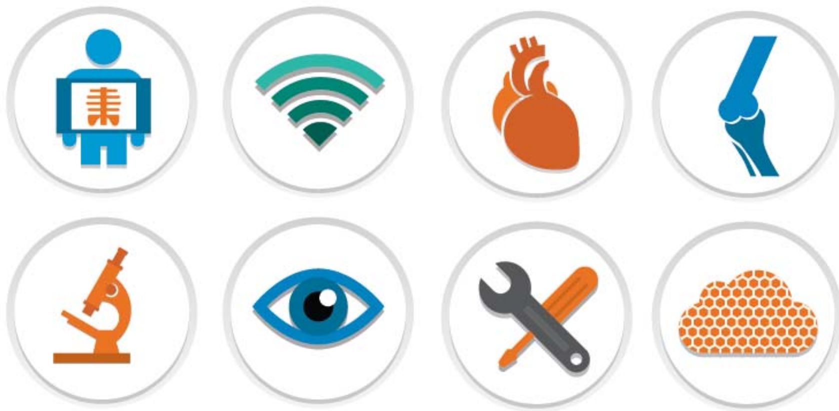
innovative imaging™



iConnect® Access
V. 5.0

USER'S GUIDE

Merge Healthcare
900 Walnut Ridge Drive,
Hartland, WI 53029
USA

The software that is the subject matter of this document is an advisory device and is not designed or intended to substitute for the skill, knowledge or experience of the users of the software.

CAUTION: **U.S. federal law restricts this device to sale by, or on the order of, a physician.**

CE 0120

NOTE: The iConnect Access software complies with the MDD Council Directive 93/42/EEC of 14 June 1993.

EC REP

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For application support or to report issues with user documentation, contact Customer Support:

- In North America: call toll-free 1-877-741-5369
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Part	Date	Revision	Description
ICA-6327	March 2014	1.0	Initial version for 5.0
	August 2014	2.0	Modified procedure for downloading the Exam Importer. Minor updates for version 5.0.3.

Contents

Chapter 1 Overview

This document is designed to introduce you to the main iConnect Access application functions. Overview topics include:

About the Application

The iConnect Access application is a cost-effective, workflow-friendly, Web-based zero-client DICOM and XDS viewer that delivers imaging capability to a large community of end-users. By providing easy access to images and content, iConnect Access enhances stickiness for providers by providing excellent service levels to referring physicians.

Key functionality includes:

- Compact, low-maintenance application that runs entirely within a browser.
- Requires no download or installation.
- Browser support for Microsoft® Internet Explorer®, Mozilla® Firefox®, Google™ Chrome, and Safari® (for MacIntosh®, Apple® iPhone®, iPod touch® and iPad® users).
- Intuitive user interface that requires little or no training.
- Immediate and reliable access to images and reports.
- Ability to access external Web-based applications (such as Merge PACS) from one workstation.

- Secure transmission of images over the Internet using HTTPS.
- Scalable platform with concurrent licensing for enterprise networks and multi-site systems.
- Seamless integration with any Health Information Exchange (HIE) portal solutions.
- Requires no consumables such as film or disks to send images.
- User/Group management controls ensure only those authorized can view images.
- Accesses documents across multiple institutions via the Cross-Enterprise Document Sharing (XDS) standard.
- Supports integration with a Master Patient Index which manages patient IDs from multiple domains for the same patient.
- Accesses DICOM and DICOM-related data from multiple institutions and data sources.
- HTML5 viewer support as well as HTML4 viewer support.
- Sharing of studies between an institution or user with another institution or user.

NOTE: If you see http:// in your browser's address bar, it means that data transferred between the client workstation and the server is not encrypted or secure. If you require a secure encrypted connection (for example, https://), contact your System Administrator.

Standalone and Integrated Configurations

You can implement the iConnect Access application as a standalone application or integrate its components into a third-party application, such as an EMR or portal. When integrated into an existing system, only the study and patient navigation and selection differs from the standalone implementation. These differences are described in **"Patient Studies" on page 17** and **"Patient Records" on page 97**.

Indications for Use

- The iConnect Access application provides internet access to multi-modality softcopy medical images, reports, and other patient related information for conducting diagnostic review, planning and reporting through the interactive display and manipulation of medical data.

- The iConnect Access application can be configured to provide either lossless or lossy compressed images for display. The medical professional user must determine the appropriate level of image data compression that is suitable for their purpose.
- Display monitors used for reading medical images for diagnostic purposes must comply with applicable regulatory approvals and with quality control requirements for their use and maintenance.
- Lossy compressed mammographic images and digitized film screen images must not be reviewed for primary image interpretations. Mammographic images may only be interpreted using an FDA approved monitor that offers at least 5 MP resolution and meets other technical specifications reviewed and accepted by FDA.
- iPads and other mobile devices can present diagnostic quality images, but the iConnect Access application on an iPad is not intended for diagnostic use.

Safety Precautions

This section contains a list of safety precautions that you must be aware of when using the iConnect Access application, including:

- **"Microsoft Windows Updates" on page 9**
- **"Repetitive Strain Injury" on page 10**
- **"Image Compression" on page 10**
- **"Date and Number Format" on page 10**
- **"Supported Character Sets" on page 10**
- **"Magnetic Interference" on page 11**
- **"Computer Virus Protection" on page 11**

Microsoft Windows Updates

We recommend that you always apply the latest Microsoft Windows updates on your client workstation.

Repetitive Strain Injury

As with all computer systems, there is a risk of repetitive strain injury if the workstation is used excessively. Repetitive strain injury can include symptoms such as eyestrain, backache, and so on.

WARNING: **Excessive use of the workstation may result in repetitive strain injury.**

Image Compression

Do not use JPEG mammographic images for primary diagnostic interpretation. It is possible to misinterpret JPEG (that is, lossy compressed) images due to the loss of information from the image. To avoid misinterpretation, for all JPEG images, the application displays the image compression and its quality in the Review toolbar (for example, JPEG (Q=80)). Q represents image quality, where a value of 50 represents high quality and a compression ratio of 15:1 while 100 represents the highest quality and a compression ratio of 2.6:1.

WARNING: **JPEG images are subject to misinterpretation due to information loss. JPEG mammographic images must not be used for primary diagnostic interpretation unless approved for use in digital mammography.**

Date and Number Format

On the client workstations, the date and number format displayed in the study and viewer windows reflects the date and time format selected by the customer and configured on the iConnect Access Web Server and not the configuration used by the client workstation.

NOTE: For more information about the date and number format, contact your System Administrator.

Supported Character Sets

At this time, the iConnect Access application only supports the English character set for the mobile version. However, the desktop version supports different languages. For details on localizing the iConnect Access application, refer to the iConnect Access *Localization Guide*.

Magnetic Interference

The images displayed on the workstation's monitor(s) can be distorted by strong magnetic fields; therefore, the workstation should be positioned outside the 5 Gauss (0.5 mT) magnetic fringe field.

CAUTION: **Position the workstation outside the 5 Gauss (0.5 mT) magnetic fringe field.**

Computer Virus Protection

Computer viruses can prevent the application from working properly. We recommend you protect the workstation with anti-virus software. Contact your System Administrator for further details.

CAUTION: **We recommend that you install anti-virus software on your workstation.**

About this Guide

This user's guide assumes that you are familiar with the basic operation of personal computers, such as how to turn them on, how to use the mouse, and how to work in the Microsoft Windows Operating System environment (e.g,. opening and closing windows, using a browser and understanding Windows terminology). If you are not familiar with these operations, refer to the documentation provided with your workstation.

NOTE: Cross-references that appear in blue text are hyperlinks.

Screen Captures

This guide uses screen captures to help illustrate various steps and procedures. The screen captures are used as examples only and may differ somewhat from what you actually see on your monitor in terms of color schemes and button layouts which are customer-defined.

Notes, Cautions, and Warnings

NOTE: Notes are used to indicate information which may be helpful or of special interest to the reader.

CAUTION: **Caution messages indicate procedures which, if not observed, could result in loss of data on the hard disk or damage to the equipment. Do not proceed beyond a Caution message until the indicated conditions are fully understood and met.**

WARNING: **Warning messages indicate procedures or practices which, if not observed, could result in personal injury to the user or the patient. Do not proceed beyond a WARNING message until all of the indicated conditions are fully understood and met.**

Chapter 2 Getting Started

The following topics describe how to get started with the iConnect Access application:

- **"Logging On to the Application" on page 13**
- **"Signing Up for a User Account" on page 14**
- **"Using the Help System" on page 16**
- **"Viewing the Connection Attributes" on page 16**

If you are using the application on a mobile device, see **"Using the Application on an iPad, iPhone, or iPod Touch" on page 129**.

NOTE: The above topics are only applicable if you are using the iConnect Access application in standalone mode.

Logging On to the Application

This section describes how to log in to the iConnect Access application in standalone mode. If you do not already have a user account, you can sign up for one from the iConnect Access Login screen if that option is available (see **"Signing Up for a User Account" on page 14**).

NOTE: The application can be configured by your System Administrator to time out if left idle for a specified number of minutes. If the application times out, you must log in again.

NOTE: You cannot run simultaneous sessions of the application using the same browser. For example, if you log in to the iConnect Access application using Internet Explorer, you cannot open another session of the application in Internet Explorer until you close the first session. However, you can open another session using a different browser. Refer to the release notes for a list of supported browsers.

To log in to the application

1. Open your Web browser.
2. In the **Address** field, type **http://webservername/webaccess**, where *webservername* is the computer name of the iConnect Access server.

NOTE: If your server uses an encrypted or secure connection, type **https://** instead of **http://**. Limit the use of http:// connections to local area networks. If using the iConnect Access application over the internet, use either an https:// connection or a VPN.

3. When the application opens the Login screen, do the following:
   - If your Web server supports additional languages, select a language from the drop-down list.
   - Type your user ID and password.
   - Click **Log In**.
4. If configured, the application displays a message. Click **OK** to close the message and use the application. If the option is available, you can select the **Do Not Display This Message Again** checkbox to prevent the message from appearing the next time you log in to the application.
5. You can now start using the application. To use the Studies window, see **"Patient Studies" on page 17**. To use the Patients window, see **"Patient Records" on page 97**.
6. Click **Logout** when you are done using the application. The application closes and returns you to the Login screen.

Signing Up for a User Account

When you sign up online for a user account, the iConnect Access application automatically sends your request to a System Administrator. If you provide an email address, the System Administrator sends you a notification once your account has been approved (created) or rejected.

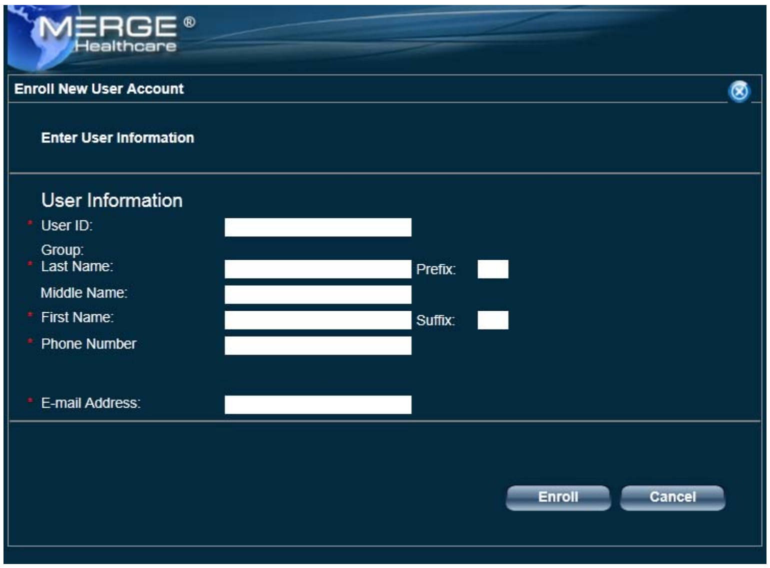
NOTE: This feature is optional and may not be available on the iConnect Access Login screen. For more information, contact your System Administrator.

To sign up for a user account

1. Open your Web browser.
2. In the **Address** field, type **http://webservername/webaccess**, where *webservername* is the computer name of the iConnect Access server.

NOTE: If your server uses an encrypted or secure connection, type **https://** instead of **http://**.

3. When the application opens the Login screen, click **Sign up**.
4. When the application displays the registration form, enter the details for your user account. Mandatory fields are indicated by an asterisk (*).



NOTE: If you want to receive email notifications regarding your account request, make sure you provide your email address in the Email Address field.

5. Click **Enroll**.
6. When the application opens the confirmation dialog, click **OK**.

Using the Help System

The online help system provides quick access to user instructions.

To use the online help

1. From the Help menu, select **Contents**. The application opens the online help in a separate window.

2. Use the following features to navigate the help system and find the required topics:

   - Click **Contents** to display a list of topics available, then click the topic you want to view.

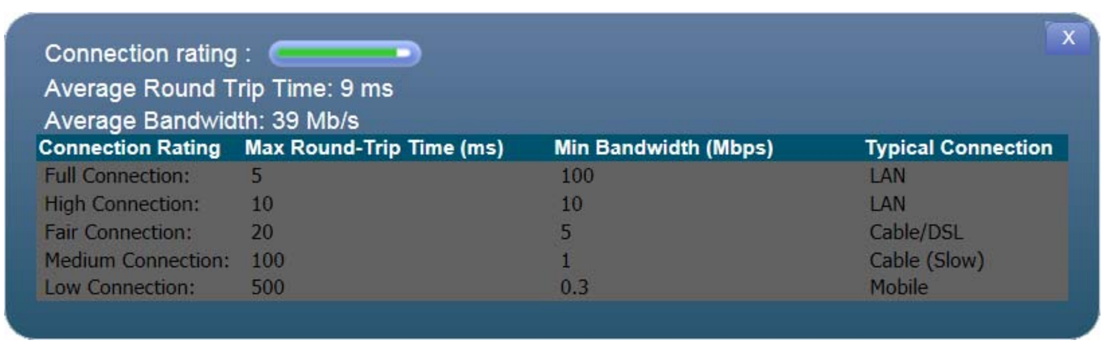
   - Click **Index** to display a list of keywords from which you can select a topic. Type in the first few letters of the keyword you are looking for, then double-click the keyword. This is often the easiest way to find a topic.

   - Click **Search** to find all topics that contain a keyword. Type the keyword you want to find, click **Go**, then click the desired topic in the list displayed.

Viewing the Connection Attributes

The iConnect Access application displays a visual representation of connection quality and throughput. A rating scale appears on the Login page and the Studies tab.

Click the rating scale to view the average round trip time and the average bandwidth of the active connection. The legend illustrates the values associated with a given rating.



NOTE: The connection quality image does not appear until the study and the toolbar have both completed loading.

Chapter 3 Patient Studies

The following topics describe how to select patient studies and perform other study-related functions in the Studies window:

- **"Studies Window" on page 18**
- **"Performing Searches" on page 18**
- **"Customizing the Search Results Table" on page 26**
- **"Managing the Search Results" on page 27**
- **"Selecting and Loading Studies" on page 28**
- **"Managing Access to Studies" on page 31**
- **"Transferring or Downloading Studies" on page 33**

NOTE: Selecting and loading studies into a third-party application and transferring studies to another data source may not be available depending on your site's configuration. Contact your System Administrator.

When integrated with a third-party application such as an EMR, the iConnect Access application can receive search criteria from the third-party application. Depending on your configuration and the amount of information provided, you can perform the following study-related functions from the Studies window:

- Display search results (see **"Selecting and Loading Studies from the Studies Window" on page 29**)
- Start a new search (see **"Performing Searches" on page 18**)
- Open a specific patient study in the Study Viewer (see **"Study Viewer" on page 49**)

NOTE: Access to these features is based on your site's configuration. Contact your System Administrator.

Studies Window

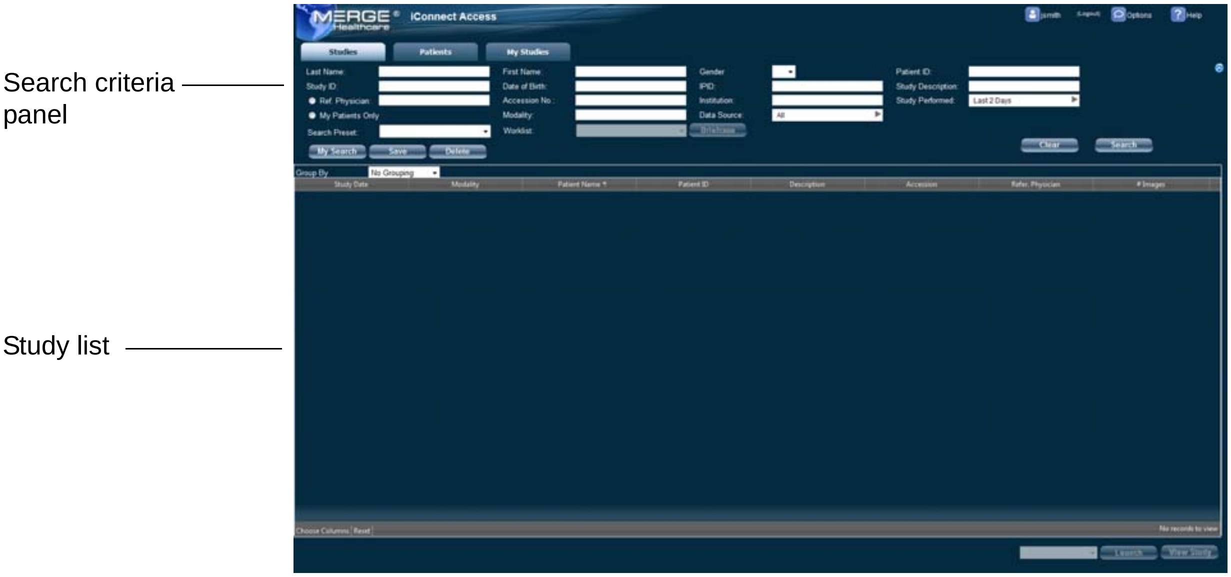
This section describes the Studies window and how to access it during a review session.

To access the Studies window during a review session

1. Do one of the following to access the Studies window:

   - In the Navigation bar of the viewer window, click **Studies**.

   - Click the close button on the Study Viewer.



Performing Searches

The Search Criteria panel enables you to search for studies in one or more data sources based on one or more parameters (such as patient name, patient ID, accession number, or study date).

The Search Criteria panel can be configured to provide the following search methods.

- Custom Search — Refer to the following procedure.

- Patient Name Search — Enables users to search based on the patient name. See **"To perform a patient name search" on page 22**.

- Emergency Search — Enables clinicians who do not have access privileges, but do have emergency search privileges to search for patients and view their studies. Users with emergency search privileges are restricted to the following search parameters which are mandatory and must match the patient data exactly:
  - Last Name
  - First Name
  - Date of Birth
  - Gender

NOTE: Domain and Role level filters will not be applied when an Emergency Search is performed.

- My Search — See **"Using and Managing Saved Searches" on page 23**.
- Saved Search — See **"Using and Managing Saved Searches" on page 23**.

The Studies window provides the following search parameters:

Field	Description
Last Name	The patient's last name. Mandatory for emergency searches.
First Name	The patient's first name. Mandatory for emergency searches.
Patient Name Search	The patient's name. Applies to patient name searches only.
Gender	The gender of the patient. Mandatory for emergency searches.
Patient ID	The patient's identification number.
Date of Birth	The patient's date of birth. Mandatory for emergency searches.
Study ID	The study identification number.
IPID	The issuer of the patient ID.
Study Description	The DICOM study description.
Accession No	A unique examination accession number generated by the Radiology Information System (RIS). It is used by the RIS system to track the radiology order, scan, and report.
Institution	The name of the institution where each series in a study was created.
Referring Physician	The name of the referring physician.

Field	Description
Study Performed	The date and time on which the study was created. The date format displayed is determined by the configuration used by the iConnect Access Web server and not the configuration used by your client workstation. For more information about the date and time format, contact your System Administrator.
Modality	The source modality (or modalities) of the series within the study.
Data Source	The name of the data source (or data sources) where the study is located. This column appears only if multiple data sources are configured and available to the user.

NOTE: Study List columns are configurable. As a result, it is possible that some of the columns described may not be displayed. To customize which columns are displayed, see **"Customizing the Search Results Table" on page 26**.

NOTE: If the user account is configured so that only the Studies tab is available, then the application displays no tabs.

To search the study list

1. Ensure that the Search Criteria panel is displayed (see **"Showing/Hiding the Search Criteria Panel" on page 24**).

Search Criteria panel

NOTE: If the System Administrator has enabled the auto-query feature, then the Studies window automatically display results of the default saved search. If no saved search is identified as the default, the auto-query is not invoked.

2. Select the appropriate search method:
   - Custom Search — proceed to **Step 3**
   - Patient Name Search — see **"To perform a patient name search" on page 22**

- Emergency Search — proceed to **Step 3**
- Saved Search or My Search — see **"Using and Managing Saved Searches" on page 23**

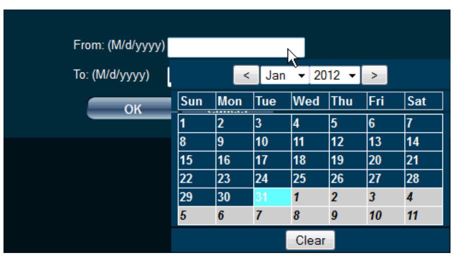
3. In the Search Criteria panel, type a value in one or more fields. For text input fields, you need to type only the first few characters. The more information you type, the more refined the search.

NOTE: The **Modality** field supports searching by multiple modalities. To search for studies by multiple modalities, insert a backslash (\) between each modality name (for example, CT\MR).

4. If you want to search the Study List for studies referred by a specific physician, select **Ref. Physician** and type the name of the referring physician.
5. You can select **My Patients Only** to limit the results to your patients.

NOTE: This option only applies if you are a referring physician or reading physician. When you select this option, the application compares your user name with the Referring Physician DICOM attribute or the Name Of Physician(S) Reading Study DICOM attribute in the studies to display only those studies that match your name.

6. If you want to search for studies created in a specific time frame, select a preset from the Study Performed drop-down list or select a Custom Date Range and do the following:
   - Click the **From** field to select a start date from the calendar. The application searches for studies created on or after the specified date. Any studies created before the "From" date are considered as prior studies.



   - Click the **To** field to select an end date from the calendar. The application searches for studies created on or before the specified date.
   - Click **OK**.
7. If multiple data sources are available, use the Data Source drop-down list to limit your search to a specific data source. If you select no data sources, the system queries all configured data sources.

8. When you are finished entering your search criteria, click **Search**. The application queries the system and displays the search results and the total number of records found.

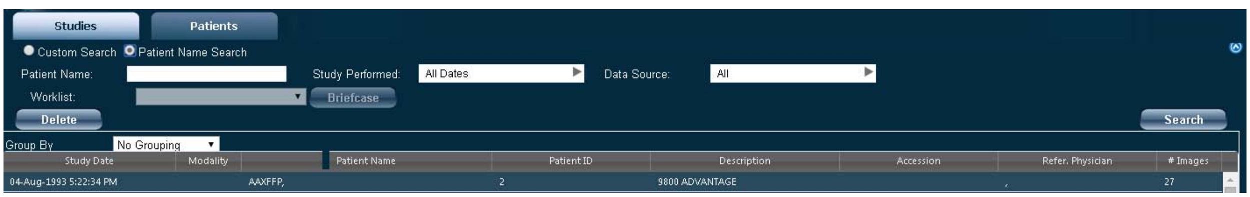
NOTE: By default, the application can initially retrieve a maximum of 1000 studies. To increase or decrease this limit, contact your System Administrator.

NOTE: If the Auto-Search feature is enabled in the System Service tool, the next time you log in, the application applies your last search criteria and displays only the patient studies that match.

NOTE: If you do not want to have the automatic search run when you log in or return to the Study window, turn off the automatic search user preference. See **"User Preferences" on page 147**.

To perform a patient name search

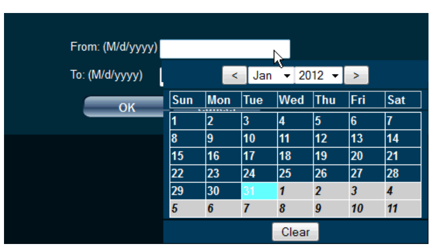
1. In the Studies window, select the **Patient Name Search** radio button.



2. In the **Patient Name** field, type some or all of the patient's surname or given name. For example, the system will return John Doe's studies if you type John Doe, Jo D, Doe J. For patient name searches, no wildcard characters are necessary.

3. If you want to search for studies created in a specific time frame, select a preset from the Study Performed drop-down list or select a Custom Date Range and do the following:

   - Click the **From** field to select a start date from the calendar. The application searches for studies created on or after the specified date. Any studies created before the "From" date are considered as prior studies.



- Click the **To** field to select an end date from the calendar. The application searches for studies created on or before the specified date.
- Click **OK**.

4. If multiple data sources are available, use the **Data Source** drop-down list to limit your search to a specific data source. If you select no data sources, the system queries all configured data sources.
5. When you are finished entering your search criteria, click **Search**. The application queries the system and displays the search results and the total number of records found.

Using and Managing Saved Searches

The iConnect Access application allows you to save your search criteria. Once saved, you can retrieve and apply the saved search without having to re-enter search criteria.

To save your search criteria

1. Ensure that the Search Criteria panel is displayed (see **"Showing/Hiding the Search Criteria Panel" on page 24**).
2. Specify your search criteria in the Search Criteria panel (see **"Performing Searches" on page 18**).
3. Click **Save**. The following box opens:

4. Select one of the following:
   - Save as Preset Named — saves the search under a unique name
   - Save as My Search — saves the search and assigns it to the My Search button
5. Click **Save**.

To run a saved search

1. Ensure that the Search Criteria panel is displayed (see **"Showing/Hiding the Search Criteria Panel" on page 24**).
2. Do one of the following:
   - From the Search Preset drop-down list, select the desired search and click **Search**.
   - If you have saved a search as "My Search", click **My Search**.

To delete a saved search

1. Ensure that the Search Criteria panel is displayed (see **"Showing/Hiding the Search Criteria Panel" on page 24**).
2. From the Search Preset drop-down list, select the search you want to delete.
3. Click **Delete**.

Showing/Hiding the Search Criteria Panel

To make more room on the Study window for search results, you can hide the Search Criteria panel.

To show the Search Criteria panel

1. If the Search Criteria panel is hidden, click . The application displays the Search Criteria panel.

To hide the Search Criteria panel

1. If the Search Criteria panel is shown, click . The application hides the Search Criteria panel.

Viewing Your Briefcase

The iConnect Access application allows you to view your Briefcase stored in the Merge PACS Archive. For this feature to work, user name in the iConnect Access user database needs to be the same as the Merge PACS user database. User name synchronization is typically performed by means of LDAP or Active Directory.

NOTE: Users cannot modify Briefcase contents from within the iConnect Access application. The modification of Briefcase contents is performed exclusively from within Merge PACS Viewer.

Your Briefcase, also known as a teaching worklist (TWL), is a collection of associated studies. Each study can be associated with no or an unlimited number of teaching worklists. A number of non-DICOM tags can be specified for each study in a teaching worklist. Any number of teaching worklists can be created by a user but only one of these worklists can be defined as the briefcase.

Your Briefcase displays a list of all teaching worklists for all connected Merge PACS archives. The teaching worklists display the worklist name and the data source name for all teaching worklists The default teaching worklist is displayed first in worklist drop-down list.

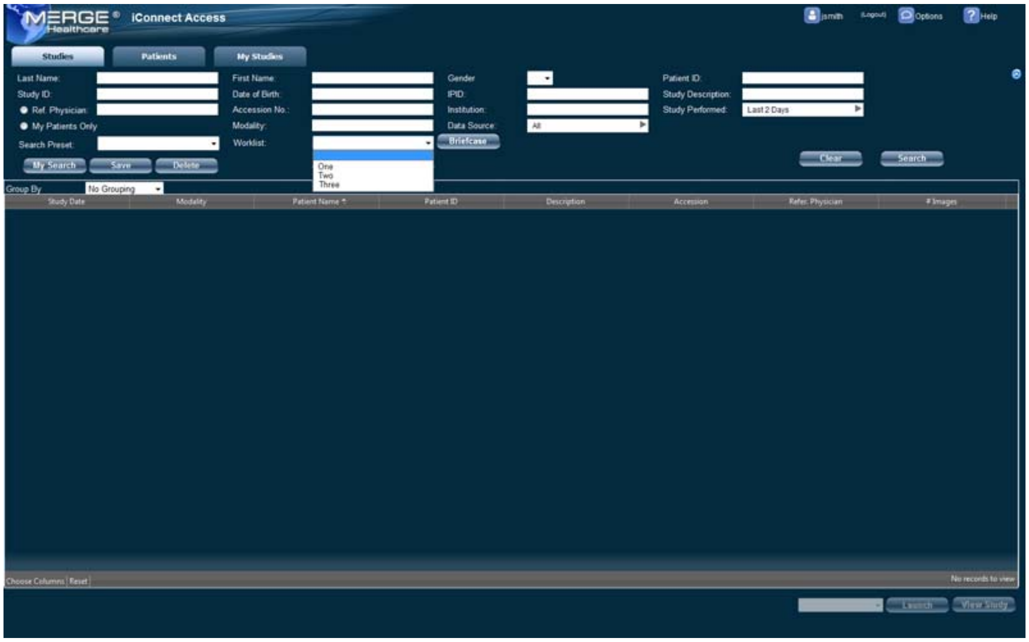
When a worklist is displayed, the study list displays the same columns that are used for a standard search.

