COLLEGE of AMERICAN PATHOLOGISTS

Laboratory Quality Solutions

CAP eCC XML Comparator User Guide

November 2017
Version 1.0

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Introduction

The rapid identification of eCC version changes is important for many reasons, such as: deciding whether to implement the latest eCC version, determining how to query eCC data across versions, and estimating the work involved in updating to the latest eCC version.

The eCC XML Comparator is a browser-based tool that allows users to compare any 2 versions of an eCC XML template. The tool reads eCC XML files from the CAP eCC XML repository or from your locally-stored eCC XML files. The tool's various file comparison visualizations and reports will enable users to identify all eCC content and metadata changes over time.

This user manual provides instructions for accessing the eCC XML Comparator from the CAP Website. It also provides an introduction to using the eCC XML Comparator, including instructions for viewing and interpreting File Comparison reports in the browser.

Comments and Contact Information
Please send comments or feedback to the CAP SDT:

College of American Pathologists
Email: CAPeCC@cap.org
Phone: 847-832-7700

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System Compatibility

The eCC XML Comparator web tool is compliant with the operating systems and browsers listed below.

Windows 7, 8, 8.1 & 10 ✓ Compatible; ✗ Not Recommended Websites and Applications	Microsoft Internet Explorer (10, 11)	Microsoft Edge	Mozilla Firefox	Google Chrome	Notes
eCC XML Comparator Web Tool	✓	✗	✓	✓	▪ **HOW TO ADJUST BROWSER SETTINGS** ▪ Enable pop-ups ▪ Enterprise mode must be turned off (for IE11 only)

Mac OSX ✓ Compatible; ✗ Not Recommended Websites and Applications	Mac Safari (7.1, 8, 9)		Mozilla Firefox	Google Chrome	Notes
eCC XML Comparator Web Tool	✓		✓	✓	▪ **HOW TO ADJUST BROWSER SETTINGS** ▪ Enable pop-ups ▪ Enterprise mode must be turned off (for IE11 only)

Login Instructions

There are two approaches to access and navigate the "CAP eCC XML Comparator" web tool.

Approach 1 – Via the CAP Website

1. Click the following CAP website link http://www.cap.org/capeCC
2. Then click "**Access eCC XML COMPARATOR**" on the right site as indicated by the red arrow. This will take you to the **CAP eCC XML Comparator website** login page.
3. Use your login credentials (Same as download credentials)
   a. **User ID:** Your specified email address (same as download Username)
   b. **Password:** Your specified password (same as download password)

Note: Your Username & Password credentials are the same as your eCC download credentials.

CAP eCC

The College of American Pathologists (CAP) eCC (electronic Cancer Checklists) enables pathologists to use the CAP CANCER PROTOCOLS directly within their laboratory information system (LIS) workflow and to ensure that each report is completed with the necessary required elements. Most anatomic pathology (AP)-LIS vendors offer a CAP eCC synoptic module for reporting on surgical cancer resections and selected biopsies.

AJCC Cancer Staging Manual Update

The AJCC 8TH EDITION STAGING MANUAL will go into effect January 1, 2018. The CAP will release updated Cancer Protocols and electronic Cancer Checklists (eCC) by the end of the second quarter 2017.

CAP eCC Releases

The CAP releases eCC templates on a rolling basis, coordinating as much as possible with the posting of new and revised CANCER PROTOCOLS AND CANCER BIOMARKER REPORTING TEMPLATES. A few weeks prior to each Major or Agile release, email notifications are sent out to all licensed CAP eCC users.

Benefits of the CAP eCC

- Integrates into pathologist AP-LIS workflow
- Supports and aids the pathologist in the diagnostic process
- Standardizes the collection and reporting of cancer patient data
- Facilitates communication between pathologists, clinicians and cancer registrars
- Helps to advance the pathologist role as chief diagnostician and a leader in the patient care process
- Improves and supports information exchange and data interoperability
- Provides automated access to patient data through work with vendors

eCC XML Comparator Tool

The ECC XML COMPARATOR TOOL compares two versions of the eCC XML files from CAP repository or local repository. This web-based tool allows for comparison of two versions of the eCC checklist to view "File Comparison Report".

