SecurView®
Breast Imaging Workstation

SecurView® DX/RT Workstation
User Guide
MAN-08908-002 Revision 002

HOLOGIC®

SecurView® DX/RT

Breast Imaging Workstation

User Guide

For Software Version 11.1

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HOLOGIC®

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Chapter 1 Introduction

This chapter provides an overview of Hologic® SecurView® DX and RT workstations, with information about this guide, product support resources, and safety precautions.

1.1 Overview

This guide provides instructions for operating the SecurView workstations:

- SecurView DX Diagnostic Workstation
- SecurView RT Technologist Workstation

In addition, this guide provides instructions for working with the following supplemental Hologic software applications:

- ImageChecker® Computer Aided Detection
- ImageChecker® 3D Calc CAD
- Quantra™ Breast Density Assessment
- Application Synchronization
- Study List Manager

For information regarding the Advanced Multimodality Option, refer to the *SecurView Advanced Multimodality Option User Guide*.

SecurView workstations provide a dedicated softcopy review environment for diagnostic and screening mammography. The system user interface and workflow are optimized to support experienced mammography reviewers in high-volume reading. Efficiency and reading quality are supported by specialized features including:

- Predefined Hanging Snapshots
- Best matching ReportFlow
- Workflow keypad
- Patient Bar Code Scanner
- Individual user login and user preference settings
- Automatically generated worklists
- Predefined standard views
- Support for double reading

SecurView provides access to additional patient data:

- MammoNavigator feature to support easy access to non-standardized image material such as additional views, mosaics, and scanned documents
- Mammography CAD Structured Report (CAD SR) integration
- Automatic synchronization with external applications
- Application event logging to support compliance with patient privacy policies
- Study List Manager adds non-local patients to patient list to facilitate automatic synchronization

1.2   Intended Use

R_X Only   United States federal law restricts this device to use by, or on the order of, a physician.

1.2.1   SecurView DX Diagnostic Workstation Intended Use

The Hologic SecurView DX device is intended for selection, display, manipulation, filming, and media interchange of multimodality images from a variety of different modality systems. It also interfaces with various image storage and printing devices using DICOM or similar interface standards. The device used with FDA-cleared monitors may be used by a trained physician for display, manipulation, and interpretation of lossless compressed or non-compressed mammographic images for screening and diagnostic mammography and digital breast tomosynthesis, as well as any other DICOM multimodality image. SecurView DX is typically used by trained professionals, including, but not limited to physicians, radiologists, nurses, medical technicians, and assistants.

1.2.2   SecurView RT Technologist Workstation Intended Use

The SecurView RT Technologist Workstation is a softcopy display system intended for viewing only and does not support diagnostic reading of mammography. It is capable of retrieving prior mammography images for display from PACS and other DICOM image storage systems.

1.3   Using This Guide

This guide is organized as follows:

- Workstation Description provides an overview of the SecurView workstations, including component descriptions. It also explains how to start up and shut down the system, and how to log in.
- Patient Manager explains the Patient List, which includes all patients, studies, and images currently in the SecurView database. The chapter also explains how to set up reviewing Sessions.
- Reviewing Patients describes how to open patients for viewing, how to use the viewing and annotation tools, how to close studies, and printing options.
- Working with Tomosynthesis Images describes how to view and work with tomosynthesis images.
- Setting User Preferences explains how to define preferences for individual users.
- Hanging Snapshots and ReportFlows describes Hanging Snapshots and ReportFlows, how a Radiologist user can select specific ReportFlows for everyday use, and how to create new Hanging Snapshots and ReportFlows.
- Administrator Tasks describes system administrator tasks such as managing users, configuring system-level settings, and backing up the patient database.

- Case Administrator Tasks describes how the case administrator can delete patient data.

- Patient and ReportFlow Files provides procedures intended to support the technologist in managing patient and ReportFlow files.

1.4 Resources Available

In addition to this guide, the following resources are available to assist you when working with SecurView workstations.

- **Training:** For new systems, the Hologic Applications team provides remote in-depth training for radiologists and technologists. For additional personalized instruction, contact your Hologic representative.

- **Hologic Training Center:** This website provides quick access to guides and training materials for Hologic products and is available at no charge to our customers under warranty or Hologic service contract. You can find the Training Center by visiting the Hologic website (*www.hologic.com*).

- **Additional Documentation:** In addition to this guide, Hologic supplies the following documents for the SecurView workstations:
  - *SecurView DX/RT Workstation Release Notes*
  - *SecurView DX Workstation Quality Control Manual*
  - *SecurView DX/RT Workstation Installation & Service Manual*
  - *SecurView Workstation DICOM Conformance Statements*
  - *SecurView Advanced Multimodality Option User Guide*
  - *SecurView Advanced Multimodality Option Installation & Service Manual*

  The SecurView User Guide and Advanced Multimodality Option User Guide are available online by selecting the Help icon on the SecurView workstation toolbar. You can obtain additional copies of printed guides and manuals through your Hologic representative. The DICOM Conformance Statements are available at *www.hologic.com*.

- **Product Support and Service:** For information, refer to the copyright page of this guide.

1.5   Warnings and Precautions

This guide uses the following conventions to provide technical and safety information of special interest.

> **Warning:**
> **An instruction that, if not followed, can result in a hazardous condition.**

> **Caution**
> **An instruction that, if not followed, can result in damage to the system.**

> **Important**
> An instruction provided to ensure correct results and optimal performance, or to clarify limitations of the device.

> **Note**
> Information provided to clarify a particular step or procedure.

Before using the system, read the following warnings and precautions.

> **Warning:**
> **The system is intended for use only by personnel who have read this guide and received training on how to use the system. Hologic does not accept responsibility for injury or damage associated with improper or unsafe system operation.**

> **Warning:**
> **If Administrative users access the operating system or file system other than as instructed in this guide or by Hologic trained personnel, system corruption or changes that render the system unusable could result.**

> **Warning:**
> **Use the system only outside the patient environment. The system is rated for use only in an office environment.**

> **Warning:**
> **The symbol next to the power connector indicates a potential shock hazard. To reduce the likelihood of electrical shock or fire hazard, connect the computer only to a power receptacle that is grounded properly and provides voltage and current within the specifications of the system.**

Warning:
Do not place liquid containers on the device. In the event of a spill, shut down power to all components prior to cleaning to minimize the possibility of electrical shock. If internal components are exposed to liquid, do not operate the device – contact your service representative.

Caution
Always shut down the computer according to the procedures provided in this guide. Improper system shutdown can cause loss of data or damage to the computer operating system.

Important
For proper system operation, the technical quality of the images (e.g., contrast) should be acceptable to the mammographer and meet the requirements of the Mammography Quality Standards Act (MQSA) or the appropriate national standards.

Important
The device design and mode of operation are consistent with current standard mammography clinical practices, as governed by the MQSA. Users are advised to comply with the MQSA for the United States, or the appropriate national standards, when implementing the SecurView application in clinical protocols.

Important
When reviewing images from a full-field digital mammography (FFDM) device, adhere to the guidelines of the American College of Radiologists (ACR). To ensure optimum display of diagnostic information, review each image with the View Actual Pixels scaling mode. When displaying images using a fractional Image Size zoom factor larger than one, SecurView enlarges the original images by interpolating pixel values between the source pixels. The pixel characteristics in the enlarged images may differ from the original image pixels. For information on the scaling modes, refer to *Scaling Modes* on page 54.

Important
To assure optimal performance of SecurView high-resolution displays, follow the recommended quality control procedures. Perform all quality control tests at the prescribed frequencies as required under national regulations.

Important
SecurView workstations are intended for use as image reviewing workstations only. The workstations are not intended to be used for archiving image data or to be used as an image archive. For permanent archiving of patient images and records, use a PACS.

1.5.2 Installation and Maintenance

Warning:

To connect primary power to the system, always use a three-conductor grounded power cable that meets local regulatory standards. Use of a two-prong adapter disconnects the utility ground and creates a severe shock hazard.

Warning:

SecurView workstation computers are heavy! If you have concerns about lifting or positioning the computer, request assistance.

Warning:

Before cleaning the system components, always shut down the system according to the procedures in this guide and disconnect power cords to prevent electrical shock. Never use alcohol, benzene, thinner, or other flammable cleaning agents.

Caution
This product contains no user-serviceable parts.

Caution
Maintain equipment in a well-ventilated, air-conditioned environment that meets the temperature and humidity specifications provided in the product service manual.

Caution
Do not attempt to install or repair the SecurView system yourself. Only trained personnel, authorized by Hologic, are qualified to install or repair the system.

Caution
Disconnect the power cord before moving or servicing.

Caution
Install the system behind the institution firewall for network security and antivirus protection. Hologic provides no computer virus protection or network security for the system. If antivirus software is required, visit the Hologic website for information on Hologic's cybersecurity program and antivirus software installation guidance.

1.6   Product Complaints

Any healthcare professional who has complaints or is dissatisfied with the quality, durability, reliability, safety, effectiveness, and/or performance of this product should notify Hologic.

If there is reason to believe the device caused or contributed to a serious injury of a patient, notify Hologic immediately by telephone, fax, or written correspondence.

1.7   Warranty Statement

Except as otherwise expressly stated in the Agreement: i) Equipment manufactured by Hologic is warranted to the original Customer to perform substantially in accordance with published product specifications for one (1) year starting from the date of shipment, or if Installation is required, from the date of Installation ("Warranty Period"); ii) digital imaging mammography x-ray tubes are warranted for twenty-four (24) months, during which the x-ray tubes are fully warranted for the first twelve (12) months and are warranted on a straight-line prorated basis during months 13-24; iii) replacement parts and remanufactured items are warranted for the remainder of the Warranty Period or ninety (90) days from shipment, whichever is longer; iv) consumable Supplies are warranted to conform to published specifications for a period ending on the expiration date shown on their respective packages; v) licensed Software is warranted to operate in accordance with published specifications; vi) Services are warranted to be supplied in a workman-like manner; vii) non-Hologic Manufactured Equipment is warranted through its manufacturer and such manufacturer's warranties shall extend to Hologic's customers, to the extent permitted by the manufacturer of such non-Hologic Manufactured Equipment. Hologic does not warrant that use of Products will be uninterrupted or error-free, or that Products will operate with non-Hologic authorized third-party products. These warranties do not apply to any item that is: (a) repaired, moved, or altered other than by Hologic authorized service personnel; (b) subjected to physical (including thermal or electrical) abuse, stress, or misuse; (c) stored, maintained, or operated in any manner inconsistent with applicable Hologic specifications or instructions, including Customer's refusal to allow Hologic recommended Software upgrades; or (d) designated as supplied subject to a non-Hologic warranty or on a pre-release or "as-is" basis.