NOTE: The Briefcase contents provide a snapshot of the state of your teaching worklists. The display of the teaching worklist is not be updated until a new query is run.

To view worklists

1. In the Studies tab, click the **Worklist** drop-down list and select a worklist.

NOTE: Clicking **Briefcase** loads the Briefcase. The Briefcase is the first teaching worklist displayed in the **Worklist** drop-down.



The list of studies in the selected teaching worklist displays in the study list.

2. Double-click on a study to open it in the Study Viewer.

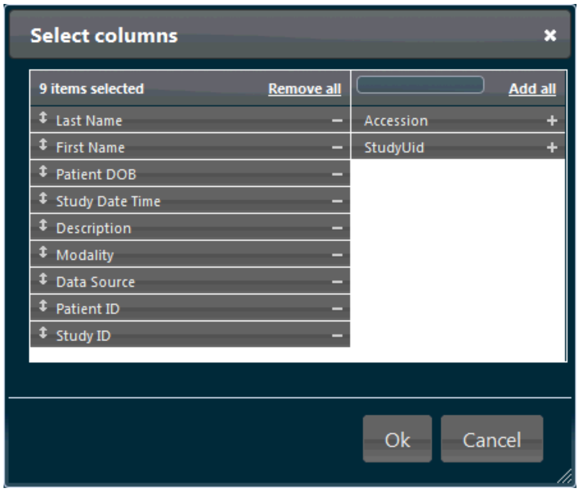
NOTE: If you do not have any teaching worklists available, the Briefcase button and drop-down list are not enabled.

Customizing the Search Results Table

You can add, remove, and move columns in the search results table. If your Administrator has enabled the **Allow User to Save Study List Column Layout** option at the domain and role levels, these settings are saved. Otherwise, the default settings are restored when you log out or navigate away from the page.

To customize the search results

1. At the bottom of the search results list, click **Choose Columns**. The Select Columns dialog opens.



2. Do the following:

- To sort columns within a list, click and drag the column up or down.
- To remove a column from the selected list and place it in the unselected list, click the minus sign. Unselected columns do not appear in the search results table.
- To add a column from the unselected list to the selected list, click the plus sign.

NOTE: Alternatively, you can move all of the columns from one list to another by clicking **Remove All** or **Add All**.

3. Click **OK** to apply your changes.

Managing the Search Results

The search window enables you to manage the search results in the following ways:

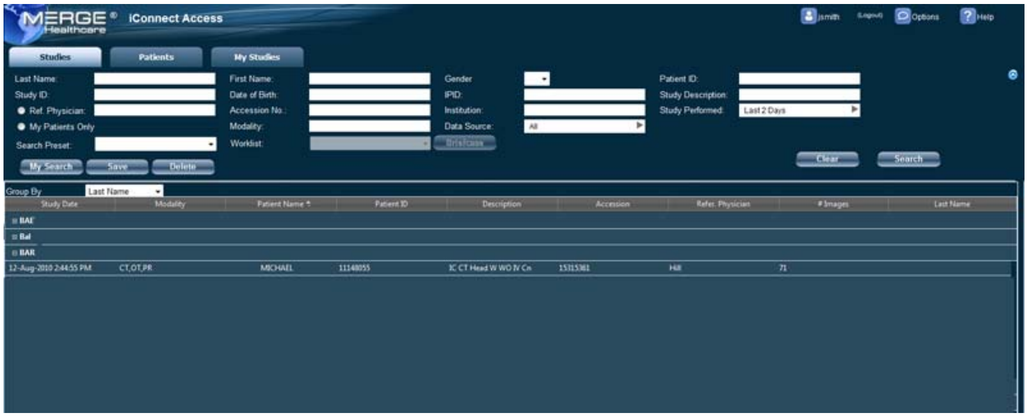
- Sort the search results in ascending or descending order using the column headings in the typical Windows manner.
- Group the search results based on a selected category, such as last name, modality, and study date.

To sort the search results

1. Click the appropriate column heading in the list. For example, **Last Name**.
2. The application sorts the patients in ascending or descending order according to the information in the column (either alphabetically or numerically, depending on the type of information). It displays an arrow in the column heading to indicate the column by which the Studies window is sorted. For example, if the Patient Name column heading appears as shown below, the search results are sorted by Patient Name, in ascending, alphabetical order (that is, A to Z).
3. Click the column heading again to reverse the sort order.

To group search results

1. From the Group By drop-down list, select the desired grouping. The application refreshes the search results grouped according to your grouping selection.



For example, if you select Study Date and Time, the search results appear in ascending order by date.

By default, the **No Grouping** option groups search results in ascending alphabetical or numerical order based on the contents of the first column.

NOTE: You can expand or collapse each grouping.

Selecting and Loading Studies

This section contains the following procedures:

Selecting and Loading Studies for Review

Use the following procedure to select and load a study for review.

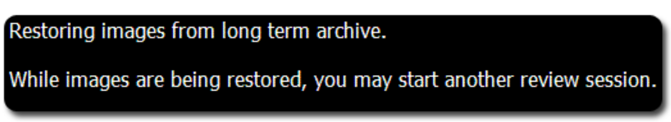
NOTE: You can double-click a patient study in the Studies window to select and load it for review in one step.

When you first load a study into the Study Viewer, the application loads as many series as possible within the selected study into the number of available viewers. This scenario is only applicable if a default viewer setting exists for the study’s modality. For example, if a viewer setting of 1x2 viewers was configured for MR studies, when you load an MR study, the application displays two viewers and automatically loads the first two series into the viewers. If a viewer setting does not exist for a modality, the application loads the first series into a single viewer.

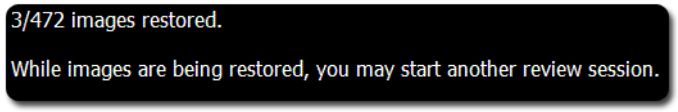
NOTE: To configure a default viewer setting for a modality, contact your System Administrator.

To select and load a study

1. Click on the required study in the Studies window. The application highlights the selected study.
2. Click **View Study**. The application displays the selected study in the Study Viewer.
3. If the studies are being restored from a long term archive, the following message appears in the application’s viewer window. If desired, you may start another review session while images are being restored.



4. While the images are being restored, the application displays the status of the restore in the viewer window.



Selecting and Loading Studies from the Studies Window

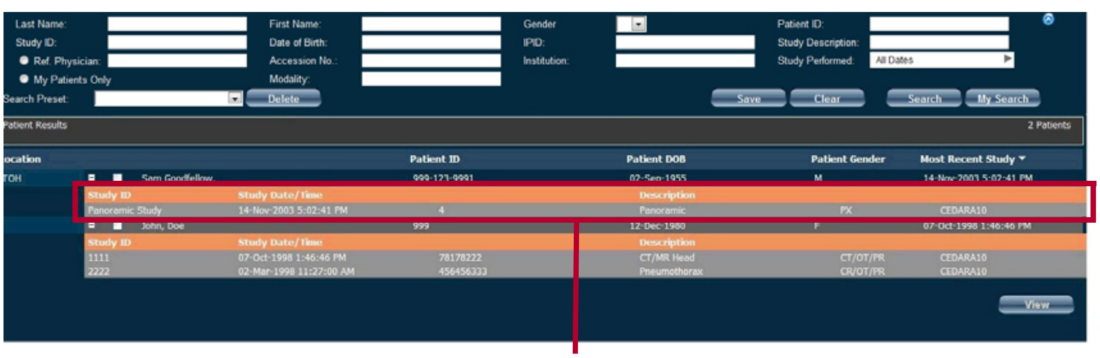
When integrated, the iConnect Access application receives the search criteria from a third-party application. Based on your site's configuration, the iConnect Access application may list search results in the Studies window, or directly display the patient study in the viewer window (see **"Study Viewer" on page 49**).

The Studies window displays the search results in either a patient-centric or a study-centric view as described below. From the Studies window, you can select one or multiple studies to load into the Study Viewer.

- Patient-centric — Displays the search results by patient (that is, studies with the same patient name, ID, date of birth, and gender are grouped together).

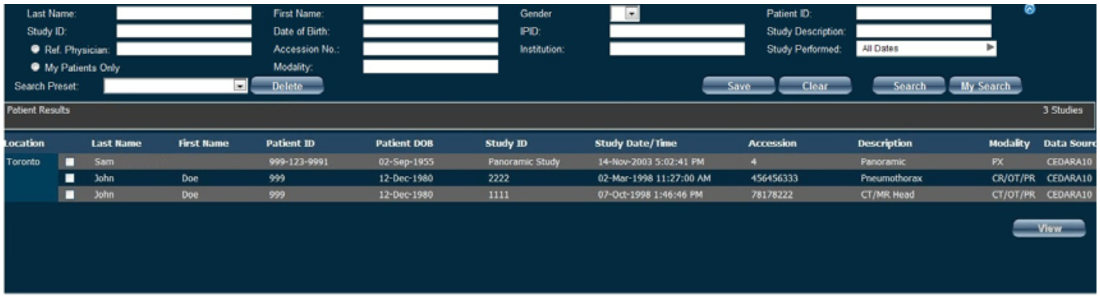
NOTE: In many cases, the patient-centric view is not available as this requires the use of an Enterprise Master Patient Index. Consult your System Administrator for availability.

NOTE: When you select a patient, all studies associated with the patient are loaded into the Study Viewer.



Studies for a selected patient

- Study-centric — Displays the search result by studies.



NOTE: Depending on your configuration, you can start a new search from this window (see **"Performing Searches" on page 18**). If you start a new search, the Studies window replaces the current search results with the new results. The Studies window does not save your search criteria.

To select and load one or more studies

1. The application displays the search results in the Integrated Studies window. By default, the Studies window lists the results by location. You can sort the results using the remaining column headings (see **"Managing the Search Results" on page 27**).

2. Do one of the following:

   - In a study-centric list, select the checkbox beside the studies you want to load.

   - In a patient-centric list, select the checkbox for the patients you want to load. The application loads all studies associated with the selected patient.

3. Click **View**. For instructions on using the Study Viewer, see **"Study Viewer" on page 49**.

Selecting and Loading Studies into an External Application

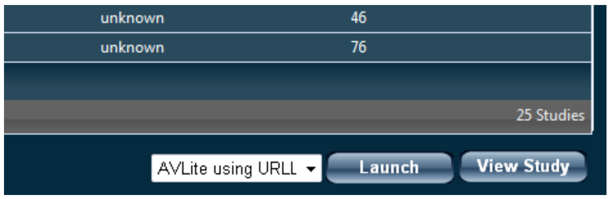
You can select and load studies into other standalone applications that are external to the iConnect Access application.

Use the following procedure to select and load a study into a third-party application.

To select and load a study into an external application

1. Do one of the following:

   - Select a study in the Studies window, select the third-party application, and click **Launch**.



   - In the Study Viewer, position the pointer over the button and select the third-party application.

   iConnect Access launches the external application and the selected study is displayed in application's native interface.

NOTE: The External Applications feature is also accessible from the Radiology Studies and XDS pages in the Patient Record.

Managing Access to Studies

The Grant Access feature allows you to grant or remove access to studies to other users.

NOTE: The Grant Access feature is also accessible from the Study Viewer and My Studies window.

NOTE: If the Grant Access feature is not enabled, contact your System Administrator.

CAUTION: **It is the user's responsibility to check that data is correct before allowing access to studies.**

To manage access to studies

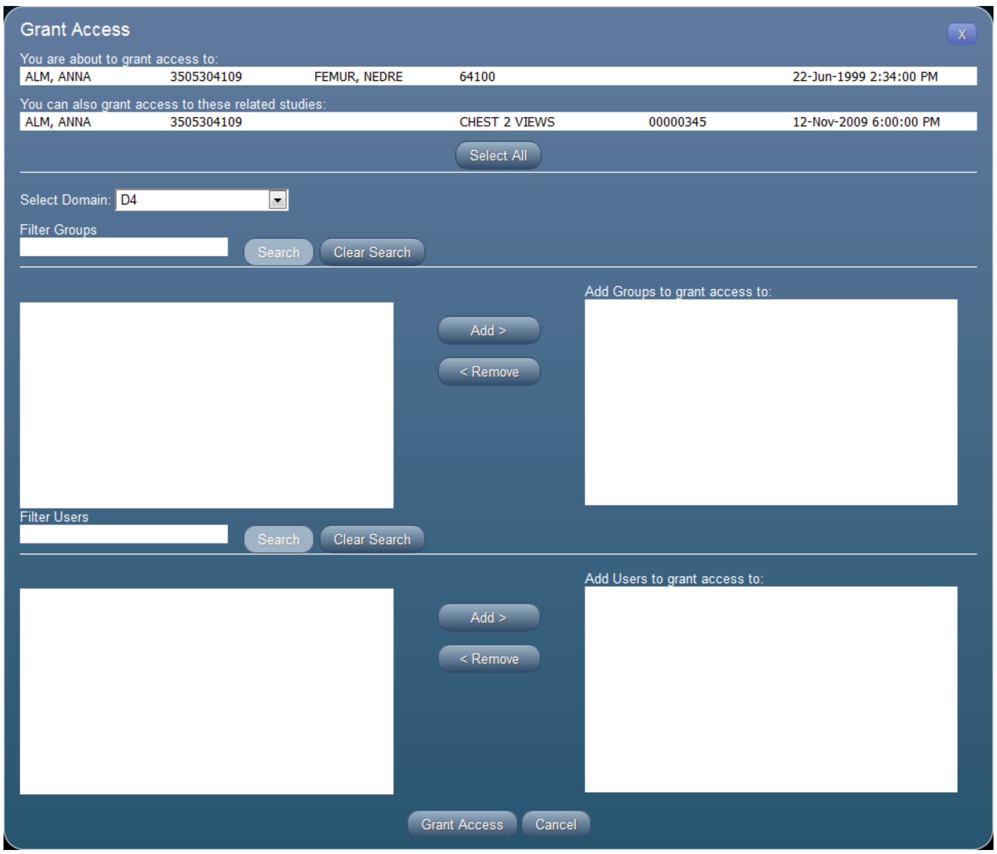
1. Select the required study in the Studies window. If you want to select multiple studies, hold down the CTRL key and select the studies in the list. The application highlights selected studies.

2. Do one of the following:

   - In the Studies window, click **Grant Access**.

   - In the Study Viewer, click  .

3. The Grant Access dialog opens.



If you have selected multiple studies in the Study List, the **Grant Access** dialog lists all the selected studies.

If you selected one study from the Study List, the **Grant Access** dialog lists related studies under 'You can also grant access to these related studies.' Select any related studies in the 'You can also grant access to these related studies' list to include them. Click **Select All** to add all related studies.

4. From the **Select Domain** drop-down list, select the domain that contains the group(s) or users(s) to which you want to grant access.

5. To find specific groups or users, type their name in the Filter Groups or Filter Users fields and click **Search**. The groups or users are listed in the Add Groups or Add Users to grant access to field.

   The Search button becomes active after you have typed two or more characters.

6. Highlight the groups or users to which you want to grant or remove access, then click either **Add** or **Remove**.

7. Click **Grant Access** to save the access privileges.

Transferring or Downloading Studies

This section contains the following procedures:

- **"Transferring Studies to a Configured Data Source" on page 33**
- **"Downloading Studies to a Local System" on page 34**
- **"Downloading Studies to a DICOM Downloader Client" on page 37**

Transferring Studies to a Configured Data Source

The transfer feature allows the user to transfer a study from the iConnect Access application to another data source.

NOTE: The Transfer feature is also accessible from the Study Viewer and from the Radiology Studies and XDS pages in the Patient Record. It can also be used with the Apple iPad.

To transfer studies to a configured data source

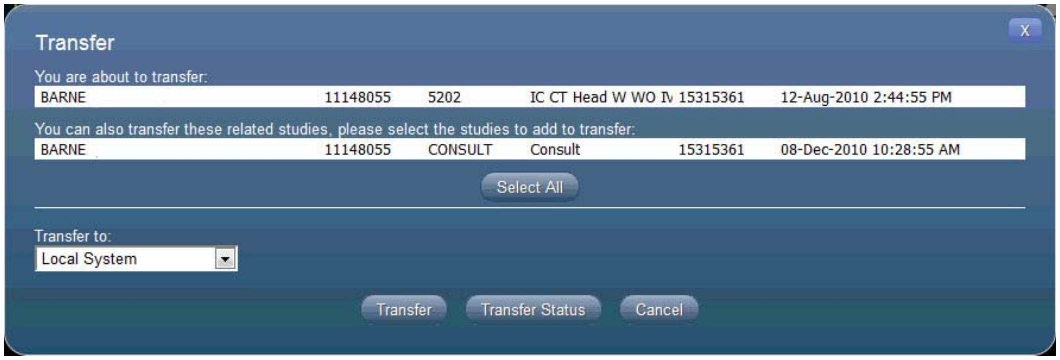
1. Do one of the following:

   - Select one or more studies in the Studies, Inbounds, or Outbounds list. To select multiple studies, hold down the CTRL key and select the studies in the list. The application highlights the selected studies. Click **Transfer**.

- Open the study in the Study Viewer and click .

2. The Transfer dialog opens. If you have selected multiple studies in the Study List, the Transfer dialog lists all the selected studies. Go to **Step 4**.

3. If you selected one study from the Study List, the Transfer dialog lists related studies. Select any related



studies to add to the transfer. Click **Select All** to add all the related studies to the transfer.

4. From the Transfer to drop-down list, select a configured data source.

5. Click **Transfer**. The Transfer Status dialog opens, displaying the status of the transfer. The transfer status changes from “In Progress” to “Succeeded” when the transfer has successfully completed.

Downloading Studies to a Local System

When downloading a study to the local system, the system retrieves all information from all data sources and processes them into one zip file per study. The zip file observes the following naming convention: <patient last name>_<patient first name>_<description>_<study date>_<study time>. For example:

Jane_Doe_Pelvis_06-Jan-2012_1_23_00_PM_0.zip

This zip file is then downloaded to the destination you have specified.

NOTE: The Transferring Studies feature is also accessible from the Study Viewer and from the Radiology Studies in the Patient Record. It can also be used with the Apple iPad.

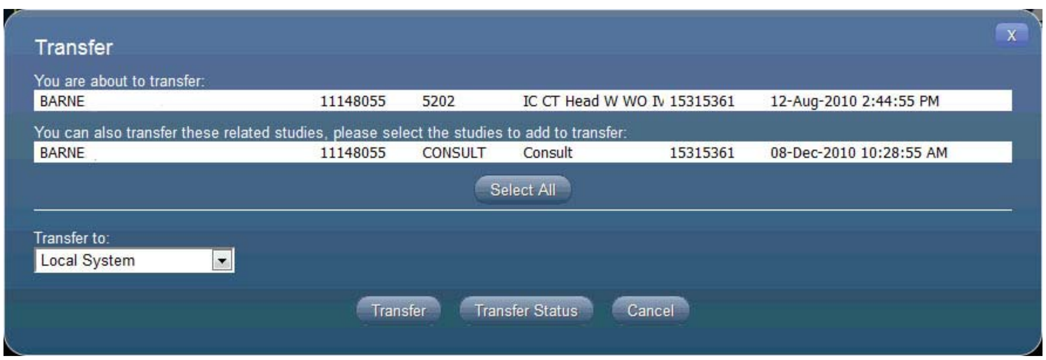
NOTE: This feature is available if the Download Studies option in the User Preferences dialog is set to **As zip files** or **Both**.

During the transfer process, a transfer job can have one of the following status values:

- Created — The system has created the transfer job.
- Ready — The system has retrieved information from all data sources and processed the information into a zip file. The file can now be downloaded.
- In Process — The construction of the package is in progress.
- Done — The file has been downloaded.
- Retry — The transfer has failed and can be retried.
- Expired — The transfer period has been exceeded. By default, the transfer period is one hour. Contact your system administrator to adjust this time period.

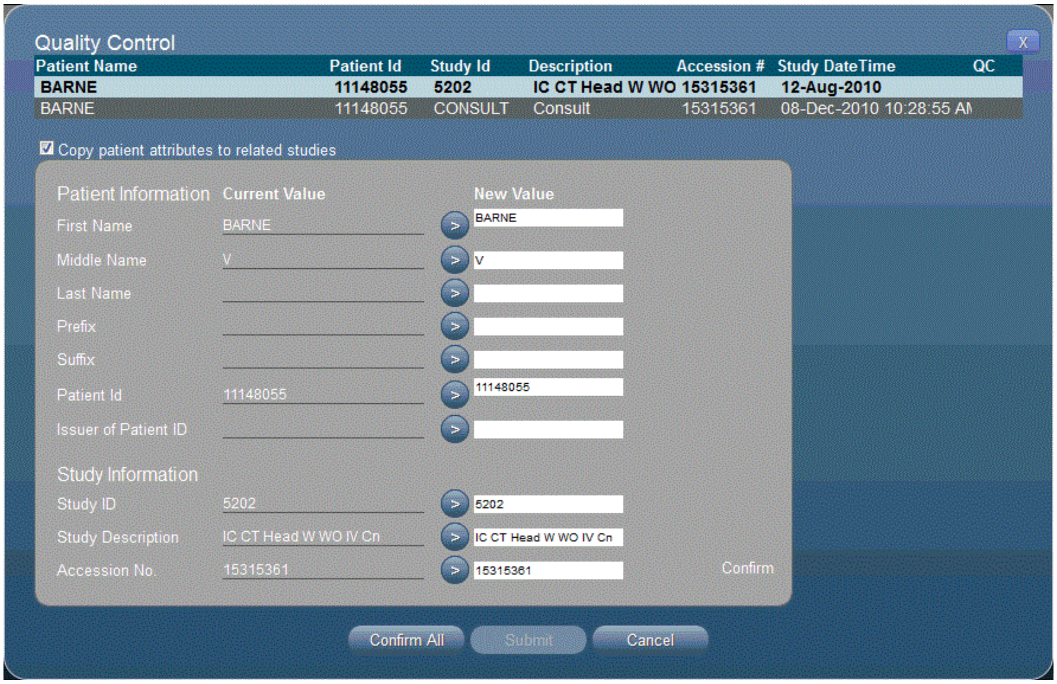
To download a study to a local system

1. Do one of the following:
   - Select one or more studies in the Studies, Inbounds, or Outbounds list. To select multiple studies, hold down the CTRL key and select the studies in the list. The application highlights the selected studies. Click **Transfer**.
   - Open the study in the Study Viewer and click .
2. The Transfer dialog opens. If you have selected multiple studies in the Study List, the Transfer dialog lists all the selected studies. Go to **Step 4**.
3. If you selected one study from the Study List, the Transfer dialog lists related studies. Select any related



   studies to add to the transfer. Click **Select All** to add all related studies to the transfer.
4. From the Transfer to drop-down list, select **Local System**.

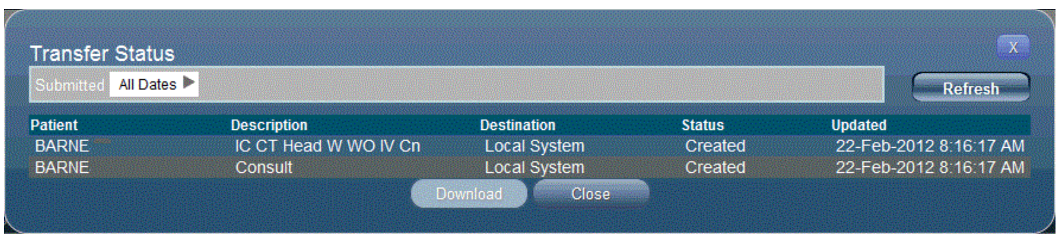
5. Click **Transfer**. The Quality Control dialog opens, displaying the attributes of the study to be transferred. Verify that the values are complete and correct and change the attributes as required.



6. Do one of the following:

- To confirm the attributes of one study at a time, click the study in the study list at the top of the dialog and then click **Confirm** when the attributes have been validated.
- To confirm the attributes of all studies at once, click **Confirm All**.

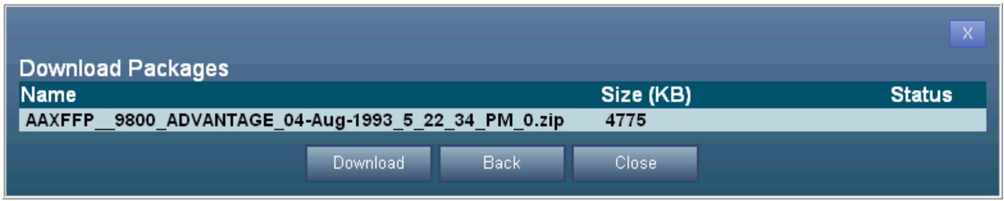
7. Click **Submit**. The Transfer Status dialog opens.



NOTE: You can also access the Transfer Status dialog by choosing **Transfer Status** from the Options menu.

8. The status refreshes every 30 seconds. However, you may manually refresh the display by clicking **Refresh** to view the most current status of the transfer.

9. When the package has a status of Ready, click **Download**. The Download Packages dialog opens, displaying the name and size of the file.



10. Click **Download**. The File Download dialog opens, enabling you to open or save the package.

11. Save the package to the desired location and close the File Download dialog. When the package is successfully downloaded, the Status field in the Download Packages dialog displays a checkmark.

Downloading Studies to a DICOM Downloader Client

The download feature allows the user to download a study from the iConnect Access application to another destination, for example, you can link to another client's account to transfer the data to a local workstation. In order to download studies, you need to have a Transfer Account.

NOTE: You can either create a new Transfer Account account or register an existing account through the Transfer dialog. See **"To create a transfer account" on page 40** or **"To register an existing account" on page 41**.

NOTE: This feature is available if the Download Studies option in the User Preferences dialog is set to **With Client Application** or **Both**.

To download a study

1. Do one of the following:

   - Select one or more studies in the Studies, Inbounds, or Outbounds list. To select multiple studies, hold down the CTRL key and select the studies in the list. The application highlights the selected studies. Click **Transfer**.

   - Open the study in the Study Viewer and click .

2. Click **Transfer**. The Transfer dialog opens.

3. If you have selected multiple studies, the Transfer dialog lists all the selected studies. Go to **Step 5**.

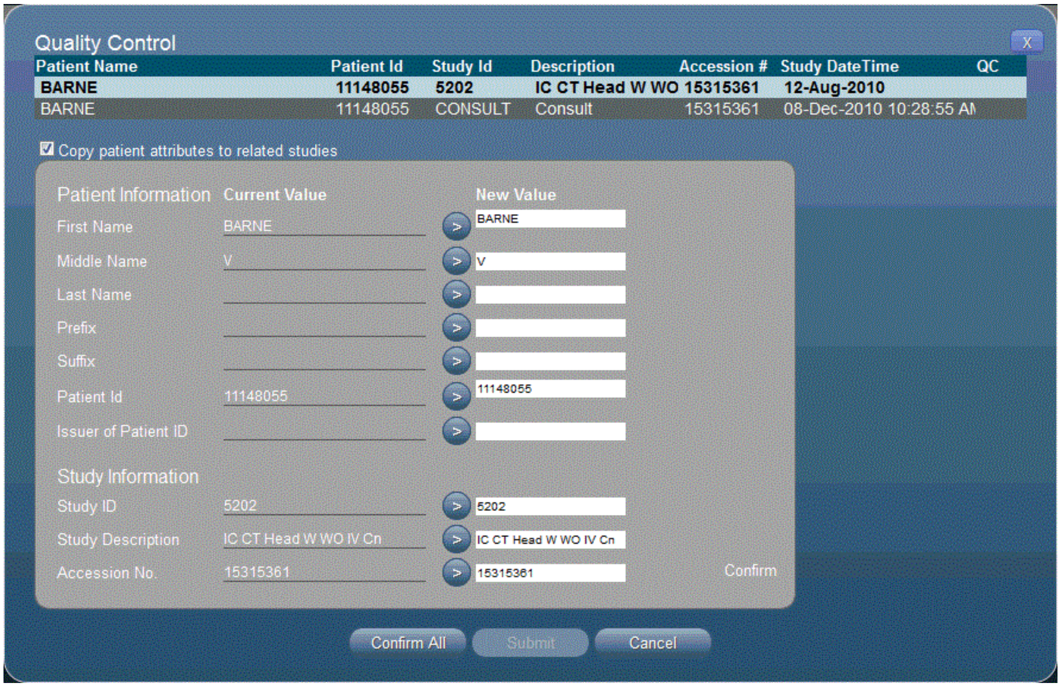
4. If you selected one study, the Transfer dialog lists related studies. Select any related studies in the 'You can also transfer these related studies, select the studies to transfer' list to include them. Click **Select All** to add all related studies.

5. From the **Transfer To** drop-down list, select the destination.

NOTE: You can optionally create a new destination. See **"To create a new destination" on page 42**.

6. In the **Send Email On Completion To** field, optionally type the email address of the person you are transferring the studies to. When the transfer succeeds, the system sends an email notification to this address.

7. Click **Transfer**. The Quality Control dialog opens, displaying the attributes of the study that you are transferring. Verify that the values are complete and correct and change the attributes as required.



