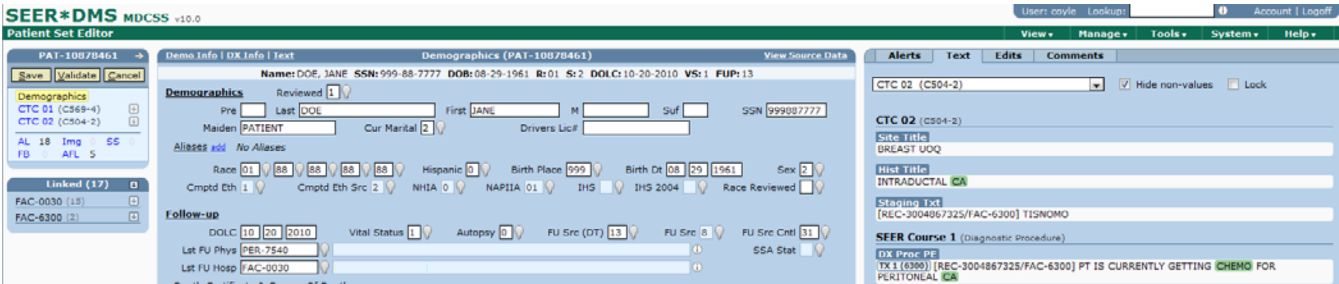
Chapter 11: The Patient Set Editor

In the SEER*DMS database, a "patient set" stores all data pertaining to the same patient. These data include patient demographics, information on all reportable cancer/tumor/cases (CTC), associated admissions, diagnostic and treatment procedures, and follow-up information. Data summarized or consolidated from the source records are stored in patient set data fields. The patient set also includes direct links to the source records that contributed the data. Refer to *Chapter 2: Records and Patient Sets* for more information related to patient set and record data.

The layout of the patient set editor is similar to the record editor. The navigation controls are on the left, data fields are displayed in the center body of the page, and system alerts, text fields, failing edits, or comments from registry staff can be viewed in the right panel.



It is possible for two users to view the same patient set simultaneously. SEER*DMS prevents a user from overwriting changes saved by another user. If fields are changed by the system or another user while you are viewing a patient set, you will not be able to save changes to that patient set. You will be notified that the data have been changed and will be able to reload the patient set. It is also possible to open a patient set that is associated with a pending worklist task. When you open the patient set, SEER*DMS will display an alert and provide a link to the worklist. To avoid the duplication of effort, you should review the tasks prior to making changes.

The features and tools of the patient set editor are described in this chapter. Step-by-step instructions for applying these tools to specific worklist tasks are provided in: *Chapter 12: Consolidating Data*, *Chapter 13: Visual Editing*, and *Chapter 14: Resolving Patient Set Errors*.

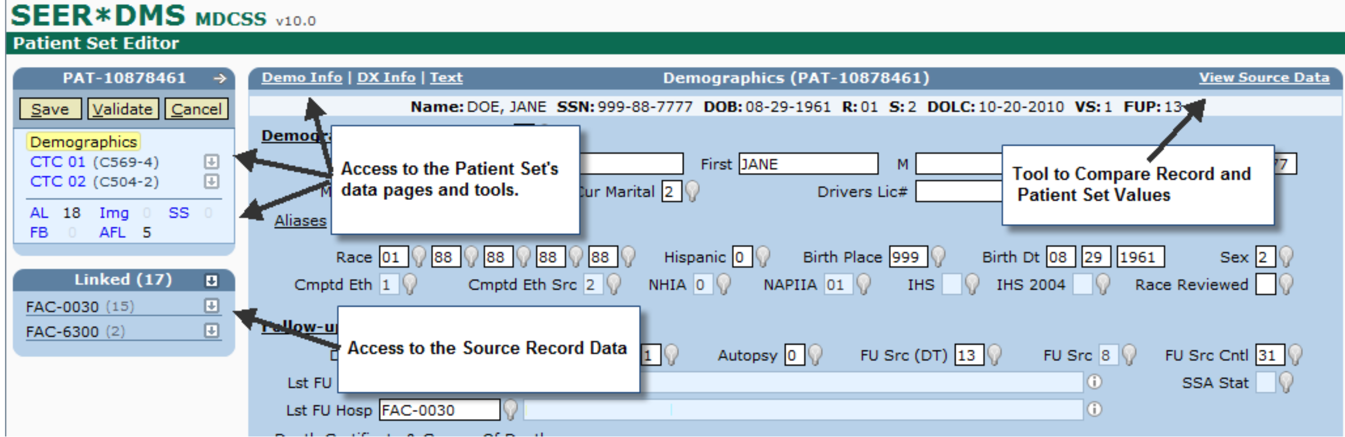
In this chapter, you'll learn about

- Features of the Patient Set Editor
- Editing Data Fields
- Demographic Information Viewer
- Diagnostic Information Window
- Viewing Text
- Comparing Consolidated Data to Source Data
- Course Page to Review Treatment Data
- Comparing Abstract Records
- Viewing the Logic of Integrated Edits
- Polishers
- Resolving Edit Errors
- Creating and Completing Review Tasks
- Linking and Unlinking Records
- Identifying and Removing Duplicate Patient Sets
- Printing Record or Patient Set Data

- Undoing Changes
- Saving Changes to a Patient Set
- Keyboard Shortcuts
- Requesting Follow-back Information

Features of the Patient Set Editor

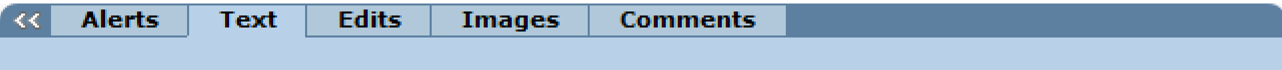
The title bar shows the page title, patient set ID, and links to tools for viewing, comparing, and consolidating data (Demo Info, DX Info, Text, Source Data Viewer). Demo Info and DX Info can be used to compare demographic and diagnostic information in the patient set with data in the source records. The Text viewer displays the text fields in a separate window. The Source Data viewer can be used to compare data fields on source records to the same fields in the patient set, and to copy values from record data fields to the patient set. In the figure below, the title bar indicates that the Demographics page is being displayed and the Patient Set ID is PAT-10878461.



You can use the links in the left panel to:

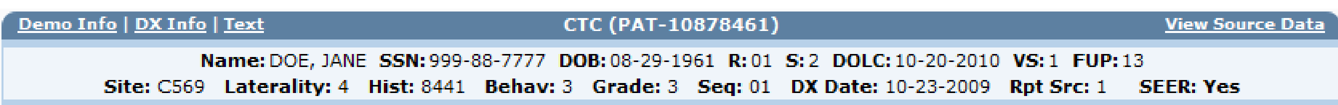
- View each page of patient set data (Demographics and CTC pages). Links to pages within a CTC are shown when you expand the section by clicking the CTC ID or the down arrow.
- Review the patient set's **Audit Log (AL)**. Each change made to a data field is documented in the audit log. Audit log entries include the user or process which modified the data, the task or system event in which the change was made, comments related to the change, the date and time of modification, and the original and modified value of each data field that was changed. Audit log events are described in *Chapter 2: Records and Patient Sets*.
- View, add, or delete **Image Files (IMG)** containing scanned documents for this patient. These may include images of pathology reports, death certificates, or other documents.
- View **Special Studies (SS)** to which this patient is assigned. Add or remove the patient set from a special study (*Chapter 28: Special Studies*).
- Review or submit a request to the reporting facility for **Follow-back (FB)** information. Please refer to the *Requesting Follow-back Information* section of this chapter.
- Review or create an **Abstract Facility Lead (AFL)** to indicate that an abstract record is needed for the patient (see *Chapter 21: Managing Abstracting Assignments*).
- The source records can be accessed within the **Linked** section. To see the types of records or view record data from a specific facility, click the down arrow adjacent to the facility ID. To expand the list for all facilities, click the down arrow adjacent to "Linked". You may then click one of the record types to access the record data.

- In a consolidate task, the patient set navigation box will also include a separate list of **Incoming Records** to distinguish new records from records that were previously linked. This feature is described in *Chapter 12: Consolidating Data*.



You can use the tabs in the right panel to:

- View system messages and task-specific instructions on the **Alerts** tab.
- View the **Text** fields stored in the patient set or source records.
- View and/or resolve the **Edits** triggered by data fields in the patient set, as described in the *Resolving Edit Errors* section of this chapter.
- View scanned **Images** of documents while viewing or editing data in the main editor.
- View or add to the **Comments (Cmt)** stored in the patient set. The comments include notes added by system users and messages auto-generated by SEER*DMS.



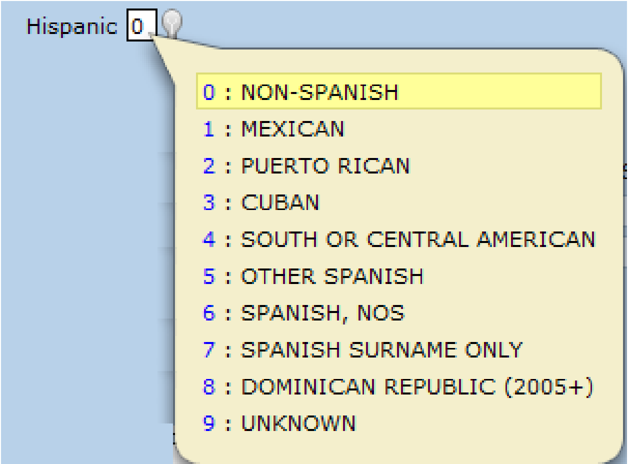
A **Data Header** is displayed at the top of many patient set data pages, as shown above. Fields from the Demographics page are displayed in the header as a reference when viewing other pages. Fields from the main CTC page are included in the header when you are viewing any CTC page (CTC, Staging, Summary TX, Facility, Course, or TX pages).

