassing encounter
Encounter_Org_State	State of the organization having primary legal responsibility for the encompassing encounter
Encounter_Org_Zip	Zip code of the organization having primary legal responsibility for the encompassing encounter

Data element name	Data element description
Encounter_Org_Country	Country of the organization having primary legal responsibility for the encompassing encounter
Encounter_Org_Phone	Phone number of the organization having primary legal responsibility for the encompassing encounter
ProvReferredFrom_NPI	NPI number of the provider that referred the patient to the reporting facility
ProvReferredFrom_LastName	Last name of the provider that referred the patient to the reporting facility
ProvReferredFrom_FirstName	First name of the provider that referred the patient to the reporting facility
ProvReferredFrom_Name	Full name of the provider that referred the patient to the reporting facility (when not split out into first and last name)
ProvReferredFrom_Suffix	Name suffix of the provider that referred the patient to the reporting facility
ProvReferredFrom_StreetAddress	Street address of the provider that referred the patient to the reporting facility
ProvReferredFrom_City	City of the provider that referred the patient to the reporting facility
ProvReferredFrom_State	State of the provider that referred the patient to the reporting facility
ProvReferredFrom_Zip	Zip code of the provider that referred the patient to the reporting facility
ProvReferredFrom_Country	Country of the provider that referred the patient to the reporting facility
ProvReferredFrom_Phone	Phone number of the provider that referred the patient to the reporting facility
ProvReferredFrom_OrgNPI	NPI number of the organization that referred the patient to the reporting facility
ProvReferredFrom_OrgName	Name of the organization that referred the patient to the reporting facility
ProvReferredFrom_Org_StreetAddress	Street address of the organization that referred the patient to the reporting facility
ProvReferredFrom_Org_City	City of the organization that referred the patient to the reporting facility
ProvReferredFrom_Org_State	State of the organization that referred the patient to the reporting facility
ProvReferredFrom_Org_Zip	Zip code of the organization that referred the patient to the reporting facility
ProvReferredFrom_Org_Country	Country of the organization that referred the patient to the reporting facility
ProvReferredFrom_Org_Phone	Phone number of the organization that referred the patient to the reporting facility
ProvReferredTo_NPI	NPI number of the provider to whom the patient was referred
ProvReferredTo_LastName	Last name of the provider to whom the patient was referred
ProvReferredTo_FirstName	First name of the provider to whom the patient was referred
ProvReferredTo_Name	Full name of the provider to whom the patient was referred (when not split out into first and last name)
ProvReferredTo_Suffix	Name suffix of the provider to whom the patient was referred
ProvReferredTo_StreetAddress	Street address of the provider to whom the patient was referred
ProvReferredTo_City	City of the provider to whom the patient was referred
ProvReferredTo_State	State of the provider to whom the patient was referred
ProvReferredTo_Zip	Zip code of the provider to whom the patient was referred
ProvReferredTo_Country	Country of the provider to whom the patient was referred
ProvReferredTo_Phone	Phone number of the provider to whom the patient was referred
ProvReferredTo_OrgNPI	NPI number of the organization to whom the patient was referred

Data element name	Data element description
ProvReferredTo_OrgName	Name of the organization to whom the patient was referred
ProvReferredTo_Org_StreetAddress	Street address of the organization to whom the patient was referred
ProvReferredTo_Org_City	City of the organization to whom the patient was referred
ProvReferredTo_Org_State	State of the organization to whom the patient was referred
ProvReferredTo_Org_Zip	Zip code of the organization to whom the patient was referred
ProvReferredTo_Org_Country	Country of the organization to whom the patient was referred
ProvReferredTo_Org_Phone	Phone number of the organization to whom the patient was referred

Data_Race

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
Patient_RaceCode	Coded value for patient's race
Patient_RaceDisplayName	Name given to the coded race value
Patient_RaceOID	Coding System Object Identifier (OID) for the race code
NAACCRPatient_RaceCode	NAACCR race code translation
Author_ModelName	The model name/number of the software device that created the CDA document
Author_SoftwareName	The software name of the software device that created the CDA document