Licensing of the CAP eCC

The following lists some of the vendors who integrate the CAP eCC into their AP-LIS software products:

- CERNER COPATHPLUS

Licensed CAP eCC Users

Licensed eCC users may download eCC releases or access the eCC XML Comparator tool.

| DOWNLOAD ECC RELEASES | » |

| ACCESS ECC XML COMPARATOR | » |

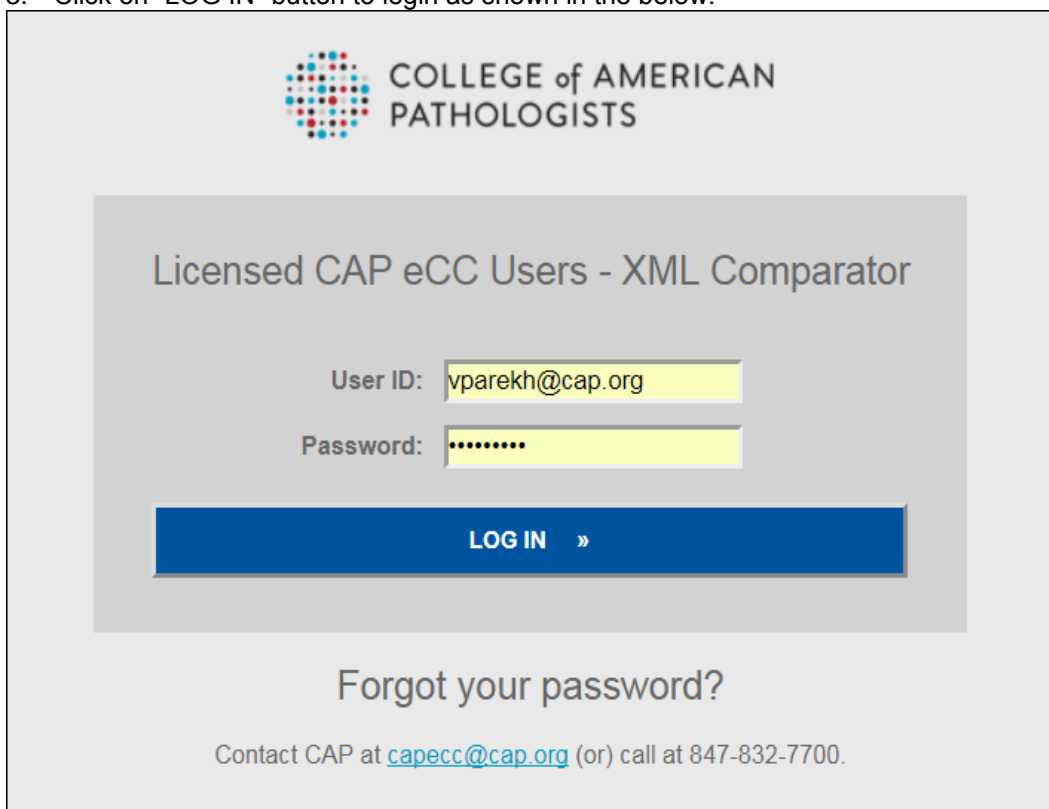### Contact Information

Direct questions, comments on CAP eCC to:

CAP ECC
📞 847-832-7700

Approach 2 – Via Direct Login to the "CAP eCC XML Comparator" Web tool

1. Click the following CAP eCC XML Comparator website link
   https://sdt.cap.org/XMLComparator/login.aspx
2. Enter your credentials (Same as download credentials)
   a. **User ID:** Your specified email address (Same as download Username)
   b. **Password:** Your specified password (Same as download password)

Note: Username & Password credentials are the same as download credentials to simplify eCC user workflow.

3. Click on "LOG IN" button to login as shown in the below.

CAP eCC XML Comparator Home Page

After clicking the "LOG IN" option, authorized users with an eCC license will be directed to the home page.