Chapter 2 Workstation Description

This chapter describes the workstation models, how they interact with each other, and how they interact with other devices in the clinical environment. It also explains how to start up and shut down the system and how to log in.

2.1 Workstation Overview

Hologic offers the following SecurView workstations:

- **SecurView DX Diagnostic Workstation** – Used by radiologists to review medical images for screening and diagnostic mammography and digital breast tomosynthesis. SecurView DX workstations can be installed as Standalone workstations, or several of them can be configured as Client workstations that share a central database on a SecurView DX Manager.

- **SecurView DX Manager** – Provides central database access and performs the image preparation for all connected SecurView DX Client workstations.

- **SecurView RT Technologist Workstation** – Used by technologists to review medical images for reference purposes. SecurView RT workstations can be installed as Standalone workstations or several of them can be configured as Client workstations that share a central database on a SecurView RT Manager. SecurView RT workstations are used primarily in sites with Hologic Selenia® FFDM systems.

Note

SecurView RT TechMate™ is no longer supported for version 9.0 or later.

- **SecurView RT Manager** – Provides central database access and performs the image preparation for all connected SecurView RT Client workstations.

2.2 SecurView DX Diagnostic Workstation

Physicians use SecurView DX diagnostic workstations to review medical images for screening and diagnostic mammography and digital breast tomosynthesis.

SecurView DX provides a patient browser with query/retrieve functionality for access to patient data, review and annotation of patient images, display of Mammography CAD SR results, and workstation administration and user settings.

A SecurView DX Standalone or Client workstation consists of:

- A wide-screen diagnostic grayscale or color display (or two portrait displays)

- One or two optional lower-resolution displays for the Advanced Multimodality Option, MultiView™ MM software option, Patient Manager, and/or external applications

- Computer with Microsoft Windows, keyboard, and mouse

- SecurView workflow keypad with trackball (optional)

- Bar Code Scanner (optional, not shown)

- Uninterruptible Power Supply (UPS) (optional, not shown)

> **Note**
> The Advanced Multimodality and MultiView MM Options enhance the softcopy reading environment of the SecurView DX workstation. You can use one or two additional displays for the Advanced Multimodality Option, the MultiView MM option, the Patient List, and/or an approved external application (with Application Synchronization installed).
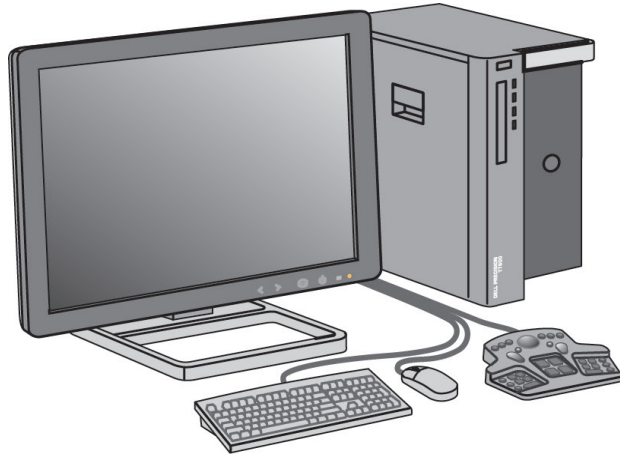
Figure 1: SecurView DX Diagnostic Workstation

2.2.1 SecurView DX Standalone Systems

When installed as a Standalone system, each SecurView DX workstation provides a full complement of workstation functions:

- Temporary storage of current patients
- Patient Manager for browsing patients
- Reviewing and annotating patient images
- Query and retrieval of patient studies from PACS
- DICOM connectivity
- Database with configurable system settings and user preferences
- Images prepared for display
- Storage and display of Mammography CAD SRs

The following diagram shows how images originating from the acquisition workstation flow to the Standalone SecurView DX workstation. After reviewing images at the SecurView DX workstation, any Annotations (physician markings with descriptions) are automatically stored in the SecurView database and sent to all configured destinations.
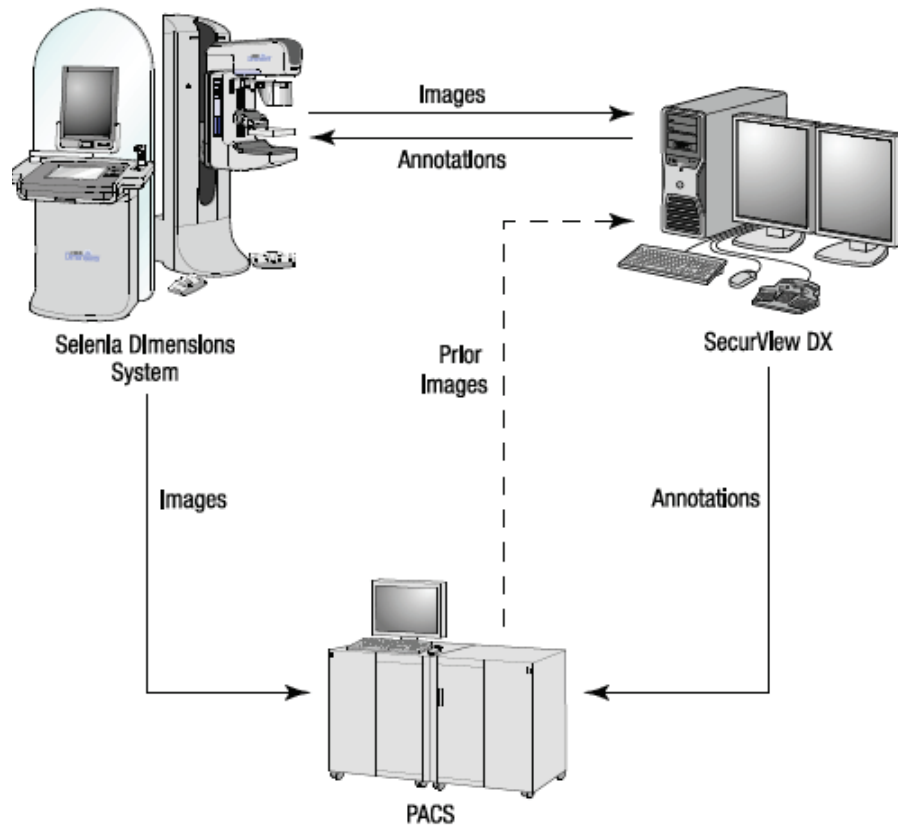
Figure 2: Information Flow with a Standalone SecurView DX Workstation

2.2.2   SecurView DX Multiworkstation Systems

One SecurView DX Manager supports two or more SecurView DX Client workstations as needed, depending on patient volume and workflow requirements. The Manager consists of:

- Landscape display
- Computer with Microsoft Windows, keyboard, and mouse
- UPS (not shown)

The SecurView DX Manager provides the central SecurView database for its cluster and performs image preparation for all connected SecurView DX Client workstations. The Manager acts as the DICOM entity for a multiworkstation cluster and is responsible for receiving DICOM images. A multiworkstation cluster acts as a single DICOM entity.
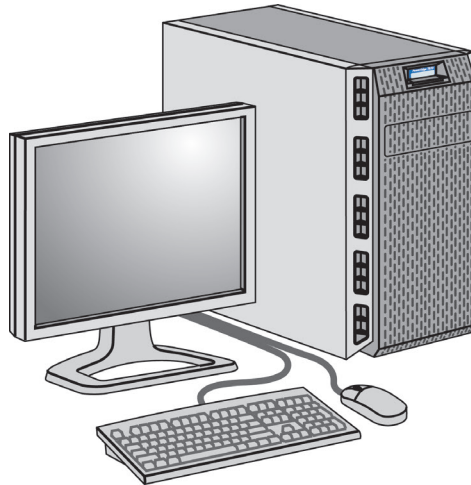
Figure 3: SecurView DX Manager

The following diagram shows how images originating from the acquisition workstation flow to the SecurView DX Manager. After reviewing images at the SecurView DX workstation, any Annotations (physician markings with descriptions) are automatically stored in the Manager database and sent to all configured destinations.
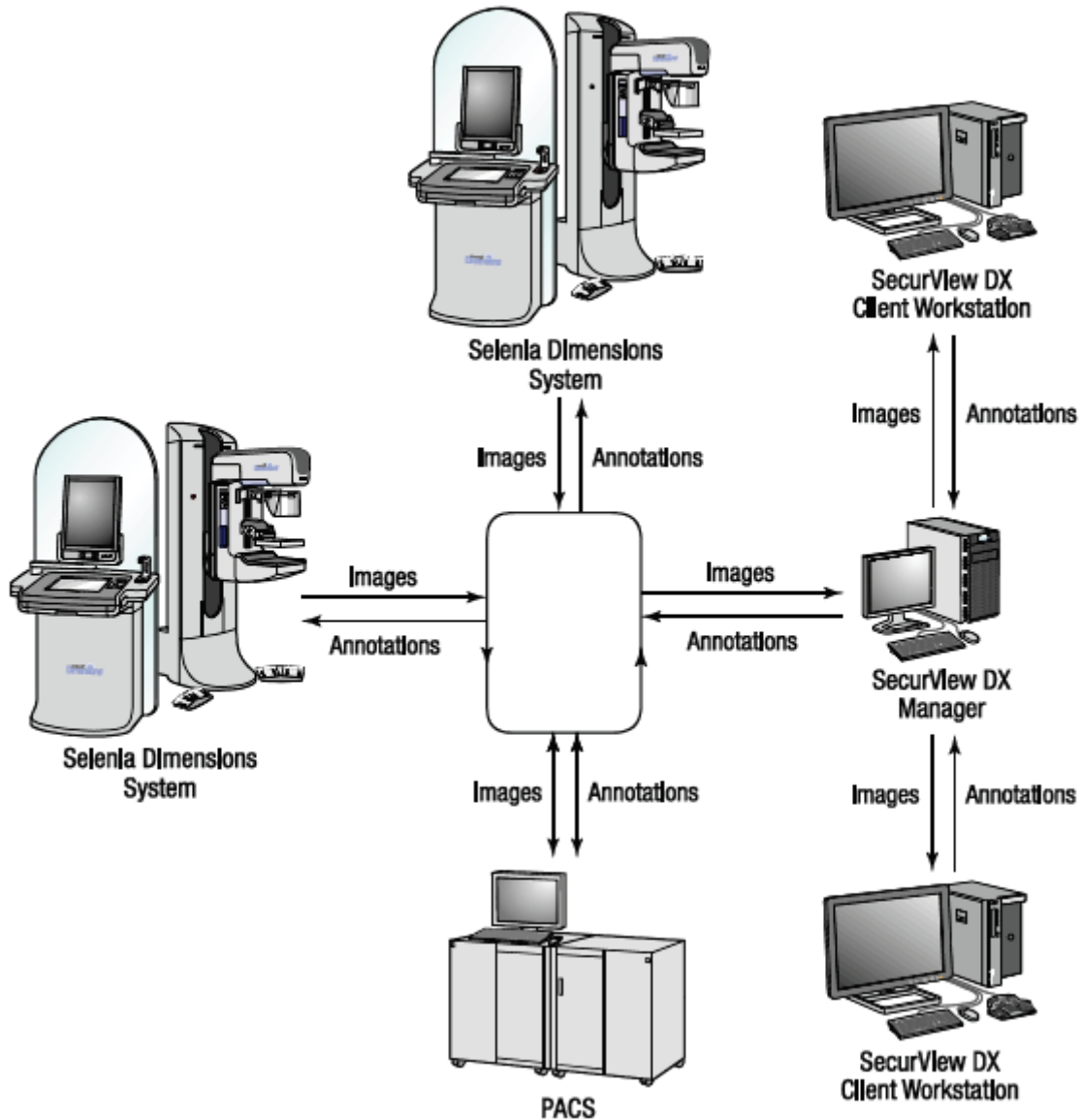
Figure 4: Information Flow in a SecurView DX Multiworkstation System

2.3   SecurView RT Technologist Workstation

Technologists use SecurView RT workstations to check new images, review prior images and radiologist Annotations, and for administrative tasks.