Data_Results

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
Results_Procedure_Code	Coded value for the type of procedure performed to obtain the test result
Results_Procedure_DisplayName	Name given to the coded procedure value
Results_Procedure_CodeSystemOID	Code System Object Identifier (OID) for the procedure code
Results_Procedure_Effect_Time_Low	Earliest time that the procedure was performed
Results_Procedure_Effect_Time_High	Latest time that the procedure was performed
TestType_Code	Coded value for the type of test performed
TestType_DisplayName	Name given to the test type code
TestType_CodeSystemOID	Code System OID for the test type code
Result_Value_Text	Text test result for non-quantitative tests
Result_Value_Quant	Test result value for quantitative tests
Result_Value_Units	Test result units that go with value for quantitative tests
Result_InterpretationCode	Coded value for a qualitative interpretation of the observation
Result_InterpretationCode_DisplayName	Name given to the interpretation code
Result_InterpretationCode_OID	Code System OID for the interpretation code

Data element name	Data element description
Result_EffectTime	Date/time of test result
LabName	Name of the author of the observation (e.g., the Laboratory that performed the test)
LabID_Root	ID root of the author of the observation. The root indicates the "assigning authority" (e.g., CLIA) of the ID
LabID_Extension	ID extension of the author of the observation (e.g., CLIA # of the Laboratory that performed the test)

Data_Radiation

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
RADREGMODALITY_CODE	Coded value for the dominant modality of radiation therapy used to deliver the regional dose
RADREGMODALITY_DISPLAYNAME	Name given to the radiation treatment regional modality code
RADREGMODALITY_OID	Code System OID for the radiation treatment regional modality code
NAACCRRADREGMODALITY_CODE	
RADBOOSTMODALITY_CODE	Coded value for the radiation treatment—boost modality
RADBOOSTMODALITY_DISPLAYNAME	Name given to the radiation treatment—boost modality code
RADBOOSTMODALITY_OID	Code System OID for the radiation treatment—boost modality code
RADBOOSTMODALITY_EFFECTIVETIME	Date/time that the radiation treatment—boost modality was given
RADREGMODALITY_EFFECTIVETIME	Date/time that the radiation treatment regional modality was given

Data_Treatment_Plan

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
PlannedProc_Code	Coded value for procedure that is planned to be performed in the future
PlannedProc_DisplayName	Name given to the planned procedure code
PlannedProc_OID	Code System OID for the planned procedure code
PlannedProc_EffectiveTime	Date/time the procedure is planned to take place
PlannedMed_Code	Coded value for medication that is planned to be given in the future
PlannedMed_DisplayName	Name given to the planned medication code
PlannedMed_OID	Code System OID for the planned medication code

Data_SocialHistory

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
SocialHx_LOINC	Coded value that identifies the data element (occupation, industry, or smoking status)
SocialHx_Code	Coded value for the data element (occupation, industry, or smoking status)
SocialHx_DisplayName	Name given to the coded data value
SocialHx_OID	Code System Object Identifier (OID) for the occupation, industry, or smoking status code
SocialHx_OriginalText	Corresponding narrative text for coded information (occupation, industry, or smoking status)
SocialHx_Effect_Low	Earliest date the data value was known by the facility
SocialHx_Effect_High	Most recent date the data value was known by the facility
SocialHx_Effect_Time	Date the data value was known by the facility

Data_VitalSign

Data element name	Data element description
Document_Date	Date the CDA Document is created by the Physician EHR
DocumentID	Unique identifier for the CDA Document created by the Physician EHR
FacilityID	NPI or other unique ID number for the facility
Patient_MRN	Unique identifier for the patient created by the facility (Medical Record Number)
VitalSignType_Code	Coded value that identifies the type of vital sign result (e.g., height, weight)
VitalSignType_DisplayName	Name given to the coded vital sign type
VitalSign_Value	Vital sign quantitative value
VitalSign_Units	Units related to vital sign value
VitalSign_EffectiveTime	Date/Time vital sign value was recorded