8. Do one of the following:

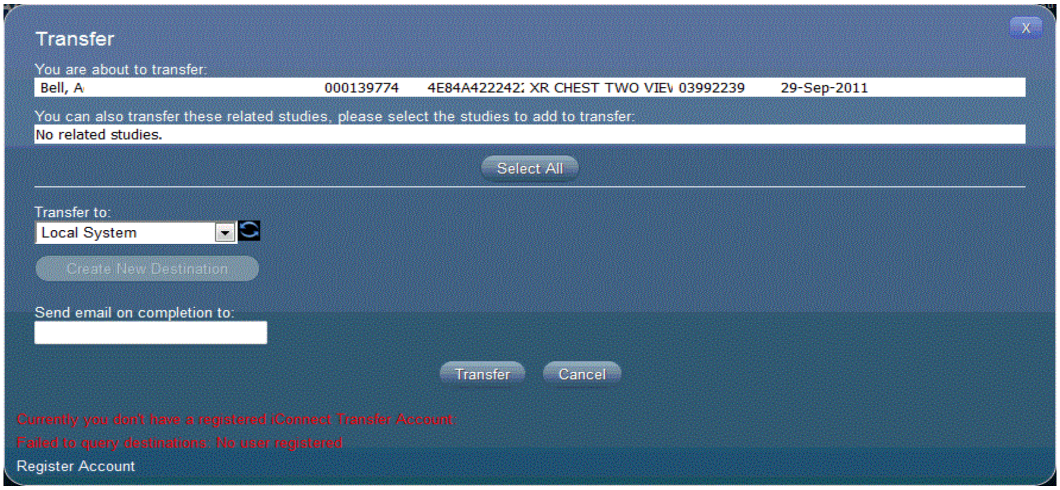
   - To confirm the attributes of one study at a time, click the study and then click **Confirm** when the attributes have been validated.

   - To confirm the attributes of all studies at once, click **Confirm All**.

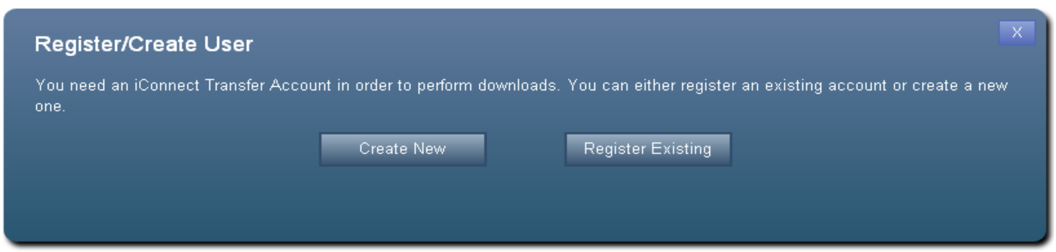
9. Click **Submit**.

To create a transfer account

1. In the Studies tab, click **Transfer**. The Transfer dialog opens.



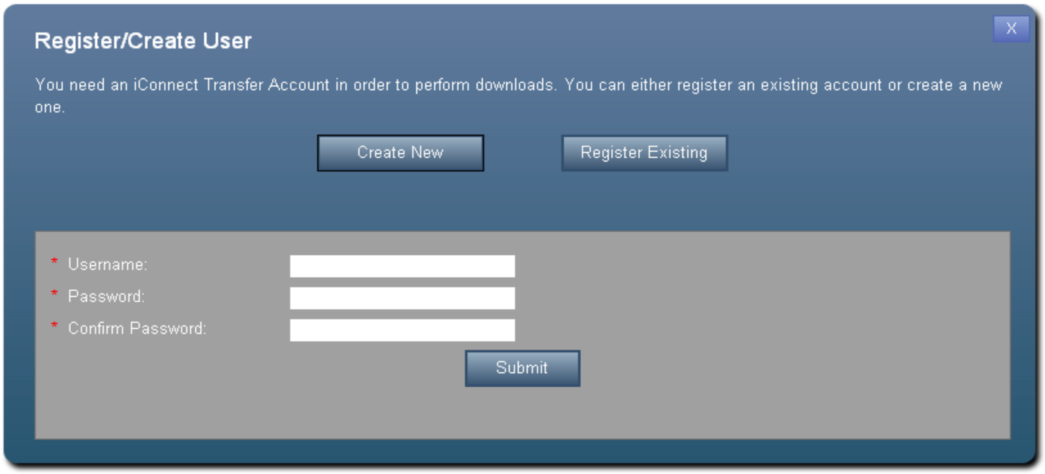
2. Click **Register Account**. The Register/Create User dialog opens.



NOTE: To register a transfer account, your workstation must have dual processors or better.

NOTE: If an account is already configured, the application displays a Change Account link.

3. Click **Create New**. The Register/Create User dialog appears as follows:



4. Provide the following information:
   - Username
   - Password
   - Confirm Password
5. Click **Submit**. You are returned to the Transfer dialog.

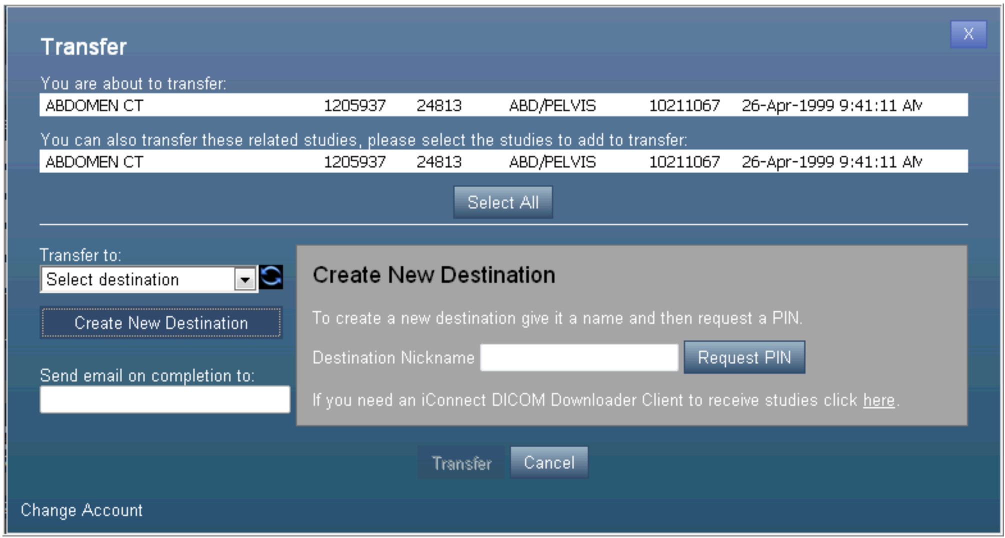
To register an existing account

1. Click **Register Existing**.
2. Type your username and password.
3. Click **Submit**.

To create a new destination

NOTE: You can only create a new destination if you have a Transfer Account. See **“To create a transfer account” on page 40**.

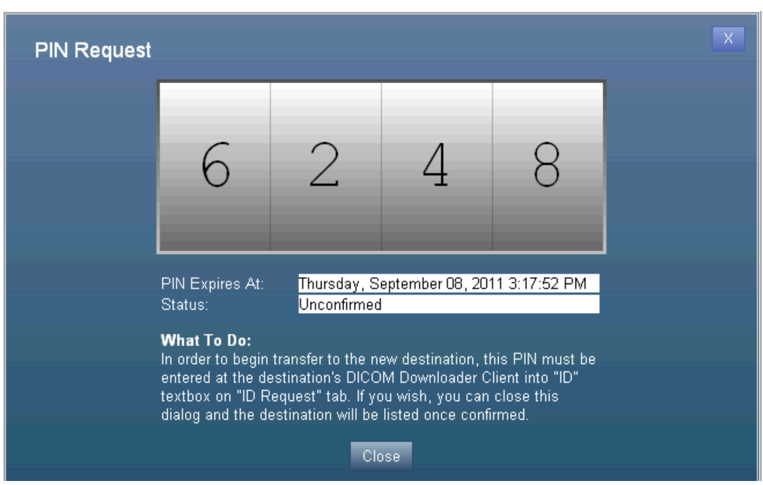
1. In the Transfer dialog, click **Create New Destination**. The Create New Destination group box opens.



2. In the **Destination Nickname** field, type a short, intuitive destination name.

NOTE: You cannot request a PIN without entering a destination nickname.

3. Click **Request PIN**. The PIN Request dialog opens.



4. Make note of your PIN. After the request is confirmed, the 'Unconfirmed' status changes to 'Confirmed'.

5. Click **Close**.

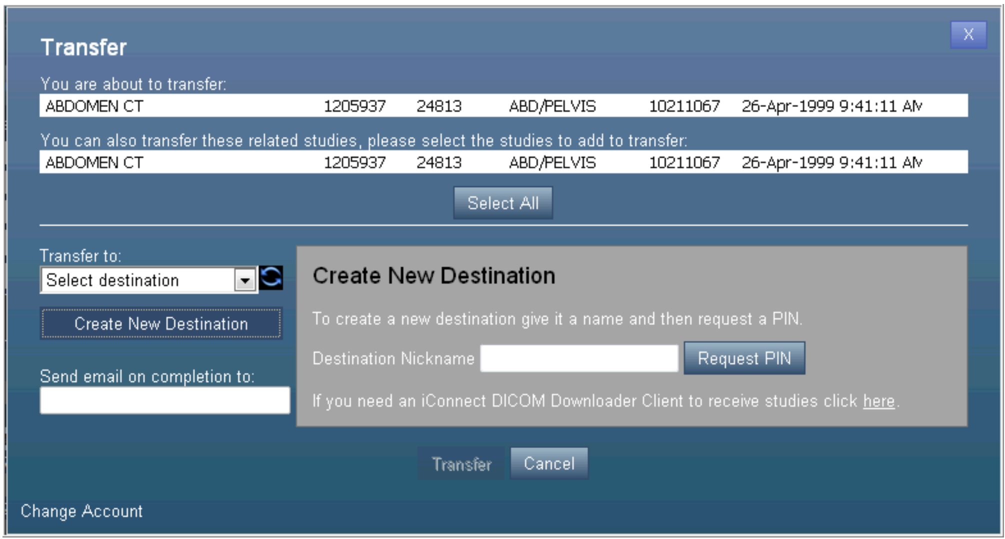
Installing and Configuring the DICOM Downloader

The iConnect DICOM Downloader enables you to identify the peers between which studies can be downloaded and transferred.

NOTE: You must have administrative privileges for the machine on which you are installing the iConnect DICOM downloader.

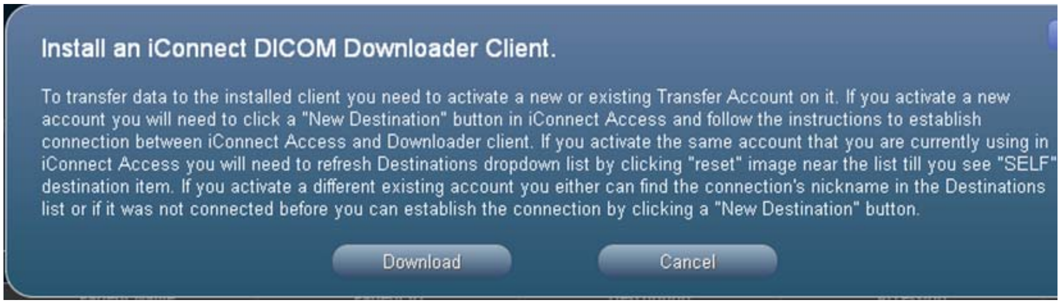
To download and install the iConnect DICOM Downloader

1. In the Transfer dialog, click **Create New Destination**. The Create New Destination dialog opens.



2. Click the **here** link to download the iConnect DICOM Downloader Client. This client enables you to identify and validate destinations.

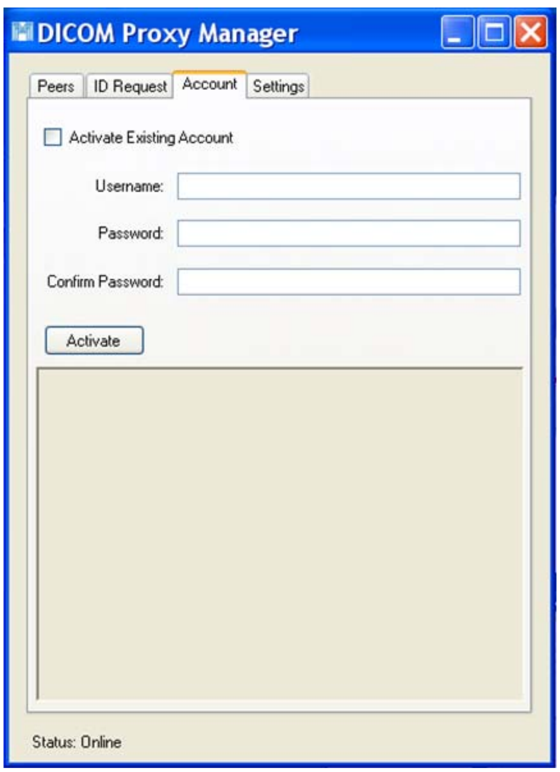
3. Click **Download** in the dialog that opens.



4. After the client is downloaded, launch the DICOM Proxy Installer. The installer will install the iConnect DICOM Downloader Client and will place a shortcut on your desktop.

To activate accounts

1. Open the DICOM Proxy Manager by double-clicking the icon on the desktop.
2. Click the Account tab to log into your account.



3. Do one of the following:

   - If you already have a transfer account, select **Activate Existing Account**, type your username and password, and click **Activate**.

- If you do not have a transfer account, perform the procedure **"To create a transfer account" on page 40**. After you have created a transfer account, return to the Account tab and complete the **Username**, **Password**, and **Confirm Password** fields. Click **Activate**.

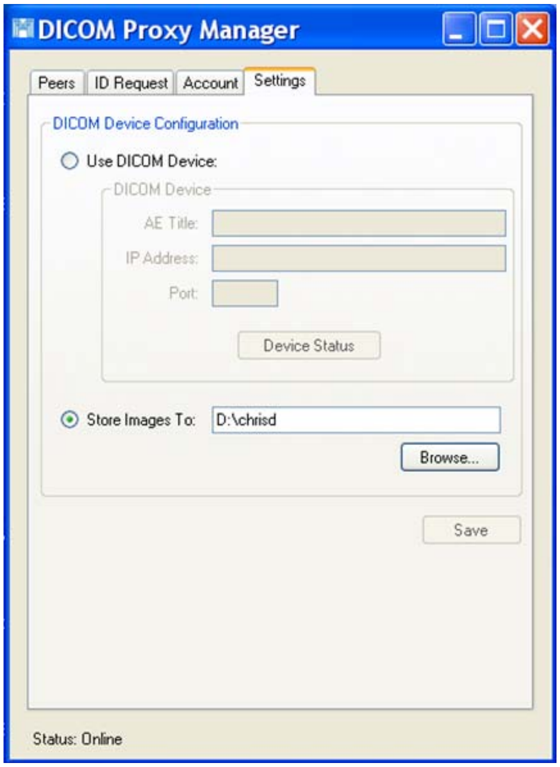
To confirm a destination

1. Click the ID Request tab.

2. Type the destination nickname (as recorded on the Create New Destination dialog).
3. In the **ID** field, type the PIN that was provided.
4. Click **Submit**. The requestor will receive a confirmation that the status of the destination is confirmed.

To define DICOM Proxy Manager settings

1. Click the Settings tab.



2. If you are downloading to a DICOM device, select **Use DICOM Device** and specify the following:

   - AE Title – The AE title of the DICOM device.
   - IP Address – The IP address of the DICOM device.
   - Port – The port number of the DICOM device.

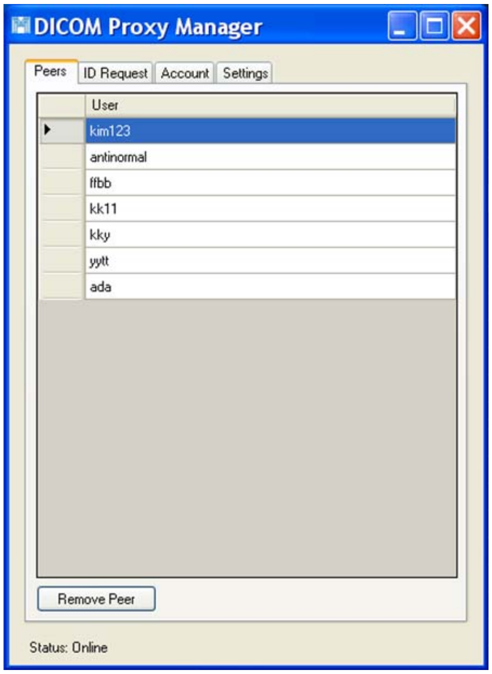
   Optionally click **Device Status** to ensure that you can connect to the DICOM device.

3. If you are downloading to a local destination, select **Store Images to** and specify a destination directory.

4. Click **Save**.

To view existing destinations

1. The Peers tab displays the peers that are already registered.



If your DICOM Proxy Manager is offline...

If the status of your DICOM Proxy Manager remains offline after starting it, then it is possible that it is referring to the incorrect XMPP server or account server URL. To verify these settings, do the following:

1. Your System Administrator will be able to provide you the XMPP Server and Account URL values. These values are contained in the XMPP sub-tab of the Enable Features section of the Merge iConnect Access Service Tool.

2. On the machine on which the DICOM Proxy Manager is installed, open the following file using a text editor: \Program Files (x86)\Merge Healthcare\DICOM Proxy\config\DICOMProxyConfig.xml.

3. Locate the following...

```
<config>
  <XmppServer>ixs.merge.com</XmppServer>
  <AccountServerUrl>https://iws.merge.com/jabber</AccountServerUrl>

</config>
```

   ... and ensure that the XMPP Server and Account URL values match the values found in the iConnect Access Service Tool.

4. If the values do not match, change them in the DICOMProxyConfig.xml file and save the file.

Chapter 4 Study Viewer

The Study Viewer enables you to review studies selected from the Studies or tabs. Study Viewer functionality is described in the following:

The Study Viewer supports both HTML4 and HTML5. If your browser supports HTML5 and you want to enable it, you can change the Default Viewer Setting in User Preferences. See **"Configuring User Preferences" on page 147**.

NOTE: The following features are not supported in the HTML5 viewer: Edge Enhancement, Linked Scrolling, Joint Line, Localizer Lines, Plumb Lines, and Transischial Line.

NOTE: Images with embedded overlays are not supported in the HTML5 viewer.

Opening the Viewer

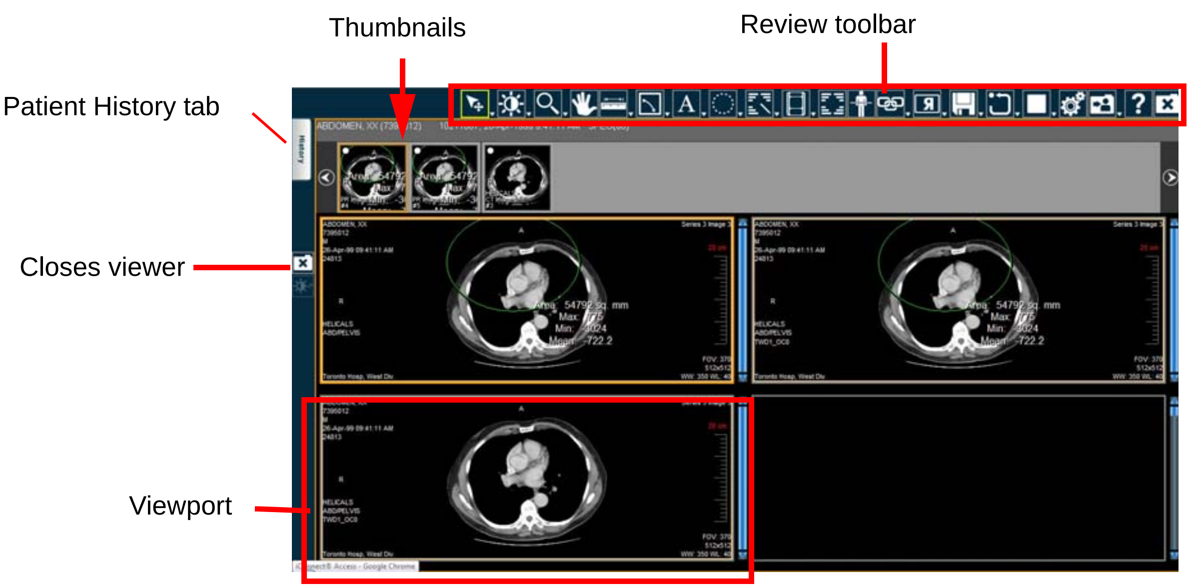
To open the viewer

1. Search for a study. See **"Performing Searches" on page 18**.
2. Do one of the following:
   - Select a study in the search results and click **View Study**.
   - Double-click a study in the search results.

   The study opens in the Study Viewer.

Study Viewer Components

The Study Viewer window consists of the following components:



- **"History Tab" on page 51**
- **"Thumbnails" on page 58**

- **"Viewer and Viewports" on page 59**
- **"Review Toolbar" on page 59**

NOTE: To help you differentiate between patients who have the same name, each viewport displays the patient name and a unique patient ID.

NOTE: When loading a shared study from a holding a pen that has not been reconciled yet, a yellow caution icon will appear at the top of the viewport and also next to the study in the Patient History tab. The tool tip for the icon states "Foreign Exam. This study may not belong to the same patient.".

History Tab

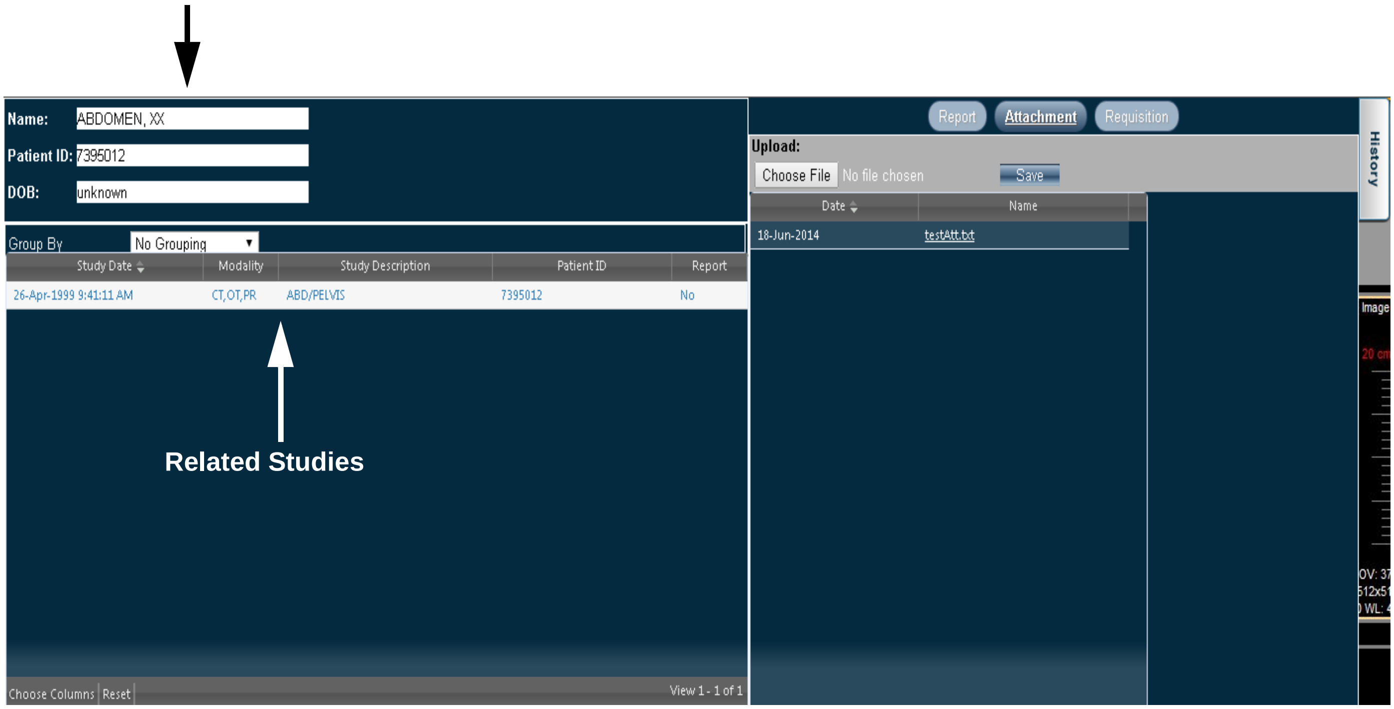
The History tab contains the following areas:

- The patient information area displays the patient's name, patient ID, and date of birth.
- The related studies section displays any studies that may be associated with the patient. When you load a study, the application automatically searches for studies with the same patient name, patient date of birth and patient ID and displays them in the Related Studies List. If the study you are reviewing has related studies, you can open them for comparison.

  When opening a related study in the viewer, each study will have its own panel with thumbnails, demographic information and a side study/modality specific toolbar. Up to three study panels can be open at one time. Each can be closed individually, except for the base study (the one that was originally selected from the study list).
- The report section is accessed by clicking the **Report** button. This section displays the study report, provided that the study has an associated report. Reports can include audio files (such as digital dictations) that you can play directly from the Report Panel or the viewer (if you have selected Report View).
- The attachment section is accessed by clicking the **Attachment** button. This section displays attachments associated with the study has an associated report and enables you to add new attachments. See **"Working with Attachments" on page 54**.

- The requisition section is accessed by clicking the **Requisition** button. This section displays the study's order requisition (if available).

Patient Information



Refer to the following for more information:

- **"Viewing Order Requisitions" on page 52**
- **"Viewing a Study Report" on page 53**
- **"Working with Attachments" on page 54**
- **"Selecting Related Studies" on page 56**
- **"Selecting and Loading Different Series" on page 56**

Viewing Order Requisitions

If a study contains an order requisition, you can display it in the viewer using the Requisition View. The viewer supports the following types of documents:

- DICOM images
- Non-DICOM images (such as JPG and GIF files)

- Adobe Portable Document Format (PDF) documents
- Microsoft Office documents (for example, Microsoft Word, Microsoft PowerPoint®, Microsoft Excel®)
- Videos (such as AVI and MPG files)

NOTE: The Requisition View is an optional feature and may not be available at your site. This feature requires custom adaptation offered by Merge Healthcare's Professional Services team. Contact Customer Support for details.

When viewing the order requisition in the viewer, the viewer provides basic tools that are native to the file format of the order requisition. For example, if the order requisition is an Adobe PDF file, the viewer provides the application's basic toolbar so you can edit the document. However, you can only save your changes locally.

NOTE: Except for DICOM images, the viewer can only display documents whose application is already installed on your workstation. For example, to load and review a Microsoft Word document, the application must already exist on your local workstation. If the application is not already installed, the application asks if you want to save the document locally.

NOTE: Any changes to the requisition files performed in the viewer can only be saved to the local computer.

To view a study's order requisition

1. Select and load the desired study (see **"Selecting and Loading Studies" on page 28**).
2. Open the History tab.
3. Click **Requisition** to display the requisition in the viewer.

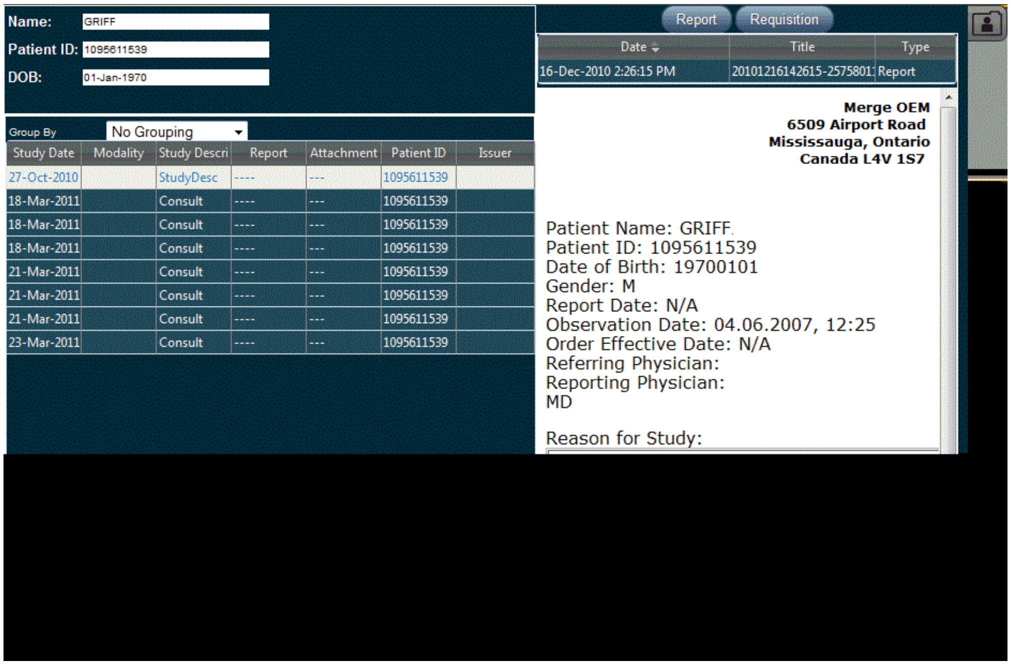
Viewing a Study Report

This section describes how to view a study report, provided that the study has an associated report.