SecurView RT workstations provide low-resolution display of patient images and so are not suitable for diagnostic review. However, SecurView RT provides many SecurView DX workstation features such as the patient browser, query/retrieve functionality for access to patient data, and workstation administration and user settings.

SecurView RT workstations are used primarily in sites with Hologic Selenia FFDM systems.

A SecurView RT Standalone or Client workstation consists of:

*   Landscape display
*   Computer with Microsoft Windows, keyboard, and mouse
*   UPS (not shown)
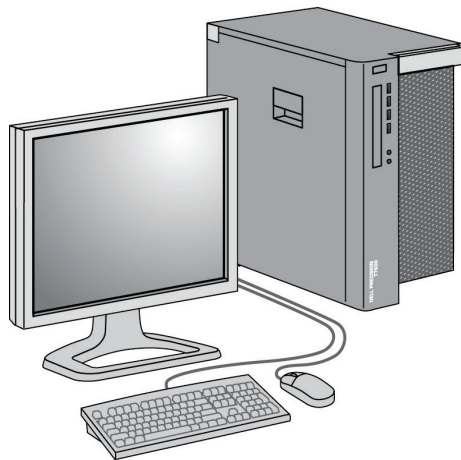
Figure 5: SecurView RT Technologist Workstation

2.3.1   SecurView RT Standalone Systems

When installed as a Standalone system, each SecurView RT workstation provides a range of functions for the technologist:

*   Check new studies and images as they arrive
*   Review prior images and radiologist Annotations
*   Create and manage ReportFlows and Hanging Snapshots
*   Print, import, and export mammography image files

The following diagram shows how images originating from the acquisition workstation flow to Standalone SecurView RT and DX workstations. After reviewing images at the SecurView DX workstation, any Annotations (physician markings with descriptions) are automatically stored in the SecurView database and sent to all configured destinations, including any SecurView RT workstations.
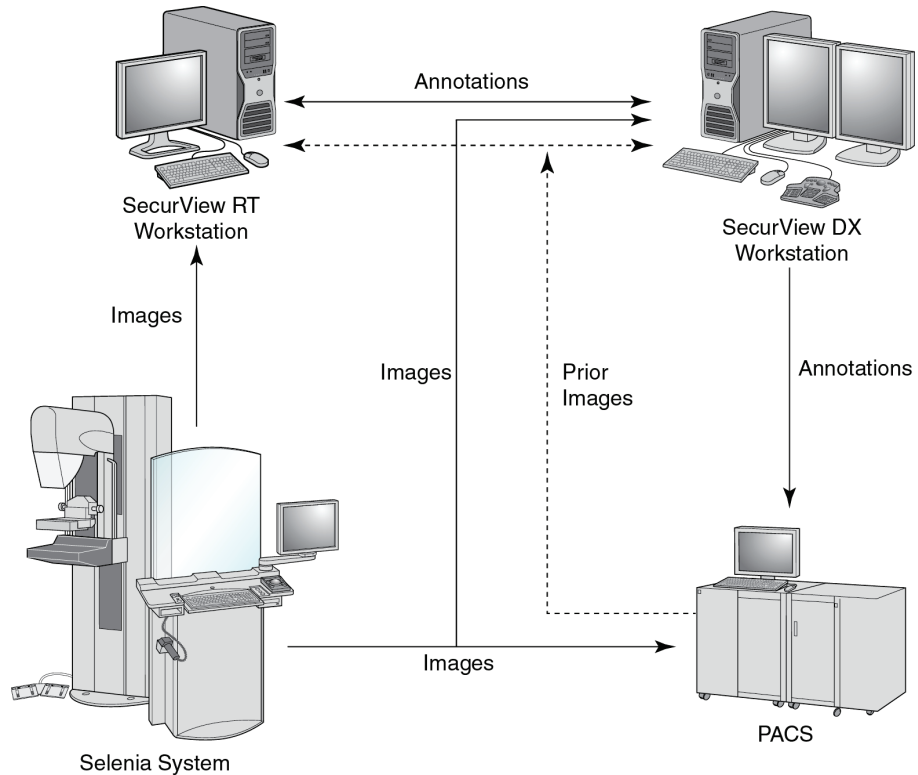
Figure 6: Information Flow with Standalone SecurView DX and RT Workstations

2.3.2   SecurView RT Multiworkstation Systems

One SecurView RT Manager supports two or more SecurView RT Client workstations as needed, depending on patient volume and workflow requirements. As with the SecurView DX Manager, the SecurView RT Manager provides the central SecurView database for its cluster and performs image preparation for all connected SecurView RT Client workstations.

The following diagram shows how images originating from the acquisition workstation flow to SecurView RT and DX workstations.

SecurView RT Workstation

Images from Selenia

Images

Images from PACS

SecurView RT Manager

Images

SecurView RT Workstation

SecurView DX Manager

Images

SecurView DX

Images

SecurView DX

Images

PACS
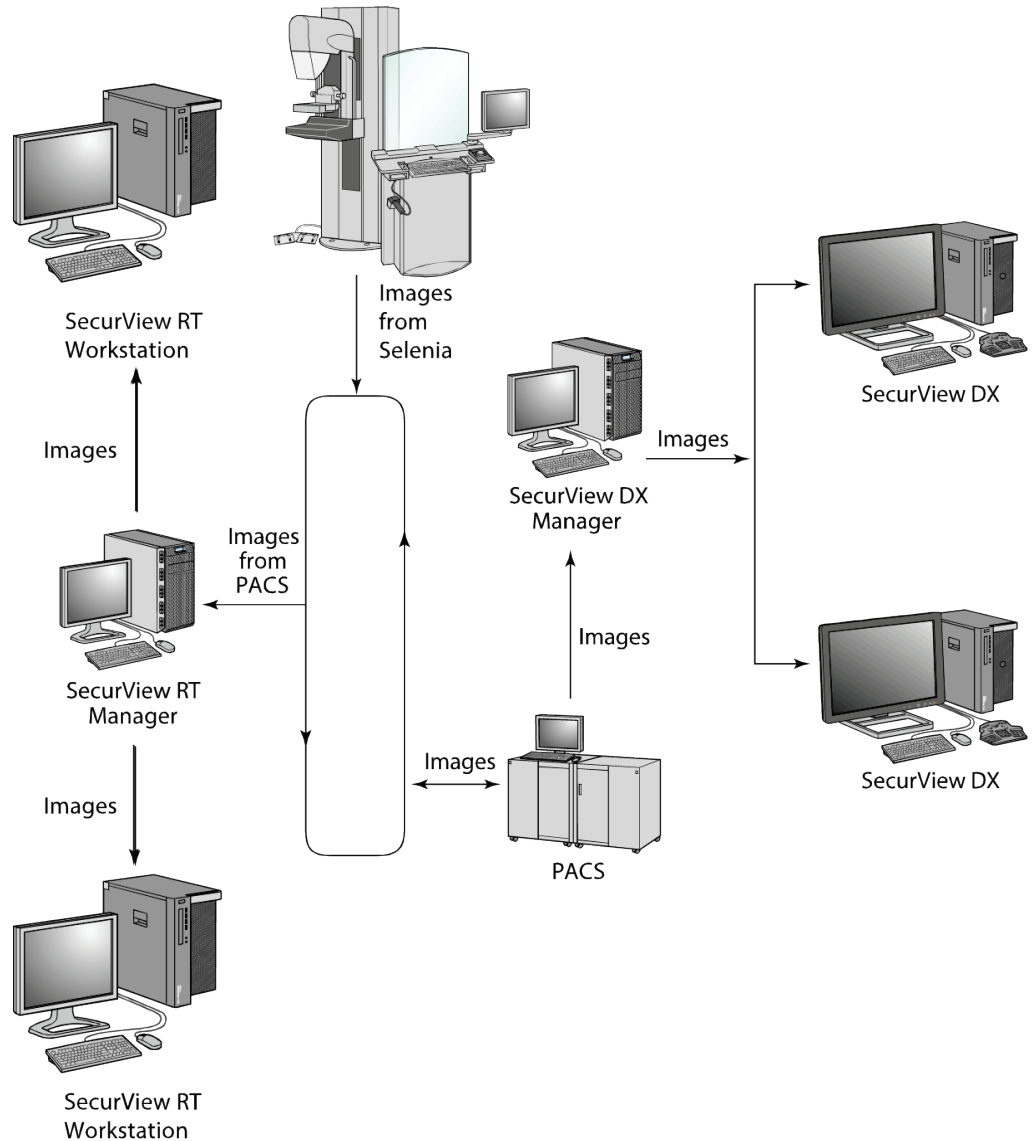
Figure 7: Image Flow in a SecurView DX and RT Multiworkstation Installation

After reviewing images at the SecurView DX workstation, any Annotations (physician markings with descriptions) created on the Client workstation are automatically stored in the SecurView DX Manager database and sent by the Manager to all configured destinations outside the Client cluster, including any SecurView RT Standalone or Manager workstations.