Editing Data Fields

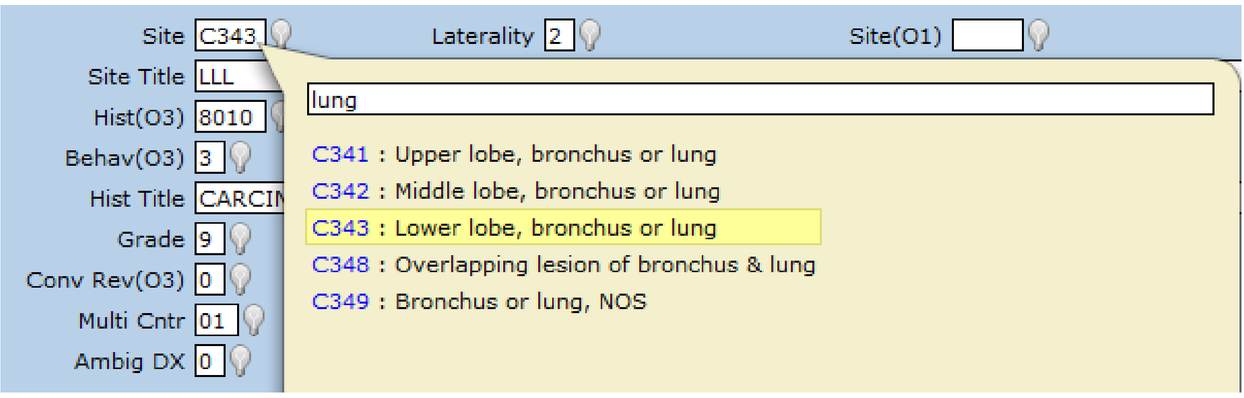
To modify a field, you may either enter a value directly into the field or you may use a lookup to select a value from a pick list. If the pick list has too many values to show on the screen, you will be able to use search terms to reduce the list. The data field controls also allow you to document a change as you update the field, review changes that others have made to the field, and review documentation and coding guidelines. The data field controls are described below.

- Values can be typed directly into any data field that can be modified.
- Some fields are set by the system and cannot be changed. If a field can be modified then its value is displayed in a white edit box, otherwise, you cannot change the value. In the example below, Race, Spanish/Hispanic Origin, Birth Place, and Birth Date can be modified. Computed Ethnicity, Computed Ethnicity Source, NHIA, NAPIIA, and the IHS linkage fields are read only. You cannot modify read only fields, SEER*DMS will auto-update their values.

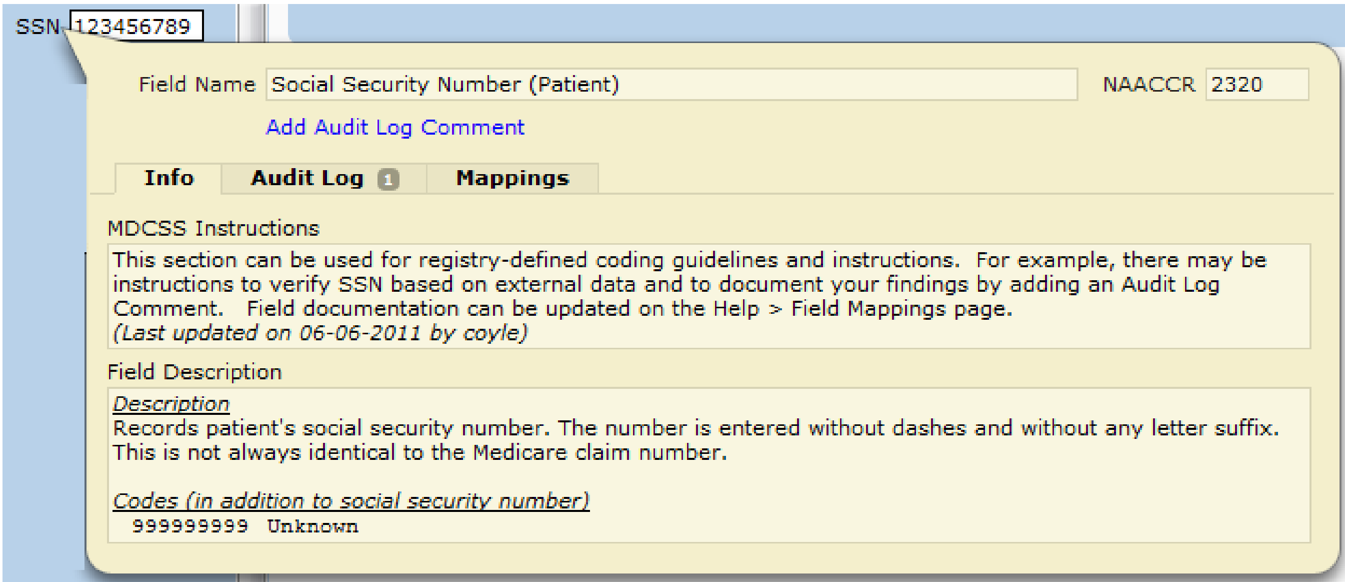
- Lookups are available for many fields in SEER*DMS. For these fields, you have the option of typing the field's value or selecting a code after clicking the Lookup icon. Keyboard shortcuts can be used to open the lookup instead of mouse-clicking. Tab or use your mouse to go to the field and then press Ctrl+Alt+L. This shortcut does not work if the lookup requires a separate window (e.g., city, physician, and facility lookups).
- For many fields, all values will be displayed when you open the lookup. You may use your mouse to select a value; or use the arrow keys to move to a value and press Enter.



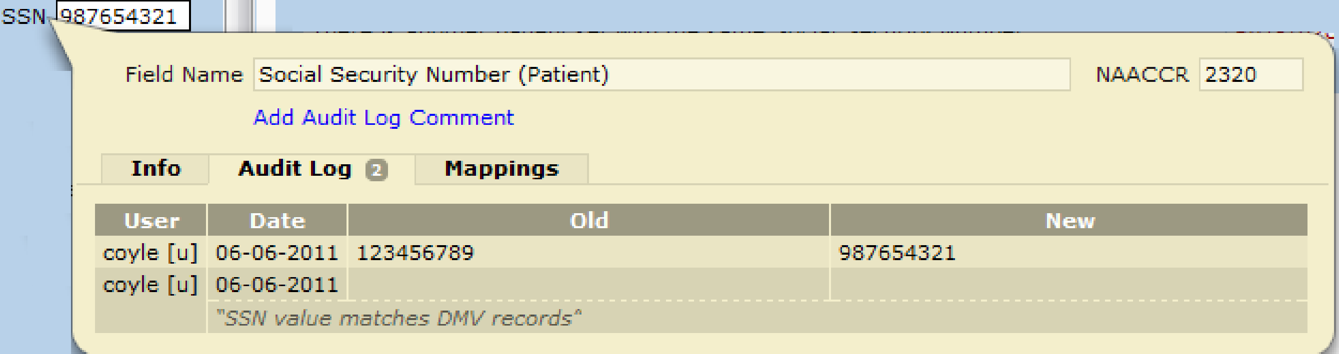
- If the field has too many values to display, enter search terms. Items that match your search terms will be listed. You may search by text or codes. You may use the down arrow to move to the list and select a value; or you may select a value with your mouse.



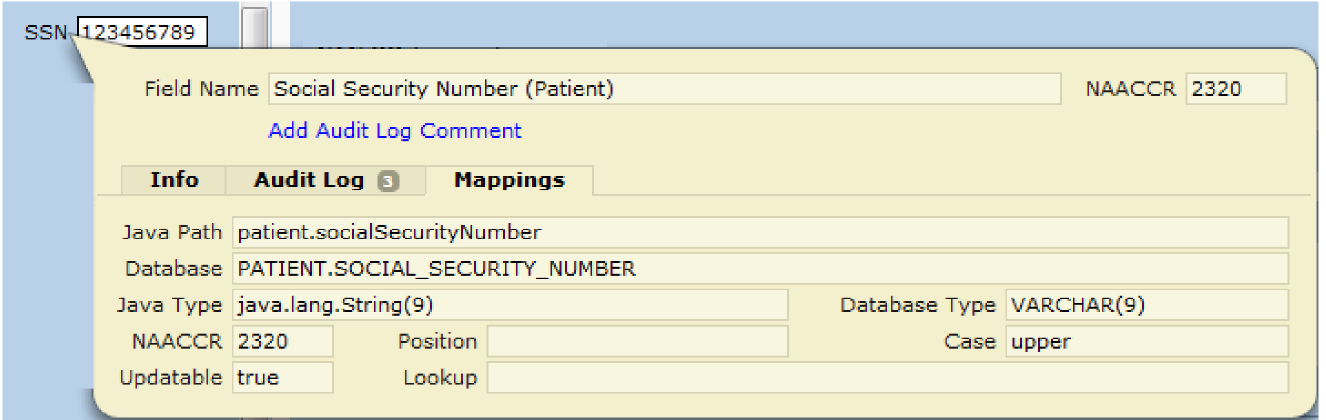
- Click the field label to view documentation. Registry-specific instructions are shown first. If the field is a NAACCR item, the Info tab includes the item number and text from the NAACCR coding manual.



- To document a change or enter a comment related to a field, click **Add Audit Log Comment**. All changes and field-level comments will be displayed on the Audit Log tab. This information is also displayed in the patient set's full audit log.



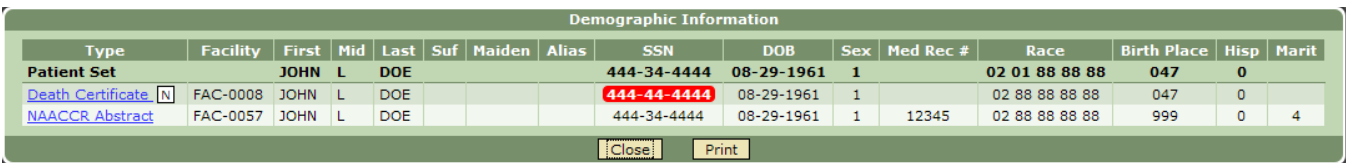
- Technical field documentation is provided on the **Mappings Tab**. The **Java Path** is syntax required to reference the field in Mass Change imports and other processes; the database name is the syntax required in SQL queries. The **Java and Database Types** define the field length and variable type. If **Updatable** is false, the field cannot be modified via Mass Change (this has no affect on modifying the field in the editor). If the field is associated with a **Lookup**, the name of the lookup will be listed. The value provided for lookup may be a database table or it may be a query defined in the lookups.xml system file.



Demographic Information Viewer

The Demographic Information Viewer is auto-displayed when you open a consolidation task. You can also open the viewer by clicking **Demo Info** or pressing Ctrl+Alt+D. The viewer is only available if there are records linked to the Patient Set. Data from all records are displayed. If you are in a Consolidate task, the incoming records will be listed separately at the top.