Home Page Feature

- The User Name & current date information will be displayed in the upper right corner (**green arrow**)
- By clicking the "Logout" option (upper right, **purple arrow**), the user will be taken back to the login page.
- Two tabs are presented on this page, which can be used to view "eCC File Comparison" Report
  - Compare Files on CAP Repository (**blue arrow**). This is the default view which shows list of all the eCC templates.
  - Compare Your Local Files (black arrow)
  This option allows users to choose local eCC template files
- This upper right link (**red arrow**) allows users to view the eCC Release history.
- The search box (**orange arrow**) allows users to filter the eCC templates to provide a shorter list.
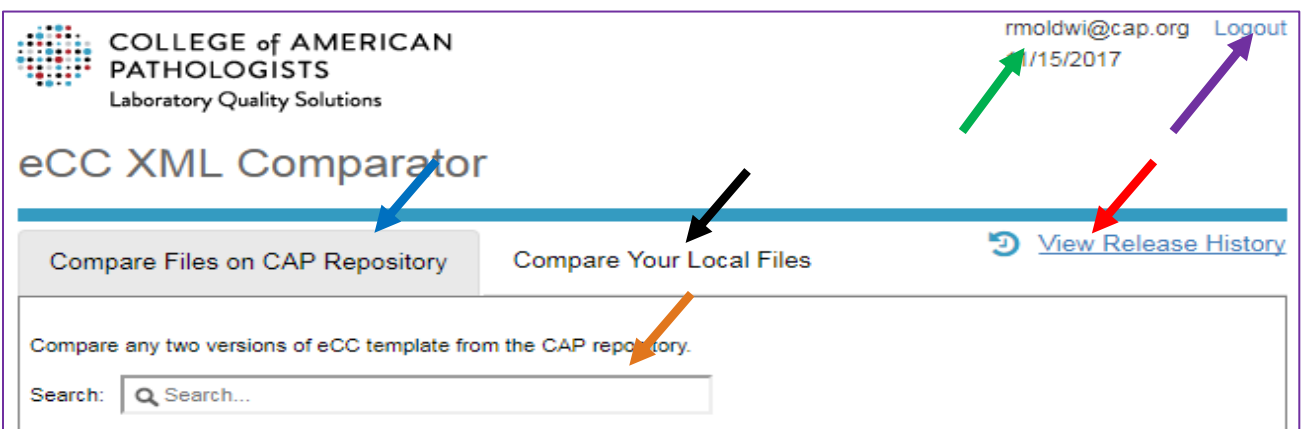
View Release History

The View Release History option is available on the upper right of the Home page.

Clicking this link will allow the user to view the eCC Release history in a scrollable list format. This report includes the eCC Release Name, Date, and Notes columns as shown below.

Viewing the List of eCC Templates and Versions

When a user clicks on the **Compare Files on CAP Repository** tab (**blue arrow**), a list of eCC templates in ascending order will be displayed in a scrollable list view, split into 3 columns (i.e. Template, New Version, and Old Version), and described in the table below and shown in the next figure.

Template	This column will contain Name of the eCC Template Additional sub information is presented on new lines, separated by pipe delimiters:	
	Category	This is a grouper
	Short Name	This is the unique short name not present in the eCC XML file
	Current Version	This is the latest eCC Release version
	Latest Release Date	This is a latest eCC Release date
	HTML link	Link to view HTML form
	XML link	Link to download latest eCC xml file.
New Version	This is a dropdown list showing all of the released versions, so a user can select any specific version.	
Old Version	This is a dropdown that will display available older versions based on the user's New Version selection.	

Note: New version and Old version drop down lists show the eCC Release date. Please note that the eCC Release date may be different from the protocol web posting date.

A user can also search **(orange arrow)** any specific eCC templates based on various search criteria. The search criteria are Category, Short Name, Current Version, and Release Date. When a user enters a search value (e.g., "adrenal" or "2017"), then the corresponding results will be displayed.

The above figure also shows the **HTML** and **XML** links (**black arrow**), described next.

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Viewing eCC HTML for the Current Version

When a user clicks on the **HTML** link, it will open the *latest version* of the eCC HTML form as shown below.

The HTML view includes a TOGGLE OPTIONS menu, as shown below. Users can toggle the display of Metadata, IDs and Deprecated items.