The receiving SecurView RT Manager distributes Annotations to all connected Clients. As a result, any physician Annotations are available for technologists at the SecurView RT Client workstations.
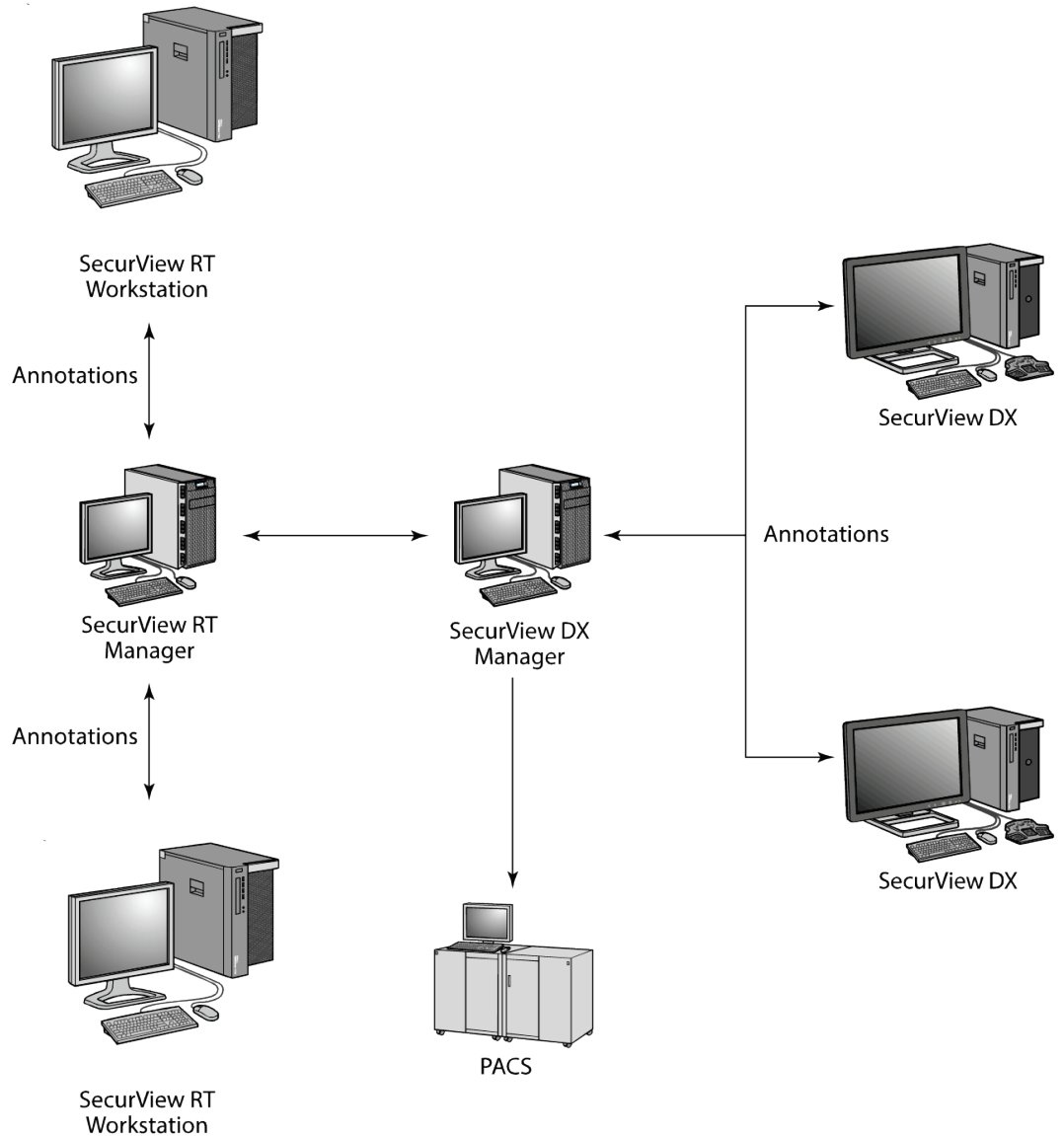
Figure 8: Physician Annotations Flow in a SecurView DX and RT MultiWorkstation Installation

2.4 Functional Division in Multiworkstation Configurations

The following table shows how functionality is split between Manager and Client workstations.

Table 1: Functional Division Between Manager and Client Workstations

Function	SecurView DX or RT Manager	SecurView DX Client	SecurView RT Client
Patient Manager for browsing studies		X	X
Diagnostic review of patients		X	
Annotating patient images		X	X
Display of CAD SRs		X	X
Low-resolution display of patient images and Annotations			X
Query and retrieval of patient studies from PACS		X	X
Temporary storage of current studies and CAD SRs	X		
DICOM connectivity	X		
Database with configurable system settings and user preferences	X		

2.5 User Groups and Passwords

A SecurView system Administrator must register each user by setting up a user profile that includes:

- **User name** – A name that identifies the user to the system.
- **Password** – Use to log in securely.
- **First & Last Name** – The user's actual name.
- **User Group(s)** – Radiologist, Technologist, Administrator, Case Administrator, or Service (refer to the following table).
- **Rights** – A set of permissions to review images and configure system settings.

A SecurView system Administrator or Service user may configure additional password security as a system-level setting for all users that do not use Active Directory.

- Require password change on next login – The user must change the password at the first or next login.

- Password expiration – The user must change the password after a configurable number of days. The user is informed of pending password expiration for a configurable number of days prior to expiration.

Each user has access to specific program modules depending on the assigned group(s) and rights (refer to *Managing User Profiles* on page 150).

Table 2: User Groups and Rights

User Group	Rights – These users can . . .
Radiologist	• Configure personalized workflow preferences (for example, default tools, Hanging Snapshots, ReportFlows) • Perform diagnostic review of patient studies • Enter and view Annotations, merge multiple records for a single patient, track study reading states • Search for patients on PACS • Close studies
Technologist	• Set up worklists for screening and diagnostic sessions (on SecurView DX) • View patient studies and Annotations • Merge multiple records for a single patient, track study reading states (on SecurView DX) • Search for patients on PACS
Case Administrator	• Delete images and patients from database • Merge multiple records for a single patient
Administrator	• Set up new users and assign user rights • Configure system-level workflow preferences (for example, Hanging Snapshots, ReportFlows) • Configure other system-level settings such as disk space monitoring, auto-fetching, and synchronization with an external application • Back up database • Configure Image Overlay and the MammoNavigator feature

Table 2: User Groups and Rights

User Group	Rights – These users can . . .
Service	• Configure network and DICOM settings
	• Configure workstation, image routing, delete patients from database, and manage licenses
	• Access all Administrator settings

2.6 Startup and Shutdown

Normally you can leave the workstations powered on. Use these procedures if someone powered off the system or if you need to shut it down (for example, if you are going to move the computer, or you know of an upcoming power outage).

To start up a SecurView workstation:

Note

In a multiworkstation environment, start the Manager before starting the Client workstations.

1. Power on the peripheral devices (first the UPS, then the displays).
2. Power on the SecurView workstation computer. The SecurView application starts automatically and displays the *Login* window.

Figure 9: Login Window

For information on logging in, refer to *Logging into SecurView* on page 21.

To shut down a SecurView workstation:

1. On the Application Selector, select **Shutdown**.
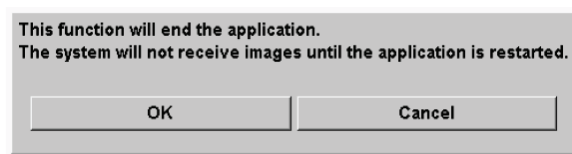
Figure 10: Shutdown Message

2. Select **OK**. The SecurView application closes and the computer shuts down.
3. Power off the peripheral devices (first the displays, then the UPS).

2.7   Logging into SecurView

Every user must log in with a distinct user name and password. A system Administrator sets up each user account and assigns the user to one or more groups (Radiologist, Technologist, Case Administrator, Administrator, Service). Each group has a set of access privileges to specific program modules. Refer to *User Groups and Passwords* on page 18.

To log into the SecurView application:

In the *Login* window, enter your user name and password, then select **Login** to display the *SecurView Startup* screen.

If additional password security is configured for users that do not use Active Directory, you may be required to change the initial password at first login, when the password is going to expire, or when the password has expired. If you need to change the password, the *Change Password* dialog box is displayed prior to the *SecurView Startup* screen.
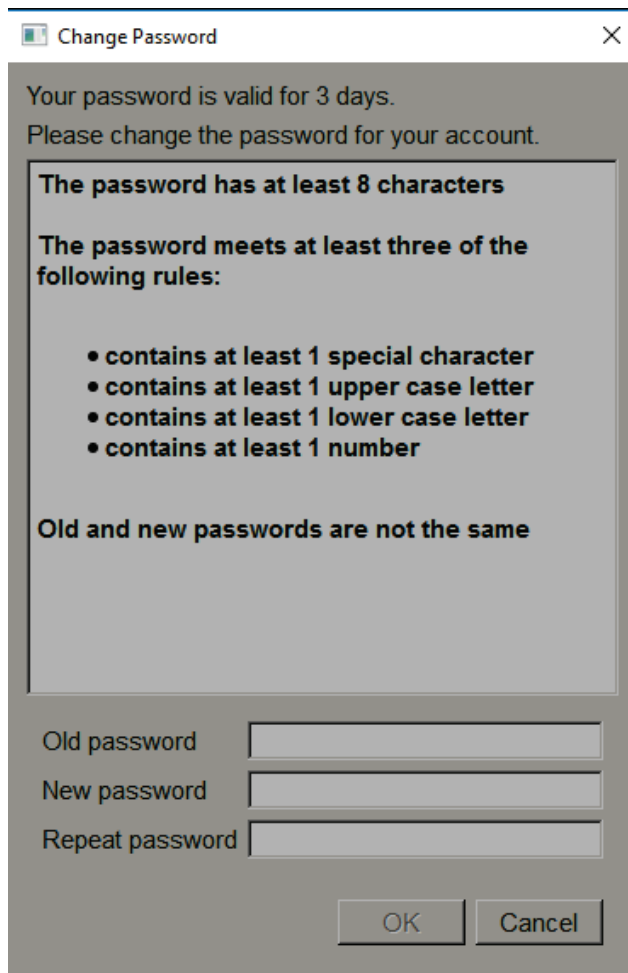
Figure 11: Change Password Dialog Box – Password About to Expire
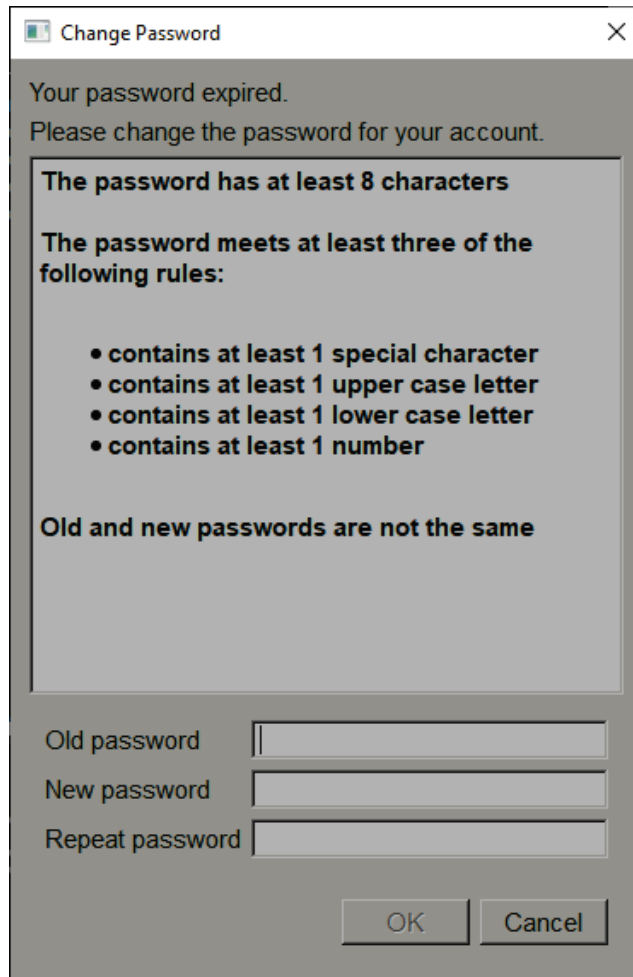
Figure 12: Password Change Dialog Box – Password Expired

To change the password:

1. Enter the old password.
2. Enter the new password according to the rules displayed in the dialog box.
3. Enter the new password a second time.
4. Select **OK**.