Appendix B: Abstract Display Report with Defaults

Seq	Item No	Data Item	Section Name	Default Value	Protected	Invisible	Critical
1	9961	Weight	SITE-SPECIFIC DATA ITEM (SSDI)				
2	3827	Estrogen Receptor Summary	SITE-SPECIFIC DATA ITEM (SSDI)				
3	3838	Gleason Patterns Clinical	SITE-SPECIFIC DATA ITEM (SSDI)				
4	3920	PSA (Prostatic Specific Antigen) Lab Value	SITE-SPECIFIC DATA ITEM (SSDI)				
5	2230	Name--Last	PATIENT IDENTIFICATION	UNKNOWN			
6	2240	Name--First	PATIENT IDENTIFICATION				
7	2250	Name--Middle	PATIENT IDENTIFICATION				
8	2390	Name--Maiden	PATIENT IDENTIFICATION				
9	2280	Name--Alias	PATIENT IDENTIFICATION				
10	2260	Name--Prefix	PATIENT IDENTIFICATION				
11	2270	Name--Suffix	PATIENT IDENTIFICATION				
12	2290	Name--Spouse/Parent	PATIENT IDENTIFICATION				
13	2320	Social Security Number	PATIENT IDENTIFICATION	999999999			
14	220	Sex	PATIENT IDENTIFICATION	9			
15	240	Date of Birth	PATIENT IDENTIFICATION				
16	241	Date of Birth Flag	PATIENT IDENTIFICATION				
17	230	Age at Diagnosis	PATIENT IDENTIFICATION	999			
18	150	Marital Status at DX	PATIENT IDENTIFICATION	9			
19	2315	Medicare Beneficiary Identifier	PATIENT IDENTIFICATION				
20	2330	Addr at DX--No & Street	DEMOGRAPHICS	UNKNOWN			
21	2335	Addr at DX--Supplementl	DEMOGRAPHICS				
22	70	Addr at DX--City	DEMOGRAPHICS	UNKNOWN			
23	80	Addr at DX--State	DEMOGRAPHICS	US			
24	100	Addr at DX--Postal Code	DEMOGRAPHICS	999999999			
25	90	County at DX Reported	DEMOGRAPHICS	999			
26	2350	Addr Current--No & Street	DEMOGRAPHICS	UNKNOWN			
27	2355	Addr Current--Supplementl	DEMOGRAPHICS				
28	1810	Addr Current--City	DEMOGRAPHICS	UNKNOWN			

Seq	Item No	Data Item	Section Name	Default Value	Protected	Invisible	Critical
29	1820	Addr Current--State	DEMOGRAPHICS	US			
30	1830	Addr Current--Postal Code	DEMOGRAPHICS	999999999			
31	1832	Addr Current--Country	DEMOGRAPHICS	USA			
32	1840	County--Current	DEMOGRAPHICS	999			
33	96	County at DX Geocode2010	DEMOGRAPHICS				
34	2360	Telephone	DEMOGRAPHICS	9999999999			
35	252	Birthplace--State	DEMOGRAPHICS	ZZ			
36	254	Birthplace--Country	DEMOGRAPHICS	ZZU			
37	160	Race 1	DEMOGRAPHICS				
38	161	Race 2	DEMOGRAPHICS				
39	162	Race 3	DEMOGRAPHICS				
40	163	Race 4	DEMOGRAPHICS				
41	164	Race 5	DEMOGRAPHICS				
42	190	Spanish/Hispanic Origin	DEMOGRAPHICS	9			
43	310	Text--Usual Occupation	DEMOGRAPHICS	unknown			
44	290	Occupation Source	DEMOGRAPHICS	0			
45	270	Census Occ Code 1970-2000	DEMOGRAPHICS				
46	282	Census Occ Code 2010 CDC	DEMOGRAPHICS				
47	320	Text--Usual Industry	DEMOGRAPHICS	unknown			
48	300	Industry Source	DEMOGRAPHICS	0			
49	280	Census Ind Code 1970-2000	DEMOGRAPHICS				
50	272	Census Ind Code 2010 CDC	DEMOGRAPHICS				
51	330	Census Occ/Ind Sys 70-00	DEMOGRAPHICS				
52	390	Date of Diagnosis	CANCER IDENTIFICATION				
53	391	Date of Diagnosis Flag	CANCER IDENTIFICATION				
54	560	Sequence Number--Hospital	CANCER IDENTIFICATION	00			
55	2580	Text--Primary Site Title	CANCER IDENTIFICATION				
56	400	Primary Site	CANCER IDENTIFICATION				
57	410	Laterality	CANCER IDENTIFICATION				
58	2590	Text--Histology Title	CANCER IDENTIFICATION				
59	522	Histologic Type ICD-O-3	CANCER IDENTIFICATION				