Reports can include audio files (digital dictation) which you can play directly from the Report Panel or the viewer (if you have selected Report View). For audio files, the application displays audio controls then automatically plays the audio file once it has finished loading.

To access a study report

1. Select and load a study (see **"Selecting and Loading Studies" on page 28**).
2. Do one of the following:
   - Open the History tab, select a study, and click **Report** to display the report in the viewer.



   - Open the study in the viewer and click the report button.

NOTE: To return to viewing the patient's images in the viewer, close the Patient History tab.

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3. If a study has multiple reports, select the desired report from the top of the report list.

Working with Attachments

You can attach and view non-DICOM objects (such as *.xml files) to a selected patient study.

NOTE: If this feature is unavailable and you want to attach a file to a study, contact your System Administrator.

NOTE: By default, the application limits the file size of attachments to 10MB. To increase or decrease this limit, contact your System Administrator.

CAUTION: **When you attach a file, you are attaching the file to the study that is currently selected in the Related Studies List.**

To attach a file to a study

1. Select and load the desired study (see **"Selecting and Loading Studies" on page 28**).
2. Click **Attachment**. The attachment panel opens.

3. Click **Choose File** and browse to the file location and select the desired file.
4. In the Attachment Panel, click **Save**. The application uploads the selected file to the iConnect Access Web server.

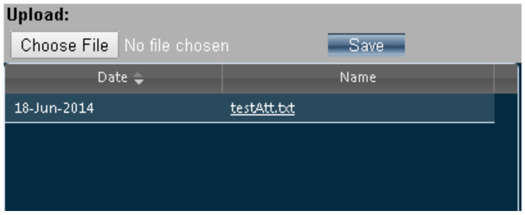
NOTE: If the file name of the file being attached to the study exceeds 50 characters, it is recommended that you rename the file to a name that contains fewer than 50 characters. The application may reject file names that are excessively long.

5. To attach additional files, repeat **Step 3** to **Step 4**.

To view attachments

1. Select and load the desired study (see **"Selecting and Loading Studies" on page 28**).
2. Expand the Patient History tab.

3. Click **Attachment**.



4. Click the file name of the attachment you want to view. The File Download dialog opens.

5. Open the file or save it for viewing later.

Selecting Related Studies

Related studies enable you to compare the original study with one or more additional studies. Related studies are displayed in their own viewers.

To select and load another study

1. From the Related Studies List, click the desired study. The application loads the study images into the Series Thumbnails panel.

2. From the Series Thumbnails panel, double-click the image or series you want to load.

Selecting and Loading Different Series

You can load different series from the same or different study for the same patient into a viewer. Multiple viewers enable you to load different series for side-by-side comparison.

To load different series from the same study

1. Select the number of viewers (see **"Series Viewer Options" on page 69**).

2. From the Related Studies List, click the desired study. The application loads the study images into the Series Thumbnails panel.

3. Select a viewer.

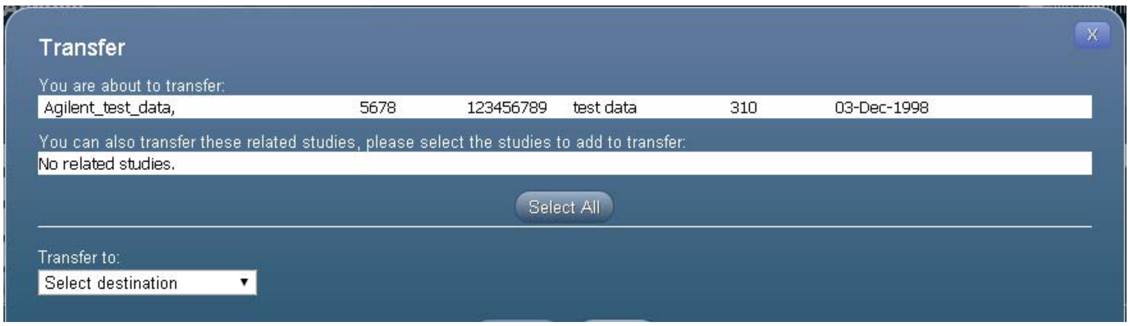
4. From the Series Thumbnails panel, double-click the image or series you want to load into the selected viewer.

5. Repeat **Step 3** to **Step 4** for each viewer.

Study Transfer Dialog

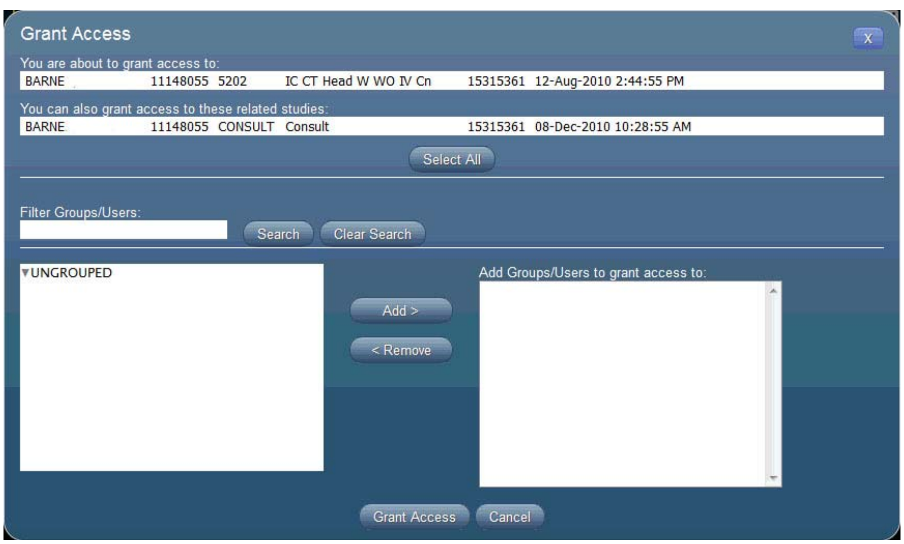
The Transfer feature allows you to transfer a study from the iConnect Access application to another data source.

NOTE: The Transfer Studies feature is also accessible from the study list. For details on using this feature, see **"Transferring or Downloading Studies" on page 33**.



Study Sharing Dialog

If configured, the Study Sharing dialog enables you to grant access to the study to another iConnect Access user. This feature is also available from the Studies tab.



For more information, see **"Managing Access to Studies" on page 31**.

Thumbnails

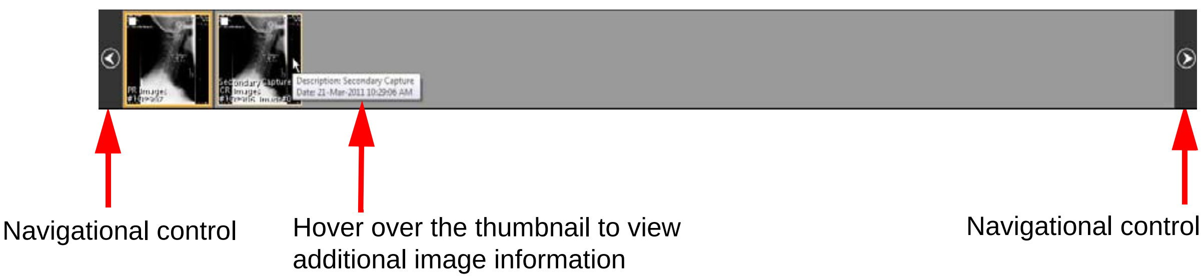
Thumbnails may represent a single image (such as a CR, DR, or ultrasound) or a series (in the case of a slice stack of MR or CT images). Thumbnails allow you to quickly select different series for review. Each thumbnail displays one image from the series it represents.

Thumbnail behavior can be configured per modality in the System Configuration tool, in domain settings, and in user preferences. For example, you can choose to have a CR series of thee images represented by a single thumbnail ("Series" option) or by three thumbnails ("image" option). If the **Image** option is selected, each viewport that corresponds to such a thumbnail displays a single image.

NOTE: Some studies, such as dual echo MR, appear as a single study in the Studies window but are interpreted by the application as two separate series (one series for each TE value). In these cases, the application displays two thumbnails instead of one.

NOTE: The Series Thumbnail panel displays the image series for the study currently selected in the Related Studies List. See **"Selecting Related Studies" on page 56**.

If the number of thumbnails exceeds the width of the screen, the controls highlighted below enable you to navigate through the available thumbnails.



To open a thumbnail image in a viewport

1. You can open a thumbnail in a viewport in the following ways:
   - Select the viewport in which you want to open the thumbnail and then double-click the thumbnail.
   - Click and drag the thumbnail to the desired viewport.

Viewer and Viewports

The viewer consists of a configurable number of viewports. You can configure the viewer by means of the following:

- **“Image Layout Options” on page 72**
- **“Series Viewer Options” on page 69**

Review Toolbar

The Review toolbar contains tools that you can use to investigate and manipulate images in the image viewer.

NOTE: The Review toolbar is configurable by the System Administrator. As a result, the contents of the button bar and the sequence of buttons may differ.

For more information, see:

- **“All-In-One Tool” on page 61**
- **“Window Options” on page 61**
- **“Zoom” on page 61**
- **“Pan” on page 62**
- **“Lines and Angles” on page 63**
- **“Text and Annotations” on page 64**
- **“Annotation Options” on page 65**
- **“Cine and Stack” on page 66**
- **“Link Options” on page 67**
- **“Image Orientation” on page 67**
- **“Print and Generating Reports” on page 68**
- **“Save” on page 68**

All-In-One Tool

	Enables the All-In-One tool. See **"Using the All-In-One Tool" on page 75**.

Window Options

	Enables you to manually adjust the *window width*, which can be wide (many grays, less contrast) or narrow (fewer grays, more contrast). The *window level* can be high (dark) or low (bright). See **"Changing Window Settings" on page 76**.
	Applies optimum window width and level values based on a histogram analysis of the active image. See **"Changing Window Settings" on page 76**.
	Inverts the image grayscale to provide a negative image display. Click the button again to return to the original setting. For MG images, this feature only inverts the breast tissue; the background remains black.
	Resets the image display parameters (such as window settings, zoom, pan, orientation and grayscale inversion) to the last saved settings or, if you have not saved the settings during the current session, to the settings applied when the study was first loaded. When you reset the image display parameters, depending on the scope set for the viewer, the application resets the current image or all the images in the series.
	Full screen mode utilizes more screen real estate by hiding the menu bar and toolbar from the viewer. See **"Using Full Screen Mode" on page 76**.
	Closes the viewer and returns to the study list.

Zoom

	Zooms the selected image. In the viewport, click and hold the left mouse button, and move the pointer up to zoom in and down to zoom out.

 	Magnifies an area of an image. You can move the magnification box to different locations within the viewport. In the HTML4 viewer, move the magnifier window to magnify areas of interest. Left-click within the magnification area to dismiss the window. In the HTML5 viewer, click and hold the left mouse button to activate the magnifier. Release the button to deactivate it. To change the magnification level, you can either disable the tool and select a different magnification factor, or scroll the mouse wheel while in the magnifier.

Pan

	Pan. Repositions the image within the viewport.

Lines and Angles

	Line measurement. The application displays the distance between the starting point and ending point in millimeters. When using the HTML4 viewer, the behavior of this tool can be configured in three ways in the iConnect Access Service Tool. When using the HTML5 viewer, all behaviors are supported. To change the behavior, contact your System Administrator. By default, the line measurement tool in the Study Viewer requires you to click the left mouse button to identify the start of the line, and click again to identify the end of the line. If the Use Alternate Drawing option is enabled in the Service Tool, after the line is drawn, you can select and move the line and each of it's endpoints. The third behavior enables you to use the option, Rubberbanding Behavior When Drawing Line Measurement. With Rubberbanding, click and hold the left mouse button to start the line. Drag the pointer to the desired location and release the mouse button to identify the end of the line. The line appears as you move the mouse. **NOTE:** With this feature, after the line is drawn, you cannot select and move the endpoints of the line.
	Calibration. Click two points on the image to create a line. The application displays the distance, and an input field to enter the newly calibrated distance, in millimeters. See **"Working with Calibration Lines" on page 83**.
 	Plumb lines; Horizontal and Vertical. Select the desired plumb line orientation—vertical or horizontal—and click anywhere on an image to draw a plumb line across the entire image intersecting at the location of the mouse pointer. See **"Working with Plumb Lines" on page 86**. **NOTE:** This feature is not supported in the HTML5 viewer.
	Joint line. Measure angles for metatarsal osteotomies with the assistance of a line perpendicular to the base of the angle. Click two points on the image to create a reference line. Click a third point on the image to complete an angle. The application displays the angle measurement at the intersection. Adjustments can be made to Joint lines once they are created. See **"Working with Joint Lines" on page 86**. **NOTE:** This feature is not supported in the HTML5 viewer.
	Transischial Line. Used to measure leg length discrepancies for pre-operative planning of orthopedic surgeries. Click two points on the image to create a reference line. Click two more points on either side of the reference line to measure the distance between those points and the reference line. The application displays the distance between the two points and the reference line and calculates the discrepancy between the two distances. **NOTE:** This feature is not supported in the HTML5 viewer.

	Angle. Click three points on the image. The application displays the angle's measurement.
	Cobb angle. Click two points on the image to create a line. Click two more points to create the second line. The application extrapolates the point where the two lines intersect and displays the Cobb Angle.
	Free Draw. Click and hold the left mouse button to begin drawing nonlinear annotations on an image by moving the pointer. Release the left mouse button to end the annotation.
	Localizer Lines. These lines enable you compare images of different planes. The application takes one reference image, compares it with the images in the other viewers, then displays a line (if applicable) that shows where the reference image intersects with the other images. See **"Working with Localizer Lines" on page 81**. **NOTE:** This feature is not supported in the HTML5 viewer.

Measurements made in the Study Viewer can now be modified as follows:

- Left-click and drag a handle of a measurement to move the handle's location. Calculated values, such as distance measurements, are updated dynamically.
- Left-click and drag a measurement or text box to move it.
- Right-click a measurement to delete it.

Text and Annotations

	Add text. Click the image where you want the text to appear. The application places a text insertion point on the image. Type the text you want to place on the image. Click outside of the text box or press Enter to complete the function.
	Edit text. Click the text and edit as desired. Click outside of the text box or press Enter to complete the function.
	Toggles the text. Click once to hide the text and again to restore the text.
	Annotation rectangle. Click and drag the mouse pointer to draw a rectangle over the desired region. When you release the mouse button, the application displays the ROI measurements. *

	Annotation ellipse. Click and drag the mouse pointer to draw an ellipse over the desired region. When you release the mouse button, the application displays the ROI measurements. *
	Annotation ROI. Click and drag the mouse pointer to draw a freehand region of interest (ROI). When you release the mouse button, the application completes the ROI with a straight line between the start and end points. The application displays the ROI measurements.*

* For each annotation drawn, the following measurements are displayed: Area (pixel area in sq. mm), Max (maximum pixel value), Min (minimum pixel value), and Mean (average pixel value). For CT images, the pixel measurements are automatically converted to Hounsfield units.

Annotation Options

Annotation options enable you to manage the following annotations on the images:

- Measurement annotations (such as line, rectangle, ellipse, ROI, angle and cobb angle). All measurements are displayed in metric units.
- Text annotations (such as labels and notes).

The following table describes all of the available annotation tools:

	Edit annotation. When selected, enables you to modify a selected annotation in the image viewer.
	Delete annotation. When selected, deletes a selected annotation in the image viewer. **NOTE:** Annotations created in the HTML4 viewer must be deleted one component at a time if using the HTML5 viewer. It is recommended that you do not use HTML5 viewer to modify HTML4 viewer annotations, and vice versa.
	Delete all annotations. When selected, deletes all annotations in the image viewer.

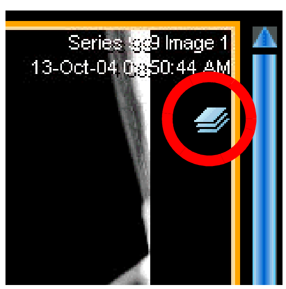
User Preferences

	Opens the **User Preferences** dialog, where preferences for the viewer are set by the user. When these preferences are set by an Administrator for a role, all members of the role inherit the same preferences unless overridden at the personal level. For more information, see **"Configuring User Preferences" on page 147**.

Pixel Value

	Pixel Value. In the HTML4 viewer, identifies the pixel coordinates and the pixel value of a pixel when you click on an image. In the HTML5 viewer, identifies the pixel coordinates and the pixel value of pixels when you click and hold the left mouse button and move the icon. The pixel value is expressed as an RGB value for color images or a greyscale value (representing brightness) for monochrome images. For CT images, the pixel measurements are identified by the abbreviation "HU" if the pixel values are stored in Hounsfield units. An abbreviation of "US" indicates an unspecified unit of measure.

Cine and Stack

	Cine. You can animate any active series using the Cine feature. Cine controls provide standard navigation commands that allow you to stop, pause and move forward or backward through the cine. You can also adjust the speed of the cine and use the zoom, pan, and window settings while in cine mode. See **"Animating a Series" on page 87**.
	Stack. Produces a stack of all images in the study within a single viewport. Use the scroll bars to scroll through the images that constitute the stack. An indicator displays in the viewport to identify that the images are stacked. 
	Scroll Tool. Enables you to scroll through the images in a series within a viewport by moving the mouse pointer up or down while the left mouse button is pressed.

Link Options

	Link all. See **"Link All / Link All Offset" on page 78**.
	Link all offset. See **"Link All / Link All Offset" on page 78**.
	Link cancel. See **"Cancel" on page 79**.
	Link selected. See **"Link Selected / Link Selected Offset" on page 78**.
	Link selected offset. See **"Link Selected / Link Selected Offset" on page 78**.

NOTE: Linked scrolling is not supported in the HTML5 viewer.

Image Orientation

	Flips the image on the horizontal axis.
	Flips the image on the vertical axis.
	Rotates the image clockwise or counter-clockwise in 90 degree increments.

Edge Enhancement

	The Edge Enhancement feature allows you to enhance the edge of an image. Edge enhancement is an image processing filter that enhances the edge contrast of an image to improve its apparent sharpness. **NOTE:** This feature is not supported in the HTML5 viewer. **NOTE:** The edge enhancement filter is intended for use on images with high spatial resolution and low signal-to-noise ratios. The edge enhancement filter is intended for use on X-ray images only. For more information, see **"Applying Edge Enhancement" on page 88**.

Print and Generating Reports

	Prints the selected patient image to a printer connected to your local workstation. If you are connected to a network, you can print to a network printer. The application's print function is dependent on the Web browser that you are using. Hardcopy printouts can vary between different Web browsers. See **"Printing Patient Images" on page 90**.
pdf	Download PDF. Generates a report of the study with embedded key images (if applicable) in PDF format. This option is available when the study being viewed contains a report in text format. The first page of the report includes information that describes the exam and can optionally include logos and the institution's name and other information. Patient information appears in the header on every page. See **"Generating PDF Reports" on page 92**.

Save

	Saves the series to the data source from which it was originally opened.
	Saves the selected annotated image to the data source from which it was originally opened.

Series Viewer Options

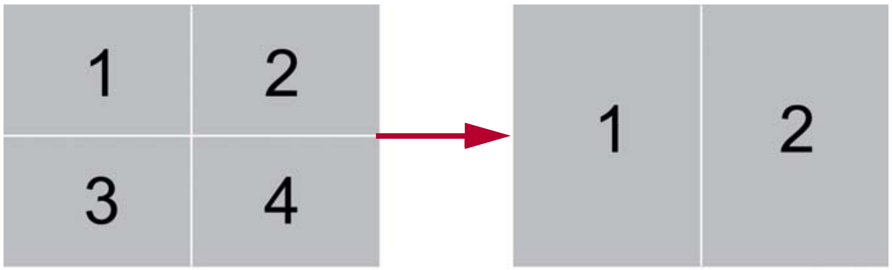
For modalities other than PR and KO, series scope is set by default.

	The viewer window enables you to display one, two, four, or six viewers. Each viewer displays a series which you load from the Series Thumbnails panel. When you use multiple viewers, you can perform side-by-side comparison of the same or different series, from the same or different studies for the same patient.

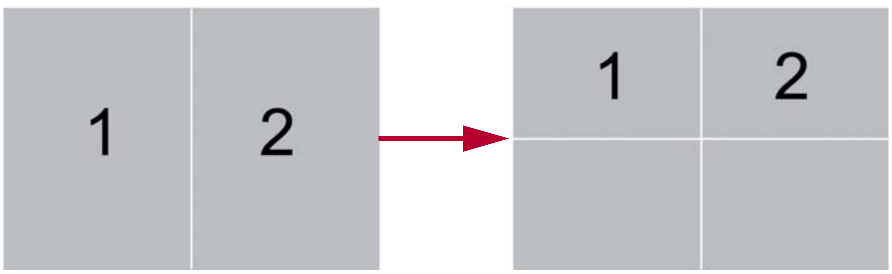
NOTE: When you first load a study, the application displays the number of viewers defined in the modality presets. For information on defining the modality presets, refer to the *i*Connect Access *Administrator's Guide*.

For details on selecting and loading different series from the same or different studies into each viewer, see **"Selecting and Loading Different Series" on page 56**.

When you change the number of viewers from a larger to a smaller number, the application preserves the first n images (where n is the smaller number). When you change the number of viewers from a smaller to a larger number the application preserves the images.



Larger to smaller



Smaller to larger

The application saves the last viewer settings and displays the same number of viewers the next time you load a study into the viewer window.

External Application Launch

	Launches an external application.

Series Scope Options

Scope is the range of displayed images to which the application applies your changes (such as window settings, zoom, pan, orientation and grayscale inversion). There are two scope settings: Image and Series. When you apply a scope, the setting applies to all viewers during a review session.

NOTE: For PR and KO modalities or if the viewer has global stack enabled, the default scope is set to Image. Otherwise, the scope setting is set to Series. If both scope options are configured on the toolbar, the system highlights the option that is applied.

When you first load a study, the viewer displays the images using the last saved presentation state (in other words, the images do not share the same image settings). For example, if you had previously set your scope setting to Image and saved your review parameters (see **"Saving Presentations" on page 93**), when you reload the study, the viewer displays your images as they were last saved. If you do not change the scope setting back to Image, when you apply any changes to the review parameters, the application applies those changes to every image in the series.

NOTE: If the application detects different pixel spacing between images in a series, the viewer displays a warning message immediately. After you dismiss the warning message, the application only applies zoom and pan settings to the current image to prevent inaccurate measurements. For example, if your scope setting is Series, and the images have different pixel spacing values, the application applies review changes to all images in the series except for zoom and pan changes. The application only applies those changes to the image on which you are currently reviewing.

CAUTION: **If you change your scope setting from Image to Series during a review session, the application applies any review parameters on any image to all the images in the series.**

Your scope setting applies to all the series that belong to the same study, including the studies in the Related Studies List.

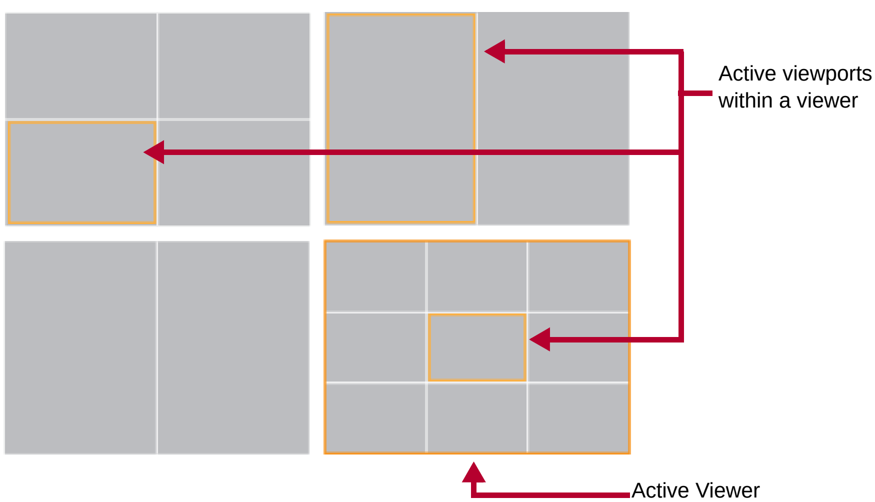
	Applies review parameters to all images in a series.
	Applies review parameters to the current image.

Image Layout Options

For PR and KO modalities, image scope is set by default.

	The image layout specifies the number of rows and columns in which the images are displayed within a viewer. Each image area within a viewer is referred to as a viewport. For example, if you select a 2x2 layout, there are four viewports in the viewer.

The following example shows four viewers, each with a different layout. The application applies an orange bounding box to the active viewport.



Series Navigation Options

	Enables you to navigate to the next or previous series.

Sharing Studies

	Enables you to send a study to non-registered users via email. See **"Emailing Studies" on page 95"Emailing Studies" on page 95**.
	Opens the **Grant Access** dialog. See **"Managing Access to Studies" on page 31**.

Transfer Study

	Opens the **Transfer** dialog. See **"Transferring or Downloading Studies" on page 33**.

Nominate Study for Archiving

	Opens the **Confirm Study Archive Nomination** dialog. See **"Nominating Studies for Archiving" on page 121**.

Archive Study

	Opens the **Reconcile/Archive Study** dialog. See **"Archiving Studies" on page 122**.

Reroute Study

	Opens the **Reroute Study to New Destination** dialog. See **"Rerouting Studies to a New Destination" on page 123**.

Add Receiver

	Opens the **Add Additional Details** dialog. See **"Adding Recipients" on page 121**.

Consultation Notes

	Opens the Consultation Notes screen. See **"Viewing and Sending Consultation Notes" on page 142**.

Online Help

	Opens the iConnect Access online help system in another browser window.

Working with Studies

The following sections describe how to work with studies:

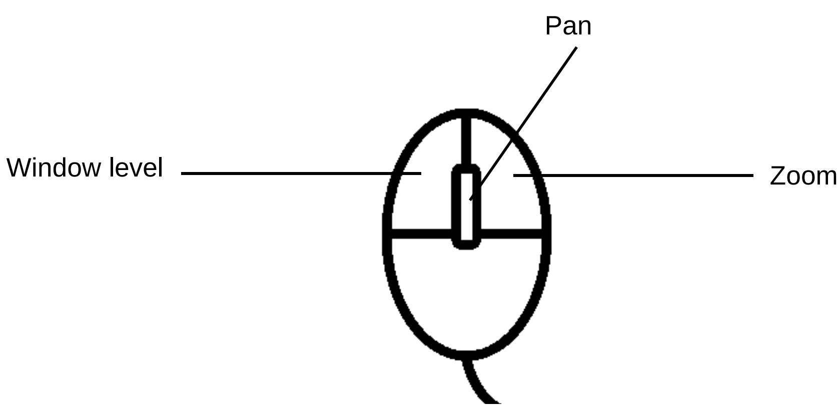
- "Using the All-In-One Tool" on page 75
- "Using Full Screen Mode" on page 76
- "Changing Window Settings" on page 76
- "Linked Scrolling" on page 78
- "Working with Localizer Lines" on page 81
- "Animating a Series" on page 87
- "Printing Patient Images" on page 90

Using the All-In-One Tool

The All-In-One tool enables you to assign specific functions to the right and left mouse button and to the mouse wheel. The functions are available when the cursor is positioned over images displayed in the image viewer.

The All-In-One tool is enabled by default. The tool can be disabled by clicking any other button in the Review toolbar. If the tool has been disabled, it can be enabled by clicking the following button in the Review toolbar:

The following illustrates the functions that may be assigned to mouse buttons.



You can assign functions to the right and left mouse button and to the mouse wheel in the **User Preferences** dialog. See "User Preferences" on page 147.

Using Full Screen Mode

You can create more space on the monitor for viewing images using iConnect Access Full Screen mode. iConnect Access Full Screen mode utilizes more screen real estate by hiding the menu bar and toolbar from the viewer.

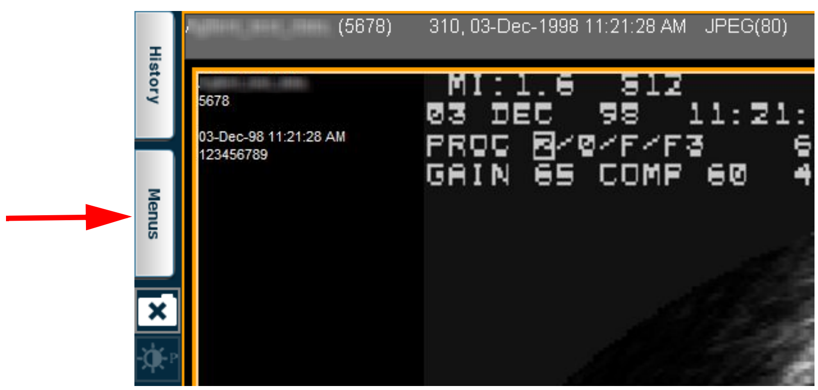
NOTE: This is different from your browser's full screen () F11 mode.

To use Full Screen Mode

1. In the viewer window, click the **Full Screen** button.

   The application hides the menu bar and toolbar and maximizes the viewer(s).

2. To exit from Full Screen mode, click **Menus**.



3. Click the **Full Screen** button again.

Changing Window Settings

The window settings (such as window width and window level) on digital images are similar to the contrast and brightness, respectively, on your computer screen. The *window width* can be wide (many grays, less contrast) or narrow (fewer grays, more contrast). The *window level* can be high (dark) or low (bright). You can apply the window width and window level functionality across different modalities, including 2D color studies (such as Doppler U/S, PET, NM).