Note

If you Cancel changing the password when a password change is required or after the password has expired, you will not be able to log into the SecurView application.
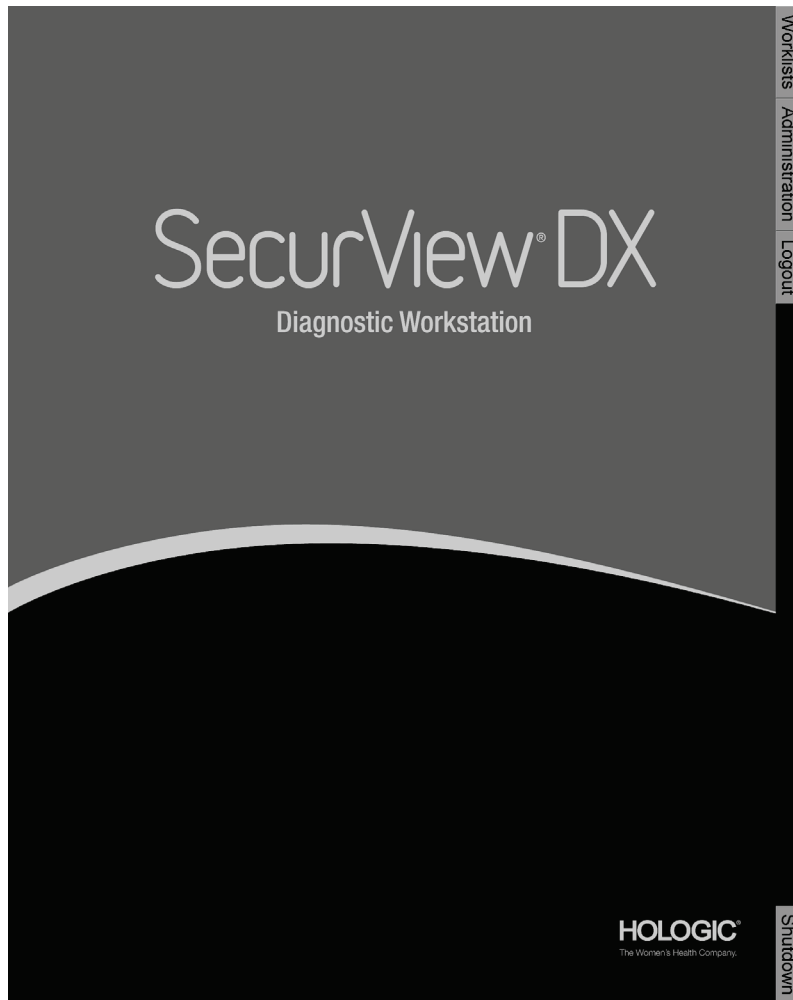
Figure 13: Startup Screen

Access to the application is through the tabs on the right side of the display:

- **Worklists:** Provides access to automatic worklists and user-defined Sessions. This tab is available only to Radiologist users on SecurView DX. Refer to *Displaying Patient Studies* on page 39.

- **Administration:** Provides access to the Administration module, which allows you to select patients for review (refer to *Opening the Patient Manager* on page 25) and to set up user preferences (refer to *Setting User Preferences* on page 119).

- **Logout:** Logs you out of SecurView and displays the *Login* window.

- **Shutdown:** Shuts down SecurView and switches off the computer. Refer to *Startup and Shutdown* on page 20.

2.8   Accessing Unique Device Identifier Information

Unique Device Identifier (UDI) is a unique numeric or alphanumeric code that identifies a medical device through distribution and use. UDI information is displayed in the *About* screen of the SecurView application.

To access UDI information:

1. Log into the SecurView application (refer to *Logging into SecurView* on page 21).
2. Select the **About** tab.

    The UDI information is shown in the *About* screen.

Chapter 3 Patient Manager

The Patient Manager provides the Patient List with all patients, their studies, and image series currently in the database, and non-local patient studies received via Study List Manager. Using the Patient Manager, you can:

- Select patients for viewing
- Search for patient studies
- Create Sessions (patient worklists set up in advance for reviewing)
- Track the reading states of studies (SecurView DX only)
- Import DICOM images into SecurView
- Synchronize with an external Study List Manager

3.1 Opening the Patient Manager

On the Application Selector, select **Administration**. The **Patient Manager** tab and the Patient List open. The **Patient List** tab is the main window to start viewing patient images.
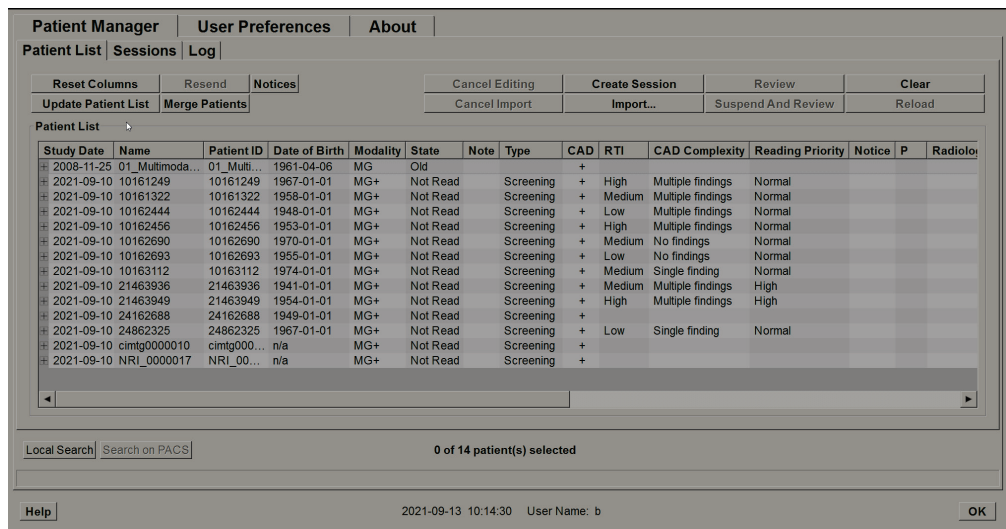
Figure 14: Patient List

The Patient Manager provides three tabs:

- **Patient List:** Displays all patients that are available on the system, and provides options for searching, selecting, and reviewing patients.
- **Sessions:** Provides an overview of existing Sessions and the patients in the Sessions. You can also edit the Sessions to change the sort order or to add or remove patients.
- **Log:** Logs failed print jobs, Auto-Fetch failures, and other events related to information exchange with DICOM devices.

3.2 Using the Patient List

The Patient List provides all patients, studies, and series currently in the database.

3.2.1 Selecting Patients

You can select one or more patients as follows:

- Type the first few letters of the patient name to advance in the Patient List.
- Select a single patient by selecting the patient. Select **+** to display the studies and image series associated with each study.

Figure 15: Example Studies and Associated Image Series

- Add additional patients one at a time by selecting them.
- Select a block of patients by selecting the first patient, holding the mouse button, and moving the mouse pointer to the last patient you want to select (above or below). Then release the mouse button.

To begin reviewing:

- Select one or more patients (up to 100) then select **Review**, or
- Double-click a patient (to open a single patient), or
- Use the Bar Code Scanner to read a patient bar code.

SecurView closes the Patient List, opens the Mammography (MG) Viewer to the first patient, and displays the images using the ReportFlow set up in your user preferences.

3.2.2   Patient List Buttons

The Patient Manager provides buttons to assist in managing patients.
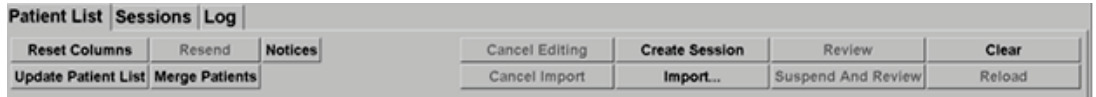
Figure 16: Patient List Buttons

The buttons have the following functions:

- **Reset Columns** – Arrange all columns to the default settings.
- **Resend** – Manually resend DICOM objects (GSPS Notices, GSPS Reports, MG Secondary Capture images, and/or MM ScreenCapture images) to all configured destinations to which a previous attempt failed (SecurView DX only). This button is available if at least one selected patient is in the 'Read*' state (refer to *Reading States* on page 31) or there is a '*' in the Notice column of the Patient List.
- **Notices** – Resort Patient List so patients with Notices appear at top.
- **Review** – Begin reviewing one or more selected patients on the MG Viewer. Refer to *Selecting Patients* on page 26.
- **Clear** – Clear selected patients.
- **Update Patient List** – Add any new studies to the Patient List. If an acquisition workstation or PACS sends images while the Patient List is open, the items appear automatically in the Patient List.
- **Merge Patients** – Manually merge two patient records. Refer to *Merging Patient Data* on page 39.
- **Suspend And Review** – Available during patient review. Select to interrupt reading of the current worklist and patient to review one or more high priority patients. After reviewing these patients, you are returned to the previously opened worklist and patient to resume reading.

To activate Suspend and Review mode:

1. In Review mode, select the Patient List from the keypad or toolbar.
2. When Patient Manager is displayed, select one or more patients for review, then select the **Suspend And Review** button. A new session opens for review.
3. After completing the intermediate session, select the toolbar button to exit Review mode. You then continue the previous session at the point where it was suspended.

Also refer to *Using the Shortcut Menu* on page 38.

> **Note**
> On returning to an automatic worklist after **Suspend And Review**, it is possible that the worklist order of patients has changed such that a patient that is not yet reviewed precedes the currently open patient (refer to *Workflow Preferences* on page 120).