Values that differ from the patient set or other records will be highlighted as shown below. The record values shown in Med Rec # column are not compared to values in the patient set. A value in the Med Rec # column will be shown in red if it differs from a value on another record from the same facility. Accession number is shown in the Med Rec # column if major record subtype is Pathology Rpt (currently, this record type is only used by the Seattle registry).



Demographic Information

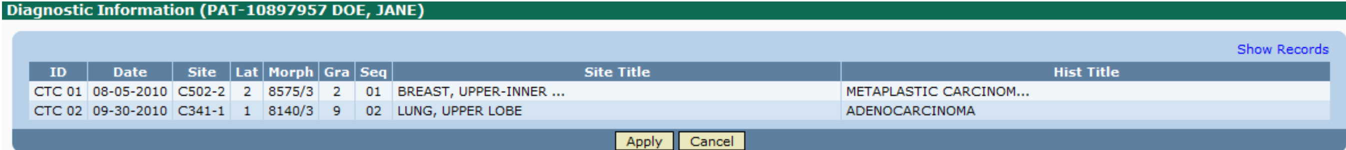
Type	Facility	First	Mid	Last	Suf	Maiden	Alias	SSN	DOB	Sex	Med Rec #	Race	Birth Place	Hisp	Marit
Patient Set		**JOHN**	**L**	**DOE**				**444-34-4444**	**08-29-1961**	**1**		**02 01 88 88 88**	**047**	**0**	
Death Certificate [N]	FAC-0008	JOHN	L	DOE				444-44-4444	08-29-1961	1		02 88 88 88 88	047	0	
NAACCR Abstract	FAC-0057	JOHN	L	DOE				444-34-4444	08-29-1961	1	12345	02 88 88 88 88	999	0	4

Close Print

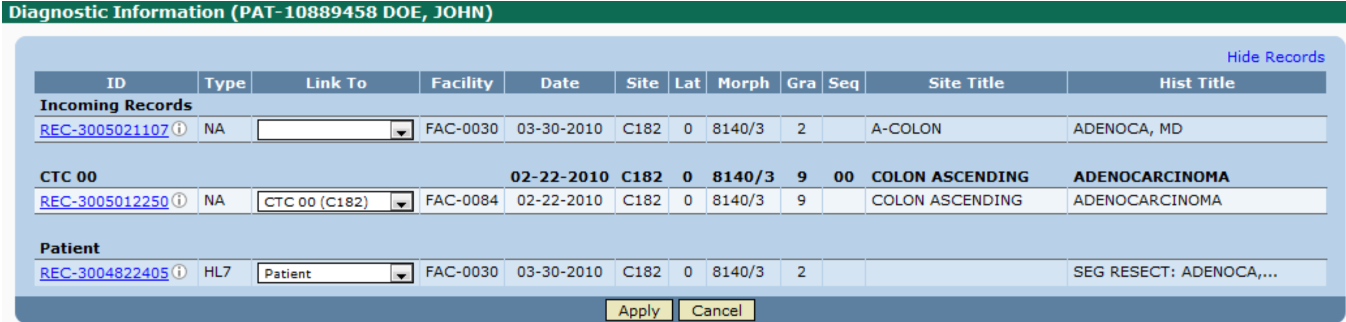
Click **Close** or press Ctrl+Alt+C to close the Demographic Information viewer. Simply pressing Enter will also close the window unless you moved focus to the print button. Click **Print** in the Demographic Information viewer to create a PDF version of the data. You may print the PDF or you may simply keep the PDF open on your screen while you review other pages in the patient set.

Diagnostic Information Window

Click **DX Info** or press Ctrl+Alt+X to open the Diagnostic Information viewer. This window allows you to review basic diagnostic data items for each CTC. If you are reviewing a patient set with multiple CTCs, you may prefer to suppress the display of fields from the linked records. Click **Show Records** / **Hide Records** to toggle the display of the record fields.

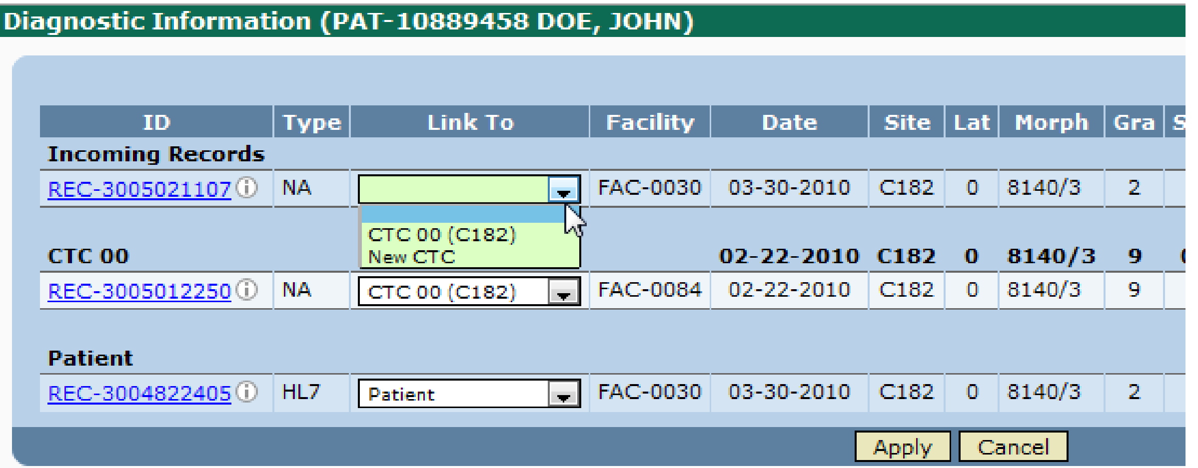


When records are shown, the consolidated values for each CTC are shown in bold and the record values are listed below each CTC line. Records that are linked at the patient level are listed below the Patient sub-heading. In a Consolidate task, data from the unlinked records are shown first so that you can compare the values on the incoming records to other data in the patient set.

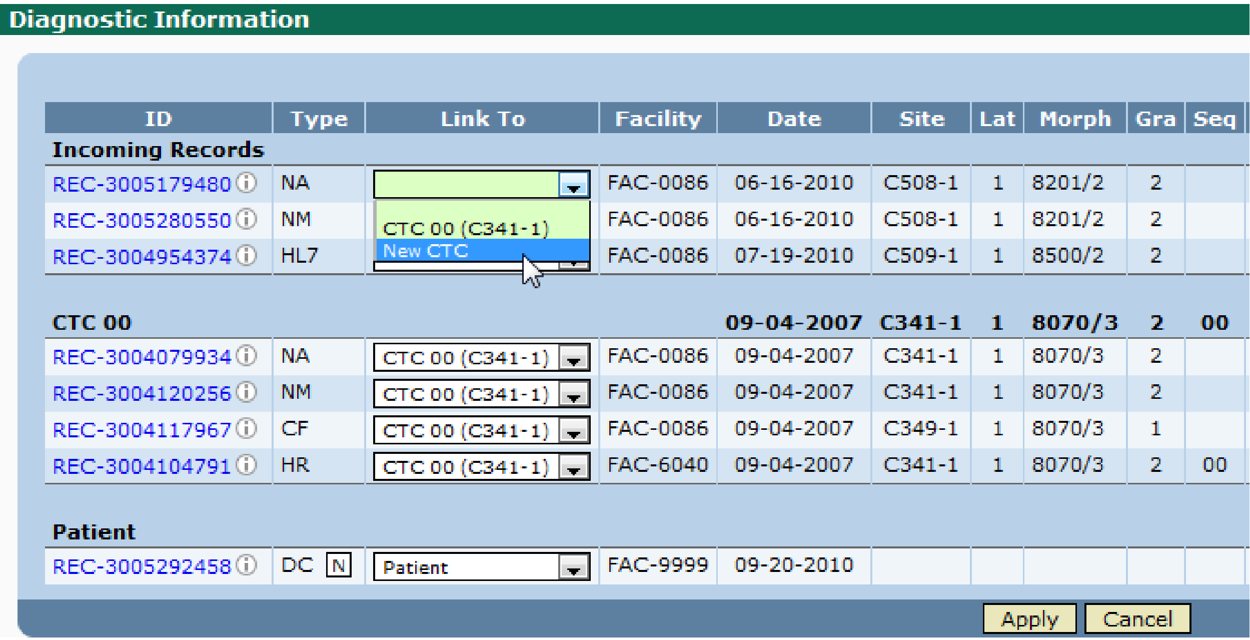


The items in the Link To drop-down will vary based on the situation. The instructions below illustrate the various options to use when linking or unlinking records.

- In the example below, a new NAACCR Abstract was received for the patient set. The choices in the Link To menu are to link the record to the CTC that has sequence number = 00 and site = C182; or to create a new CTC from an incoming NAACCR Abstract record.



- If an incoming record represents a new CTC, select New CTC.