Viewing eCC XML for the Current Version

A user can download the latest version of the eCC XML Template to a local environment by clicking the **XML** link (**black arrow**). The area inside the **blue oval** is used for version comparisons, and will be discussed next

Comparison of Files on the CAP Repository

We now describe how to compare 2 eCC versions. The area of the blue oval (see previous figure) is shown in the image below. The user can select 2 specific versions to compare. A New Version and an Old Version are selected from the dropdown boxes (next figure). When the New Version template is selected, the Old Version list will only display versions that are older than the new version. Once both selections are made, the COMPARE button (black arrow) will be enabled.
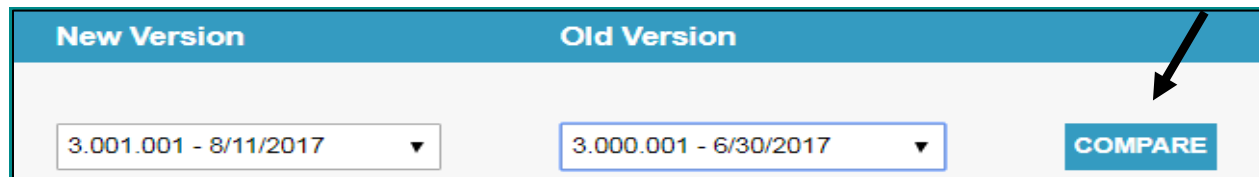
The user can now click the COMPARE button to view an eCC File Comparison Report (shown below). We will describe this report in detail later.

Compare Your Local Files

This tab allows the user to choose 2 versions of an eCC template from their locally stored eCC XML files to view an eCC File Comparison Report. The user can select the files for the new and old versions in any order.