- **Import…** – Import patient DICOM files into the SecurView database. Refer to *Importing DICOM Images* on page 38.

- **Cancel Import** – Enabled while you are importing DICOM files. Select to stop the import process. SecurView retains images that were imported.

There are three buttons used for creating and editing Sessions (refer to *Creating Sessions* on page 36):

- **Create Session** – Create a list of patients for reviewing.

- **Reload** – Enabled when you are editing patients in a Session. Select to undo any changes you have made.

- **Cancel Editing** – Enabled when you are editing patients in a Session. Select to deselect any highlighted patients.

Below the Patient List are two search buttons. Refer to *Searching for Patients* on page 39.

Figure 17: Patient List Search Buttons

- **Local Search** – Search for patients in the local SecurView database.

- **Search on PACS** – Search for patients and retrieve them from a PACS.

3.2.3 Patient List Columns

The Patient List provides column headings that you can use to sort and manage patients. For example, you can select any column heading to sort patients by study date, name, reading state, etc. Sorting is possible using two sorting criteria. When selecting a column, it immediately becomes the primary sorting criterion, and the previous primary criterion automatically becomes the secondary sorting criterion. When you sort any column, SecurView collapses all patient studies and series and sorts the entries on the patient level.

You can also modify the column widths and positions:

- Drag a column header to the desired position in the patient list.

- Drag the right column border (in the header) to modify the width.

When you exit the Administration module, SecurView stores the column arrangement as a user preference.

This section describes the columns, indicating what appears at the patient level unless otherwise stated.

- **Study Date** – Acquisition date of the newest study. For non-local studies, 'non-local' is displayed at the series level in place of the series description.
- **Name** – Patient name (last name, first name), up to 100 characters.

Note

Characters in a patient name that are not supported by SecurView are represented using the question mark character ('?').

- **Patient ID** – Patient identification number, up to 70 characters. An asterisk (*) identifies a merged or combined patient.

Caution:

SecurView uses Patient IDs (and the date of birth) for identification of patients and to assign new data to existing patient data. Patient IDs are unique to the facility where the images are acquired. SecurView cannot identify incorrect data caused by incorrect entries at the acquisition workstation or patient scheduling system. In case of incorrect Patient IDs, images might be added to the incorrect patient, leading to patient mixup.

- **Date of Birth** – Patient's birth date.
- **Modality** – Comma-separated list of all modalities of each patient study. Tomosynthesis studies and series appear with modality 'MG +'. Non-local studies are likely to be of US and MR modality. On study level, each series appears with its laterality, view, image type, and number of images.
- **State** – Indicates the reading state for the patient and each patient study (SecurView DX only). Refer to _Reading States_ on page 31.

Note

Non-local studies do not have a state. The State column is blank for non-local studies.

- **Note** – Indicates an intermediate status for the most recent study (Consultation Required, Additional Images Required, Additional Images Arrived, or Pending) (SecurView DX only). Refer to _Closing a Study_ on page 89.
- **Type** – Indicates the most recent study type (screening or diagnostic).
- **CAD** – Indicates with a '+' whether a CAD report is available for a patient.
- **RTI** – Indicates the read time indicator (Low, Medium, or High) if a CAD report is available that includes Read Time Indicator (for example, Hologic Genius AI™ Detection). On the patient level, if multiple studies have a CAD report with Read Time Indicator, the highest value for the newest study is displayed.

- **CAD Complexity** – Indicates the quantity of findings (No findings, Single finding, or Multiple findings) if a CAD report is available for a patient that includes CAD Complexity (for example, Hologic Genius AI Detection). On the patient level, if multiple studies have a CAD report with CAD Complexity, the newest value for the newest study is displayed.

- **Reading Priority** – Indicates the reading priority (Normal or High) if a CAD report is available for a patient that includes Reading Priority (for example, Hologic Genius AI Detection). On the patient level, if multiple studies have a CAD report with Reading Priority, the newest value for the newest study is displayed.

- **Notice** – Indicates whether one or more Notices are available for a patient (refer to *Sending and Viewing Notices* on page 88). A '+' indicates that the SecurView workstation received one or more Notices. An asterisk '*' indicates a failure occurred when the workstation attempted to send a Notice. Technologist users can mark patients with Notices as viewed (refer to *Closing a Study as a Technologist* on page 93).

- **AF** – Indicates the patient's Auto-Fetching state. Refer to *Auto-Fetching Patient Data* on page 32.

- **P** – Indicates a patient protected against auto-deletion. To protect any patient, right-click on the patient and select **Protect against autodeletion**. Also refer to *Using the Shortcut Menu* on page 38.

- **Radiologist(s)** – Name of the radiologist(s) that either read a study or locked a patient as 'Consultation Required', 'Additional Images Required (or Received)', or 'Pending'. An asterisk (*) appears next to the name of the radiologist who locked the patient (SecurView DX only).

- **Technologist(s)** – Name of the technologist who acquired the patient images.

- **Referring Physician** – Name of the referring physician.

- **Accession Number** – The accession number of the most recent study when displayed on patient level.

- **Institution Name** – List of institution names, ordered by the ages of available studies.

- **# Exam** – Total number of available studies.

- **Gender** – Patient's gender, 'F' or 'M'.

- **Read Twice** – Indicates studies to be reviewed twice (SecurView DX only).

- **Viewed** – This column appears only on SecurView RT. A '+' indicates that a received Notice has been viewed on SecurView RT for at least one study for the patient. Technologist users can mark patients with Notices as viewed (refer to *Closing a Study as a Technologist* on page 93).

3.2.4   Reading States

On SecurView DX, the State column of the Patient List shows the current reading state for each patient and each patient study. The State column does not appear on SecurView RT.

The reading states (Read, Not Read, etc.) can have different meanings depending on whether the indication is on the patient level or on the study level.

Note

Non-local studies do not have a state. The State column is blank for non-local studies.

Table 3: Reading State Definitions

Reading State	Patient Level	Study Level
Not Read	At least one study of this patient has the state 'Not Read' or 'Read Once'.	The study has not been read.
Read	At least one study of this patient has been read by the current user. All other studies have the state 'Old'.	The study has been read.
Read Once	(Not applicable)	In a double-reading environment, a study that was read by the first reader but not by the second.
Changed	At least one study of this patient has the state 'Changed'.	Additional images arrived after the study was read.
Old	All studies of this patient have the state 'Old'.	Study where SecurView received the images more than five days after the images were produced by the acquisition device (this value is configurable).

In some cases, the reading state changes automatically. For example, if a study has been 'Read' and SecurView receives new images (not more than five days after they were produced), then the reading state changes to 'Changed'.

During patient review, SecurView also indicates the reading state by placing a symbol in front of the Patient ID (refer to *Patient Reading and Lock States During Review* on page 49)**.**

Read* State

If DICOM objects (GSPS Notices, GSPS Reports, MG Secondary Capture images, or MM ScreenCapture images) were sent but failed to reach a configured destination, then SecurView sets the patient state to 'Read*' and enables the **Resend** button on the Patient List. When 'Read*' appears, verify that all DICOM destinations are configured correctly. If selecting **Resend** still does not change the state to 'Read', contact Hologic Product Support. For more information, refer to *Patient List Buttons* on page 27.

3.2.5 Auto-Fetching Patient Data

When SecurView receives newly acquired images, it can automatically fetch DICOM data for the patient from an archive. In this case, SecurView retrieves prior mammography images, CAD SRs, GSPS Reports (study states with or without Annotations, and tagged tomosynthesis reconstructed slices or slabs), GSPS Notices, MG Secondary Captures, MM ScreenCaptures, and third-party GSPS objects that meet the Auto-Fetching criteria. A Service Engineer or Administrator must configure this feature (refer to *Auto-Fetching/Auto-Completion Configuration* on page 155). If Auto-Fetching is On, the AF column in the Patient List displays the state of patient data requested from the archive configured in the service interface as 'PACS 1'. Possible states are:

- **+** = Auto-Fetching completed successfully
- **0** = Auto-Fetching is in progress
- **D** = Auto-Fetching was postponed (or interrupted)
- **F** = Auto-Fetching failed – select the **Log** tab to view detailed information
- **–** = Nothing found on PACS 1 that matches the Auto-Fetching criteria
- blank = Auto-Fetching not triggered

3.2.6 Using the Shortcut Menu

If you right-click on any patient, a shortcut menu opens with several options:

- **Suspend open patient and review** – closes the current patient, allows you to review a new patient, then returns to the original patient (functions like the **Suspend and Review** button on the Patient List). Refer to *Patient List Buttons* on page 27.
- **Protect against autodeletion** – prevents unintended deletion of the patient.
- **Unlock** – allows you to unlock any patient that you locked (SecurView DX only). There are three locked states ('Consultation Required', 'Additional Images Required', or 'Pending'). Refer to *Closing a Study* on page 89.
- **Take over** – allows you to 'take over' a patient that was locked by another radiologist.

- **Synchronize patient** – allows you to send a synchronization request to an external application (refer to *Patient Synchronization with an External Application* on page 96).

- **Export to media** – allows you to export all images in DICOM format for the selected patient(s) to a folder or to removable media (refer to *Exporting DICOM Files* on page 188).

- **Undo merge patients** – allows you to separate two patient records merged in the SecurView database. This function undoes the action of the **Merge Patients** button on the Patient List (refer to *Merging Patient Data* on page 39).

3.2.7   Merging Patient Data

SecurView automatically merges all DICOM data with the same Patient ID and birth date. If the facility establishes that Patient IDs are unique and that certain image types (for example, prior digitized films) do not contain a birth date value, a Service Engineer can configure the system to merge images with a common Patient ID and no birth date (or the same birth date).

This section describes how to merge patient records with different Patient IDs that are in fact the same person. This functionality allows side-by-side review of patient images acquired at different times.

Note

You cannot manually merge patients that contain non-local study data from an external Study List Manager (SLM).

Note

Merging patient data on SecurView (for example, two or more studies) does not merge patient data stored on PACS.

To merge two patient records:

1. When no patients are open, select two patient records in the Patient List, then select **Merge Patients**. If the patients you select are not currently open on any Client in a workgroup cluster, SecurView shows the selected patient records:

Figure 18: Select Primary Patient Dialog Box

2. Select the patient record for the primary patient: Make your selection, then select **OK**. The system merges the two patients and closes the dialog box.

    After you merge patients, only the primary patient appears in the Patient List. SecurView assigns all studies and series from both patient records to the primary patient. In the Patient List, the primary merged Patient ID appears with an asterisk (*).

3. Select the primary patient, then select **Review**. SecurView displays all images and corresponding DICOM objects (Notices and study states with Annotations, CAD SRs, etc.) of the merged patients in the MG Viewer.