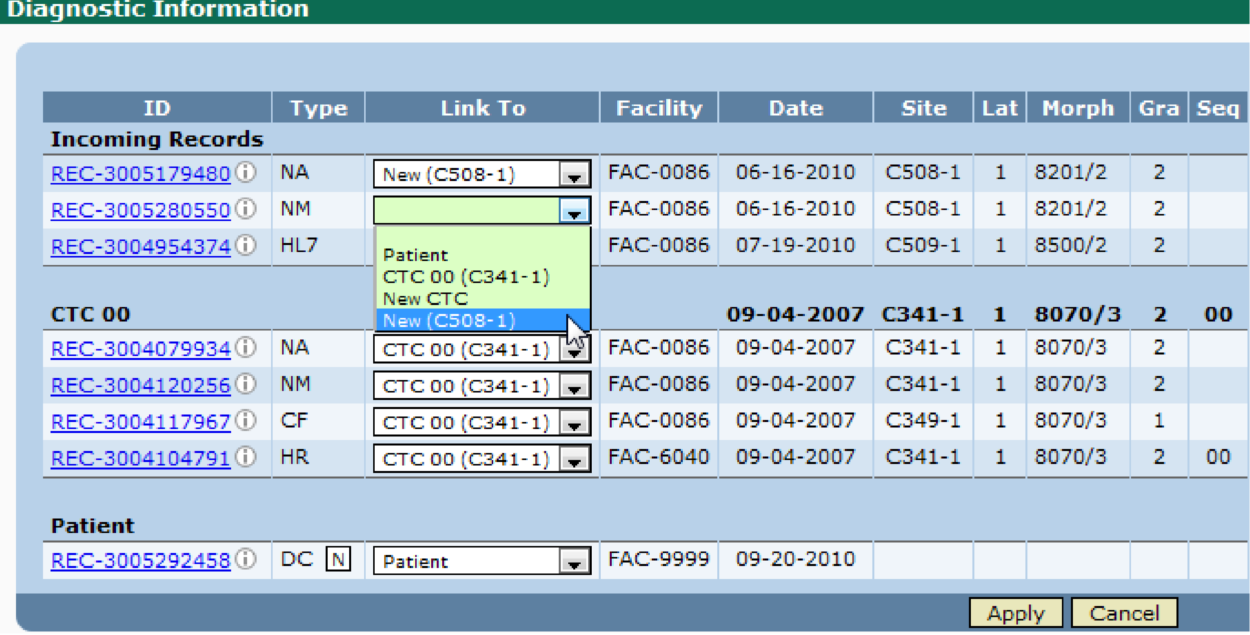


Diagnostic Information

ID	Type	Link To	Facility	Date	Site	Lat	Morph	Gra	Seq
Incoming Records									
REC-3005179480	NA		FAC-0086	06-16-2010	C508-1	1	8201/2	2	
REC-3005280550	NM	CTC 00 (C341-1)	FAC-0086	06-16-2010	C508-1	1	8201/2	2	
REC-3004954374	HL7	New CTC	FAC-0086	07-19-2010	C509-1	1	8500/2	2	
CTC 00				**09-04-2007**	**C341-1**	**1**	**8070/3**	**2**	**00**
REC-3004079934	NA	CTC 00 (C341-1)	FAC-0086	09-04-2007	C341-1	1	8070/3	2	
REC-3004120256	NM	CTC 00 (C341-1)	FAC-0086	09-04-2007	C341-1	1	8070/3	2	
REC-3004117967	CF	CTC 00 (C341-1)	FAC-0086	09-04-2007	C349-1	1	8070/3	1	
REC-3004104791	HR	CTC 00 (C341-1)	FAC-6040	09-04-2007	C341-1	1	8070/3	2	00
Patient									
REC-3005292458	DC N	Patient	FAC-9999	09-20-2010					

Apply Cancel

- After you select New CTC for one record, the drop-down list will include an entry for the new CTC. In this example, the CTC is C508-1. All incoming records in this example will be linked to that CTC. If there are multiple records for a new CTC, you do not need to worry about the order in which you select the records. SEER*DMS will automatically select the best record to build the CTC when you apply your changes.



Diagnostic Information

ID	Type	Link To	Facility	Date	Site	Lat	Morph	Gra	Seq
Incoming Records									
REC-3005179480	NA	New (C508-1)	FAC-0086	06-16-2010	C508-1	1	8201/2	2	
REC-3005280550	NM		FAC-0086	06-16-2010	C508-1	1	8201/2	2	
REC-3004954374	HL7	Patient CTC 00 (C341-1) New CTC New (C508-1)	FAC-0086	07-19-2010	C509-1	1	8500/2	2	
CTC 00				**09-04-2007**	**C341-1**	**1**	**8070/3**	**2**	**00**
REC-3004079934	NA	CTC 00 (C341-1)	FAC-0086	09-04-2007	C341-1	1	8070/3	2	
REC-3004120256	NM	CTC 00 (C341-1)	FAC-0086	09-04-2007	C341-1	1	8070/3	2	
REC-3004117967	CF	CTC 00 (C341-1)	FAC-0086	09-04-2007	C349-1	1	8070/3	1	
REC-3004104791	HR	CTC 00 (C341-1)	FAC-6040	09-04-2007	C341-1	1	8070/3	2	00
Patient									
REC-3005292458	DC N	Patient	FAC-9999	09-20-2010					

Apply Cancel

- If you would like to link a record to the Patient Set but not to a particular CTC, select Patient. The use of this option varies among registries. In some registries, death certificates and case finding records are linked at the patient level. A CTC is not created until an abstract is received. Later, when the abstract record is received and used to build

the new CTC, you can reassign this link to the CTC. (Abstract records cannot be linked at the patient level.)

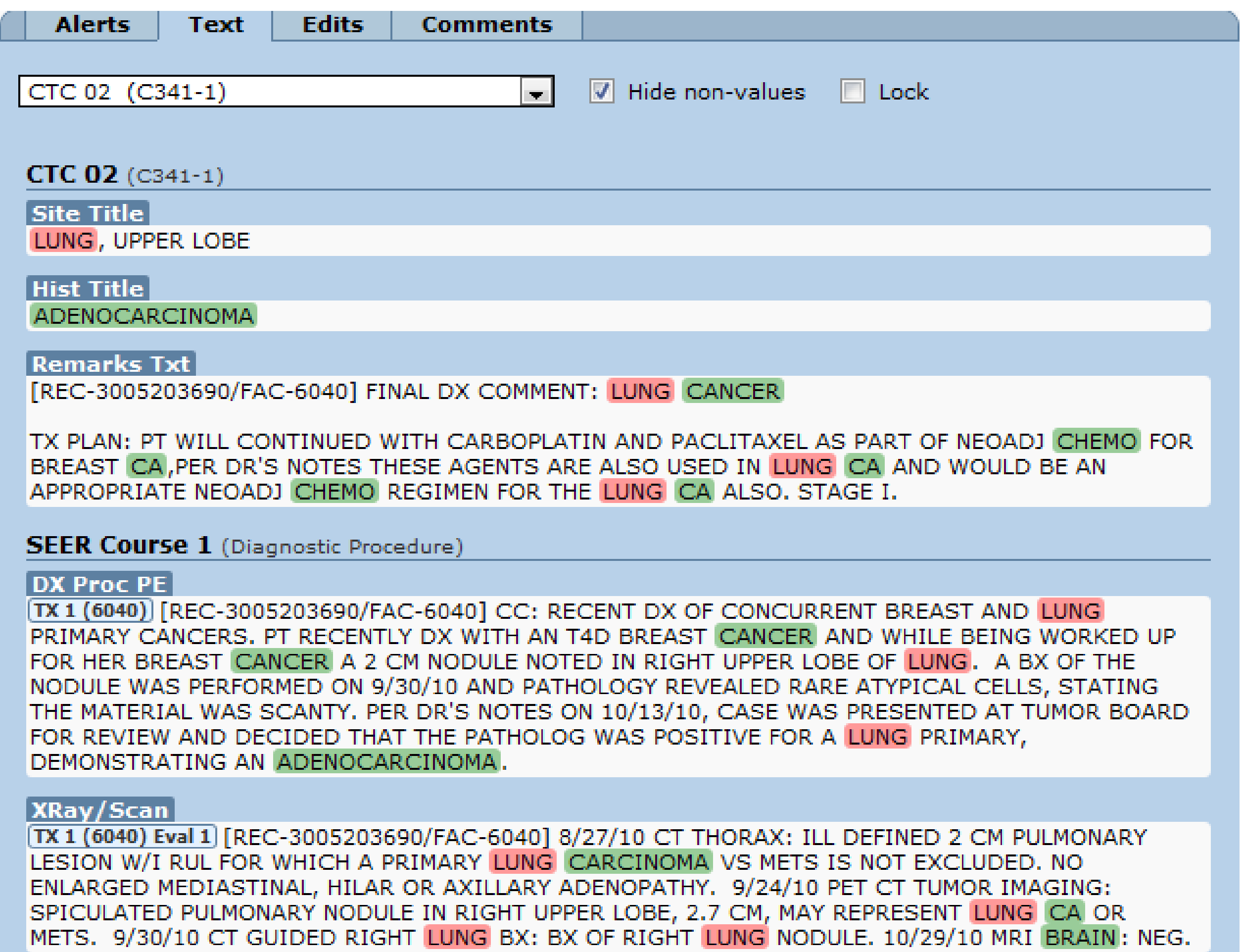
- To save your changes, click **Apply**. If you created a new CTC, SEER*DMS will attempt to set the sequence number based on the central sequence number coded in the record and the number of CTCs in the patient set. If you have multiple CTCs with the same sequence number, you should review the CTCs and manually adjust the sequence numbers.

Popup windows do not auto-close when you exit a patient set; and the data in the popup will not auto-update when you open a new patient set. To prevent confusion, close popups before opening a new patient set. Use ☒, the **Cancel** button, or the **Apply** button to close the Diagnostic Information window.

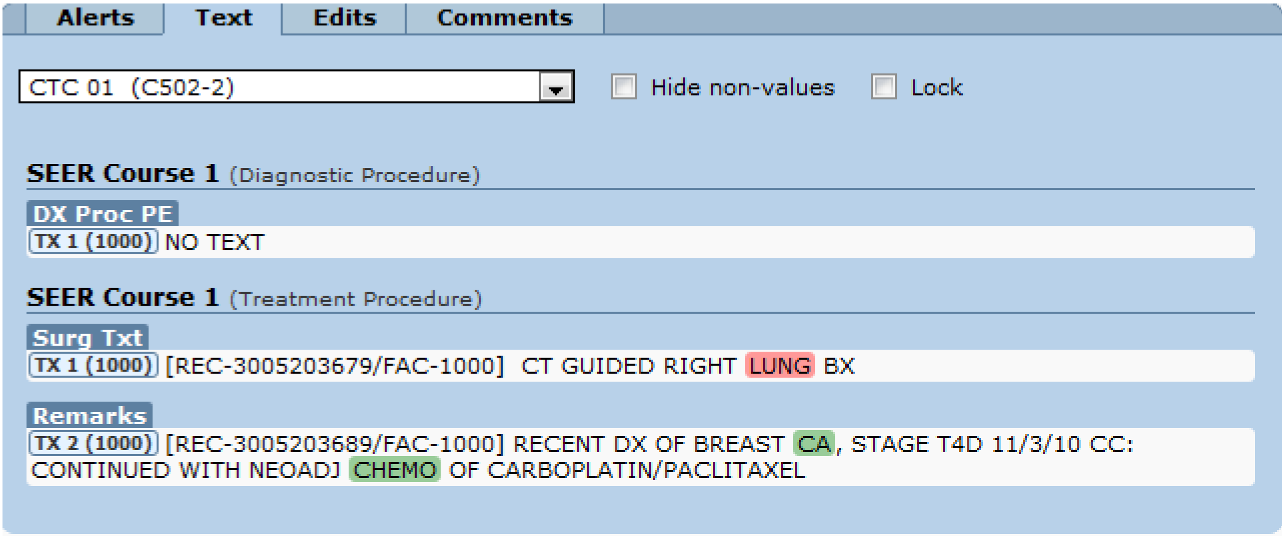
Viewing Text

Text fields are shown on the Text tab in the right panel of the patient set editor. If you prefer, you may open the text in a separate window by clicking the Text link in the title bar of the main data panel. You may display both the text window and a data page in the editor at the same time (you may need to resize the windows or show one on a separate monitor). To close the text window, either click the ☒ in the top right corner or the **Close** button at the bottom of the viewer. Close the text window before exiting the editor or opening another patient set.