The user clicks the top Choose File button to select a first eCC XML file from local computer environment. Then the user clicks the next Choose File button to select a second eCC XML file from local computer, as shown below.
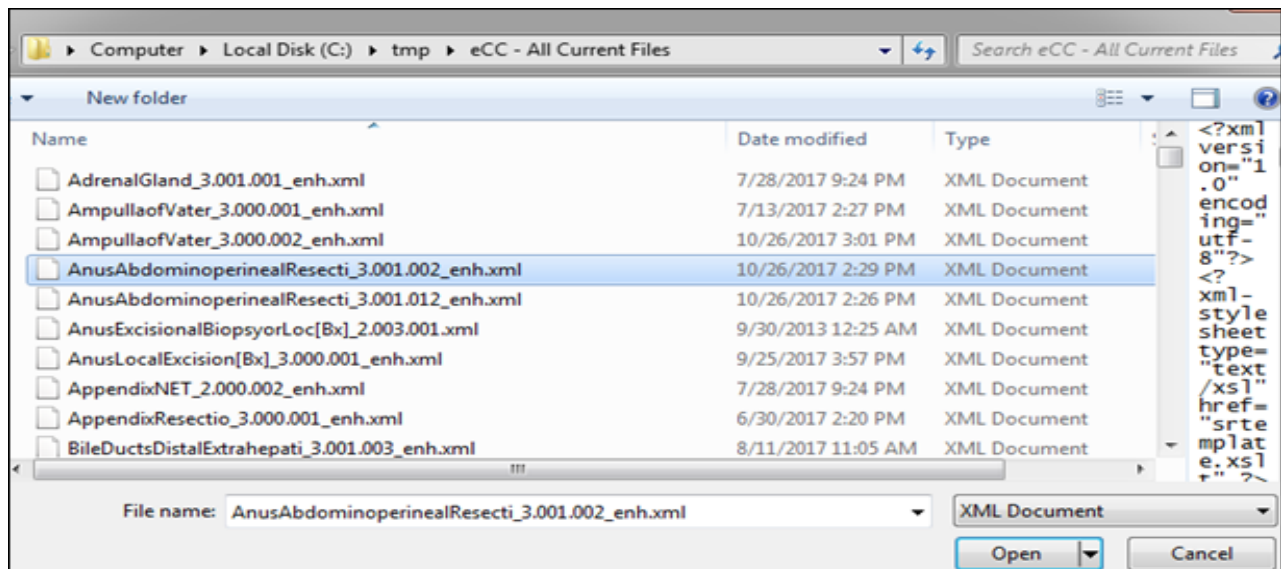
When both files have been selected, the COMPARE button (black arrow) will be enabled as shown below.
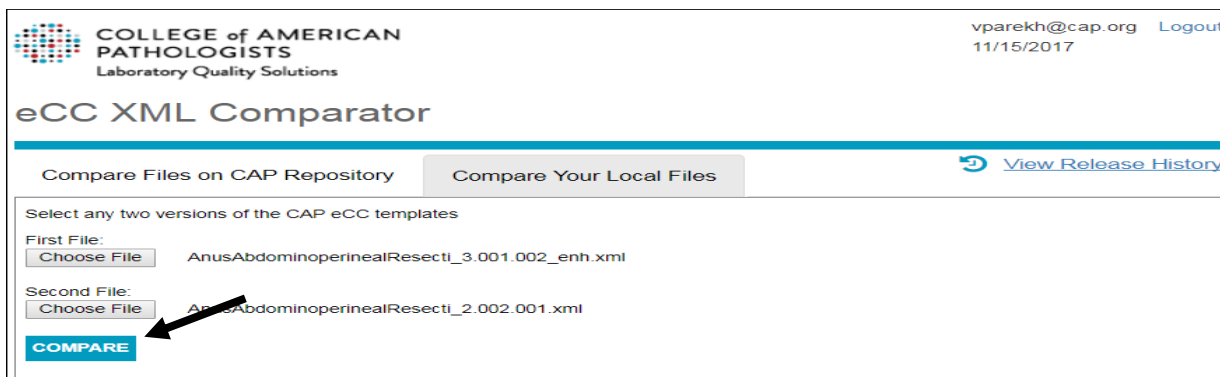
The user can then view an eCC File Comparison Report (next figure) by clicking the COMPARE button:
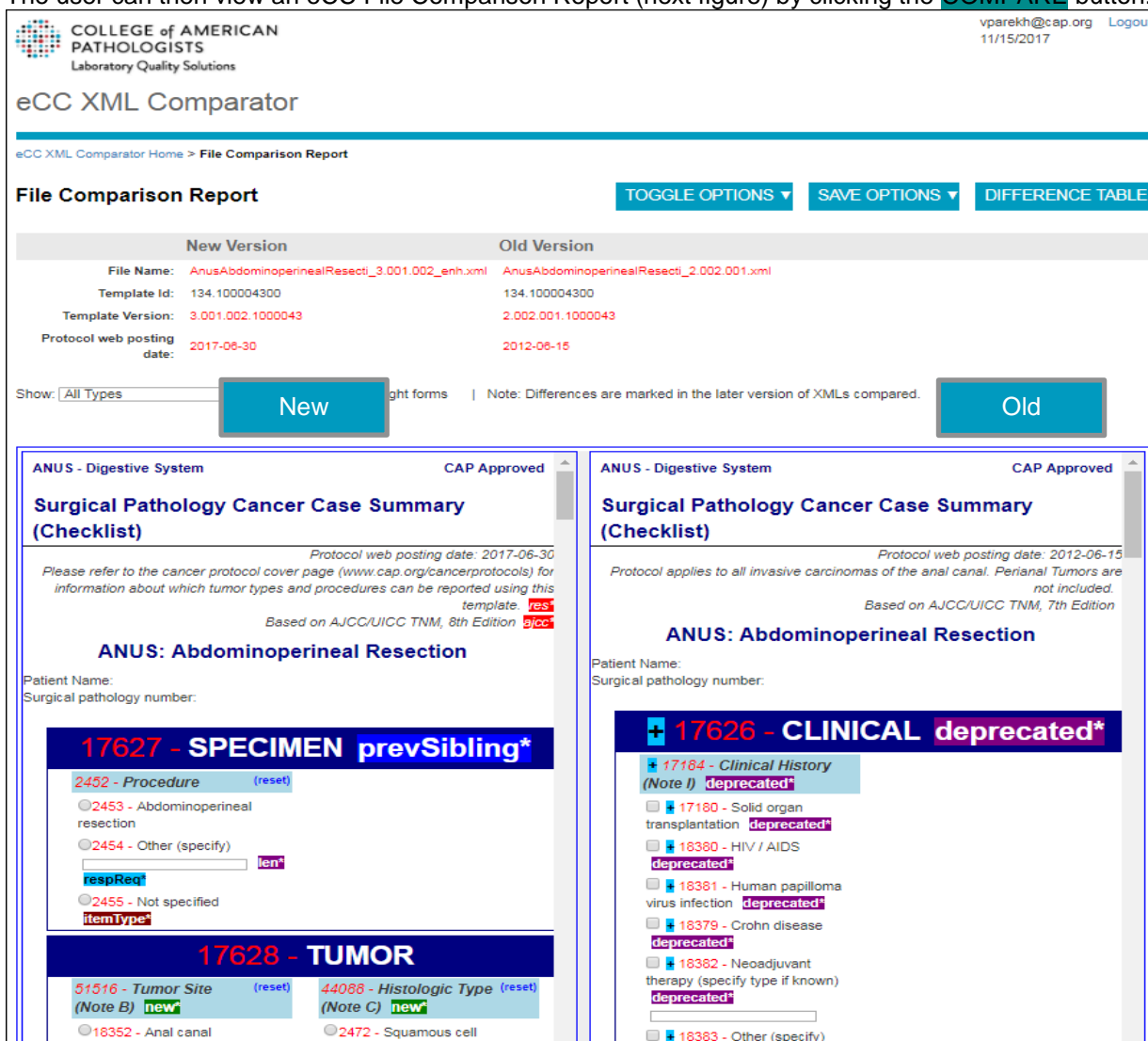
Note- The user can select the New and Old files in any order they wish, however the tool will always display the newer version in the left panel, and the older version in the right panel. Changes will always be displayed inside the left (newer) panel. Deprecated items will always display in the right (older) panel.