When you change the window settings, you can change it manually, automatically, or by using presets. Presets are selected in the User Preferences screen. For more information on the User Preferences screen, see **"User Preferences" on page 147**. The number of available presets depends on what your System Administrator has configured for your site.

NOTE: To add additional presets, contact your System Administrator.

When you change the window settings manually, the windowing operation is sensitive to the speed at which you move the mouse. If you move the mouse slowly, the window level changes will be relatively small. If you move the mouse more quickly, the changes will be relatively larger. Also, the changes will be relatively larger for higher resolution data.

NOTE: If you are using Mozilla Firefox, do not drag the mouse outside of the browser when changing the window settings (in other words, when you release the mouse button, make sure the mouse pointer stays within the boundaries of the browser).

To change the window settings using the mouse

1. In the Review toolbar, click the **Window Level** button.

2. Adjust the window width and/or level as follows:

   - Click and drag the mouse *vertically* over the selected image to adjust the window *level*.
   - Click and drag the mouse *horizontally* over the image to adjust the window *width*.

To change the window settings automatically

1. In the Review toolbar, click the **Auto Window Level** button.

2. The application applies optimum window width and level values based on a histogram analysis of the active image.

Linked Scrolling

Linked scrolling automates the scrolling of multiple series in several viewports at the same time. When one viewport is scrolled, the other linked series scroll in increments based on their physical location. If images cannot be matched spatially, the other selected viewports scroll in increments based on their numbering (numerically).

The system provides the following link options:

- "Link All / Link All Offset" on page 78
- "Link Selected / Link Selected Offset" on page 78
- "Cancel" on page 79

Link All / Link All Offset

The **Link All** option links all currently displayed series. The system attempts to automatically align the slices based on their DICOM position and orientation attributes.

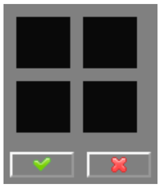
The **Link All Offset** option links all currently displayed series. The system assumes the current scroll positions represent spatially aligned images. The system maintains the same offsets as the images are scrolled.

Link Selected / Link Selected Offset

The **Link Selected** option links only the studies selected by the user. The system attempts to automatically align the slices based on their DICOM position and orientation attributes.

The **Link Selected Offset** option links only the series selected by user. The system assumes the current scroll positions represent spatially aligned images. The system maintains the same offsets as the images are scrolled.

When you select either of these options, the system displays a representation of the viewers currently displayed; for example:



When you click within the boxes to identify the viewers (and series) that you want to link, the system identifies the linked boxes as follows:

Click the check mark to complete the link.

Cancel

The **Cancel** option unlinks images.

Linking Series

To link series

1. Change the number of viewers to compare the series (see **"Series Viewer Options" on page 69**).
2. Load and display the series (see **"Selecting and Loading Different Series" on page 56**).
3. From the **Linked Scrolling** drop-down list, select the appropriate link option. For more information on individual options, see **"Link Options" on page 67**.

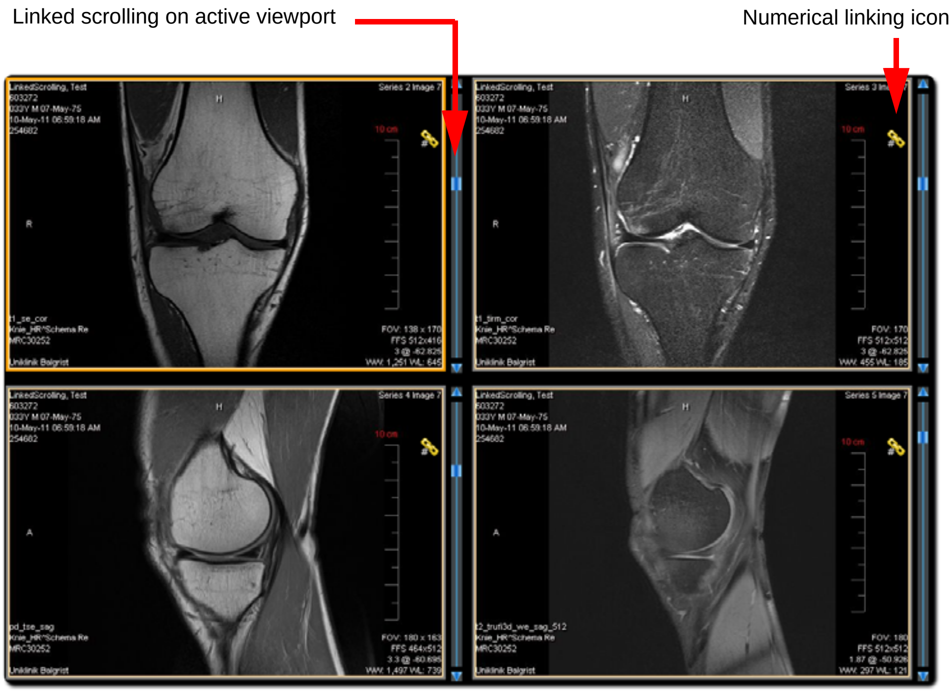
NOTE: The Link All features may or may not be available. Contact your System Administrator.

NOTE: If the series is linked numerically, the images display the linked icon with the number sign beside it. If a series is linked spatially, the number sign does not appear.

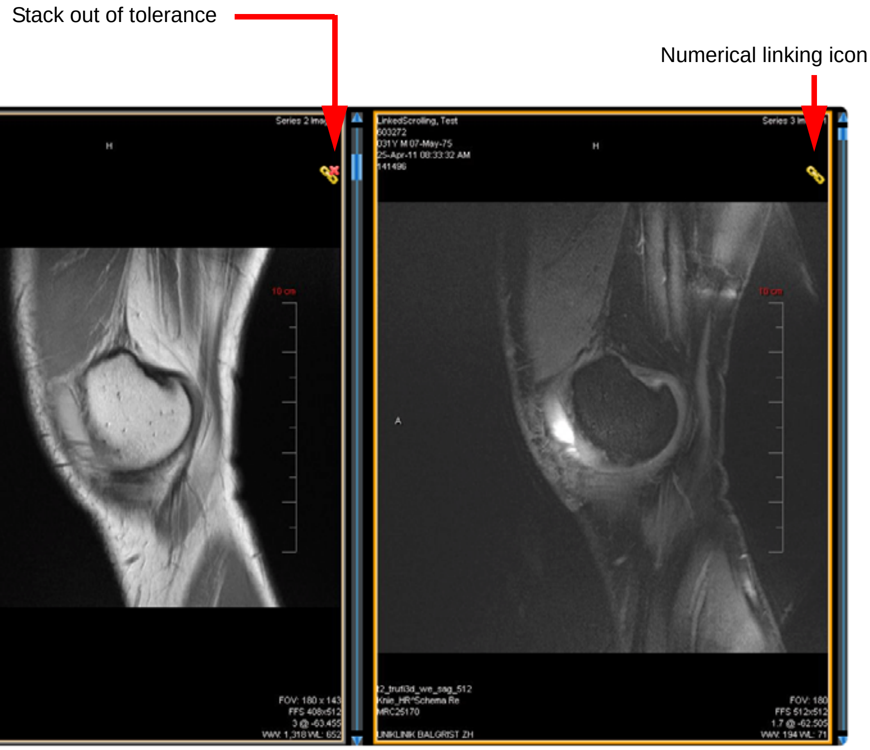
To manipulate linked series

Use the scroll bars to scroll through the stacks. The linked series scroll simultaneously according to how they are linked.

The example below displays secondary capture images using the Linked Scrolling feature (Linked All).



NOTE: If the images are determined to be too far from each other (in other words, beyond the configured slice distance or angle tolerance), an X appears beside the linked icon. The tolerances are only configurable at the system level. For details on configuring the tolerance levels, refer to the iConnect Access Installation Guide.



Working with Localizer Lines

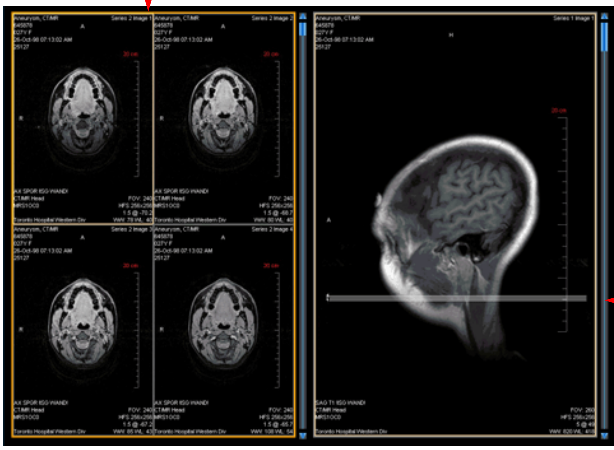
The application can display localizer lines when you compare images of different planes. The application takes one reference image, compares it with the images in the other viewers, then displays a line (if applicable) that shows where the reference image intersects with the other images.

NOTE: This feature is only available when you have multiple viewers (see **"Series Viewer Options" on page 69**).

NOTE: After you turn on the Localizer Line feature, it remains active until you turn it off or when you switch from multiple viewers to a single viewer (see **"Series Viewer Options" on page 69**).

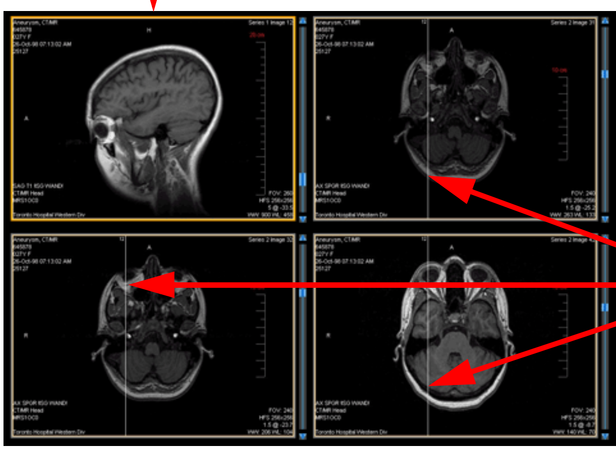
The following examples show a viewer selected as the reference and the images in the other viewers displaying the localizer lines.

Reference Images



Localizer line

Reference Images



Localizer lines

To display localizer lines

1. Select your viewer setting (see **"Series Viewer Options" on page 69**). You must have a minimum of two viewers.

2. Select and load the desired images.

3. Select the image layout for each viewer (see **"Image Layout Options" on page 72**).

4. Click the viewer that contains the images you want to use as a reference.

5. In the Review toolbar, click the **Localizer Line** button.

   The images in the other viewers update to show the localizer lines (that is, where the images intersect).

NOTE: If the reference image is on the same plane as the images in the other viewers, the application displays a white box around the image.

6. To change the reference image, click a different viewer. The images in the other viewers update to show where the images intersect.

NOTE: When you click another viewer, the series in that viewer immediately becomes the reference image even if you are only scrolling that series or applying a tool on that image/series (for example, pan, zoom, window settings).

7. In the Review toolbar, click the **Localizer Line** button to turn off the feature.

Working with Calibration Lines

In the image viewport, the Calibration tool enables you to draw a calibration line and input its length in millimeters. After calibration, all existing annotations in the image are recalculated and any new annotations will be calculated using the newly calibrated value. The calibration line appears as a normal line measurement afterwards.

The Calibration tool only affects the image level, therefore each Calibration tool only affects one image from the image viewport. Other images in the same series are not calibrated.

NOTE: The Calibration tool is disabled on PR/KO/MR/CT/PET/NM series images.

You cannot perform calibration by editing an existing calibration line. The calibration process must be repeated to re-calibrate.

When you apply the Calibration tool for inputting the actual length, the new pixel spacing is recalculated according to the current pixel aspect ratio value. If both pixel spacing and pixel aspect ratio do not exist, square pixels are assumed for calculating the new pixel spacing.

When you apply the Calibration tool to input the actual length, the new pixel spacing is recalculated according to the current pixel aspect ratio value. If neither the pixel spacing nor pixel aspect ratio exist, square pixels are assumed for calculating the new pixel spacing.

The following units of measure apply to measurement values:

- px – the measurement is displayed in pixels
- mm cal – Indicates that the pixel spacing for the measurement was calibrated by the application, either by using the provided Estimated Radiographic Magnification Factor (ERMF) or else by using other correction factors provided by the modality.
- mm det – Indicates that the pixel spacing for the measurement came directly from the detector/modality and was not calibrated by the application.
- mm cal ps – Indicates that the pixel spacing for the measurement was manually calibrated using the Manual Calibration Tool
- mm unknown – the measurement value is unknown

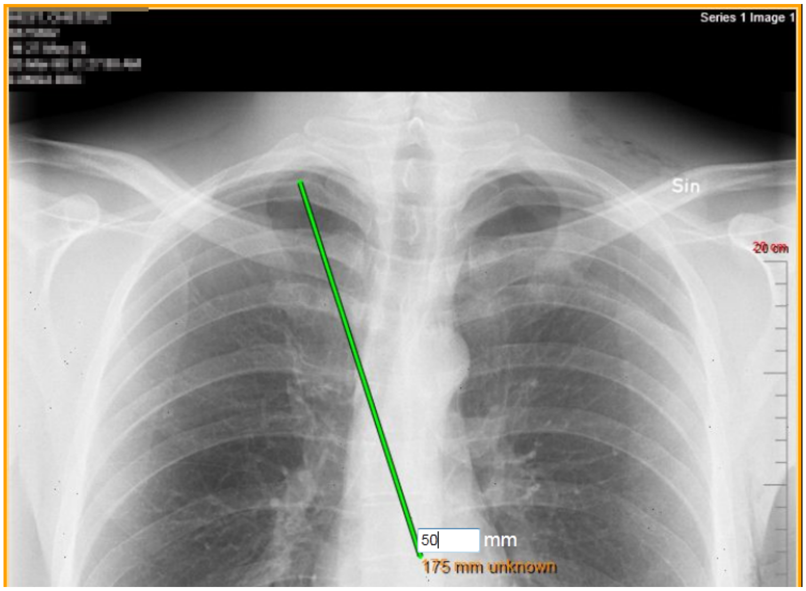
Depending on the type of calibration performed, one of the following indicators may also be displayed:

- FIDUCIAL – Indicates that the pixel spacing values have been calibrated by the operator or image processing software by measurement of an object (fiducial) that is visible in the pixel data and is of known size and is located close to the central ray (e.g. a catheter).
- GEOMETRY – Indicates that the pixel spacing values account for assumed or known geometric magnification effects and correspond to some unspecified depth within the patient.

To display calibration lines

1. Click the image viewport of the image you want to calibrate.
2. Click the **Calibration** tool.

3. Draw a line in the image by clicking at the start point and clicking again at the end point. The line is drawn, and appears as highlighted. A text box opens for the input value. The default value is in the text box.



4. Change the value by entering a value, in millimeters (minimum 0, maximum 1000), in the text box, and press **Enter**.

   All the annotations in this image are recalculated and updated according to the new value. The calibration line remains but is no longer highlighted.

NOTE: At any time, you can abort the calibration by pressing the Escape (Esc) key. The calibration line will be removed.

Working with Plumb Lines

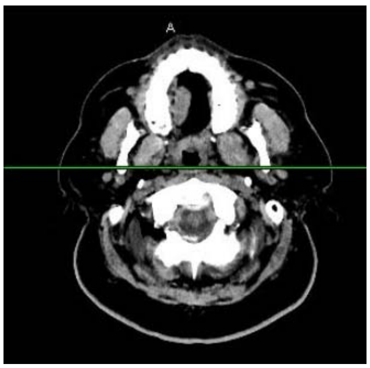
You can add a vertical or horizontal plumb line to an image by selecting the desired Plumb Line tool and clicking on an image. A horizontal or vertical plumb line is placed across the image intersecting the location of the mouse pointer.

To add a plumb line

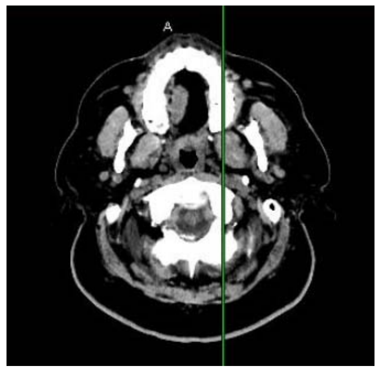
1. In the Review toolbar, click the desired Plumb Line tool.

   Horizontal  or **Vertical** 

2. Click anywhere on an image to draw the plumb line horizontally or vertically across the entire image intersecting the location of the mouse pointer.



Horizontal plumb line



Vertical plumb line

Working with Joint Lines

You can measure angles for metatarsal osteotomies with the assistance of a line perpendicular to the base of the angle using the Joint Line tool.

To measure an angle

1. In the Review toolbar, click the **Joint Line** tool.

2. Click on an image once with the left mouse button where you want to begin drawing the first line.

3. Click a second time with the left mouse button where you want to define the end position of the first line.

4. Click a third time with the left mouse button where you want to complete the angle. The angle will be placed and the angle measurement will appear at the intersection point.

5. With the Joint Line tool cursor, you can make the following adjustments to the annotation once you have created it:

   - To move the entire annotation, click on the first line drawn and drag the entire annotation to a new location.
   - To move the location of the perpendicular, click on the line's endpoint and drag it to a new location.
   - To move the accompanying text, click on the text and drag it to a new location.
   - To change the angle, click on any line's endpoint and drag it to a new location.

Animating a Series

You can animate any active series using the Cine feature. Cine controls provide standard navigation commands that allow you to stop, pause and move forward or backward through the cine. You can also adjust the speed of the cine and use the zoom, pan and window settings while in cine mode.

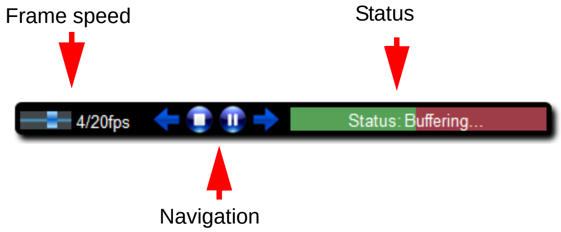
NOTE: When using the HTML5 viewer, if the Cine feature is run on a large dataset (more than 1000 slices), the client machine running the browser requires at least 8GB of memory.

To animate a series

1. Click the viewport of the series you want to animate.
2. In the Review toolbar, click the **Cine** button.

3. The application loads the images, displays the cine controls and starts the cine. While loading the images, the Cine status bar displays the following:

   - Calibrating — Sets the optimal cine speed during buffering.
   - Buffering — Loads the images at the cine speed set during calibration.
   - Playing / Paused — The animation is playing or has been paused.



4. Operate the cine as follows:

   - To play the cine, click the **Play** button. The cine advances through the images in a loop until the animation is paused or stopped.
   - To advance the cine by one frame, click the **Forward** button. To move backward by one frame, click the **Back** button. In both cases, make sure the cine is paused first.
   - To pause the cine, click the **Pause** button. Click **Play** to resume.
   - To stop the cine, click the **Stop** button. The **Cine** status bar closes.

To adjust the cine speed

1. Click and drag the cine speed slider to achieve the desired frame rate. The frames per second (fps) control updates to display the adjusted cine speed; for example, 4/20 fps where 4 is the current frame rate and 20 is the adjusted frame rate.

   The application adjusts the speed dynamically as you move the slider.

Applying Edge Enhancement

The Edge Enhancement feature allows you to enhance the edge of an image. Edge enhancement is an image processing filter that enhances the edge contrast of an image to improve its apparent sharpness.

Edge enhancement increases the image contrast in the area immediately around the edge. This has the effect of creating subtle bright and dark highlights on either side of any edges in the image, leading the edge to look more defined. This enhancement allows you to detect tube placements, hairline fractures, and so on.

NOTE: The edge enhancement filter is intended for use on images with high spatial resolution and low signal-to-noise ratios. The edge enhancement filter is intended for use on X-ray images only.

NOTE: Not all image archives support the Edge Enhancement feature. Enhanced images with this feature applied may not appear as expected.

To manually perform edge enhancement

1. Click the image viewport of the image you want to enhance.
2. Click the **Edge Enhancement** tool.

3. Place the mouse pointer over the image, click the left mouse button and perform any of the following actions:

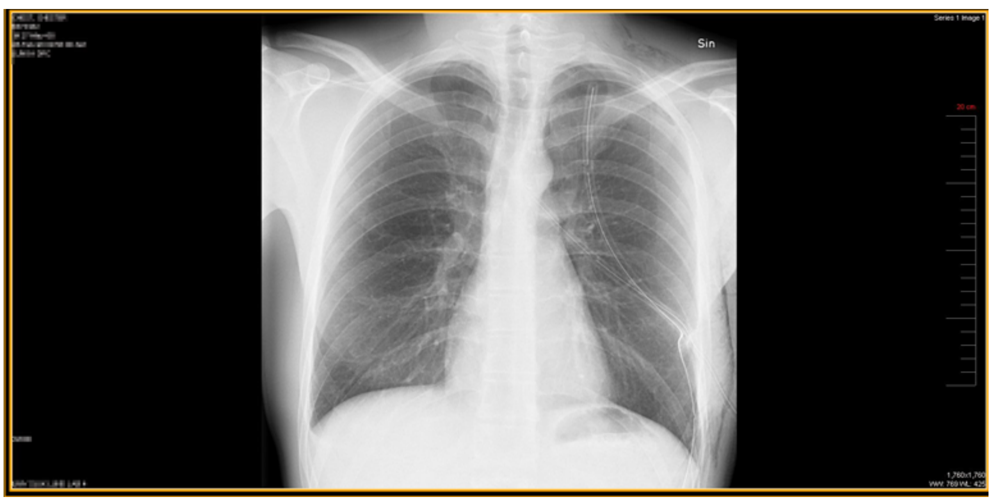
   a. Drag the mouse upward — Increases the size of edge for the image.

   b. Drag the mouse downward — Decreases the size of edge for the image.

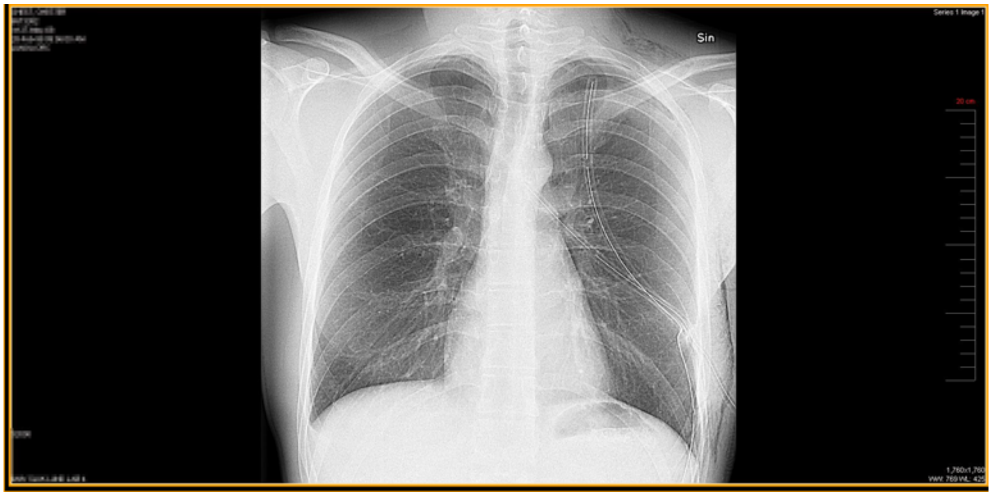
   c. Drag the mouse right — Increases the contrast for the image.

   d. Drag the mouse left — Decreases the contrast for the image.

   For example, the following image is prior to edge enhancement being applied.



This is the same image after edge enhancement has been applied.



To perform edge enhancement using presets

1. Click the image viewport of the image you want to enhance.
2. Click one of the predefined settings for edge enhancement by clicking on one of the following icons.

 Medium 3x3

 Low 5x5

 Medium 11x11

3. The image is enhanced to the predetermined level.
4. If required, click another predetermined setting to change the edge enhancement.

Printing Patient Images

The Print feature prints the images and annotations that are displayed in the viewer.

You can print to a printer connected to your local workstation or if you are connected to a network, you can print to a network printer.

CAUTION: **The application's print function is dependent on the Web browser that you are using. Printouts can vary between different Web browsers and are not for diagnostic use.**

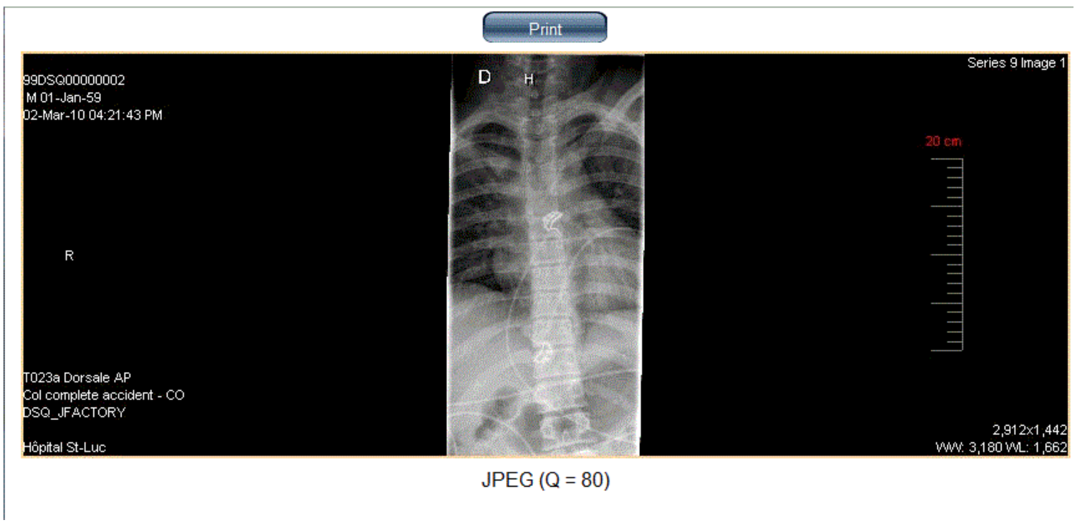
To print patient images

1. Select and load the desired study (see **"Opening the Viewer" on page 50**).

2. If required, use the review tools to manipulate the images.

3. When the images are displayed as desired, click **Print View**.

The application displays the images in a separate window.



4. Click **Print**.

5. The application displays a standard print dialog.

6. After you set the printer options, click **Print**.

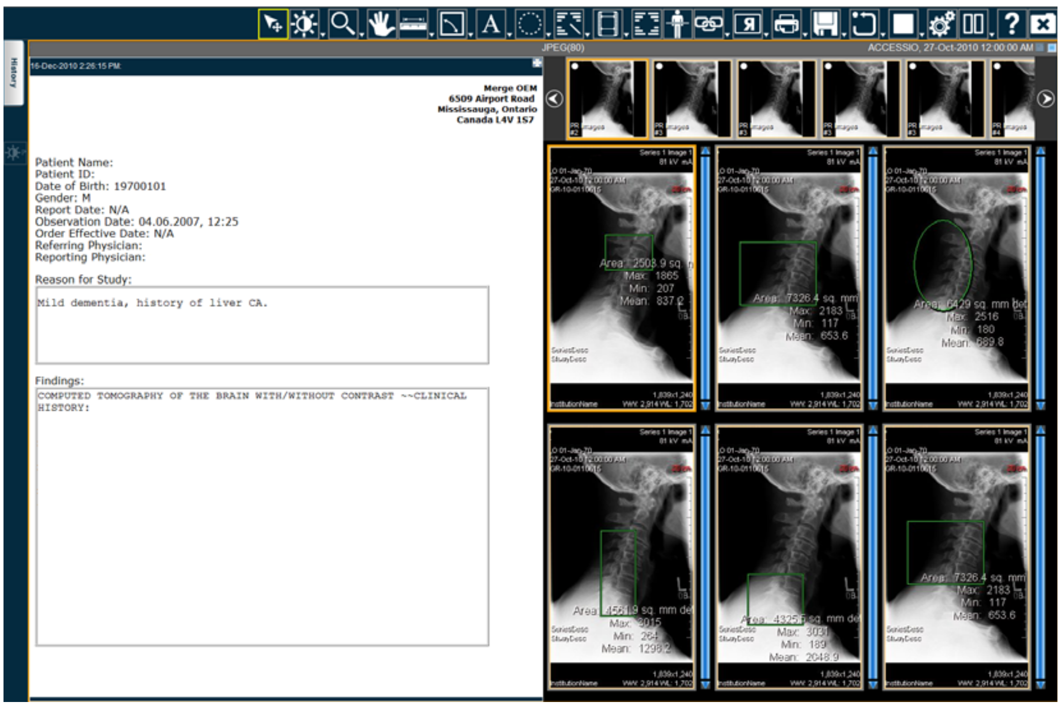
Generating PDF Reports

The following procedure describes how to generate and download PDF reports.