Seq	Item No	Data Item	Section Name	Default Value	Protected	Invisible	Critical
60	523	Behavior Code ICD-O-3	CANCER IDENTIFICATION				
61	440	Grade	CANCER IDENTIFICATION				
62	3843	Grade Clinical	CANCER IDENTIFICATION				
63	441	Grade Path Value	CANCER IDENTIFICATION				
64	3844	Grade Pathological	CANCER IDENTIFICATION				
65	3845	Grade Post Therapy	CANCER IDENTIFICATION				
66	490	Diagnostic Confirmation	CANCER IDENTIFICATION	9			
67	2570	Text--DX Proc--Path	TEXT DIAGNOSIS				
68	2520	Text--DX Proc--PE	TEXT DIAGNOSIS				
69	2530	Text--DX Proc--X-ray/scan	TEXT DIAGNOSIS				
70	2540	Text--DX Proc--Scopes	TEXT DIAGNOSIS				
71	2550	Text--DX Proc--Lab Tests	TEXT DIAGNOSIS				
72	2680	Text--Remarks	TEXT DIAGNOSIS				
73	2690	Text--Place Of Diagnosis	TEXT DIAGNOSIS				
74	995	AJCC ID	STAGE/PROGNOSTIC FACTORS				
75	3800	Schema ID	STAGE/PROGNOSTIC FACTORS				
76	3926	Schema Discriminator 1	STAGE/PROGNOSTIC FACTORS				
77	2600	Text--Staging	STAGE/PROGNOSTIC FACTORS				
78	1060	TNM Edition Number	STAGE/PROGNOSTIC FACTORS				
79	970	TNM Clin Stage Group	STAGE/PROGNOSTIC FACTORS				
80	940	TNM Clin T	STAGE/PROGNOSTIC FACTORS				
81	950	TNM Clin N	STAGE/PROGNOSTIC FACTORS				
82	960	TNM Clin M	STAGE/PROGNOSTIC FACTORS				
83	980	TNM Clin Descriptor	STAGE/PROGNOSTIC FACTORS				
84	990	TNM Clin Staged By	STAGE/PROGNOSTIC FACTORS				
85	910	TNM Path Stage Group	STAGE/PROGNOSTIC FACTORS				
86	880	TNM Path T	STAGE/PROGNOSTIC FACTORS				
87	890	TNM Path N	STAGE/PROGNOSTIC FACTORS				
88	900	TNM Path M	STAGE/PROGNOSTIC FACTORS				
89	920	TNM Path Descriptor	STAGE/PROGNOSTIC FACTORS				