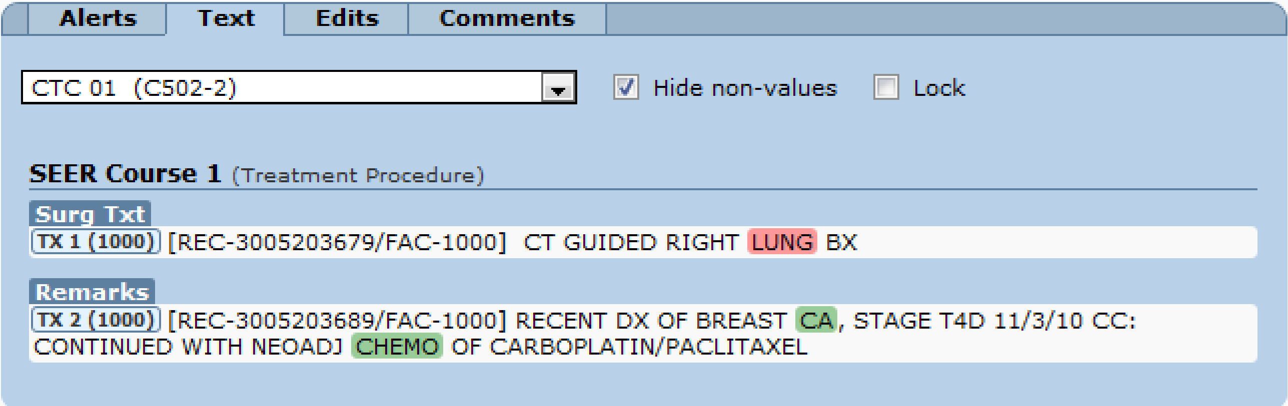
The picture below shows a partial picture of the Text tab in the right panel; the Text window uses the same format. You will use the drop-down menu to select a CTC, a linked record, or a set of linked records. Text for your selection will be displayed in a read-only format.



Blank text fields are never shown in the text tab. However, many text fields will contain values that are equivalent to blank. In the example below, "NO TEXT" is entered for DX Proc PE.

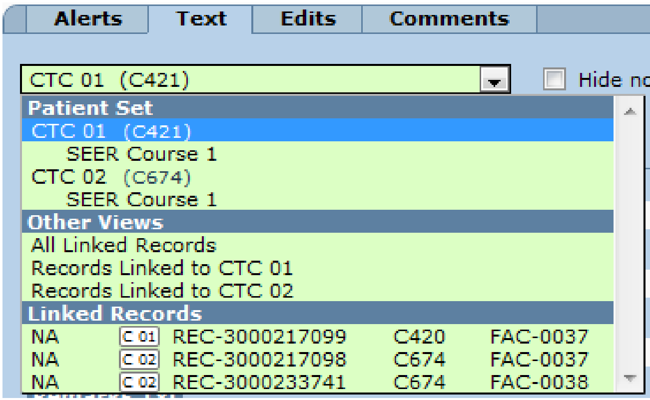


Check the **Hide non-values** check box to suppress text fields with values like "NA", "UNK", "Unknown", "No text", "None". Two configuration parameters determine what is considered a "non-value". The parameters are: *text.non.value* and *text.non.value.registry*. To add or remove items from these lists, please submit a request to the SEER*DMS Technical Support team.



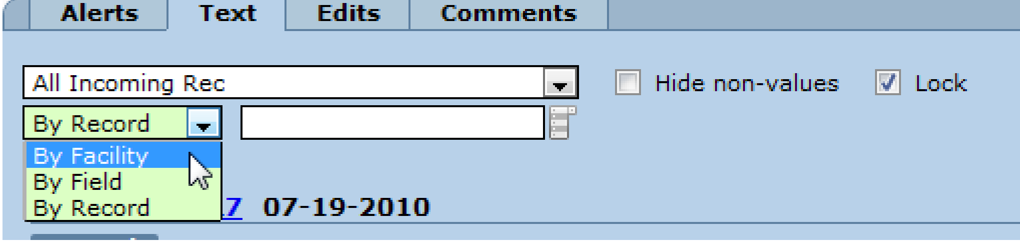
Unless the **Lock** button is checked, the fields shown in the Text tab will change when you go to another record or CTC in the editor. If the panel is not locked the text fields on the new page will be loaded. The text window does not adjust when you change pages, you must manually select a new page in the text window.

The drop-down menu controls determines which text fields are displayed. The screen shot below illustrates the choices that may be available.

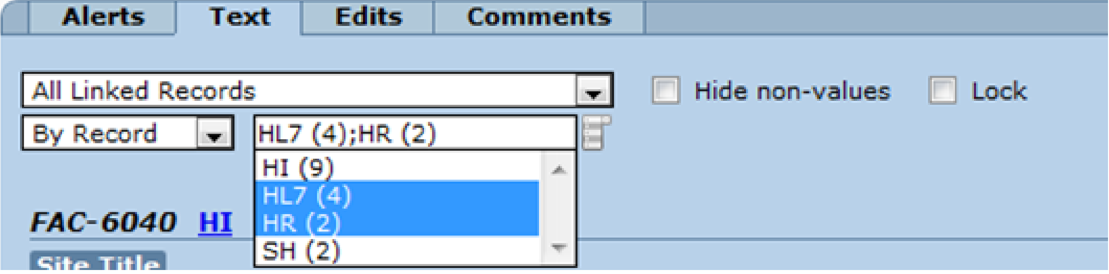


- SEER Course 1 – if selected, first course treatment text for the CTC will be displayed.
- Other Views
    - Incoming Records - An option to view text from incoming records will be included if you are viewing the patient set in a Consolidate task. (Not shown above.)
    - All Linked Records – View text stored in the record data fields of all records. In this example, this would include data related to the CTC for C421 and data for C674.
    - Records Linked to CTC – View the text stored in the data fields of records linked to CTC 01; or text stored in the fields of records linked to CTC 02.
- Linked Records – Each record is listed. The list shows the two character abbreviation for record type, the CTC to which it is linked, record ID, site, and facility.

If you are viewing text from records, there will be additional options. You can control the way in which the text data are listed. You can display them in sets of fields for each Record or Facility; or you can display them in sets of values for each field (e.g., all values of Site Title shown together).



You may select by record type. This option is available when you are viewing text from records. The patient set below has text from Health Index (HI), HL7, Health Record (HR), and Short Health Records (SH). Select one or more values. Use the Delete key to remove an entry from the list.

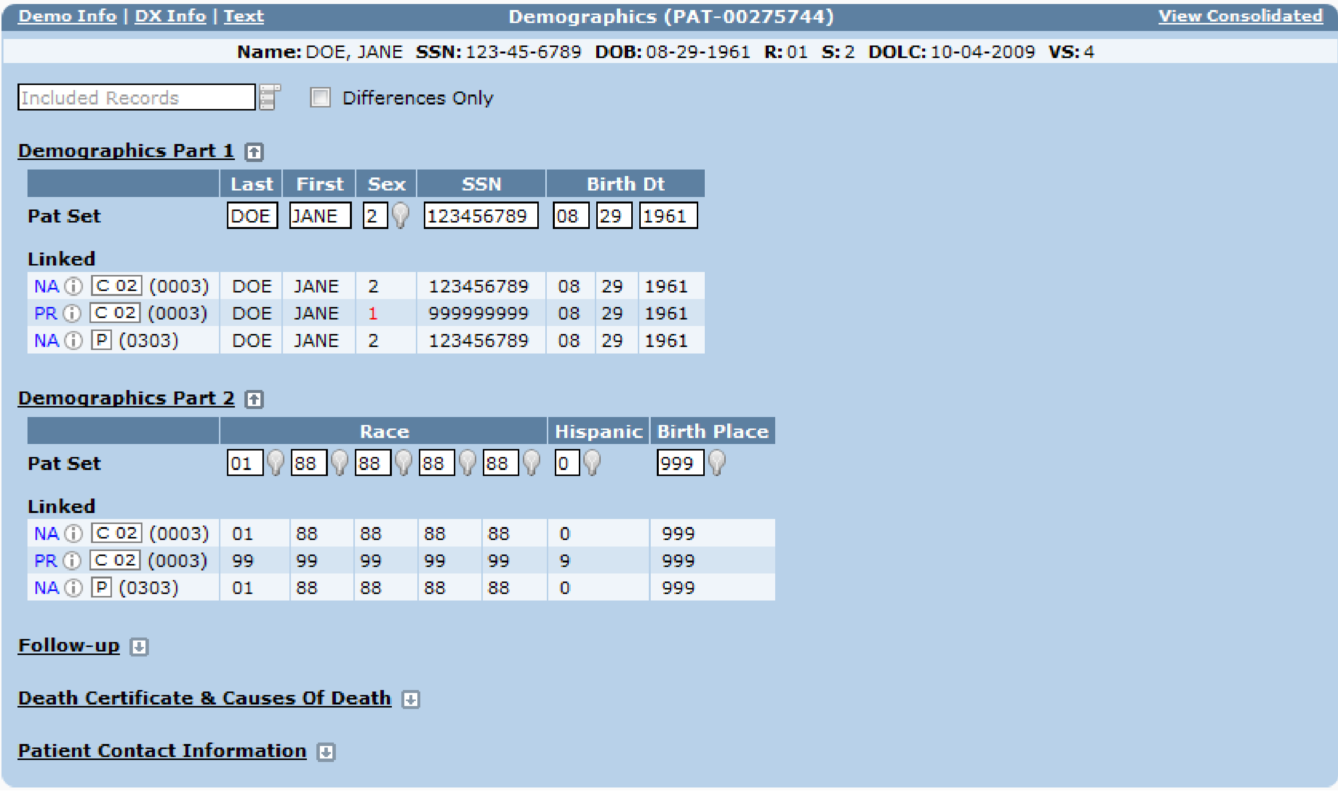


Comparing Consolidated Data to Source Data

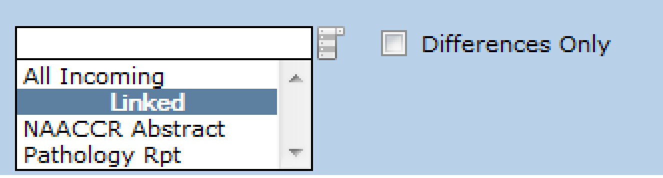
A link in the upper right of the main data panel allows you to toggle the current page from one view to another. You can View Source Data or View Consolidated Data. The Source Data View enables you to compare data fields on records with the fields in the consolidated patient set, and it provides a convenient method to copy values into the appropriate patient set fields.