File Comparison Reports

As discussed earlier, a user can generate a File Comparison Report using either the **Compare Your Local Files** or the **Compare Files on CAP Repository** tab option. This tool can be used to compare any two eCC files in any combination of enhanced and legacy formats as described below:

New eCC File Format	Old eCC File Format
Enhanced	Enhanced
Enhanced	Legacy
Legacy	Legacy

Note: This tool will be updated to support the recently-introduced eCC SDC format in the near future.

The File Comparison Report contains the basic features listed below. More details are described later. The toggle buttons are shown in the top figure on the next page.

- The File Comparison Report header shows the changes in the header section between the 2 eCC versions being compared.
- The File Comparison report has 2 panels (left for the new version, right for the old version). Changes are flagged in the left panel, and deprecated items are flagged in the right panel. The display of changes and other metadata (aside from the changed metadata) can be toggled on or off as needed with the TOGGLE OPTIONS function.
- Three menu options are available in the upper right corner: TOGGLE OPTIONS, SAVE OPTIONS AND DIFFERENCE TABLE. These will be described later.
- A change filter option (available in the upper left corner, below the header section) can be selected from a dropdown list (labeled "Show")
- Old and new eCC panels can be scrolled together or separately. This is controlled with a checkbox labeled "Sync left and right forms."
- Clicking on an ID in one panel will locate and align the same ID (if it exists) in the other panel.
- A spreadsheet of changes can be generated with "the DIFFERENCE TABLE option.

File Comparison Report Header

The File Comparison Report *Header* section shows (see next figure):
- Menu options available in the upper right corner
  - TOGGLE OPTIONS: Options are Metadata, IDs, Change, Deprecated
  - SAVE OPTIONS: Options are Save HTML Report, Save XMLs
  - DIFFERENCE TABLE: Displays all the changes by comparing previous eCC XML file.
- The 2 eCC files that were compared. Note that the file names and versions are different.
- Template Identifiers (these will be identical, except perhaps for trailing zeros)
- Template Versions (new version, older version) from inside the XML files
- Protocol web posting date (new date, old date)
- The "**Show**" dropdown list allows users to filter the types of changes that are displayed in the left panel.
- A ☑ Sync left and right forms checkbox that allows users to sync the left and right forms.

Toggle Options

This feature allows users to select/deselect various toggling options.

Metadata	This option allows user to show/hide XML metadata. The metadata are shown as icon overlays, and are described in the interpretation table below
IDs	This option allows user to view the eCC template IDs (aka Ckeys) associated with each displayed item
Change	This option allows user to view icons that flag the changes between the two template versions. Change icons always end with an asterisk (*).
Deprecated	This option allows user to show or hide the "(Deprecated Items)" section present at the end of the template.
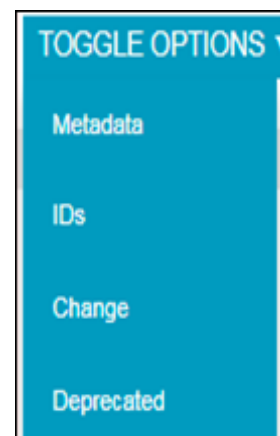
Save Options

This option allows users to download HTML packages using **Save HTML Report** option and download two versions of the specified XML files using **Save Xmls** option.