Seq	Item No	Data Item	Section Name	Default Value	Protected	Invisible	Critical
90	930	TNM Path Staged By	STAGE/PROGNOSTIC FACTORS				
91	1004	AJCC TNM Clin Stage Group	STAGE/PROGNOSTIC FACTORS				
92	1001	AJCC TNM Clin T	STAGE/PROGNOSTIC FACTORS				
93	1002	AJCC TNM Clin N	STAGE/PROGNOSTIC FACTORS				
94	1003	AJCC TNM Clin M	STAGE/PROGNOSTIC FACTORS				
95	1014	AJCC TNM Path Stage Group	STAGE/PROGNOSTIC FACTORS				
96	1011	AJCC TNM Path T	STAGE/PROGNOSTIC FACTORS				
97	1012	AJCC TNM Path N	STAGE/PROGNOSTIC FACTORS				
98	1013	AJCC TNM Path M	STAGE/PROGNOSTIC FACTORS				
99	820	Regional Nodes Positive	STAGE/PROGNOSTIC FACTORS	99			
100	830	Regional Nodes Examined	STAGE/PROGNOSTIC FACTORS	99			
101	759	SEER Summary Stage 2000	STAGE/PROGNOSTIC FACTORS				
102	764	Summary Stage 2018	STAGE/PROGNOSTIC FACTORS				
103	3769	Over-ride CS 20	STAGE/PROGNOSTIC FACTORS				
104	3110	Comorbid/Complication 1	STAGE/PROGNOSTIC FACTORS				
105	3120	Comorbid/Complication 2	STAGE/PROGNOSTIC FACTORS				
106	3130	Comorbid/Complication 3	STAGE/PROGNOSTIC FACTORS				
107	3140	Comorbid/Complication 4	STAGE/PROGNOSTIC FACTORS				
108	3150	Comorbid/Complication 5	STAGE/PROGNOSTIC FACTORS				
109	3160	Comorbid/Complication 6	STAGE/PROGNOSTIC FACTORS				
110	3161	Comorbid/Complication 7	STAGE/PROGNOSTIC FACTORS				
111	3162	Comorbid/Complication 8	STAGE/PROGNOSTIC FACTORS				
112	3163	Comorbid/Complication 9	STAGE/PROGNOSTIC FACTORS				
113	3164	Comorbid/Complication 10	STAGE/PROGNOSTIC FACTORS				
114	3780	Secondary Diagnosis 1	STAGE/PROGNOSTIC FACTORS				
115	3782	Secondary Diagnosis 2	STAGE/PROGNOSTIC FACTORS				
116	3784	Secondary Diagnosis 3	STAGE/PROGNOSTIC FACTORS				
117	3786	Secondary Diagnosis 4	STAGE/PROGNOSTIC FACTORS				
118	3788	Secondary Diagnosis 5	STAGE/PROGNOSTIC FACTORS				
119	3790	Secondary Diagnosis 6	STAGE/PROGNOSTIC FACTORS				

Seq	Item No	Data Item	Section Name	Default Value	Protected	Invisible	Critical
120	3792	Secondary Diagnosis 7	STAGE/PROGNOSTIC FACTORS				
121	3794	Secondary Diagnosis 8	STAGE/PROGNOSTIC FACTORS				
122	3796	Secondary Diagnosis 9	STAGE/PROGNOSTIC FACTORS				
123	3798	Secondary Diagnosis 10	STAGE/PROGNOSTIC FACTORS				
124	3650	NPCR Derived Clin Stg Grp	STAGE/PROGNOSTIC FACTORS				
125	540	Reporting Facility	FACILITY SPECIFIC INFORMATION				
126	545	NPI--Reporting Facility	FACILITY SPECIFIC INFORMATION				
127	500	Type Of Reporting Source	FACILITY SPECIFIC INFORMATION	4			
128	2300	Medical Record Number	FACILITY SPECIFIC INFORMATION	UNK			
129	630	Primary Payer at DX	FACILITY SPECIFIC INFORMATION	99			
130	2465	NPI--Physician--Managing	FACILITY SPECIFIC INFORMATION				
131	2485	NPI--Physician--Prim Surg	FACILITY SPECIFIC INFORMATION				
132	580	Date of 1st Contact	FACILITY SPECIFIC INFORMATION				
133	581	Date of 1st Contact Flag	FACILITY SPECIFIC INFORMATION				
134	610	Class Of Case	FACILITY SPECIFIC INFORMATION	10			
135	501	Casefinding Source	FACILITY SPECIFIC INFORMATION	30			
136	2495	NPI--Physician 3	FACILITY SPECIFIC INFORMATION				
137	2505	NPI--Physician 4	FACILITY SPECIFIC INFORMATION				
138	1285	RX Summ--Treatment Status	TREATMENT - 1ST COURSE				
139	1270	Date 1st Crs RX CoC	TREATMENT - 1ST COURSE				
140	1271	Date 1st Crs RX CoC Flag	TREATMENT - 1ST COURSE				
141	1260	Date Initial RX SEER	TREATMENT - 1ST COURSE				
142	1261	Date Initial RX SEER Flag	TREATMENT - 1ST COURSE				
143	2560	Text--DX Proc--Op	TREATMENT - 1ST COURSE				
144	2610	RX Text--Surgery	TREATMENT - 1ST COURSE				
145	1200	RX Date Surgery	TREATMENT - 1ST COURSE				
146	1201	RX Date Surgery Flag	TREATMENT - 1ST COURSE				