The Source Data Viewer is available on pages that contain data consolidated from multiple records. Therefore, it can be used on the Demographics, CTC, and Staging pages. The Summary TX page contains data summarized from other pages within the CTC, it is not consolidated directly from the records. The Course Page allows you to compare TX, TXr, and Summary TX values.

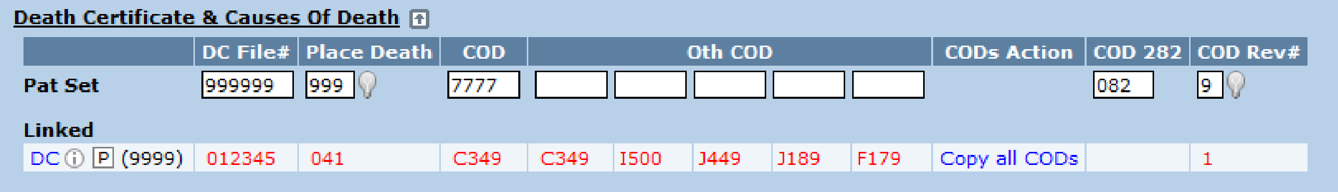
This screen shot shows the Demographics page of a patient set in the View Source Data mode. When consolidating data, work through each section of the page. Click the arrow to collapse a section when you complete your review of that section. The value of a record field will be shown in red if it differs from the patient set value. If you want to update the Patient Set field, you can modify the field directly or click one of the record values to copy it into the patient set field.



The drop-down menu allows you to multi-select by record type. In a Consolidate task, you may want to restrict the comparison to All Incoming records. Check **Differences Only** to exclude records with the same values as the patient set. This exclusion is applied independently for each table in the Source Data view (if race were the only differences between a record and the patient set, that record would be excluded from Demographics Part 1, but shown in Demographics Part 2).



There are special actions for certain types of data. For example, you can copy all values for causes of death, site-specific factors, and other fields that occur in sets. When comparing text, you can append text to the patient set field or copy the text to over-write the patient set field.



Course Page to Review Treatment Data

The Course Page shows the summarized data that the polishers set for each treatment modality. If the polisher identified missing or conflicting data, the review flag associated with the treatment modality will be set to 0 (Needs Reviewed) and an error will be generated. You can compare all TX and TXr data in the Course Page.

To modify fields, click the TX or TXr column header to open a treatment page. If changes are made in the underlying treatment data, the polishers will update the summarized data. You may over-ride the polisher by manually setting values on the Summary TX page. You must set the review flags to prevent the polisher from resetting the values based on the polisher algorithms.

If you wish to delete a TX page, click the delete link. The link appears at the bottom of each section. In the example below, you can see the delete links in the Surgery section. However, clicking a delete link will delete the full TX page. The surgery, radiation, and systemic data for that treatment procedure will be deleted. In some registries, the data are permanently removed when a treatment procedure is deleted. In other registries, the page is marked as deleted and the data are excluded from the summarization polisher.

Demo Info | DX Info | Text SEER Course 1 (PAT-10887667)

Name: SSN: DOB: R: 01 S: 2 DOLC: : VS: 1 FUP: 16
Site: C504 Laterality: 2 Hist: 8201 Behav: 2 Grade: 2 Seq: 00 DX Date: 04-30-2008 Rpt Src: 1 SEER: Yes

Surgery Surg Rev 1

SEER Course 1	Summary TX	TX 1	TXr 1
Record		HR	HR
Facility		0086	0086~0086
Rs No Surg	0	0	0
Surg Dt	04-30-2008	05-28-2008	04-30-2008
1st Recon			
Surg 03+	23	23	22
Scope 03+	0	0	0
Oth 03+	0	0	0
Surg 98-02			
Scope 98-02			
Oth 98-02			
Surg 73-97			
Approach			
App 2010			
Margin	0	0	0
LN Exm 98-02			
Scope Dt	--	00-00-0000	00-00-0000
Mst Def Surg Dt	--	05-28-2008	04-30-2008
Oth Dt	--	00-00-0000	00-00-0000
Srg Disch Dt	--	00-00-0000	
		delete	delete

Radiation Radtn Rev

Systemic Systemic Rev

Comparing Abstract Records

The Patient Set Editor includes a tool to compare one abstract record to another. You may use this to identify duplicate records. To compare records, open a linked abstract record in the patient set editor. Click the **Compare Records** at the top right of the main data panel. You may use this to compare a Health Record to other Health Records; or to compare NAACCR Abstract, NAACCR Modified, and NAACCR Casefinding records to each other. In the example below, a NAACCR Modified record linked at the patient level is compared to all candidate records in the patient set. As determined by registry algorithms, a record will not be considered as a candidate if it does not match the focus record on a standard set of fields such as facility, site, histology, or laterality.

Demo Info | DX Info | Text   **Demographics (NAACCR Modified REC-3005182076)**   View Record

Name: **SSN:** **DOB:** **R:** 01 **S:** 2 **DOLC:** 06-01-2010 **VS:** 1
Site: C508 **Laterality:** 1 **Hist:** 8500 **Behav:** 3 **Grade:** 3 **Seq:** **Date:** **Rpt Src:** 1

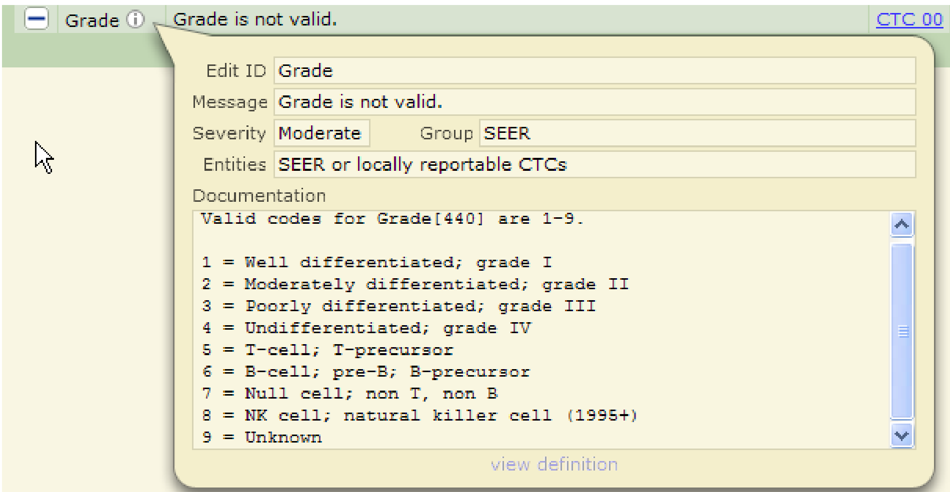
☑ Differences Only

	NM P (0049)	NA C 02 (0049)
Case Expt Dt	**02-07-2011**	08-18-2010
DOLC Month	**06**	12
Case Cplt Yr	**2011**	2010
Vendor Name	**VERS2.10**	VERS2.00
FIN Coding Sys	**2**	1
Record Type	**M**	A
Case Cplt Day	**04**	25
DOLC Year	**2010**	2009
Last Changed Dt	**01-04-2011**	05-25-2010
DOLC Day	**01**	02
Case Cplt Mth	**01**	05

Viewing the Logic of Integrated Edits

Documentation for edits in SEER*DMS is provided on the Edits help page. If you have the *system_administration* permission, you can also use the Edits Manager to review edits. In the patient set or record editor, you can view documentation for any failing edit.

On the edits tab, click the information icon ⓘ next to the Edit ID. SEER*DMS will display any documentation available for the edit. To view the source code, click "view definition". Documentation is available for all SEER edits and many SEER Extended edits. Documentation for registry-specific edits will be displayed, if available.



Polishers

A polisher is a function within SEER*DMS that imputes data values based on values in other fields (changes to these fields "trigger" the polisher). A polisher executes when the value of a trigger field changes. All changes made by polishers are listed in the Audit Log. The fields that trigger the polisher and the polisher's algorithm are documented on the Polishers help page.

The patient set menu allows you to **Force Polish**, that is, run all polishers despite the fact that the fields were not changed. This feature should be used with caution. All polishers will execute and, therefore, there may be unexpected changes in fields unrelated to your editing task. If you use Force Polish, you must carefully review the list of changes displayed when you save the Patient Set. If an undesirable change was made to the data, you should either correct the data manually or reverse the changes before saving (see the *Undo Changes* section of this chapter).

Resolving Edit Errors

Requires system permission: *pat_edit*; other permissions that may be necessary to resolve all edit errors include: *pat_edit_overrides, pat_end_task*

Edits are executed every time you move to a new page in the editor and when you click the **Save** button. To check modified fields for errors without leaving the current page, click **Validate** or press **Ctrl+Alt+V**. SEER*DMS will re-run the automated patient set edits and highlight any errors. If a modified field does not trigger any errors, it will be highlighted in yellow to show that it has been changed (color codes used in the editor are described in see *Chapter 7: Edit Errors*).

Review each error prior to making changes to a data field. To evaluate and correct the problem, you must determine if a single field is causing the error or if an inter-field edit has identified a conflict between multiple fields.

To review and correct edit errors in a patient set:

1. Open the patient set's worklist task or open the patient set for ad hoc editing.
2. If you opened a Resolve Patient Set Errors task, the Edits tab will be displayed. Otherwise, you will need to open the Edits tab in the panel on the right side of the screen. If you are not using a widescreen monitor then you may need to scroll to see the right panel.
3. The following symbols are displayed next to each error in the **S (Severity)** column:

   Critical – exclamation point is used to alert you to critical errors

   High – directional symbols indicate the relative severity level of the other levels, the up arrow is used for high

   Moderate – flat indicates a moderate severity level

   Low – a down arrow indicates a low severity level

   Note: In SEER*DMS, if you hold your mouse over any symbol its meaning will be displayed.
4. The following information is listed for each error:
   a. **Edit ID** – Edit name or identifier.
   b. **Message** – A brief description of the edit.
   c. The **Page** column provides a link to data pages containing the fields causing the error.
   d. To view additional information about the edit, click the Information Icon next to the ID. The information popup is described in the *View Edit Information* section of this chapter.