To generate PDF Reports

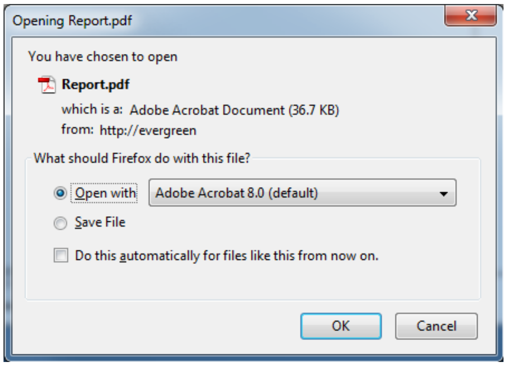
1. Open a study in the Study Viewer.
2. Click the report button.

The report appears in the Study Viewer as follows:



3. Click the **PDF Report** button .

The Opening Report dialog opens.



NOTE: The **PDF Report** button is enabled only after you have displayed a report in the report viewer.

4. Do one of the following:
   - Select **Open with** and select the appropriate program to open and view the file.
   - Select Save File to download the file to the Downloads folder of your computer.
5. Click **OK**.

Saving Presentations

If configured, the application allows you to save attributes of your current review session as a presentation. The following attributes are saved on the images:

- Image display parameters (for example, window settings, zoom, pan, orientation and grayscale inversion)
- Annotations (such as measurements and text)
- Edge Enhancement parameters (edge contrast and kernel size)

The application provides two methods for saving presentations:

- Save Series — Saves annotations and image display parameters on all images in the series.
- Save Annotated Images — Saves annotations on all images in the series.

NOTE: When you save the image display parameters, you save them for the active viewport.

CAUTION: **When you save the image display parameters you have set during the review session, you override the original values from the acquisition device.**

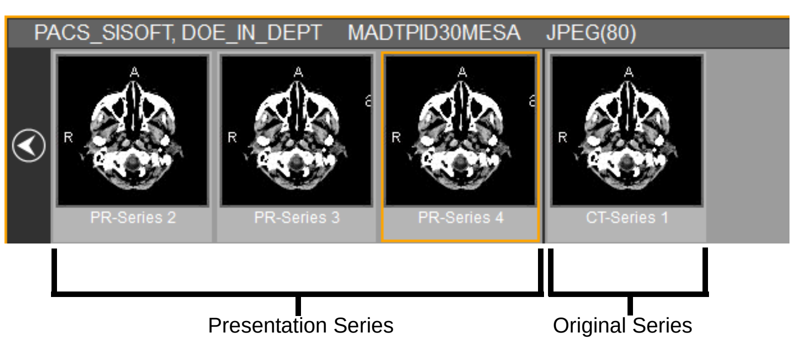
NOTE: This feature may not be available depending on your site configuration. Contact your System Administrator.

To save a presentation

1. Make the desired changes to the following image display parameters:
    - Window settings (see **"Changing Window Settings" on page 76**)
    - Spatial adjustments (see **"Zoom" on page 61**)
    - Image orientation and greyscale inversion (see **"Image Orientation" on page 67**)
2. Add the desired annotations (see **"Annotation Options" on page 65**).
3. In the Review toolbar, click one of the following:
    - Save Image . Saves the image without annotations.
    - Save Annotated Image . Saves the image and annotations.

NOTE: While the save is occurring, a spinning wheel is displayed until the save has completed. Saving a series takes longer than saving annotating images, particularly if the series consists of many images.

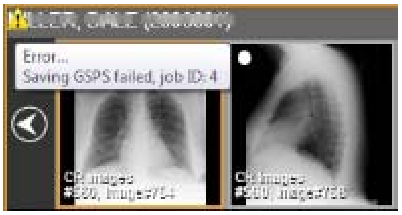
4. The application saves the presentation as a new series in the Series Thumbnail panel



Presentations are identified with a PR prefix.

NOTE: The Series Thumbnail panel displays the thumbnails for the study that is currently selected in the Related Studies List. If your presentation series does not appear in the Series Thumbnail panel, make sure that the study to which your series belongs is selected.

NOTE: If an error occurs during the save operation, a warning icon appears at the top left of the thumbnail panel. Hover the pointer over the icon to determine the nature of the error.



Emailing Studies

The iConnect Access application enables authorized users to send links to studies to non-registered users via email. For purposes of security, this feature may be configured to require the recipient to correctly type a Personal Identification Number (PIN) before accessing the study.

The iConnect Access administrator can enable or disable the email study feature, as well as the PIN security feature.

When an authorized user successfully emails a study, the recipient receives an email that contains a link to the study. The recipient may use the tools in the toolbar to manipulate the image, but the image cannot be saved. After a configurable period of time, the link to the study expires.

CAUTION: **This feature enables users to send protected health information to non-registered users. The user is advised to exercise discretion when disseminating such information.**

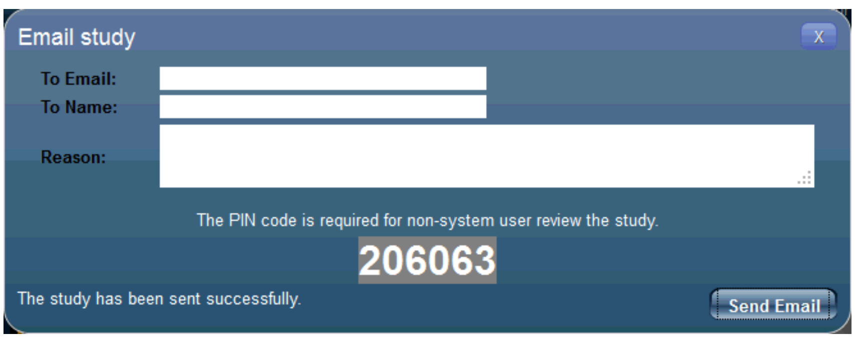
For information on enabling the email study feature, refer to the iConnect Access *Installation Guide*.

To email a study

1. Open the study from the Studies, Inbounds, or Outbounds list.
2. Click **Email Study**. The Email Study dialog opens.

NOTE: If the **Email Study** button is not visible, the email study feature is not enabled. Contact your System Administrator.

3. In the **To Email** field, type the email address of the recipient.
4. In the **To Name** field, type the name of the recipient.
5. Optionally type a reason for the email.
6. Click **Send Email**. The system sends the recipient an email that contains a link to the study. If this feature is configured to require a personal identification number (PIN) for the recipient to open the study, the application displays the following:



7. Notify the recipient of the system-generated PIN.
8. Close the Email Study dialog.

Chapter 5 Patient Records

The Patients window allows you to search for patient records. When the application displays the search results, you can view all records for a selected patient in the Patient Record window. From the Patient Record window, you can select any document to view it in the Document Viewer.

NOTE: This feature may not be available depending on your site's configuration. Contact your System Administrator.

NOTE: If integrated with a Master Patient Index (MPI), when you select a patient from the search results, the Patient Record window lists all records associated with the same patient regardless of different patient IDs.

When integrated, the iConnect Access application can receive patient search criteria from a third-party application. Depending on your configuration and the amount of information provided, the iConnect Access application can display any of the following:

- All records found for the specified patient in the Patient Record window (see **"Viewing Patient Records" on page 101**).
- A specific patient record (for example, a PDF) in the Document Viewer (see **"Using the Document Viewer" on page 103**).

Searching for Patient Records

The Patients window enables you to locate patient records in the configured data sources. Based on your configuration, you can search for patient records by using patient attribute fields (see **"Searching by Patient Attribute" on page 99**), or perform a search using a free-text search (see **"Searching for Patients using Free Text" on page 98**).

NOTE: The free-text search feature may not be available depending on your site configuration. Contact your System Administrator.

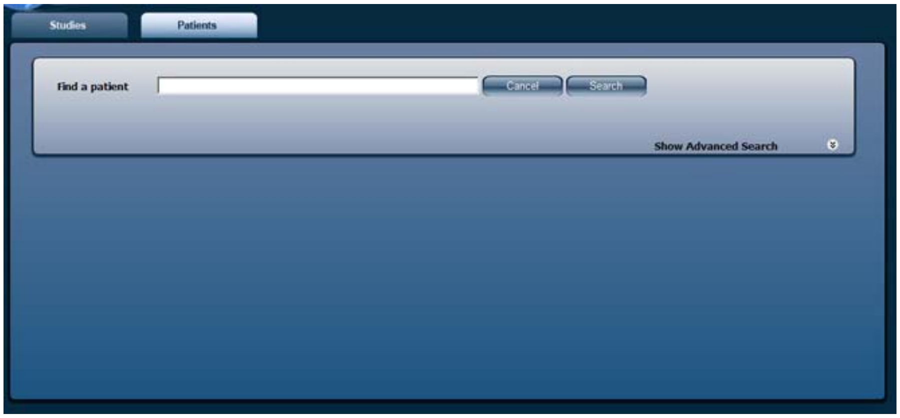
Searching for Patients using Free Text

The application offers free-text search where you can search for a patient using one or multiple search terms. Search terms can include all or partial words (such as the patient's first name) and numbers (such as the patient's date of birth).

NOTE: You can configure the application to perform a live search (that is, display search results as you type). You must type at least two characters before the application starts displaying results. For details, see **"Configuring User Preferences" on page 147**.

To search for patient records using free text

1. In the application window, click the Patient Record tab. The Patient Record window opens.
2. Type a search term in the **Find a Patient** field. Search terms include all or partial information pertaining to the patient such as:
   - first or last name
   - home telephone number
   - date of birth (month/day/year)
   - MRN #



3. If you have not enabled the live search option, click **Search**; otherwise, the search results appear as you type your search criteria (see **"Configuring User Preferences" on page 147**).

NOTE: The application does not perform a live search when you use the patient attribute fields. You must click **Search** to invoke the search.

4. When the application displays the search results, double-click the desired patient to display the patient's records (see **"Viewing Patient Records" on page 101**).

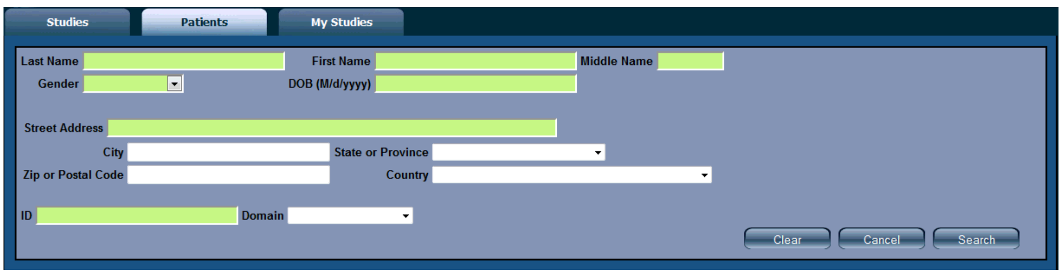
Searching by Patient Attribute

You can use the search feature to locate patients in the data source based on patient attributes (such as patient name, patient ID, date of birth).

To search for patient records using patient attributes

1. In the application window, click the **Patients** tab. The Patients window opens.

2. Expand the attributes based search button . The search screen opens as follows:



3. Type a search term in any of the patient attribute fields and click **Search**. To search for a patient, you must type a value in one of the following attribute fields; otherwise, the application does not perform a search:

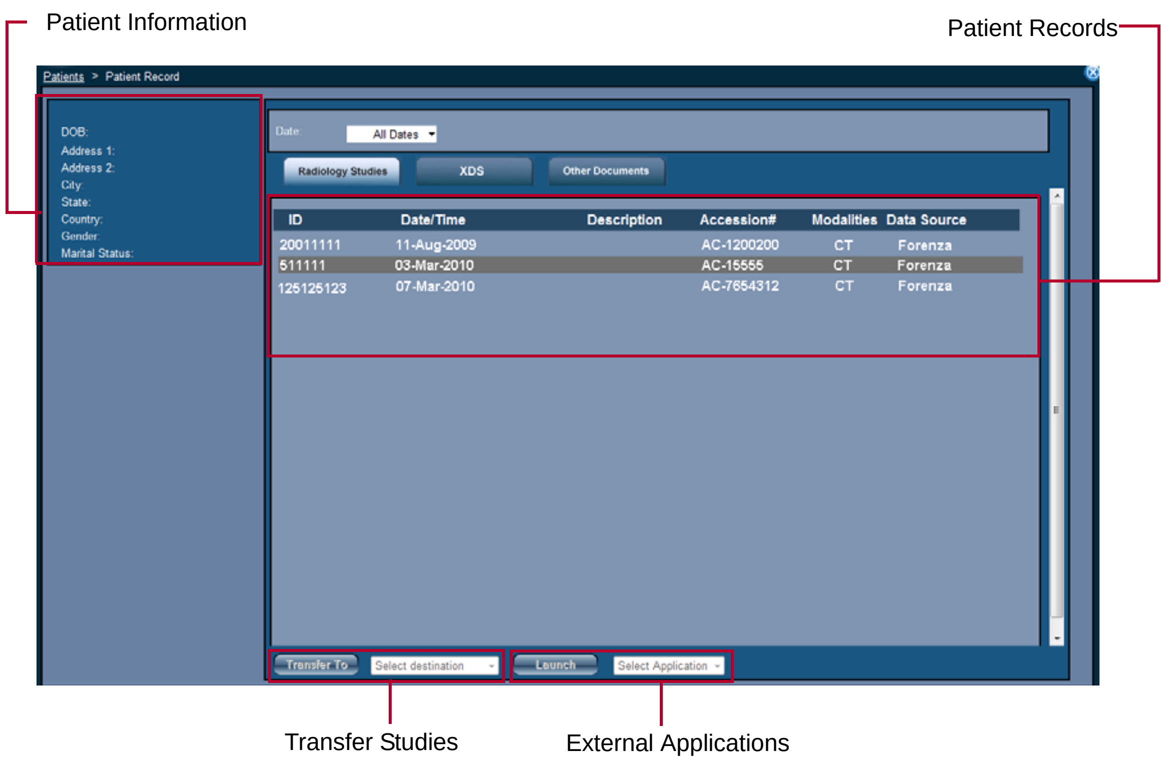
    - Last Name, First Name or Middle Name
    - Gender
    - DOB (Date of Birth)
    - Street Address
    - ID

NOTE: For the ID field, the application only returns search results with an exact match.

NOTE: The Domain drop-down list displays a list of entities, such as hospitals and clinics. You can select a domain to restrict your search to a particular institution.

4. When the application displays the search results, double-click the desired patient to display the patient's records (see **"Viewing Patient Records" on page 101**).

   The application displays the patient's records in the Patient Record window as shown in the example below.



NOTE: The External Applications and Transfer Studies features are accessible from the Radiology and XDS pages in the Patient Record. For details on using these features, see **"Patient Studies" on page 17**.

Viewing Patient Records

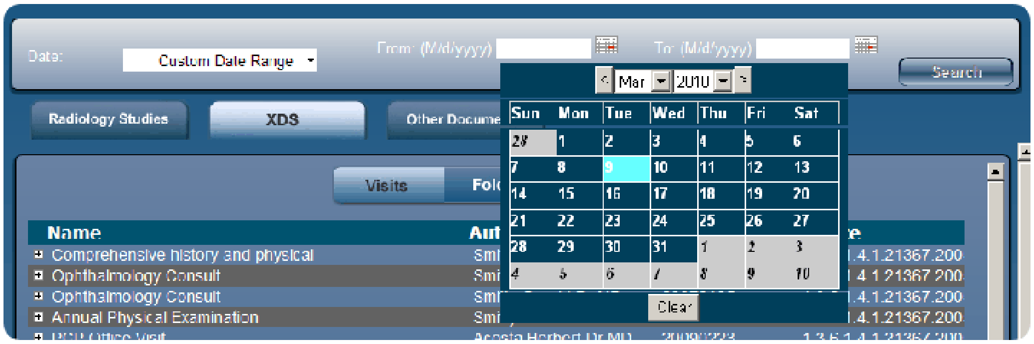
When you select a patient, the Patient Record window displays all records associated with the selected patient. Depending on your site's configuration, the Patient Record window may display any or all of the following three categories:

- Radiology Studies — DICOM studies associated with the selected patient including any attachments associated with the DICOM studies.
- XDS — Any records associated with the selected patient from an XDS source.
- Other Docs — Any records associated with the selected patient (but not attached to DICOM studies).

You can also filter the list of records displayed by a date range or by records associated to patient visits, folders or documents.

To view a patient record

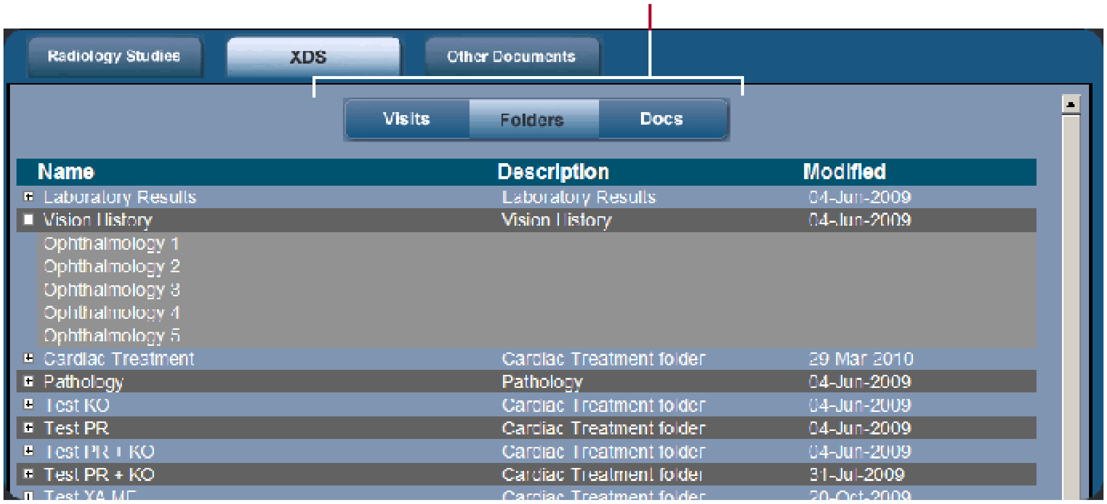
1. From the Patient Record window, select a category of patient records to view (for example, Radiology Studies, XDS, or Other Docs).
2. You can filter the list of records by specifying a date range. From the **Date** drop-down list, select a time frame (for example, Last 7 Days). To specify an exact date range, select **Custom Date Range**, then select the From and To dates using the calendar.



NOTE: If you have selected the Radiology Studies tab, the date range applies to the study date, not the document date. If you have selected the Other Documents tab, the date range applies to the document date.

3. When viewing records in the XDS tab (that is, from XDS sources), you can further organize the list of records using the sub-tabs:

Sub-tabs to organize patient records



- Visits — Click the Visits tab to display only the records associated with patient visits (such as annual physical exams or radiology exams).

- Folders — Click the Folders tab to display only the records saved in folders. Patient records not saved in a folder do not appear in this panel. You must access those records from the **Visit** button.

- Docs — Click the Docs tab to display all records associated with the patient (that is, not filtered by visits or folders).

4. Double-click a patient record to load it into the Document Viewer (see **"Using the Document Viewer" on page 103**).

5. Click the **Close Viewer** button to return to the Patient Record window. 

Using the Document Viewer

When you select and load a patient record from the Patient Record window, the application displays the selected record in the Document Viewer. This viewer supports the following types of documents:

- DICOM images
- Non-DICOM images (such as JPG, GIF files)
- Adobe Portable Document Format (PDF) documents
- Microsoft Office documents (such as Microsoft Word, Microsoft PowerPoint, Microsoft Excel)
- Videos (such as AVI and MPG files)
- 3-dimensional images (for example, 3D surface rendering)

As with the viewer window, you can choose to view patient records in Full Browser mode (see **"Using Full Screen Mode" on page 76**).

When reviewing a DICOM image in the Document Viewer, you cannot email the DICOM study to another iConnect Access user. You can attach documents to the DICOM study (see **"Working with Attachments" on page 54**). You can continue to save presentations to the current study (see **"Saving Presentations" on page 93**) if you are viewing DICOM studies from the Radiology Studies tab (see **"Viewing Patient Records" on page 101**).

When reviewing patient records in the Document Viewer, the viewer provides basic tools that are native to the file format of the patient record. For example, when viewing a Microsoft Word document, the viewer provides the application's basic toolbar so you can edit the document. However, you can only save your changes locally.

NOTE: Except for DICOM images, the Document Viewer can only display documents whose application is already installed on your workstation. For example, to load and review a Microsoft Word document, the application must already exist on your local workstation. If the application is not already installed, the application asks if you want to save the document locally.

NOTE: Any changes to a patient record performed in the Document Viewer can only be saved to the local computer.

Chapter 6 Image Sharing

If your site has enabled Image Sharing, both registered and unregistered users can upload studies to share with others. Registered users can also receive studies and perform various tasks such as viewing, reconciling, and archiving the studies.

NOTE: This feature may not be available depending on your site's configuration. Contact your System Administrator.

This section describes the following topics:

Downloading the Exam Importer

If you are using the Exam Importer tool for the first time or it has not already been installed by an Administrator, you will need to download and install it.

The following procedure describes how to download and install the Exam Importer.

To download and install the Exam Importer

1. Do one of the following:

   - Click **Upload** from the Inbounds or Outbounds tab.
   - From the Login screen, click **Install**.

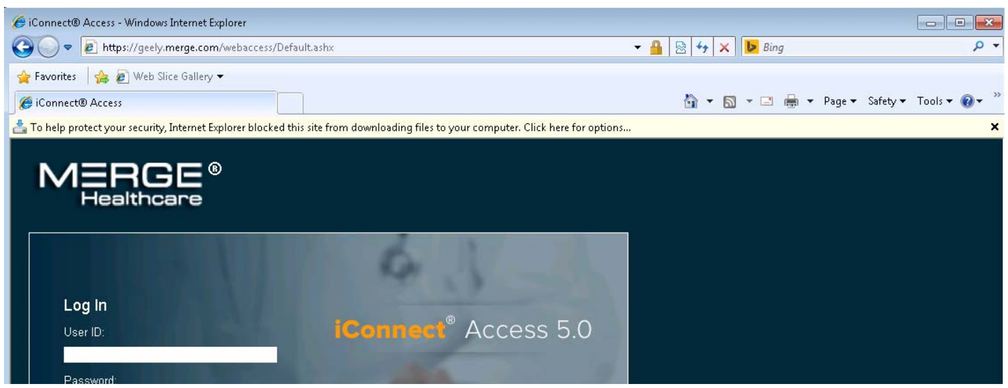
2. If using Internet Explorer 7 or 8, perform the following substeps. Otherwise, go to **Step 3**.

NOTE: The following warning only appears if this is the first time the Exam Importer has been installed on this client machine.

a. The following warning appears (if using HTTPS).

Right-click the warning and select **Always allow pop-ups from the site**.

b. Click **Install**. The following security warning appears (if using either HTTP or HTTPS).



c. Right-click the warning and select **Download File**.

3. The Exam Importer download starts. Follow the browser prompts and allow the installer to download. Click **Run** on the corresponding dialog to run the Setup Wizard.

4. When the Setup Wizards opens, accept the license agreement and click **Next**.

5. Do one of the following:

- Select **Registered User** and enter your Username and Password.
- Select **Unregistered User** and enter your email address.

6. Click **Install**.

7. When the Setup Wizard completes the Exam Importer installation, click **Finish**. Deselect **Launch application when setup exits** if you do not want to launch the application when closing the Setup Wizard.

Uploading Studies

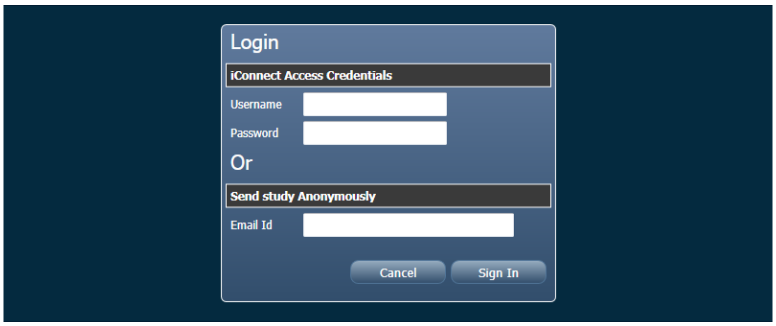
The following section describes how to upload studies using the following:

- Exam Importer — See **"Uploading Studies Using the Exam Importer" on page 108**.
- Web Uploader — See **"Uploading Studies Using the Web Uploader" on page 112**

NOTE: The **Make Java Exam Importer as default Exam Importer** setting in your user preferences determines which tool opens when you click **Upload** from the Inbounds or Outbounds tab. If the checkbox is selected, the Web Uploader opens. If it is deselected, the Exam Importer opens. If the Exam Importer is not installed, you be requested to install it.

Uploading Studies Using the Exam Importer

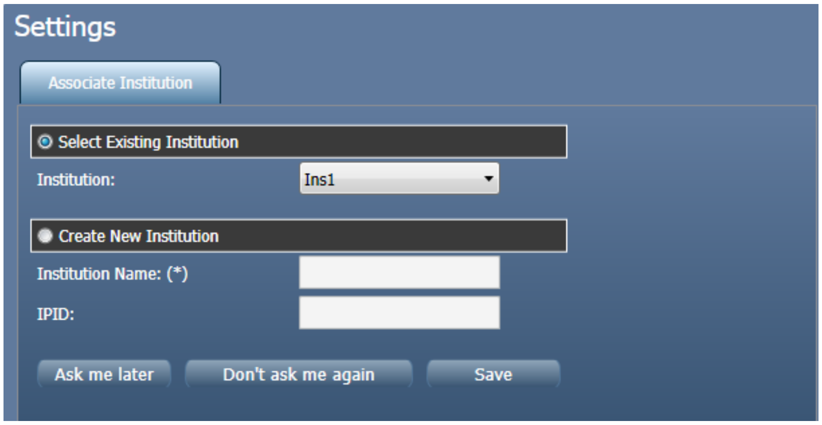
1. Do one of the following to open the Exam Importer:
   - Click **Upload** from the Inbounds or Outbounds tab. You will be logged directly into the Exam Importer.
   - On your desktop, double-click the **Send Exam to <*receiving institution name*>** icon. The Exam Importer login screen opens.



If you are a registered user, enter your username and password. If you don't have a username and password, you can upload studies as an unregistered user by entering your email address.

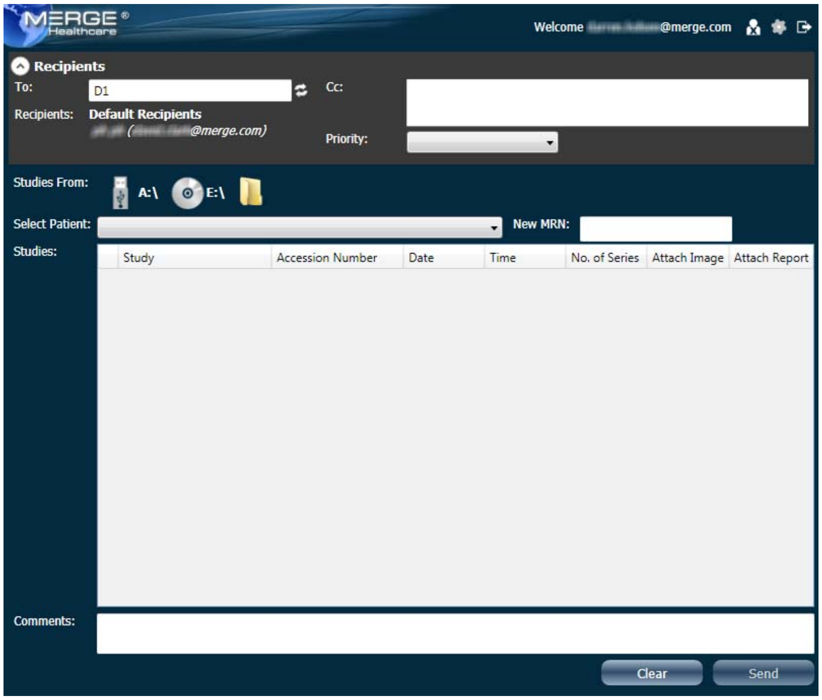
2. Click **Sign In**.

3. The first time you open the Exam Importer, a Settings dialog opens requesting that you select a sending institution or create a new one. Select an **Institution** from the drop-down list or enter a new institution name and corresponding IPID. If you leave the **IPID** field blank, one will be generated. Click **Save** to save your selection and close the Settings dialog.



NOTE: The institution and IPID are used to identify the institution or user that uploaded a study. These and other settings can be changed at any time using the Settings dialog. See **"Exam Importer Settings" on page 115** for more information.

4. The Exam Importer opens and includes the default destination to send studies, as well as the default recipients for that destination. A destination is data source within the a domain where studies will be sent. The recipients are the users at the receiving institution that you want to receive the studies and be notified when the studies are uploaded.