Seq	Item No	Data Item	Section Name	Default Value	Protected	Invisible	Critical
147	3170	RX Date Mst Defn Srg	TREATMENT - 1ST COURSE				
148	3171	RX Date Mst Defn Srg Flag	TREATMENT - 1ST COURSE				
149	670	RX Hosp--Surg Prim Site	TREATMENT - 1ST COURSE				
150	1290	RX Summ--Surg Prim Site	TREATMENT - 1ST COURSE				
151	1340	Reason for No Surgery	TREATMENT - 1ST COURSE				
152	2620	RX Text--Radiation (Beam)	TREATMENT - 1ST COURSE				
153	2630	RX Text--Radiation Other	TREATMENT - 1ST COURSE				
154	1210	RX Date Radiation	TREATMENT - 1ST COURSE				
155	1211	RX Date Radiation Flag	TREATMENT - 1ST COURSE				
156	1506	Phase I Radiation Treatment Modality	TREATMENT - 1ST COURSE				
157	1570	Rad--Regional RX Modality	TREATMENT - 1ST COURSE				
158	3200	Rad--Boost RX Modality	TREATMENT - 1ST COURSE				
159	690	RX Hosp--Radiation	TREATMENT - 1ST COURSE				
160	1360	RX Summ--Radiation	TREATMENT - 1ST COURSE				
161	1430	Reason for No Radiation	TREATMENT - 1ST COURSE				
162	1380	RX Summ--Surg/Rad Seq	TREATMENT - 1ST COURSE				
163	2640	RX Text--Chemo	TREATMENT - 1ST COURSE				
164	1220	RX Date Chemo	TREATMENT - 1ST COURSE				
165	1221	RX Date Chemo Flag	TREATMENT - 1ST COURSE				
166	700	RX Hosp--Chemo	TREATMENT - 1ST COURSE				
167	1390	RX Summ--Chemo	TREATMENT - 1ST COURSE				
168	2650	RX Text--Hormone	TREATMENT - 1ST COURSE				
169	1230	RX Date Hormone	TREATMENT - 1ST COURSE				
170	1231	RX Date Hormone Flag	TREATMENT - 1ST COURSE				
171	710	RX Hosp--Hormone	TREATMENT - 1ST COURSE				
172	1400	RX Summ--Hormone	TREATMENT - 1ST COURSE				
173	2660	RX Text--BRM	TREATMENT - 1ST COURSE				
174	1240	RX Date BRM	TREATMENT - 1ST COURSE				
175	1241	RX Date BRM Flag	TREATMENT - 1ST COURSE				
176	720	RX Hosp--BRM	TREATMENT - 1ST COURSE				