5. Click a link in the **Page** column to find and edit the fields. The fields validated by an edit may be shown on multiple pages. For example, links to the CTC and Staging pages will be shown for edits that validate staging fields based on year of diagnosis.
6. A data field is highlighted in a shade of red if it is associated with an edit that has been triggered. Hold your mouse over the field's value to view a listing of the edit errors associated with the field.
7. If you are able to resolve the error, modify the appropriate fields.
   a. The color of an edited field will change when you move to another field (see *Chapter 7: Edit Errors* for a description of the color codes used in the editor).
   b. Click **Validate** to run the edits and to determine if your changes resolved the edit.
8. There are several edit errors that can be overridden using override fields or review flags.
   a. SEER, NAACCR, and Registry overrides are implemented as data fields displayed in the **Override** section of the CTC page. Click the field label for field documentation and registry-defined instructions. If you hover your cursor over the label of a SEER or NAACCR override, the NAACCR fieldname for the flag is listed. If the field overrides SEER edits, the edit IDs will also be shown.
   b. **Collaborative Stage Overrides** are NAACCR data items shown on the Staging page.
   c. The **Reviewed** field on the Demographics page can be used to override Registry and SEER Extended edit errors that are warnings. This flag overrides warnings related to fields on the Demographics page.
   d. Registry and SEER Extended edit errors of CTC data that are warnings can be overridden by setting the **Reviewed** field on the CTC page to *Yes*.
   e. There are three treatment review flags on the summary treatment data page. Each is associated with a set of data fields; for example, the **Radiation Reviewed** field is associated with the radiation fields in the summarized treatment data. If the values of the associated data fields trigger the need for review: an edit error is generated; an R is displayed next to the **Summary TX** link in the navigation box; and review is displayed next to the data fields on the page. You must review those fields to ensure that the summary values are correct. To view treatment data fields from all treatment pages, click the multi-page icon that is displayed next to each review field. It is recommended that you change data values on the individual TX pages when possible. However, if you need to over-ride the summary values calculated by SEER*DMS, enter values into the data fields on the Summary TX data page and set the flag to *Reviewed*.
9. If you encounter a problem that you cannot resolve, follow the policies defined by your registry. You may be instructed to assign the current task to another user, create a Review Task, or submit a request for follow-back information.

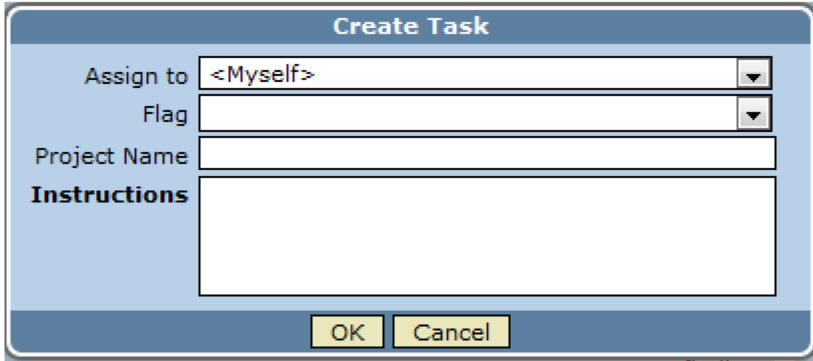
Creating and Completing Review Tasks

A Review Task is a manual worklist task created by one user for another. For example, you could create a review task when you need a manager or lead editor to review an unusual case.

To create a Review Task:

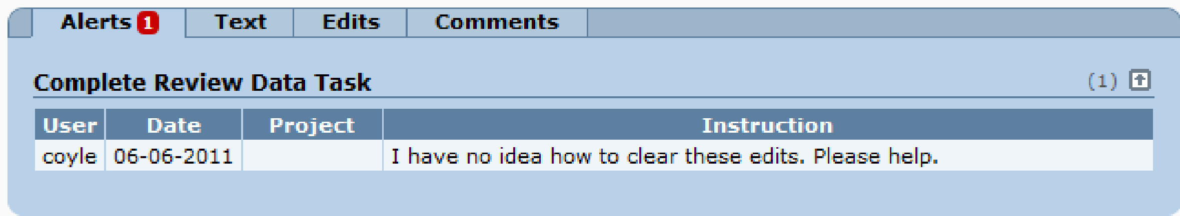
1. Select **Create a Review Task** from the patient set menu.
2. Select a user in the **Assign To** drop-down list.
3. You may assign one worklist **Flag** to the task.

4. Enter a **Project Name**, if appropriate.
5. Enter **Instructions**.

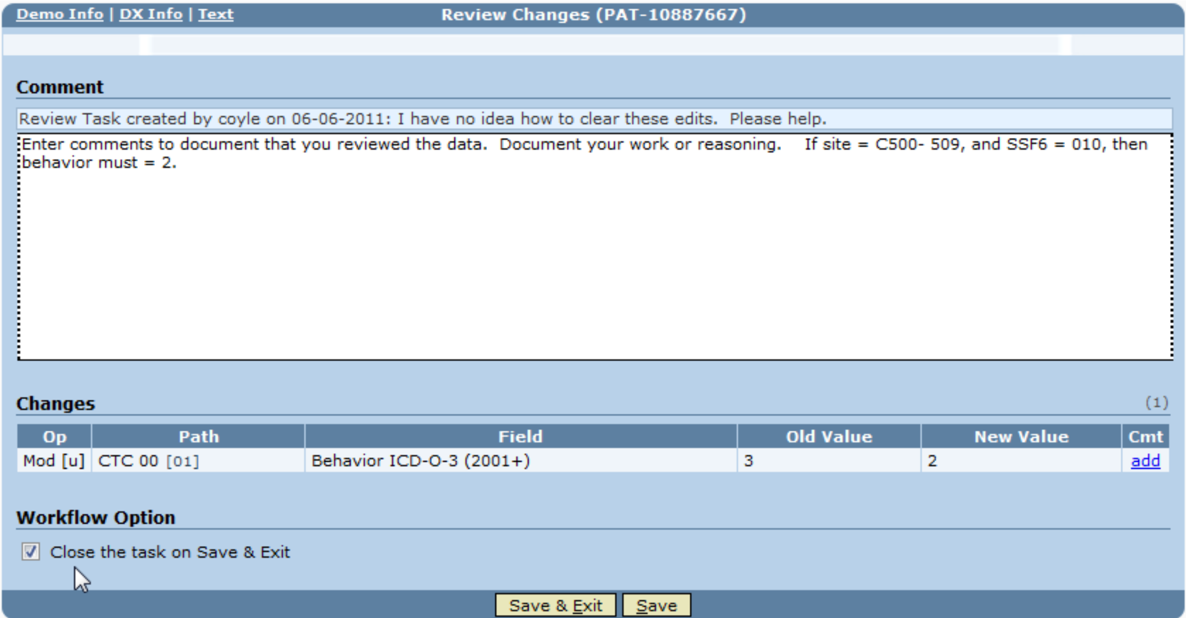


To complete a Review Task:

1. Review the instructions provided on the Alerts tab.



2. Review the data and make any necessary changes.
3. Click **Save** to save your changes and exit the task.
4. Enter comments stating that you reviewed the data and provide any information that you think may be useful. Your notes and the original instructions for the task will be permanently recorded in the patient set audit log.
5. If you have completed the review, click **Close the task on Save & Exit**. If you wish to exit without closing the task, do not check this box. The task will remain in your worklist.



Linking and Unlinking Records

Requires system permission: *pat_edit*

If you are consolidating data from an unlinked record that is new to this patient set, please follow all steps described in *Chapter 12: Consolidating Data*. Use the instructions below to make corrections when a saved patient set includes a record that was linked inappropriately.

To modify a record's link or to unlink a record completely:

1. If a record is linked inappropriately, review the relevant patient set and/or CTC data fields to determine whether you must also modify some data fields manually. Use the Audit Log as a reference. You may also want to print the patient set prior to changing the links.
2. After completing your review, either use the record's menu or the DX Info tool to modify the record's link. The following instructions involve the use of the record's menu.
   a. Open the record in the editor. The record will be displayed in read only mode.
   b. Click the arrow to open the record menu.
      i. To completely disassociate the record from this patient set, select **Unlink**. The record will be sent into the workflow at the point of matching. It will follow the workflow route designated for a record of its type.
      ii. To link the record to an existing CTC, select the appropriate **CTC** from the **Move To** sub-menu (sequence number is displayed for each CTC listed in the menu).
      iii. If you wish to use the record to create a new CTC, select **New CTC** from the **Move To** sub-menu. This menu item will not be available if the system is unable to build a CTC from a record of its type. If you are creating a CTC from a non-abstract record, you should perform the appropriate Casefinding and Death Clearance processes prior to creating a new CTC from the record.
      iv. To link the record at the patient set level, select **Patient** from the **Move To** sub-menu. If the incoming record is not an abstract record and is for a new CTC, you may wish to link the record at the patient level and defer creating the new CTC until an abstract is received. Later, when the abstract record is received and used to build the new CTC, you can link this record to that CTC. This will minimize the level of effort required to consolidate the data for the new CTC.
3. Once the record's link is moved, the new linkage will be indicated next to the record's type in the navigation box:
   a. If the record is linked to a CTC, "C *NN*" will be displayed. This indicates that the record is now linked to the CTC that has a central sequence number equal to *NN*. SEER*DMS attempts to set the sequence number appropriately, based on the central sequence number coded in the record and the dates of diagnosis on CTCs in the patient set. If you have multiple CTCs with the same sequence number, you should review the CTCs and manually over-ride the sequence number polisher (refer to the help text for the Increase CTC Sequence Number polisher on the Polishers help page).
   b. If the record is linked at the patient level, P will be displayed.
   c. If the record is unlinked, an X will be displayed.
4. If you created a new CTC in step 2, determine whether any records linked at the patient level need to be linked to the new CTC. In the patient set navigation box, the labels for newly created CTCs are shown in bold type.
5. Perform a thorough review of the patient set data, including the data pages of all CTCs that were affected by the change. You must determine whether any admissions or treatments

need to be manually deleted from the original CTC. If you have unlinked a record completely, you should verify that the patient's follow-up information has been modified appropriately.