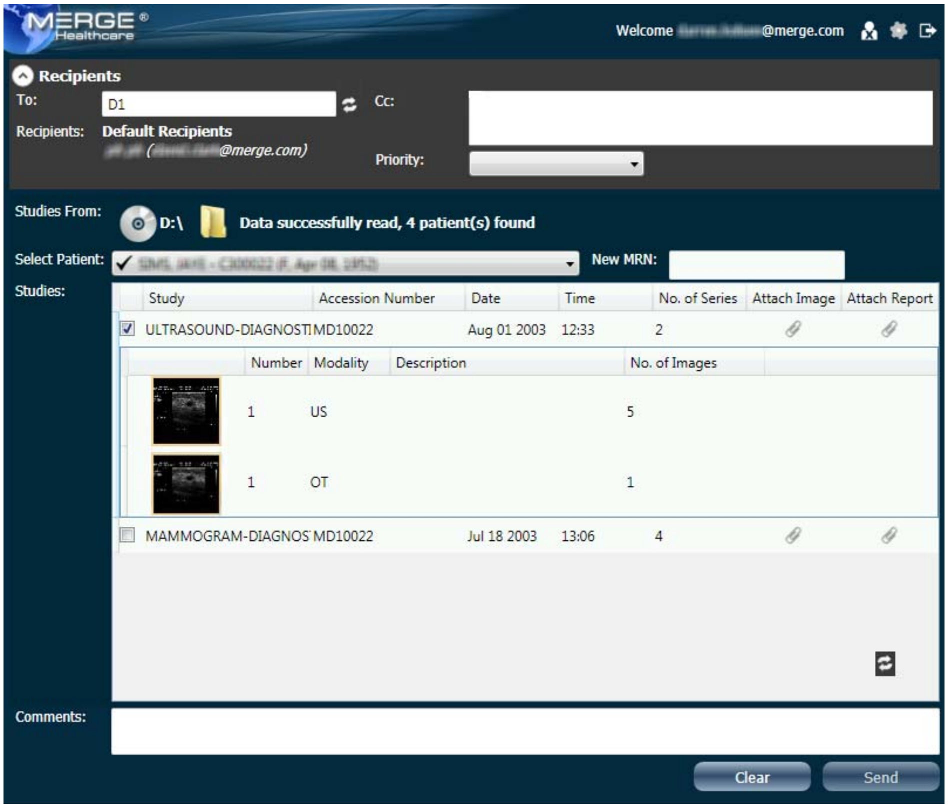
5. In the **To:** field, select a new a destination if you want to send studies to a different destination within the institution. Optionally click the refresh button to update the list.

6. In the **Cc:** field, start typing the name of any additional recipients at the receiving institution that you want to receive the studies and be notified when the studies are uploaded. As you type, matching recipients will be displayed. Click on the recipient you want to add. Repeat for each additional receiver.

7. Select a **Priority** from the drop-down list provided.

8. Using the **Studies From** icons, click the media (USB, CD, local network) you want to use to upload studies from. If you are loading images from a USB or CD, insert it into your computer before selecting the corresponding icon.

9. The application searches the selected location for DICOM studies and loads the results per patient. For each patient you want to upload studies for, select the patient from the **Select Patient** drop-down list. Series thumbnails for the selected patient will load in the Studies window.



10. To create a new MRN, type one in the **New MRN** field. The MRN helps the receiving destination reconcile the studies against an order and associate it with a patient record.

11. Select the checkbox next to each study you want to upload. When studies are selected, the patient will have checkmark icon placed beside the patient name in the **Select Patient** drop-down list.

12. If you want to attach an additional image or a report to a study, click the paper clip icon for the corresponding study below Attach Image or Attach Report. Browse to file location and select the desired file.

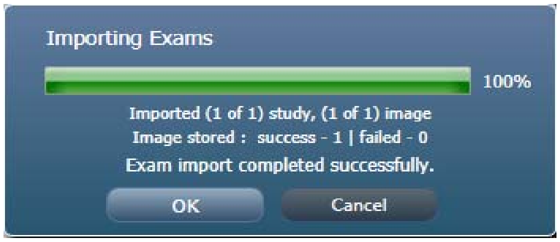
NOTE: The supported file types are BMP, JPEG, PNG, and TIFF for images and PDF for Reports.

13. Click **Attach**.

14. Type any comments that you want to include, such as clinical history, in the **Comments** text box.

15. Click **Send**.

16. The Importing Exams dialog opens detailing the progress. Click **OK** when complete.



17. The selected recipients receive a notification via email that a study has been sent to them. The email includes a link that the receiver can click to launch the study in the Study Viewer.

NOTE: If the link is to use HTTPS, then the email notification base URL must be set to HTTPS in the service tool. Alternatively, the Use SSL option can be selected. For both of these options, refer to the iConnect Access Installation Guide.

The recipient can then view uploaded studies on their Inbounds tab in the iConnect Access application. The registered user who sent the study can view and manage the uploaded studies on their Outbounds tab. The Inbound and Outbound tabs are similar to an email Inbox and Outbox. The Inbounds tab lists studies that have been sent to you and the Outbounds tab lists studies that you sent.

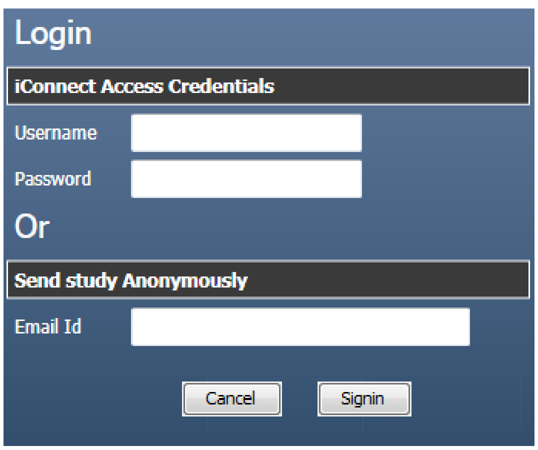
Uploading Studies Using the Web Uploader

1. Do one of the following to open the Web Uploader:

   - Click **Upload** from the Inbounds or Outbounds tab. You will be logged directly into the Web Uploader.

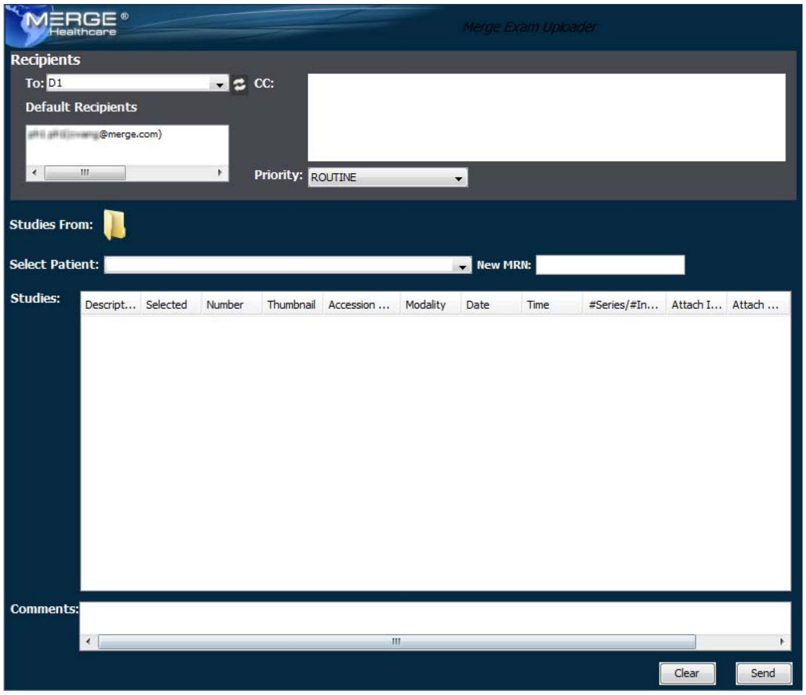
- From the login screen, click **Web Upload**.

2. Accept and run any prompts presented by the browser. When complete, the Web Uploader login dialog opens. If you are a registered user, type your **Username** and **Password**. If you don't have a username and password, you can upload studies as an unregistered user by entering your email address.



3. Click **Sign In**.

When the Web Uploader opens, it includes the default destination to send studies, as well as the default recipients for that destination. A destination is a data source within the domain where studies are sent. The recipients are the users at the receiving institution who are notified when the studies are uploaded.



4. Proceed with **Steps 4** to **17** in **"Uploading Studies Using the Exam Importer" on page 108** to complete the upload process.

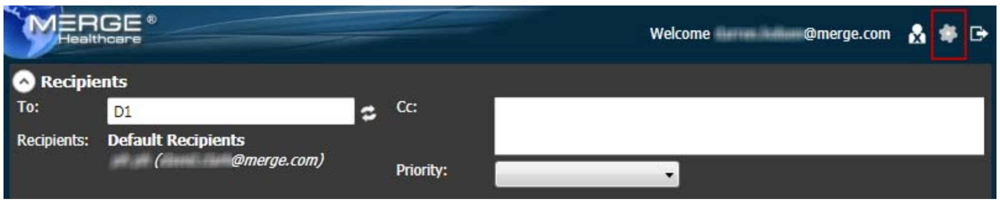
Exam Importer Settings

The following describes the settings available in the Exam Importer.

NOTE: Merge Healthcare recommends you use the default settings. Settings should only be modified by advanced users.

To modify the Exam Importer Settings

1. From the Exam Importer, click the Open Settings Dialog icon in the top right corner.



2. Modify the following settings as required:

Setting	Description
General Settings	
Idle Timeout	Time, in minutes, of inactivity until system logs current user out.
Number of retries	Number of times to attempt a retry when upload operation is not successful.
Retry Interval	Interval, in seconds, to delay before attempting a retry.
Max outgoing connections	Maximum number of concurrent connections to the iConnect Access server. This configuration cannot exceed the limit the server sets.
Chunk Size	The byte size of each chunk.
Destination List	Displays a list of available data sources for the selected institution. **Note:** The Destination List is a reference of available destinations and can only be modified by an administrator from within the iConnect Access application.

Setting	Description
System Settings	
Launch Port	Port used by the Exam Importer to communicate with the Merge iConnect Access application. This port must be the same as the Launch Port identified in the Edit Domain Settings dialog. For more information, refer to the iConnect Access Administrator's Guide. If you choose to override the launch port identified in the domain settings, you must change it in both your user preferences and the Exam Importer.
Local Cache Path	Indicates where the Exam Importer keeps a temporary local cache. Merge Healthcare recommends you use an encrypted storage path since the Exam Importer will temporarily store DICOM files (PHI data) on this path during transfer.
Click here to view logs	Opens the log file for the Exam Importer.
Associate Institution	
Institution	The name of the sending institution. **Note:** The sending institution can only be configured once.
Institution Name	Used to create a new sending institution name.
IPID	Issuer of the patient ID to be associated with the sending institution.

3. Click **Save**.

Adding Additional Details to an Uploaded Study

When you upload a study using the PACS Gateway, you are sending the exam directly from your PACS to the Merge iConnect Access application. This workflow doesn't allow you to edit details that you can change when using the Exam Importer or Web Uploader. The following procedure describes how to add those additional details to studies you have uploaded.

To add additional details

1. Open your Web browser.

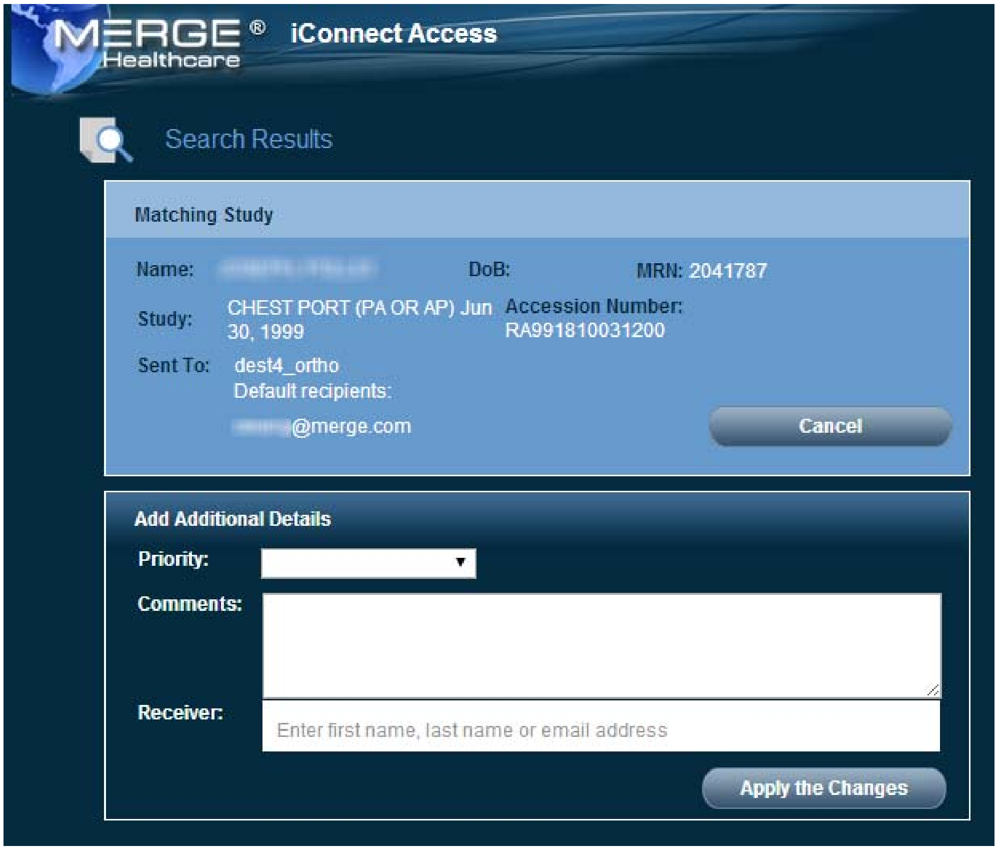
2. In the **Address** field, type **http://webservername/webaccess**, where *webservername* is the computer name of the Merge iConnect Access server.

3. When the application opens the Login screen, click **Go** below Add Additional Details to a Study. The following screen opens.

4. Type your email address in the Contact information **Email Address** field.

5. In the Study Information box, enter the search criteria for the study you want to add details to. All fields are mandatory and need to be an exact match.

6. Click **Show me the Exam**. The Search Results page displays the matching study and a box to add additional details.



7. Enter one or more of the following details:

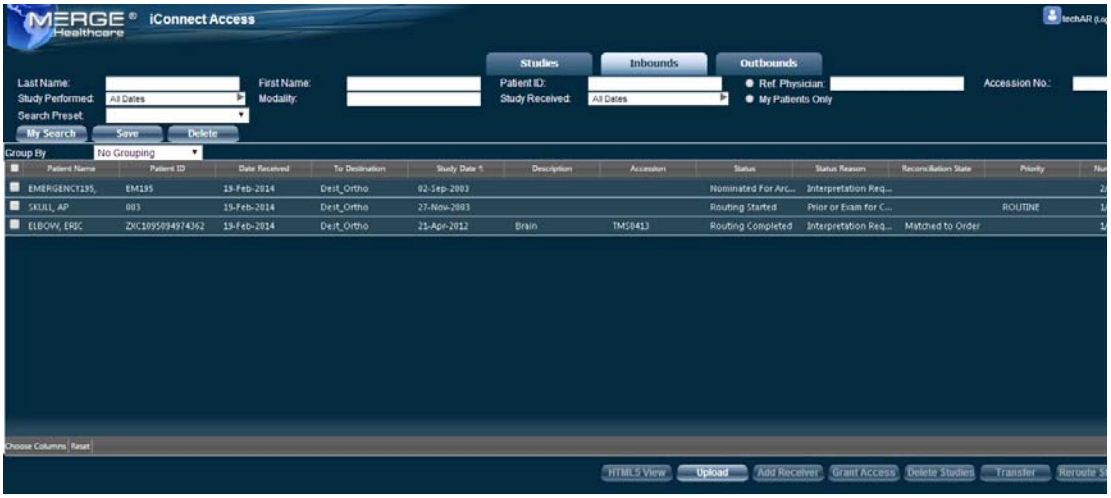
   - Priority — Modifies the priority assigned to the study
   - Comments — Information you want to send to the receiver(s)
   - Receiver — Adds additional receivers

8. Click **Apply the Changes**.

9. A confirmation page displays the requested changes.

Inbound Studies

The Inbounds tab displays a list of all new studies sent to you. Each study lists information such as the date sent and the current status. When a sender uploads a study and you are set as a receiver, you will receive an email notification with the study context. Study senders can be both registered and non-registered users and upload studies from either a PACS Gateway or a user's local machine.



From the Inbounds tab, you can:

- Search inbound studies. The Inbounds tab provides the following search parameters:

Field	Description
Last Name	The patient's last name.
First Name	The patient's first name.
Patient ID	The patient's identification number.
Referring Physician	The name of the referring physician.
Study ID	The study identification number.
IPID	The issuer of the patient ID.
Study Description	The DICOM study description.
Accession No	A unique examination accession number generated by the Radiology Information System (RIS). It is used by the RIS system to track the radiology order, scan, and report.

Field	Description
Institution	The name of the institution where each series in a study was created.
Study Performed	The date and time on which the study was created. The date format displayed is determined by the configuration used by the iConnect Access Web server and not the configuration used by your client workstation. For more information about the date and time format, contact your System Administrator.
Modality	The source modality (or modalities) of the series within the study.
Data Source	The name of the data source (or data sources) where the study is located. This column appears only if multiple data sources are configured and available to the user.

- View inbound studies in the study viewer. See **"Study Viewer" on page 49** for more information on opening and viewing studies.
- Upload studies. See **"Uploading Studies" on page 108**.
- Add registered users as receivers. See **"Adding Recipients" on page 121**.
- Grant study access to other users. See **"Managing Access to Studies" on page 31**.
- Delete studies. See **"Deleting Studies" on page 124**.
- Transfer studies to another datasource or download to your local system. See **"Transferring or Downloading Studies" on page 33** for more information.
- Email Studies. See **"Emailing Studies" on page 95**.
- Nominate studies for archiving. See **"Nominating Studies for Archiving" on page 121**.
- Archive studies to PACS. See **"Archiving Studies" on page 122** for more information.
- Reroute studies to a different destination within the institution. See **"Rerouting Studies to a New Destination" on page 123**.

Adding Recipients

Use the following procedure to add other registered users as recipients. You can add one or multiple receivers at the same time.

To add recipients

1. Select a study from the Inbounds list.

2. Click **Add Receiver** located at the bottom of the screen. The Add Additional Details dialog opens.

3. Start typing the first name, last name, or email address of the registered user to add, and then select the user from the list displayed. Repeat for each additional receiver.

4. Click **Apply the Changes**.

5. A confirmation dialog will open. Click the 'X' icon to close.

Nominating Studies for Archiving

Receivers can nominate studies for archiving to a PACS. Users who are granted permission as an archivist within the system are notified when studies are uploaded to a destination they have been associated with.

To nominate studies for archiving

1. Select a study from the Inbounds or Outbounds tab.

2. Click **Nominate for Archive** located at the bottom of the screen. The Confirm Study Archive Nomination dialog opens.

3. Select a reason for archive nomination from the **Reason for Archive** drop-down.

4. Click **Nominate**. An email notification will be sent to the Archivist directing to the nominated study and the study status will now display as "Nominated For Archive".

Archiving Studies

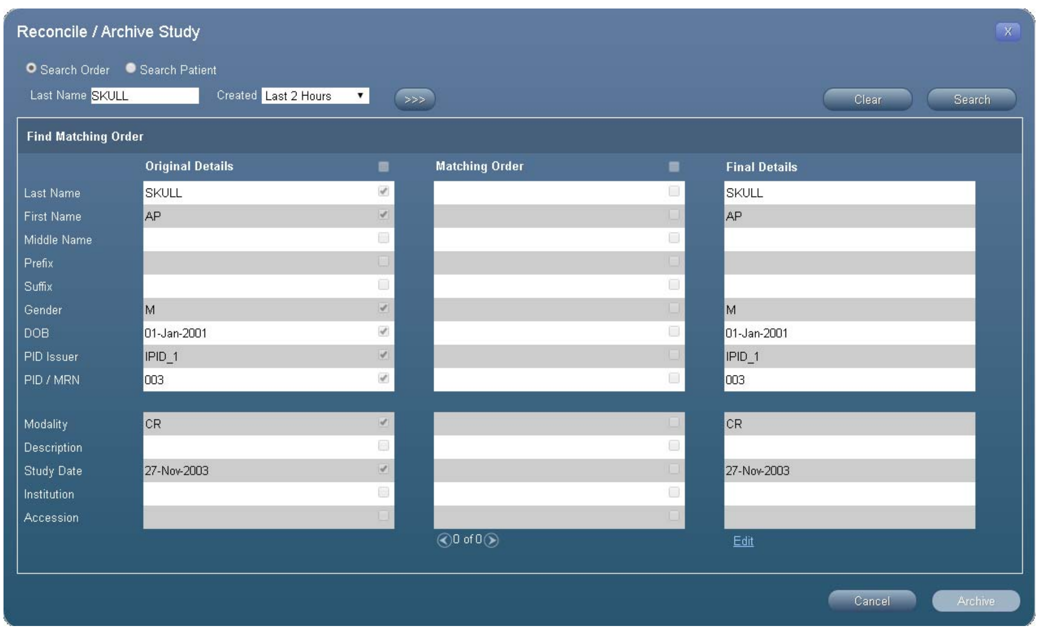
Users with archivist permissions can archive nominated studies (see **"Nominating Studies for Archiving" on page 121**) to a PACS. Studies that are nominated for archiving display "Nominated For Archive" in the status column on the Inbounds and Outbounds tabs. When studies are archived, they can be matched to existing studies and reconciled prior to archiving.

The following procedure describes the steps to archive studies.

To archive studies

1. From the Inbounds or Outbounds tab, select a study that has been nominated for archiving.

2. Click **Archive Study**. The Reconcile/Archive Study dialog opens, displaying patient and study details.



3. The iConnect Access application presents a list of possible matching orders in the Matching Order column. Click the arrows to page through the matching orders. Click **Show All** to view a list of all the matches to select one. If you do not see the match you are want, you can perform a manual search.

4. If you do not see the a matching order, you can perform a manual search, select either **Search Order** or **Search Patient** and enter the search parameters. Click the >>> icon to expand the search parameters list. Click **Search** when you are ready. Click **Clear** to clear the current search parameters.

5. Click **Edit** below the Final Details column to select and modify which details to include.

6. From the Original Details and Matching Order columns, choose which criteria you want to use. The boxes selected determine which details will be reconciled into the final details.

7. When you are finished selecting the criteria for the final details, click **Apply**.

8. Click **Archive**.

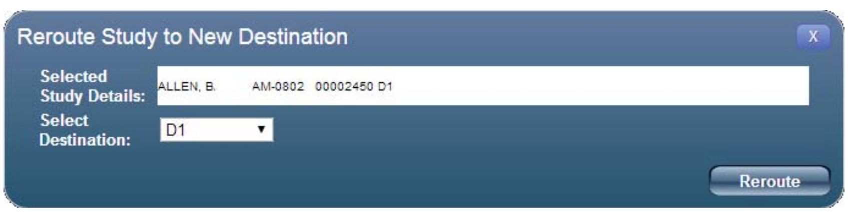
Rerouting Studies to a New Destination

If you want to reroute an inbound or outbound study to a new destination within a receiving institution, perform the steps in the following procedure.

To reroute studies to a new destination

1. Select a study from the Inbounds or Outbounds tab.

2. Click **Reroute Study** located at the bottom of the screen. The Reroute Study to New Destination dialog opens.



3. Select a Destination from the **Select Destination** drop-down.

4. Click **Reroute**.

Deleting Studies

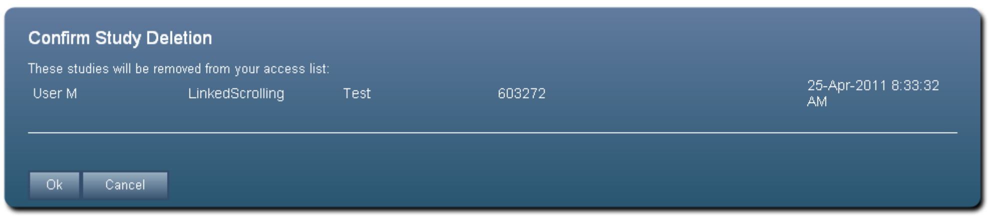
Perform the following procedure if you no longer require a study and want to remove it from your Inbounds or Outbounds study lists.

NOTE: This procedure does not delete studies from the archive.

To delete a study

1. Select the required study from the Inbounds or Outbounds list. The application highlights the selected study.

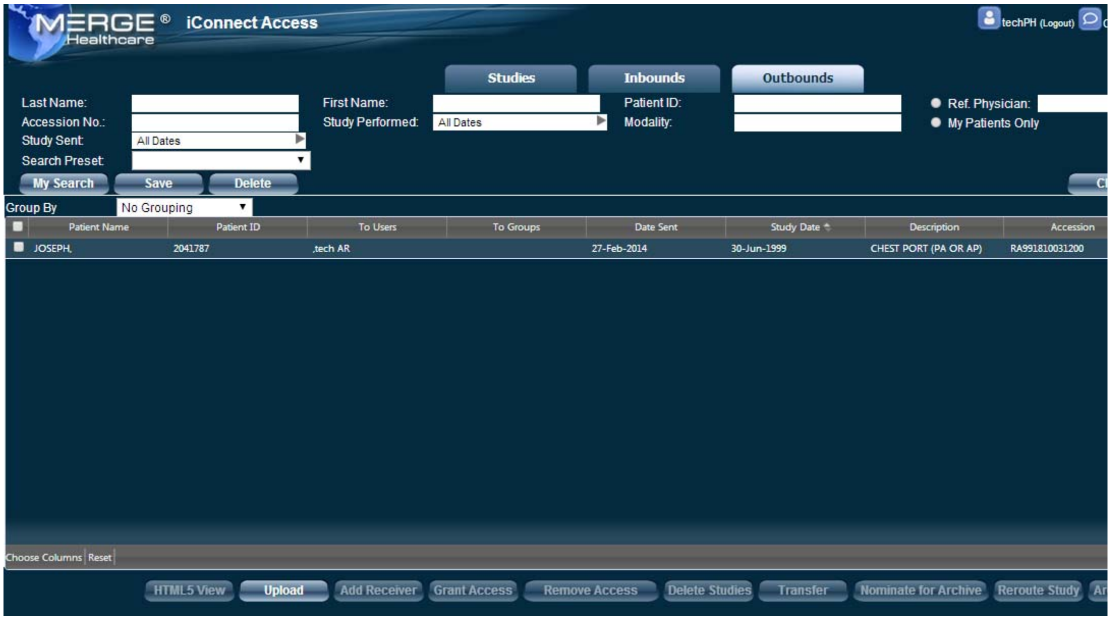
2. Click **Delete**. The the Confirm Study Deletion dialog opens.



3. Click **OK**. Click **Cancel** to abort the study deletion.

Outbound Studies

Registered users can view and manage the studies they have uploaded and sent to other users from the Outbounds tab. The Outbounds tab displays a list of all new studies that you have sent to other users. Each study lists information such as the date sent and the current status.



From the Outbounds tab, you can:

- Monitor status of the studies you have uploaded.
- Search the outbound studies. The search features are the same as when searching using the Studies tab. See **"Performing Searches" on page 18** for more information on searching studies.
- View outbound studies in the Study Viewer. See **"Study Viewer" on page 49** for more information on opening and viewing studies.
- Upload studies. See **"Uploading Studies" on page 108**.
- Add a registered user as a receiver. See **"Adding Recipients" on page 121** for information on adding another a receiver.
- Grant study access to other users. See **"Managing Access to Studies" on page 31**.
- Removing access to shared studies. See **"Removing Access to Studies" on page 126**.

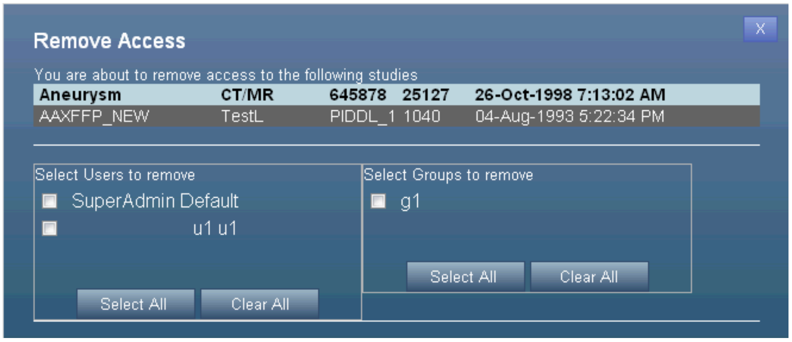
- Delete studies. See **"Deleting Studies" on page 124**.
- Transfer studies to another datasource or download to your local system. See **"Transferring or Downloading Studies" on page 33** for more information.
- Email Studies. See **"Emailing Studies" on page 95**.
- Nominate studies for archiving. See **"Nominating Studies for Archiving" on page 121** for more information.
- Archive studies to PACS. See **"Archiving Studies" on page 122** for more information.
- Reroute studies to a different destination within the institution. See **"Rerouting Studies to a New Destination" on page 123** for more information.

Removing Access to Studies

If you have granted study access to another user (see **"Managing Access to Studies" on page 31**), you have the option to revoke access to that study. The study may have been granted in error or is no longer required for use. The following procedure describes how to remove that access.

To remove access to studies in the list

1. Select one or more studies from the Outbounds tab.
2. Click **Remove Access**. The Remove Access dialog opens.



3. In the studies list, select the study to which you want to remove access.
4. To remove access to the selected study for individual users or groups, select the user(s) or group(s) in the Select Users To Remove group box and/or Select Groups to Remove box.

   To remove access to the selected study for all users or groups, click **Select All** in the Select Users to remove group box and/or Select Groups to remove group box.