Seq	Item No	Data Item	Section Name	Default Value	Protected	Invisible	Critical
177	1410	RX Summ--BRM	TREATMENT - 1ST COURSE				
178	1639	RX Summ--Systemic/Sur Seq	TREATMENT - 1ST COURSE				
179	2670	RX Text--Other	TREATMENT - 1ST COURSE				
180	1250	RX Date Other	TREATMENT - 1ST COURSE				
181	1251	RX Date Other Flag	TREATMENT - 1ST COURSE				
182	730	RX Hosp--Other	TREATMENT - 1ST COURSE				
183	1420	RX Summ--Other	TREATMENT - 1ST COURSE				
184	1296	RX Summ--Reg LN Examined	TREATMENT - 1ST COURSE	99			
185	672	RX Hosp--Scope Reg LN Sur	TREATMENT - 1ST COURSE	9			
186	1292	RX Summ--Scope Reg LN Sur	TREATMENT - 1ST COURSE	9			
187	674	RX Hosp--Surg Oth Reg/Dis	TREATMENT - 1ST COURSE	9			
188	1294	RX Summ--Surg Oth Reg/Dis	TREATMENT - 1ST COURSE	9			
189	3250	RX Summ--Transplnt/Endocr	TREATMENT - 1ST COURSE	99			
190	1760	Vital Status	FOLLOW UP/DEATH	1			
191	1750	Date of Last Contact	FOLLOW UP/DEATH				
192	1751	Date of Last Contact Flag	FOLLOW UP/DEATH				
193	1942	Place of Death--State	FOLLOW UP/DEATH				
194	1944	Place of Death--Country	FOLLOW UP/DEATH				
195	1910	Cause Of Death	FOLLOW UP/DEATH	0000			
196	1930	Autopsy	FOLLOW UP/DEATH	0			
197	1920	ICD Revision Number	FOLLOW UP/DEATH	0			
198	2440	Following Registry	FOLLOW UP/DEATH				
199	2475	NPI--Physician--Follow-Up	FOLLOW UP/DEATH				
200	2410	Institution Referred From	FOLLOW UP/DEATH				
201	2415	NPI--Inst Referred From	FOLLOW UP/DEATH				
202	2420	Institution Referred To	FOLLOW UP/DEATH				
203	2425	NPI--Inst Referred To	FOLLOW UP/DEATH				
204	2112	Date Case Report Loaded	SYSTEM FIELDS				
205	2090	Date Case Completed	SYSTEM FIELDS				
206	2100	Date Case Last Changed	SYSTEM FIELDS				

Seq	Item No	Data Item	Section Name	Default Value	Protected	Invisible	Critical
207	2110	Date Case Report Exported	SYSTEM FIELDS				
208	2170	Vendor Name	SYSTEM FIELDS	eMaRC 7.0			
209	570	Abstracted By	SYSTEM FIELDS				
210	1790	Follow-Up Source	SYSTEM FIELDS	9		✓	
211	1791	Follow-Up Source Central	SYSTEM FIELDS	00		✓	
212	2116	ICD-O-3 Conversion Flag	SYSTEM FIELDS	0		✓	
213	180	Race Coding Sys--Original	SYSTEM FIELDS	9		✓	
214	170	Race Coding Sys--Current	SYSTEM FIELDS	7		✓	
215	450	Site Coding Sys--Current	SYSTEM FIELDS	5		✓	
216	460	Site Coding Sys--Original	SYSTEM FIELDS	5		✓	
217	470	Morph Coding Sys--Current	SYSTEM FIELDS	8		✓	
218	480	Morph Coding Sys--Originl	SYSTEM FIELDS	8		✓	
219	1460	RX Coding System--Current	SYSTEM FIELDS	06		✓	
220	10	Record Type	SYSTEM FIELDS	A		✓	
221	50	NAACCR Record Version	SYSTEM FIELDS	180			
222	2508	EHR Reporting	SYSTEM FIELDS				

Appendix C: State Registry Object Identifiers (OIDs)