6. Save your changes by follow the instructions in the *Saving Changes to a Patient Set* section of this chapter.

Identifying and Removing Duplicate Patient Sets

Requires system permission: *pat_edit, pat_delete*, and *reports*

Execute RPT-066A to generate a listing of patient sets which are potential duplicates (see *Chapter 24: System Reports and Extracts* for instructions to execute and open SEER*DMS reports). You may use the Data Search or Patient Lookup to search for patient sets listed on the report. Determine whether the patient sets are true duplicates. **Tip:** Try using CSV format for the report if you would like to copy-and-paste Patient Set IDs into the Data Search.

If the report's matching algorithm falsely identified a patient set as a duplicate, use the Patient Matches feature of the patient set editor to indicate that it is a false positive match. If two patient sets exist for the same patient, follow the steps to consolidate all of the patient's data into one of the patient sets and delete the other.

To indicate that two patient sets identified as "duplicates" are not true duplicates:

1. Open one of the Patient Sets.
2. Click the arrow to open the patient set menu.
3. Select **Patient Matches** from the menu. If you have reviewed both Patient Sets and have determined that they are not duplicates, set **Action** to *Not a Match*. The two patient sets will no longer be identified as a pair of potential duplicates when you run RPT-066A.
4. Save your changes by follow the instructions in the *Saving Changes to a Patient Set* section of this chapter.

To combine data from two patient sets and remove one of the duplicates:

1. Review all data and compare the data pages in the two patient sets. To view two patient sets at one time, use the browser's controls to open a second window or tab. You may also wish to print the patient sets before consolidating the data.
2. Select a patient set to retain. Ultimately, you will want to retain the patient set that has the most and/or best data. In making this decision, you should consider the following:
   a. The length of time that each patient set has existed in the system. If one of the patient sets was created recently, it may have been created from one or two records. If a patient set was created some time ago, it may be the consolidation of data from a large number of records. The sequence of the patient set IDs and the auto-generated messages stored in the patient set's Comments are useful in determining the history of the patient set. Comments may be viewed in the right panel of the patient set editor.
   b. The number of records linked to each patient set. In patient sets created within SEER*DMS, this provides a rough measure of the amount of data consolidated into the patient set. However, source records may not be available for patient sets that were migrated to SEER*DMS from the registry's previous data management system.
   c. Compare the audit logs of both patient sets. A patient set's audit log documents all changes made to patient set data fields, including changes made by registry staff and those made in automated processes. The number of changes made manually by registry staff may impact your selection of the "best" patient set to retain. Print the audit logs for future reference.

3. The next step involves unlinking all source records from the unwanted patient set. Ultimately, you will be linking these records to the other patient set. To unlink all source records from the unwanted patient set:
   a. Verify that the unwanted patient set is displayed in the editor.
   b. For each record listed in the Linked record section of the navigation box:
      i. Click the Record Type label to open the record in the editor.
      ii. Record each ID on paper or in a text editor. You will need this information to verify that all records are ultimately consolidated into the other patient set.
      iii. Click the arrow open the record menu.
      iv. Click **Unlink**.
4. To prevent additional data from being consolidated into the unwanted patient set, mark the patient set as deleted:
   a. To open the patient set in the editor, click **Demographics** in the patient set's section of the navigation box.
   b. Click the arrow to open the patient set menu.
   c. Click **Delete Patient Set**. The patient set and all of its CTCs will be marked as deleted. This is a reversible delete. However, the patient set and each CTC would need to be undeleted individually.
5. Save your changes to this patient set and exit the editor (see the *Saving Changes to a Patient Set* section of this chapter).
6. Each record will be moved into the workflow at the point of a matching task (the exact matching task will vary by record type). In order to consolidate the records into the retained patient set, search the worklist for manual tasks initiated by these records. (Note: It may take a few minutes for the records to complete the auto-match task.) If there are no worklist tasks related to the records that you unlinked, use the Patient Lookup to search for the retained patient set. The records may have been auto-consolidated by SEER*DMS.
7. Open and complete one of the tasks:
   a. If one or more Match-Consolidate tasks were created, open and complete any one of those tasks. When selecting a Match-Consolidate task, it does not matter which task you select. All of the patient's records should be available for consolidation. After completing the match, SEER*DMS will auto-close the other tasks. Instructions for completing the Match-Consolidate task are provided in *Chapter 12: Consolidating Data*.
   b. If there are no Match-Consolidate tasks and there is a Consolidate FUP task, open and complete that task.
8. Verify that each record that was unlinked from the deleted patient set has been linked to the retained patient set, if appropriate. Refer to the list of Record IDs created in step 3.
9. Once you have linked and consolidated data from all available source records, you must incorporate any data from the deleted patient set that was not loaded from a record. This includes data that was migrated and data that was entered manually. Even though the patient set was deleted, you may open it in the patient set editor to view or print it. If you wish to view both patient sets, use the browser's controls to open two windows or tabs.

Printing Record or Patient Set Data

To print the patient set data:

1. Click the arrow to open the patient set menu. Select **Print**.
2. Or you may press **Ctrl+Alt+P** while viewing any of the Patient Set data pages.

To print data fields on an incoming or linked record:

1. Click the record's link (**Record Type**) in the navigation box.
2. Press **Ctrl+Alt+P**; or open the record menu and Select **Print**.

The data will be displayed in a preview window. Checkboxes will be displayed next to each section and all sections will be checked by default. Uncheck the box next to each section that you wish to exclude from the printed copy.

Undoing Changes

Requires system permission: *pat_edit*

You may use the Undo Changes menu item (or press **Ctrl+Alt+U**) to undo all *unsaved* changes by reloading the patient set from the database. Any changes that you had saved will not be undone. However, all changes are documented in the Audit Log. If you need to reverse a saved change, manually edit the field and enter the original value as noted in the Audit Log.

Saving Changes to a Patient Set

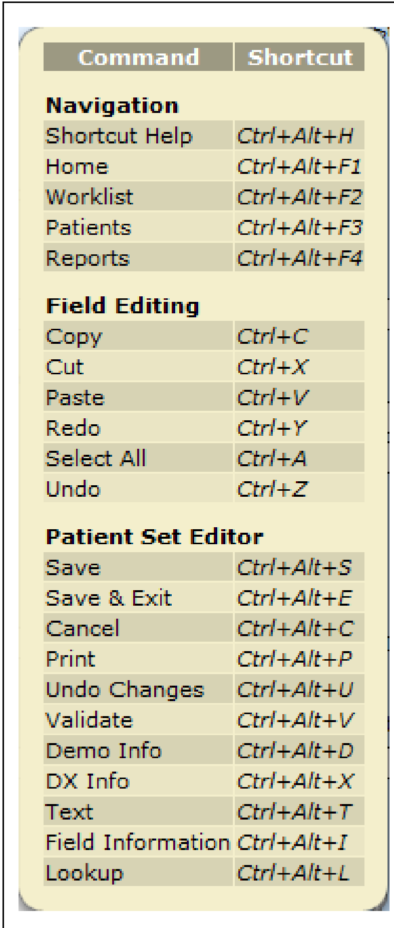
Requires system permission: *pat_edit*

Use the steps below to save changes to a patient set that you are editing in an ad hoc editing session. If you are editing data in the context of a worklist task, you must consider issues related to the flow of data in the worklist. Refer to Chapter 12 if you are saving data in a Consolidate task; Chapter 13 for Visual Editing tasks; or Chapter 14 if saving a Resolve Patient Set Errors task.

To save changes to the patient set:

1. Click **Save** or press **Ctrl+Alt+S**.
2. Enter comments to document your changes. Enter general comments in the box at the top of the Review Changes page. Comment fields next to the revised data elements can be used to add specificity. The general and data field comments will be stored and displayed in the patient set's audit log
3. Save your changes:
    a. If you would like to continue editing after saving, click the **Save** button at the bottom of the Review Changes page (or press **Ctrl+Alt+S**).
    b. If you would like to exit the editor, click **Save & Exit** or press **Ctrl+Alt+E**. The keyboard shortcut for Save & Exit will only work from the Review Changes page.

Keyboard Shortcuts



Command	Shortcut
Navigation	
Shortcut Help	Ctrl+Alt+H
Home	Ctrl+Alt+F1
Worklist	Ctrl+Alt+F2
Patients	Ctrl+Alt+F3
Reports	Ctrl+Alt+F4
Field Editing	
Copy	Ctrl+C
Cut	Ctrl+X
Paste	Ctrl+V
Redo	Ctrl+Y
Select All	Ctrl+A
Undo	Ctrl+Z
Patient Set Editor	
Save	Ctrl+Alt+S
Save & Exit	Ctrl+Alt+E
Cancel	Ctrl+Alt+C
Print	Ctrl+Alt+P
Undo Changes	Ctrl+Alt+U
Validate	Ctrl+Alt+V
Demo Info	Ctrl+Alt+D
DX Info	Ctrl+Alt+X
Text	Ctrl+Alt+T
Field Information	Ctrl+Alt+I
Lookup	Ctrl+Alt+L

SEER*DMS supports the keyboard alternatives for many menu items and buttons. Select **Help > Shortcuts** or press **Ctrl+Alt+H** to view the list of shortcuts available for the current page.

Requesting Follow-back Information

Requires system permission: *pat_edit* and *fb_initiate*

In SEER*DMS, a request for follow-back information is referred to as a "follow-back need". If you determine that additional information must be obtained from the reporting facility, you should submit a follow-back need. It will be added to a bundle of requests to the same facility.

Periodically, a manager will review, edit, and send the follow-back requests to a physician or other representative at a facility. Subsequently, the manager will process the facility's responses.

You will receive an e-mail when a response to your request is processed and the follow-back need is closed. You or another staff member may update data fields based on the new information. As determined by registry policy, one staff member may be responsible for processing all follow-back responses, or the information may be given directly to the staff members who entered the needs.

If you suspended a task pending the receipt of follow-back information, you must re-open and complete the task to allow the data to move forward in the workflow. You must either make changes to data fields based on the new information or verify that the appropriate changes were made. If you completed the task but need to update the patient set with the new information, use the Patient Lookup to search for the patient set. Instructions for submitting follow-back requests and processing the responses are provided in *Chapter 22: Follow-back*.