3.2.8 Searching for Patients

SecurView workstations offer two options for searching:

The default search field (Patient ID or Patient Name) is set according to your user preferences (refer to *Workflow Preferences* on page 120).

Local Search

This option searches for data in the local SecurView database according to the criteria shown in the following screen. Patients that match the search criteria are grouped at the top of the patient list and remain there until the user performs a new local search, the user changes patient list sorting manually, the patient list is reset, or the user logs out. (Use an asterisk (*) as a wildcard character.)

Figure 19: Local Search Criteria

Search on PACS

You can search a configured PACS (Image Source) to retrieve DICOM data (prior images or images from other modalities). SecurView copies the retrieved images to its local database.

Figure 20: PACS Search Criteria

To search, enter your criteria, then select **Search**. (Use an asterisk (*) as a wildcard character.) If the search succeeds, the matching patient data appears in the Search Results area and the **Retrieve** button becomes active. To transfer the data to SecurView, select one or more items in the Search Results area, then select **Retrieve**.

Important

If you start a new search before the previous search is finished, only the progress of the new search is displayed.

Your PACS may not support some tabs and fields in the Advanced Criteria area. A Service Engineer must configure and activate the tabs and fields.

3.3   Creating Sessions

A Session is a patient worklist set up in advance by a technologist or radiologist on SecurView DX. A Technologist user can set up Sessions for any radiologist. A Radiologist user can set up Sessions only for personal use.
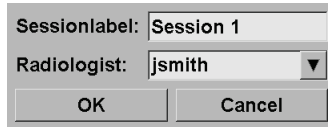
Note

To use the Sessions feature, an Administrator must enable the **Scheduling** option (refer to *Scheduling* on page 154) and configure each user with Setup rights (refer to *Managing User Profiles* on page 150). Also, note that SecurView automatically sorts patients in your Session worklists according to your user preference on the **Workflow** tab (refer to *Workflow Preferences* on page 120).

To create a Session:

1. In the **Patient List**, select patients you want to assign to a Session. Then select **Create Session**:

Sessionlabel:	Session 1
Radiologist:	jsmith ▼
OK	Cancel

2. In the Sessionlabel field, type a Session name. If you have Technologist user rights, you can assign the Session to any radiologist using the Radiologist drop-down list.

3. Select **OK** to create the Session. If you are a Radiologist user, the **Sessions** tab opens automatically. (If you are a Technologist user, the Patient List opens.)
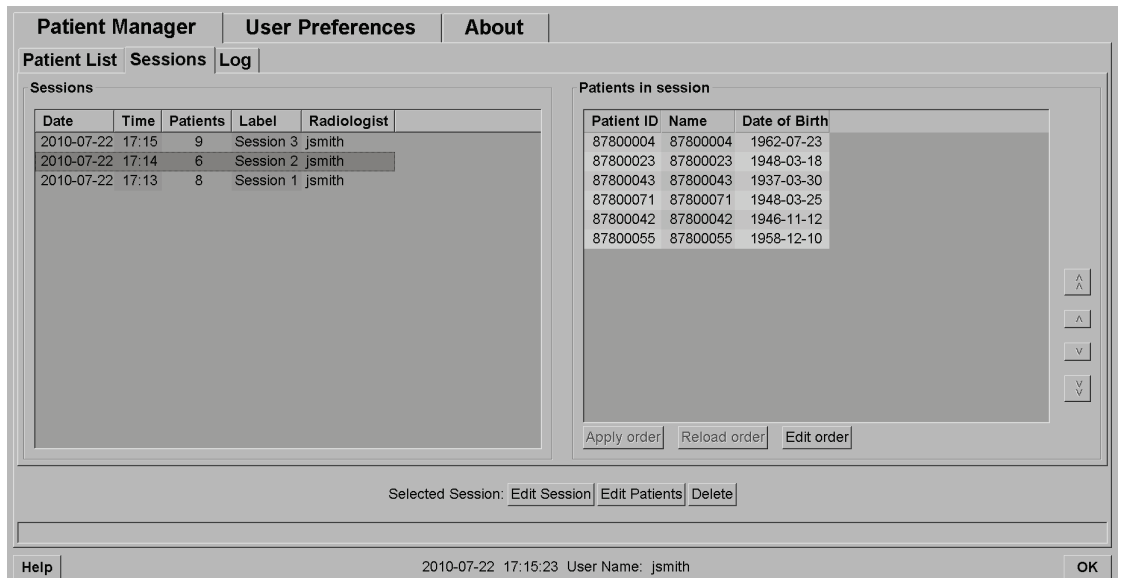
Figure 21: Sessions Tab

In the **Sessions** tab, point to any Session on the left side, then:

• Edit the patient order by selecting a patient, selecting **Edit order**, and selecting a column heading or one of the arrow keys on the right side.

• Edit the Session by selecting **Edit Session** to reopen the *Sessionlabel* dialog box. Then edit the entries as desired and select **OK**.

• Add or remove patients by selecting **Edit Patients** to reopen the Patient List. Then reselect (or deselect) patients as desired and select **Create Session** to reopen the *Sessionlabel* dialog box. Edit the entries as desired and select **OK**.

If, while editing patients, you decide to abandon your changes, then on the Patient List, select **Reload** to restore the Session to its previous state.

3.4 Importing DICOM Images

Use the **Import…** button to import DICOM images from either a local folder or external media (e.g., CD, DVD, USB drive).

> **Note**
>
> To export images, refer to *Exporting DICOM Files* on page 188.

To import DICOM images:

1. In the Patient List, select **Import…** to display the *Import from* dialog box.

2. Navigate to the folder with the DICOM images you wish to import.

3. Select the images folder, then select **OK**. SecurView imports all images in the folder that are DICOM Part 10 conformant (including those stored using DICOM compression transfer syntaxes). This may take several minutes – the DICOM files are large.

4. After importing the images, make sure all imported images appear in the Patient List.

3.5 Synchronizing Patient List with MultiView

If configured, the SecurView workstation can be synchronized with an external Study List Manager.

- The SecurView Patient List contains all studies with images received by SecurView (local studies) as well as the studies available on external systems that are known to the Study List Manager (non-local studies). On Client workstations, only the non-local studies of an associated Study List Manager (SLM) Client will be listed. On a Manager, all non-local studies known to the Study List Manager will be listed. For information on configuring the associated SLM client for Client workstations, refer to *Configure Synchronization Interface* on page 166.

- SecurView sends information on local studies that are displayed in the Patient List to the Study List Manager.

1. Synchronization with external applications (refer to *Patient Synchronization with an External Application* on page 96) allows simultaneous patient review on SecurView and a synchronized MultiView application to be triggered from either application.

2. For information about configuring Study List Management, refer to *Study List Manager (SLM) Configuration* on page 161.

> **Caution:**
> **If the synchronization with the SLM fails (for example, due to a communication error), non-local studies may not be available in the SecurView Patient List. Check the local patient list in other connected SLM client applications (for example, MultiView) to ensure all relevant studies for a patient are reviewed.**

> **Caution:**
> **If a non-local patient is the primary patient of a merged patient, the patients will be unmerged automatically if SLM synchronization deletes the non-local patient.**

Chapter 4 Reviewing Patients

This chapter describes how to open patients for viewing, use the viewing and annotation tools, close studies, print images, and synchronize with an external application.

4.1 Displaying Patient Studies

Review is often based on a patient worklist. There are three types of worklists. Once you set up a worklist, you can begin reviewing patients with the MG Viewer.

4.1.1 Patient List Worklists

From the Patient List, you can create a temporary worklist manually by pointing to one or more patients (highlighted in dark gray in the following figure), then selecting **Review**.

To begin reviewing:

- Select one or more patients (up to 100), then select **Review**, or

- Double-click a patient to open a single patient, or

- Use the bar code scanner to open a single patient by reading a patient bar code. The bar code scanner reads either the Patient ID or the Accession Number (as configured by the Service Engineer).

Figure 22: Bar Code Scanner

For more about the Patient List, refer to

4.1.2   Automatically Generated Worklists

SecurView DX automatically generates worklists of Unread studies and Second Read studies if double-reading is configured. The system can further divide the Unread and Second Read studies into worklists of Screening and Diagnostic studies. The worklist types generated depend on settings configured by an Administrator (refer to *Worklists* on page 167) In addition, if CAD reports are received that include Read Time Indicator (for example, Hologic Genius AI Detection), the user can filter automatic worklists that contain Screening patients according to Read Time Indicator values (Low, Medium, High).

To apply a Read Time Filter to automatic worklists:

1.   After logging in, select the **Worklists** tab.

2.   Select the **Automatic Worklists** tab.

3.   Select **On** to activate Read Time filtering.

　　a.   Select **Low** to filter the Screening patients to include only those with Low Read Time Indicator.

　　b.   Select **Medium** to filter the Screening patients to include only those with Medium Read Time Indicator.

　　c.   Select **High** to filter the Screening patients to include only those with High Read Time Indicator.

　　d.   Select any combination of **Low**, **Medium**, and **High** to filter the Screening patients to include only those with the selected Read Time Indicator values.

　　e.   Select **User Defined** to filter the Screening patients to include only those that match the configured Read Time mix (refer to *Workflow Preferences* on page 120).
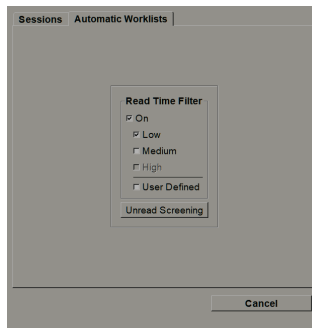
Figure 23: Worklist Selection Combined, Read Time Filter

To select an automatic worklist:

1. After logging in, select the **Worklists** tab.

2. Select the **Automatic Worklists** tab. Depending on the configuration settings, you may see one, two, three, or four buttons:

Figure 24: Automatic Worklists Buttons

3. Select a worklist button. The MG Viewer opens showing the first patient in the selected worklist, showing all patients that match the stated criteria.

   The buttons are inactive if there are no unread or second read studies.

4.1.3   Session Worklists

If your workstation has been configured for Sessions, you can start reviewing by opening a Session. For information on setting up a Session, refer to *Creating Sessions* on page 36.