5. Repeat **Step 3** and **Step 4** to remove access for other studies displayed in the study list.

6. Click **OK**. The application removes access to the study for the selected users and groups.

Chapter 7 Using the Application on an iPad, iPhone, or iPod Touch

The following topics describe how to use the iConnect Access application on an iPhone, iPod touch, and iPad. The iPhone and iPod Touch feature a scaled-down patient list, viewer and basic image review tools, including consultation notes and contact list features. The iPad features the Study Viewer and supports the same review functionality as regular browsers.

WARNING: **NOT FOR DIAGNOSTIC USE ON A MOBILE DEVICE SUCH AS AN iPAD, iPHONE, OR iPOD TOUCH.**

NOTE: The iPhone and iPod touch support integrated configurations of the iConnect Access application.

Starting the Application

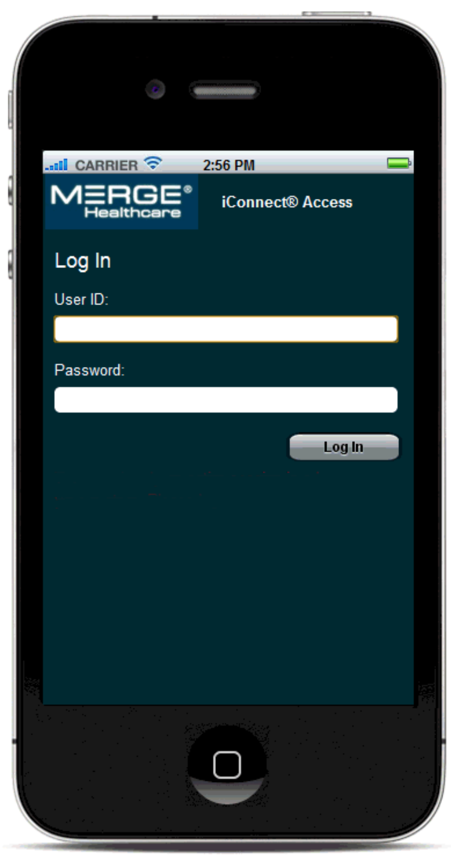
Use the steps below to start the iConnect Access application from your iPhone, iPod touch, or iPad.

To start the application

1. Open a Web browser (for example, Safari).
2. Tap the **Address** field.
3. Type **http://WebServerName/WebAccess**, where *WebServerName* is the computer name of the iConnect Access server.

NOTE: If your server uses an encrypted or secure connection, type **https:**// instead of **http:**//.

4. Tap **Go**. The application displays the Log In page.



5. Log in as follows:

    - Tap the **User ID** field and type your user ID.
    - Tap the **Password** field and type your password.
    - Tap **Done** to close the keyboard.
    - Tap **Log In**.

Selecting Patient Studies

When you log in to the iConnect Access Web server from your iPhone, iPod touch, or iPad, you can search for and load a patient study.

Searching for Patients

You can search the patient list using a free-text search or patient attributes.

Free Text Search

In a free text search, the application matches the characters typed in the **Patient Name** field with patient names in the database. For example, if you type:

ab b

The system will return any patient whose first name or last name begins with an "ab" or "b" -- such as Abraham Bernstein or Beatrice Abel.

Patient Attribute Search

In a patient attribute search, the system presents the following attributes:

- Last Name
- First Name
- Patient ID
- Accession #
- Study Description
- Modality

- Referring Physician
- Study Date
- Briefcase (iPad only)

  For more information on using the briefcase feature, see **"Viewing Your Briefcase" on page 24**.

Supply values for one or more attributes before invoking the search.

You can also filter the list using the predefined filters (for example, most recent 100 studies, studies acquired in the last two months, and studies acquired in the last two years).

To search for a patient using by free-text search

1. In the Patient List, tap the **Search** button.

2. Tap the **Patient Search** field and type one or more characters.
3. Tap **Search**. The application displays the search results and the number of patients returned.

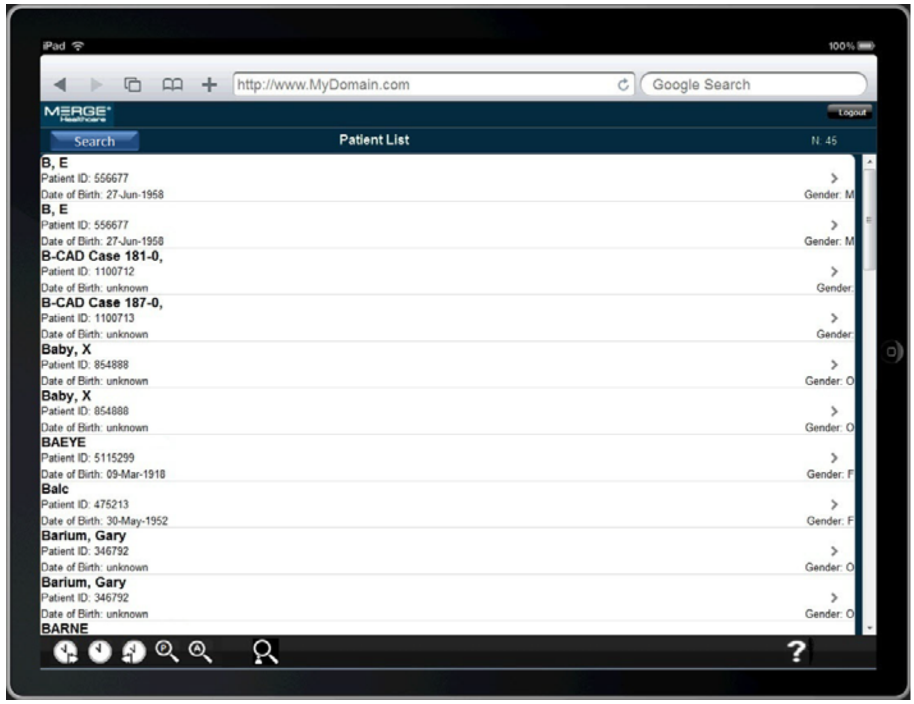
To search for a patient by attributes

1. In the Patient List, tap the **Search** button.

2. Tap the appropriate field and type one or more of the following: patient's name, patient ID, accession number, study description, modality, or study date range.

3. Tap **Search**. The application displays the search results and the number of patients returned.



4. If using an iPad, you can click the **Search** button to return to the search that generated the displayed results.

To filter the Patient List

In the Patient List, tap the desired button.

- To display the most recent 100 studies of the last *2 days*, tap the **Most Recent** button.

- To display studies acquired in the last *week*, tap the **Recent** button.

- To display studies acquired in the last *month*, tap the **Least Recent** button.

Using My Search (iPad Only)

The iPad enables users to invoke the "My Search" feature. The "My Search" feature performs a default search that has been defined in the Studies window. See **"Using and Managing Saved Searches" on page 23**.

NOTE: You cannot define a "My Search" using the iPad. The search attributes for "My Search" are defined in the Studies window.

To invoke "My Search", tap the button.

The search results appear in the Patient List.

Toggling Between HTML4 and HTML5

The HTML5 viewer is now supported on iPad. Buttons at the bottom of the study list enables you to select whether the HTML4 or HTML5 viewer will be used when you open a study. To use the HTML5 viewer, the iPad must use iOS 6 and the HTML5 viewer must be enabled.

 Identifies that the HTML4 viewer is selected. Tap to change to the HTML5 viewer.

 Identifies that the HTML5 viewer is selected. Tap to change to the HTML4 viewer.

For more information on HTML4 and HTML5 viewers, see **"Study Viewer" on page 49**.

Selecting and Loading Patients for Review

When you select a patient in the Patient List, the application displays the studies available for the selected patient.

To select a patient

1. In the Patient List, tap the desired patient. The application displays the Study List.
2. Tap the desired study to load it into the viewer.

Using the Viewer

Loaded images are displayed in the viewer. This section describes how to return to the Patient List, use the review tools to view an image, select a different series and reset the image display parameters.

NOTE: To avoid confusion where different patients have the same name, and where patients have the same ID but different names, the viewer always displays both the patient name and ID in the viewport.

NOTE: When you close the viewer when using an iPad, you are returned to the search page that displays the results from the previous search.

Accessing the Patient List (iPhone and iPod only)

This section describes how to access the Patient List from the viewer (that is, during a review session).

To access the Patient List during a review session

From the viewer, tap **Patient List**.

Scrolling Images

You can scroll through all the images in a series using a touch gesture or the scroll bar.

To scroll an image

In the viewport:

- swipe your finger right to left to scroll to the next image
- swipe your finger left to right to scroll to the previous image
- drag your finger over the scroll bar to scroll through the images
- tap the scroll arrows to scroll to the next or previous image

Zooming Images

You can zoom the images to more closely examine them.

To zoom images (iPhone and iPod only)

In the viewport:

- Move your fingers apart to zoom in.
- Pinch your fingers together to zoom out.

To zoom images (iPad only)

In addition to the pinch movement, you can zoom images using the **Zoom** button.

To zoom 200% (iPhone and iPod only)

In the viewport:

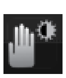
- Double-tap the viewport to zoom two times the original viewport size.
- Double-tap the viewport to zoom back to the viewport size.

Panning Images

You can pan, or reposition the images within a viewport.

To pan an image

1. Do one of the following:
   - For iPhones and iPods, if the **Pan** button is not selected and does not display the hand symbol as shown here, tap it.

   - For iPads, tap the following:

2. The Pan tool remains active until you tap it again to toggle to the Window/Level tool (see **"Changing the Window Settings (iPhone and iPod only)" on page 137**).

3. Drag your finger in any direction to move the image.

Changing the Window Settings (iPhone and iPod only)

You can change the window width (contrast) and level (brightness) of an image.

To change the window settings

1. Do one of the following:

    - For iPhones and iPods, if the **Window** button is not selected and does not display the brightness symbol as shown here, tap it.

    - For iPads, tap the following:

2. The Window/Level tool remains active until you tap it again to toggle to the Pan tool (see **"Panning Images" on page 136**).

3. Do the following:

    - Drag your finger *vertically* over the image to adjust the window level.

    - Drag your finger *horizontally* over the image to adjust the window width.

Selecting a Different Series (iPhone and iPod only)

The Series Selector is a drop-down list that represents the loaded series and provides study navigation. It allows you to keep track of the series being displayed and to quickly select different series for review.

To select another series

1. Tap the Series Selector.

2. When the Series Selector expands, tap the desired series from the list.

   The application loads the selected series into the viewport. The Series Selector displays the name of the series currently displayed in the viewport.

Selecting a Different Series (iPad only)

The iPad enables you to view loaded series and navigate to studies. It allows you to keep track of the series being displayed and to quickly select different series for review.

To select another series

1. Do one of the following:
   - Tap Show Menus.
   - Tap and hold within the Study Viewer.

   The Study Viewer appears as follows:

2. Open the History tab.
3. Select a related study.

   The study opens in a separate Study Viewer.

   For instructions on using the tools in the Study Viewer, refer to **"Study Viewer" on page 49**.

Resetting the Image Display Parameters

You can reset the image display parameters (such as window width and level, zoom, and pan) to the settings applied when the study was first loaded. When you reset the image display parameters, the application only resets the current image.

To reset the image display parameters

1. If you are using an iPod or iPhone, tap the **Reset** button.

   If you are using an iPad, tap the following button:

   The application resets the image display parameters for the current image.

Reading Reports

If a study contains a report, you can access it from the viewer. When you first open a study with a report, the application displays the report before displaying the patient images. After you close the report, you can open it from the viewer and toggle between the report and the images without losing your changes in the viewer.

To read a report (iPod and iPhone only)

1. Select and load the desired study (see **"Selecting Patient Studies" on page 131**).
2. The application displays the report. If there is more than one report available, select the appropriate report from the drop-down list.
3. You can do the following:
   - Review the report — Pinch your fingers open and close to zoom in and out. Swipe your finger up and down to scroll through the report.
   - Dismiss the report — Tap the **Image** button to close the report and review your images.

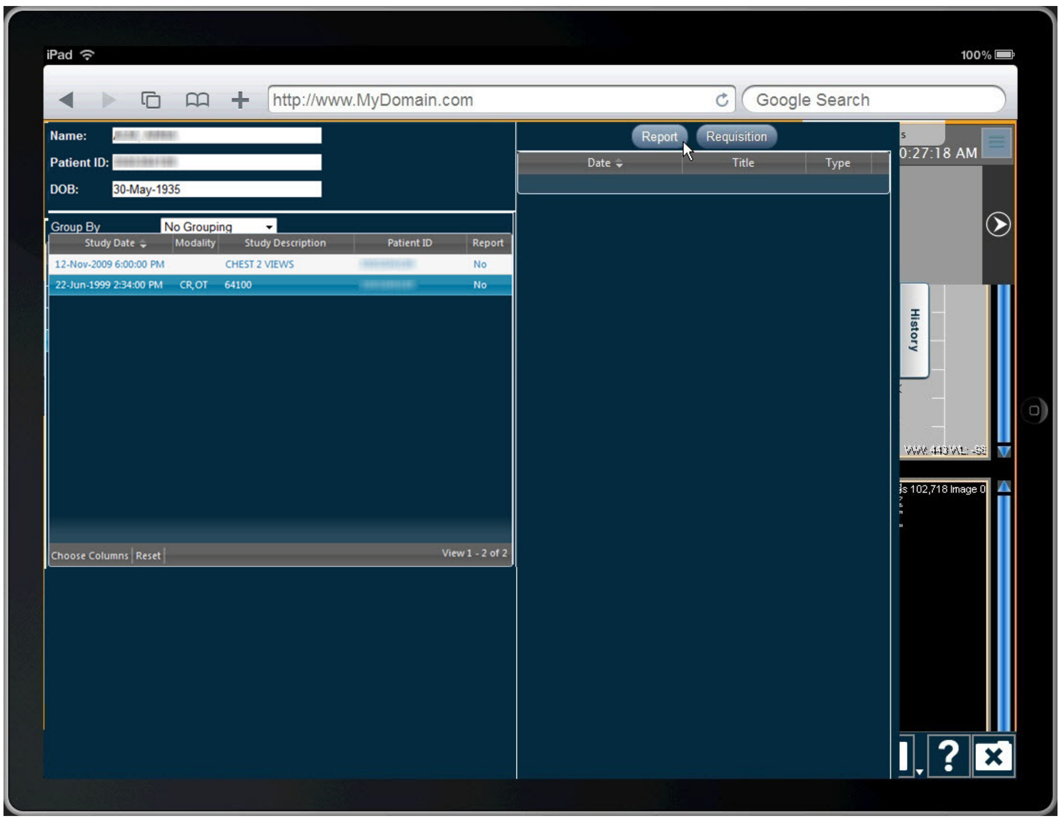
     
4. At any time, you can toggle between the report and the patient images:

- To view the report, tap the **Report** button.

- To view the images, tap the **Images** button.

To read a report (iPad)

1. In the History tab of the Study Viewer, tap **Report**.



Viewing and Sending Consultation Notes

You can view and send consultation notes to the iConnect Access Web server for a selected patient.

This feature is available only if enabled by the System Administrator.

CAUTION: When you create a consultation note, you are associating the note with the patient whose images are currently loaded in the viewer.

NOTE: At any time, you can switch between the consultation note and viewport without losing your changes (see **"To switch between the consultation note and the viewer (iPod and iPhone only)" on page 144**).

To send a consultation note

1. Select and load the desired study (see **"Selecting Patient Studies" on page 131**).
2. In the viewer, tap the **Consultation Note** button.
    - For iPhones and iPods, tap the following and go to **Step 3**

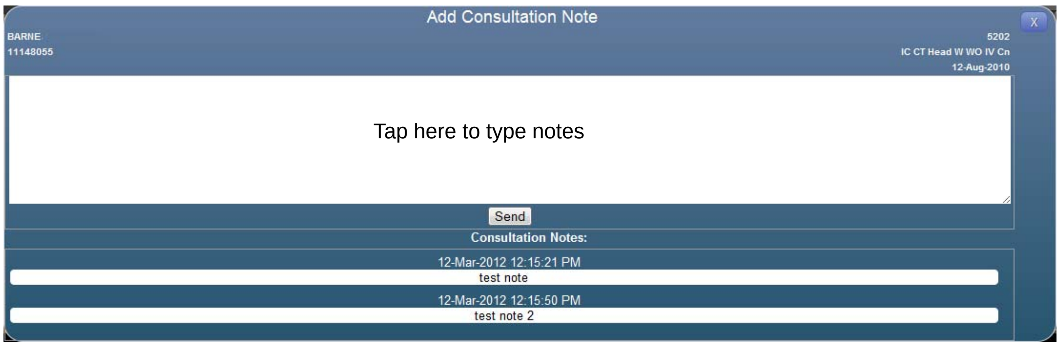
      

    - For iPads, tap the following:

3. Tap the field to display the keyboard and type your notes. For the iPhone and iPod touch, the consultation notes screen appears as follows:

For the iPad, the Consultation Notes screen appears as follows:



4. Tap **Send** to attach your notes to the current patient.

To view a consultation note

1. Select and load the desired study (see **"Selecting Patient Studies" on page 131**).
2. In the viewer, tap the **Consultation Note** button.
3. From the Consultation Notes list, double-tap the note you want to read.
4. The application loads the note in the **Consultation Notes** field.

To switch between the consultation note and the viewer (iPod and iPhone only)

1. Do the following:
   - To switch to the viewer, tap the **Images** button.

   - To switch to the consultation note, tap the **Consultation Notes** button.

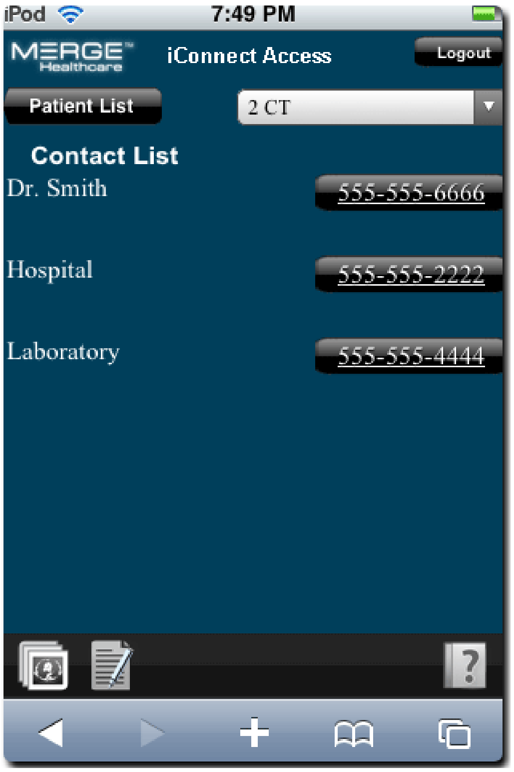
Using the Contact List (iPod and iPhone only)

The application provides a Contact List that lists the available contacts on your iConnect Access Web server. You can make a phone call directly from the Contact List after reviewing patient images. The Contact List is only available from the viewer and the Consultation Notes.

To make a phone call from the Contact List

1. Tap the **Contact List** button.

2. Tap the desired contact.



3. The application automatically dials the number for the selected contact.

Using the Express Help (iPod and iPhone only)

The express help is a task-based quick reference to get you started quickly.

To use the express help

1. Tap the **Help** button.

2. The application displays the express help in the same browser. Tap **Back** to return to the application.

Logging Off

This section describes how to log off the iConnect Access application from your mobile device.

To log off the application

1. Tap **Logout**.

2. When prompted, tap **Yes** to log out of the application.

3. The application closes and returns you to the Log In screen.

Chapter 8 User Preferences

Managing user preferences encompasses the following:

- "Configuring User Preferences" on page 147
- "Authenticating External Applications" on page 152
- "Managing Your User Profile" on page 153

Configuring User Preferences

The following options are available when you set your own preferences or when the administrator sets preferences for a role. In the latter case, all members of the role inherit the same preferences unless they are overridden at the personal level.

Setting	Description
Image Format (HTML4 viewer only)	Image format for non-transient (i.e. non-thumbnail) images. • JPEG (lossy) • PNG (lossless) The default format is JPEG.
Default Viewer Setting	Identifies viewer type to use when launching the Study Viewer. • HTML5 • HTML4 **NOTE:** This setting only appears if your site has the HTML5 viewer enabled.

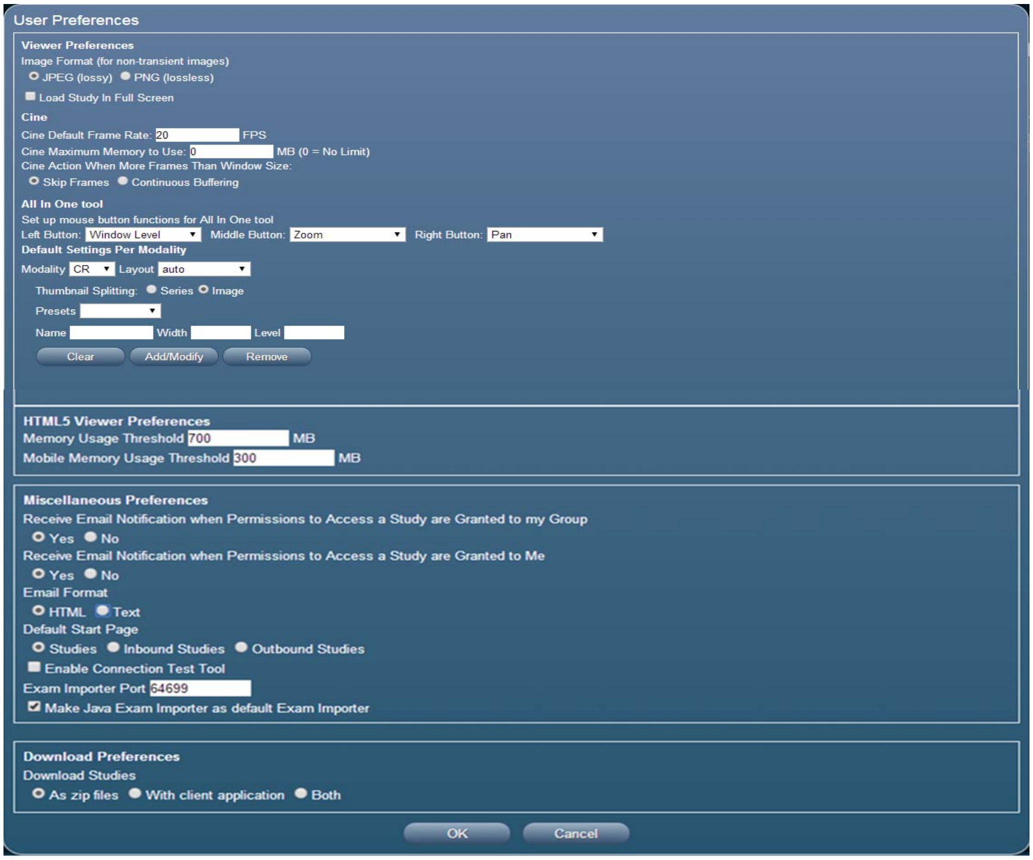
Setting	Description
Load Study in Full Screen	Configures the Study Viewer to open in Full Screen mode. See **"Using Full Screen Mode" on page 76**. **NOTE:** This option only affects the desktop version of the software. The tablet version is set by the Administrator in Domain Management.
Cine	
Cine Default Frame Rate	The number of frames per second (FPS) that the cine displays. This default frame rate only applies if the study data does not contain a recommended cine frame rate. If they do contain a recommended frame rate, the application uses this frame rate to play the cine.
Cine Maximum Memory to Use	The maximum amount of memory in MBs that is allocated to viewing the cine. The amount chosen depends on your computer's memory specifications. If the value is "0", the computer uses as much memory as needed. **NOTE:** This option is available for the HTML4 viewer only. For the HTML5 viewer, see **"Memory Usage Threshold" on page 149**.
Cine Action When More Frames than Window Size	The system's response when frames are loaded that exceed the computer's window size. • Skip Frames – The application skips frames that exceed the computer's window size. • Continuous Buffering – The application continues loading images while playing the cine. For Continuous Buffering, the application uses the calibrated frame rate to display the cine. The adjusted frame rate (i.e., adjusted using the cine speed slider) is not used. **NOTE:** This option is available for the HTML4 viewer only.
All In One Tool	
Set up mouse button function for all-in-one tool	Assigns functions to mouse buttons.
Default Settings Per Modality	
Modality	The modality for which default settings are being defined.
Layout	The layout determines the number of viewers to display (i.e., one, two, four or six) when you load a study for the selected modality.

Setting	Description
Thumbnail Splitting	Identifies whether thumbnails for the selected modality represent a single image (such as a CR, DR, or ultrasound) or a series (in the case of a slice stack of MR or CT images). Thumbnails allow you to quickly select different series for review. Each thumbnail displays one image from the series it represents. For example, you can choose to have a CR series of thee images represented by a single thumbnail ("Series" option) or by three thumbnails ("image" option). If the Image option is selected, each viewport that corresponds to such a thumbnail displays a single image
Presets	The name of a preset under which the default setting is saved.
Name	The name for the preset (for example, Bone or Tissue).
Width	The window width value for this preset.
Level	The window level value for this preset
The Default Setting Per Modality section contains the following buttons: • Clear – Clears the Name, Width, and Level fields. • Add/Modify – Saves the Name, Width, and Level field values for a new preset or an existing preset. • Remove – Deletes the preset selected from the Presets drop-down list.	
HTML5 Viewer Preferences	
Memory Usage Threshold	Defines the amount of browser memory the HTML5 viewer can use for caching managed data on desktop/laptop clients. Default is 700 MB.
Miscellaneous Preferences	
Receive email notification when permissions to access a study are granted to me (or my group)	An email notification is sent when access to a study is granted to you, or your group (if permissions are assigned at the group level). Select Yes to receive email notifications and No to receive no notifications.
Email Format	The format in which emails are received. • HTML – Select this option to send emails formatted in HTML. • Text – Select this option to send emails in plain text.
Default Start Page	The start page that appears when you or members of the group open the application.

Setting	Description
Auto Query of Study List	Identifies whether to run an automatic study list query when loading the Study List page.
Enable Connection Test Tool	Enables the connection test tool. For more information, refer to the Merge iConnect Access Installation Guide.
Exam Importer Port	Port used by the Exam Importer to communicate with the Merge iConnect Access application. **Note:** If this port is changed, you must also update it within the Exam Importer settings.
Make Java Exam Importer as default Exam Importer	Sets the Web Uploader version of the Exam Importer as the default Exam Importer.
Download Preferences	The format of downloaded studies. • As zip files – The system assembles a zip file that contains the study. • With client application – The system downloads studies in the client application format. • Both – The system produces both a zip file and a version in the client application format.
Patient Record Live Search	Enables live search when searching for patient records in the Patient Record window. When enabled, the application displays and updates the search results as you type. At least two characters must be typed before the application starts displaying search results.

To configure user preferences

1. From the **Options** menu, select **User Preferences**. The User Preferences dialog opens.



NOTE: User preferences can also be accessed by clicking **User Preferences** in the Study Viewer.

2. Modify the user preferences as needed.

3. Click **OK**. A message box opens.

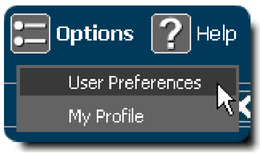
4. Click **Close**.

Authenticating External Applications

When using the External Applications feature, you can define login credentials that those applications use to authenticate users when launched from the iConnect Access application.

To authenticate external applications

1. From the **Options** menu, select **User Preferences**.



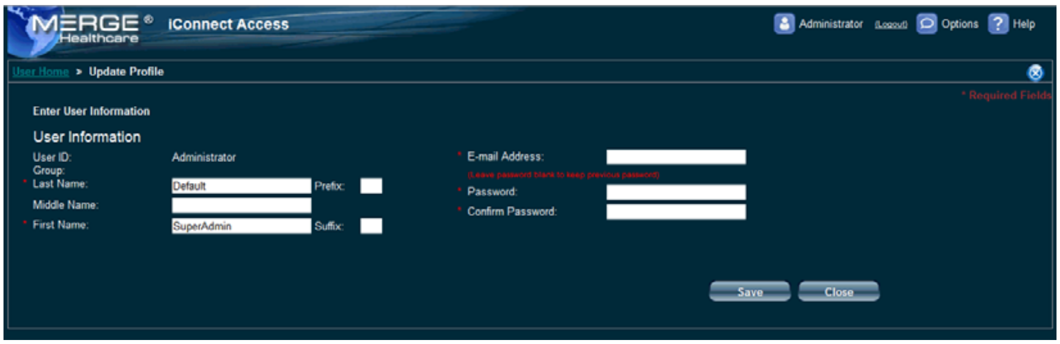
2. From the Select Applications drop-down list, select the required application.
3. Type a **User ID** and **Password** in the respective fields and click **Commit**.
4. Click **OK**.
5. Click **Close**.

Managing Your User Profile

If your user account does not already have an email address or password, you can set them from the **Options** menu. You can also use the **Options** menu to change your email address and password at any time. The updated information takes effect immediately after saving the profile.

To manage your profile

1. From the **Options** menu, select **My Profile**. The Update Profile dialog opens.



2. Change one or more of the following:

Name	The name associated with your user ID.
Email Address	The email address to which email notifications are sent.
Password	Your system password. If you change your password, ensure that you retype it in the **Confirm Password** field.

3. Click **Save**.

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