	Save HTML Report	This option allows users to save the 2-panel HTML Report in the format of a zip package, so they can view the File Comparison Report when offline.
	Save Xmls	This option allows users to save the selected versions of the XML files to their local workspace using the original versioned file names.

Difference Table

When users click on DIFFERENCE TABLE, they can view all the changes between 2 selected eCC templates in a tabular format with the following columns: Difference Type, Item Ckey, Item Text, New Value, Old Value, as shown below.

The user can filter the displayed change icons according to various change types using the **Show** dropdown option (**black arrow**):

The user can download this **Difference Table Report** in 3 formats using the "**Download**" dropdown list as shown below. The formats are XML, Excel and Pipe delimited.

Viewing File Comparison Report Changes as HTML

File Comparison Reports allows users to view flagged changes with colored icons (described at the end of this document). (Metadata icon flags are shown without an asterisk.) The flagged changes displayed on the form can be filtered with the Show dropdown list (**black arrow**).   Change icons are always displayed with an asterisk (*) at the end of the icon text.

Users can align the old and new versions of any specific eCC item, side-by-side in the split screen, by clicking on its ID. (In the case of a newly-added item, user will be shown "Item not found" message.)

Note: The ID is the number shown in red to the left of an eCC item.

Interpretation of Change Icons

The change icons provide detailed information about the various types of changes listed in the eCC XML Comparison Report. The various Change Types and corresponding color codes are described in the Interpretation of Symbols table below. Hovering above each icon will display a tooltip with a short definition, and new/old values as appropriate.

Change in XML Comparator	Icon Display Text	Description
Restriction	res*	Changes to <restrictions> content in <template-header> section
AJCC	ajcc*	Changes to <version display-name="AJCC"> content in <template-header> section
FIGO	figo*	Changes to <version display-name="FIGO"> content in <template-header> section
CS	cs*	Changes to <version display-name="CS"> content in <template-header> section
Template Title	templateTitle*	Changes to <title> content in <template-header> section
Title	title*	Changes to <title> or <text> content
Report Text	rpt*	Changes to @reportText
Invisible Question Text	alt*	Changes to @alt-text
New Item	new*	Flags new items in the left (new) panel
Deprecated Item	deprecated*	All items that were newly-deprecated (i.e., between the old to the new eCC versions) are flagged in the right/old panel, and the same newly-deprecated items are also flagged in the "(Deprecated Items)" sections at the bottom of the left/new template.
Parent Item Changed	Parent**	This flag indicates that the parent item above the current item has a different ID than in the older XML. This label therefore flags items that have changed parent-child position, or if the parent in the older XML was deprecated/replaced or a new parent was added. For answer list items, this flag always means that the parent question was deprecated and replaced. *Note: In cases of a parent question change, child answer items are not flagged with* parent* *because this would result in too much screen clutter.*
Previous Sibling Changed	prevSibling*	This flag indicates that the previous sibling above the current item has a different ID than in the older XML. This flags items if the previous sibling in the older XML was moved or deprecated, or if a new sibling was added before the current item.
Data Type	dt*	Changes to @datatype attributes such as String, Integer, Decimal
Answer Units	un*	Changes to @answer-units
Text After Response	txtAft*	Changes to @textAfterResponse
Item Type	item Type*	Flags changes to item type such as changing Answer to Answer-Fillin
Required Status	req*	Changes to <required> element
Optional	opt*	Any item made optional by adding + in front of the item text will be flagged as "opt*"
Optional to Implement	+	Indicates @mustImplement = "false"; the item is optional to display in the form
Min Cardinality	min*	Changes to @minCard
Max Cardinality	max*	Changes to @maxCard
Length	len*	Changes to <length> content; no longer in use for enhanced XML.
Locked	locked*	Changes to @locked
Omit When Selected	omitWhenSel*	Changes to @omitWhenSelected
Selection Disables Children	sdac*	Changes to @selectionDisablesChildren (SDAC)
Selection Deselects Siblings	sds*	Changes to @selectionDeselectsSiblings (SDS)
Must Implement in Form	ml*	Changes to @mustImplement ;
Response Required	respReq*	Changes to @responseRequired

Note: The change icons are displayed in the left/new panel only. However, deprecated icons are displayed in the right panel also. The "(Deprecated Items)" section may be optionally displayed at the bottom of each panel.