OID	Registry
2.16.840.1.113883.3.520.4.40	Reporting Facility Identification Number for Alabama
2.16.840.1.113883.3.520.4.41	Reporting Facility Identification Number for Alaska
2.16.840.1.113883.3.520.4.42	Reporting Facility Identification Number for American Samoa
2.16.840.1.113883.3.520.4.43	Reporting Facility Identification Number for Arizona
2.16.840.1.113883.3.520.4.44	Reporting Facility Identification Number for Arkansas
2.16.840.1.113883.3.520.4.45	Reporting Facility Identification Number for California
2.16.840.1.113883.3.520.4.46	Reporting Facility Identification Number for Colorado
2.16.840.1.113883.3.520.4.47	Reporting Facility Identification Number for Connecticut
2.16.840.1.113883.3.520.4.48	Reporting Facility Identification Number for District of Columbia
2.16.840.1.113883.3.520.4.49	Reporting Facility Identification Number for Delaware
2.16.840.1.113883.3.520.4.50	Reporting Facility Identification Number for Florida
2.16.840.1.113883.3.520.4.51	Reporting Facility Identification Number for Georgia
2.16.840.1.113883.3.520.4.52	Reporting Facility Identification Number for Guam
2.16.840.1.113883.3.520.4.53	Reporting Facility Identification Number for Hawaii
2.16.840.1.113883.3.520.4.54	Reporting Facility Identification Number for Idaho
2.16.840.1.113883.3.520.4.55	Reporting Facility Identification Number for Illinois
2.16.840.1.113883.3.520.4.56	Reporting Facility Identification Number for Indiana
2.16.840.1.113883.3.520.4.57	Reporting Facility Identification Number for Iowa
2.16.840.1.113883.3.520.4.58	Reporting Facility Identification Number for Kansas
2.16.840.1.113883.3.520.4.59	Reporting Facility Identification Number for Kentucky
2.16.840.1.113883.3.520.4.60	Reporting Facility Identification Number for Louisiana
2.16.840.1.113883.3.520.4.61	Reporting Facility Identification Number for Maine
2.16.840.1.113883.3.520.4.62	Reporting Facility Identification Number for Maryland
2.16.840.1.113883.3.520.4.63	Reporting Facility Identification Number for Massachusetts
2.16.840.1.113883.3.520.4.64	Reporting Facility Identification Number for Michigan
2.16.840.1.113883.3.520.4.65	Reporting Facility Identification Number for Minnesota
2.16.840.1.113883.3.520.4.66	Reporting Facility Identification Number for Mississippi
2.16.840.1.113883.3.520.4.67	Reporting Facility Identification Number for Missouri
2.16.840.1.113883.3.520.4.68	Reporting Facility Identification Number for Montana
2.16.840.1.113883.3.520.4.69	Reporting Facility Identification Number for Nebraska
2.16.840.1.113883.3.520.4.70	Reporting Facility Identification Number for Nevada
2.16.840.1.113883.3.520.4.71	Reporting Facility Identification Number for New Hampshire
2.16.840.1.113883.3.520.4.72	Reporting Facility Identification Number for New Jersey
2.16.840.1.113883.3.520.4.73	Reporting Facility Identification Number for New Mexico
2.16.840.1.113883.3.520.4.74	Reporting Facility Identification Number for New York
2.16.840.1.113883.3.520.4.75	Reporting Facility Identification Number for North Carolina
2.16.840.1.113883.3.520.4.76	Reporting Facility Identification Number for North Marianas Islands
2.16.840.1.113883.3.520.4.77	Reporting Facility Identification Number for North Dakota
2.16.840.1.113883.3.520.4.78	Reporting Facility Identification Number for Ohio
2.16.840.1.113883.3.520.4.79	Reporting Facility Identification Number for Oklahoma

OID	Registry
2.16.840.1.113883.3.520.4.80	Reporting Facility Identification Number for Oregon
2.16.840.1.113883.3.520.4.81	Reporting Facility Identification Number for Pennsylvania
2.16.840.1.113883.3.520.4.82	Reporting Facility Identification Number for Puerto Rico
2.16.840.1.113883.3.520.4.83	Reporting Facility Identification Number for Rhode Island
2.16.840.1.113883.3.520.4.84	Reporting Facility Identification Number for South Carolina
2.16.840.1.113883.3.520.4.85	Reporting Facility Identification Number for South Dakota
2.16.840.1.113883.3.520.4.86	Reporting Facility Identification Number for Tennessee
2.16.840.1.113883.3.520.4.87	Reporting Facility Identification Number for Texas
2.16.840.1.113883.3.520.4.88	Reporting Facility Identification Number for Utah
2.16.840.1.113883.3.520.4.89	Reporting Facility Identification Number for Vermont
2.16.840.1.113883.3.520.4.90	Reporting Facility Identification Number for Virginia
2.16.840.1.113883.3.520.4.91	Reporting Facility Identification Number for Virgin Islands
2.16.840.1.113883.3.520.4.92	Reporting Facility Identification Number for Washington
2.16.840.1.113883.3.520.4.93	Reporting Facility Identification Number for West Virginia
2.16.840.1.113883.3.520.4.94	Reporting Facility Identification Number for Wisconsin
2.16.840.1.113883.3.520.4.95	Reporting Facility Identification Number for Wyoming