To select a Session:

1. After logging in, select the **Worklists** tab.

2. Select the **Sessions** tab. If you have created Sessions (or had them created for you), then they appear as shown in the following example.
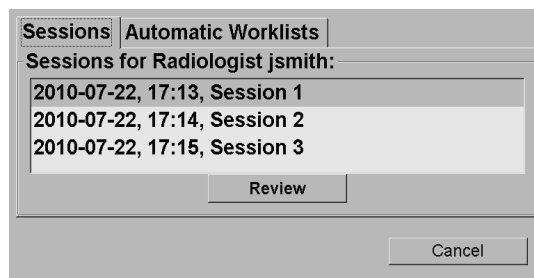
Figure 25: Example List of Sessions

3. Select a Session, then select **Review**. The MG Viewer opens showing the first patient in the Session worklist.

4.1.4   MG Viewer

When a patient opens, the MG Viewer opens.
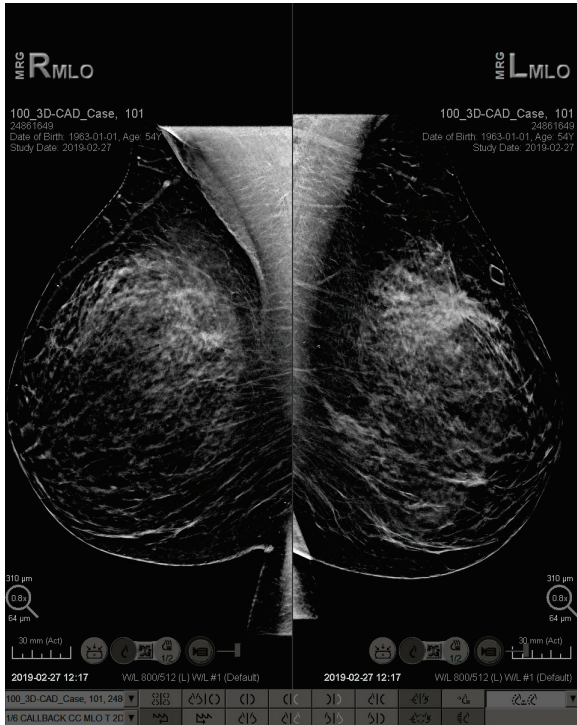
Figure 26: MG Viewer – Left Display
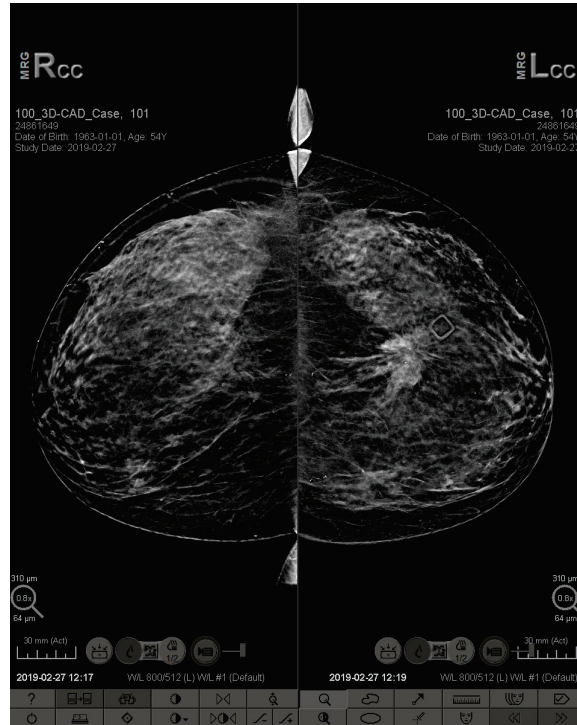
Figure 27: MG Viewer – Right Display

Most of your interaction with the application is through the toolbar buttons at the bottom of each display or their corresponding keypad buttons.

Note

When a patient without current images opens, a warning is displayed informing you that no current images are available. You can disable this warning (refer to 'No Currents Available Warning' in *Workflow Preferences* on page 120).
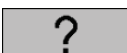
4.2 Displaying Patient Images

This section describes tools and options for displaying patient images.

4.2.1 Navigating Patients

The toolbar at the bottom of the right display provides tools for getting started.

Icon	Purpose
	Next Patient: Display the next patient in the worklist.
	Previous Patient: Display the previous patient in the worklist.
	Patient List: Display the Patient List. Refer to *Using the Patient List* on page 26.
	Reset: Undo changes you made and reset images for the current patient to their initial states when opened (Annotations remain).
	Close Study: Close the study. Active when displaying the last ReportFlow step. For more information, refer to *Closing a Study* on page 89.
	Help: Open the SecurView user guides in a separate window. (System Administrators can display the guides using the **Help** button at the lower left of the **Administration** tabs.)
	Exit: Closes the MG Viewer and displays the Administration module.

4.2.2   Using the Keypad

The optional keypad provides quick access to most viewing options. The keypad icons correspond to similar icons that appear on the toolbar buttons. The following sections of the guide explain the function of each tool.
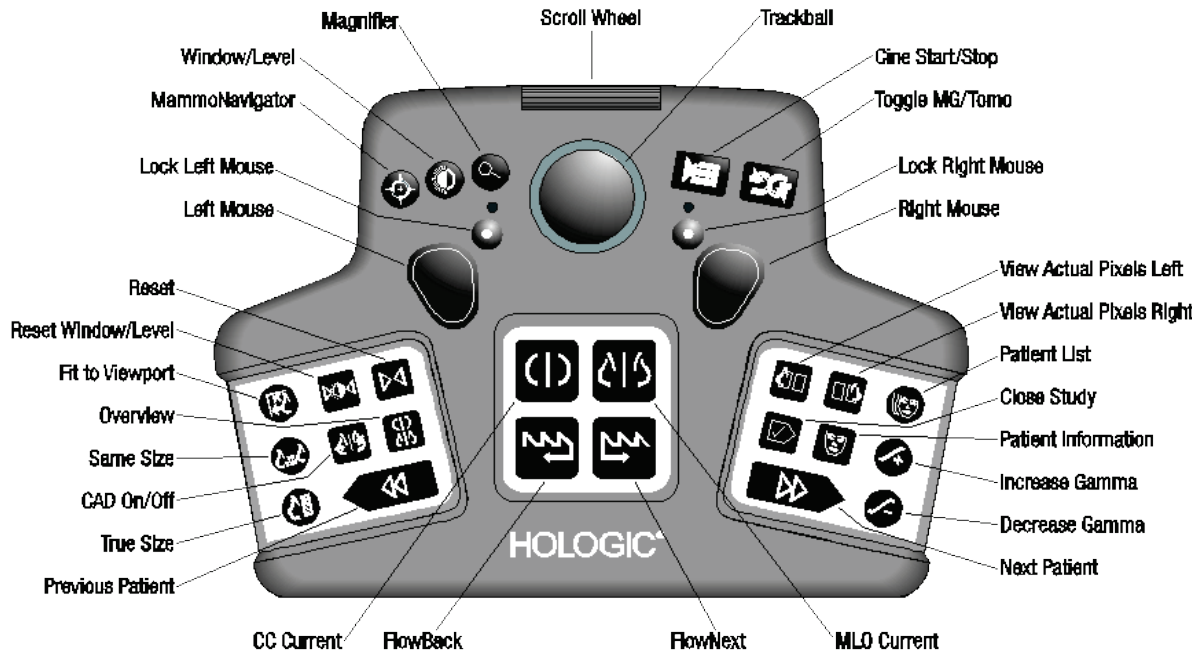
Figure 28: SecurView DX Keypad

Troubleshooting the keypad (SecurView DX)

1. If the keypad is unresponsive to input, perform the following steps:

    a. Log into SecurView as a user in the Administrator user group (e.g., **admin**).

    b. Disconnect the keypad from the computer.

    c. Select the **Exit to Windows** tab and select **OK** to confirm, then wait 5-10 seconds.

    d. Reconnect the keypad.

    e. Double-click the **SecurView** icon and log into SecurView.

    f. Confirm that the keypad functions.

2. If the keypad is still unresponsive, perform the following steps:

    a. Log into SecurView as any user.

    b. Disconnect the keypad from the computer.

    c. Select the **Shutdown** tab and select **OK** to confirm.

    d. Reconnect the keypad.

    e. Power on the computer.

    f. Log into SecurView and confirm that the keypad functions.

4.2.3   Using the Pie Menu

The Pie menu provides access to additional tools for image evaluation.

To use the Pie menu:

- Right-click any image, then select a tool from the menu.
- Point to **Image Tools** or **Sizing Tools** on the Pie menu to open a second **Pie** menu.
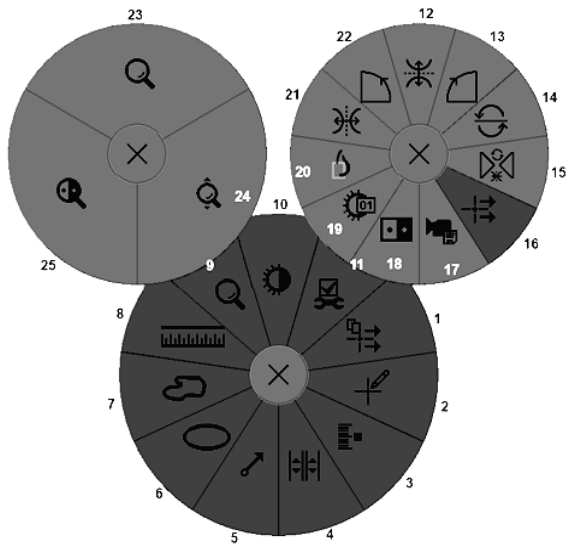
Figure 29: Pie Menu

Legend

1. Send All Notices
2. Annotation User Filter
3. Tag Tomo Images
4. Link Tile
5. Arrow
6. Ellipse
7. Freehand
8. Measurement
9. Sizing Tools Menu
10. Window/Level
11. Image Tools Menu
12. Flip Up/Down
13. Rotate 90° Clockwise
14. Rotate 180°
15. Reset Flip/Rotate
16. Send Image Notice
17. Export Movie
18. Invert Image
19. Window/Level (numeric)
20. View Actual Pixels
21. Flip Left/Right
22. Rotate 90° Counter-Clockwise
23. Magnifier
24. Continuous Zoom/Reset Continuous Zoom*
25. Inverted Magnifier

* Note: Continuous Zoom is a toggle feature. Select it to activate Continuous Zoom. When Continuous Zoom is activated, the icon changes to Reset Continuous Zoom.

Some Pie menu tools also appear on the MG Viewer toolbar and keypad. The following table describes each tool.

Icon	Description
	Magnifier – Magnify a selected area of any image. Refer to *Magnifier and Inverted Magnifier* on page 66.
	Continuous Zoom – Resizes the image around the focal point. Refer to *Continuous Zoom* on page 69.
	Continuous Zoom Reset – Resets zoomed image to the initial state.
	Inverted Magnifier – Invert a magnified area.
	Invert Image – Invert an image.
	Window/Level – Adjust brightness and contrast for any image. Refer to *Window/Level and Gamma Adjustments* on page 70.
	Window/Level (numeric) – Use numeric entries to adjust brightness and contrast precisely for any image.
	View Actual Pixels – For an image in single tiling mode, display one pixel of the original image data as one pixel in the viewport. Refer to *Scaling Modes* on page 54.
	Ellipse – Draw an elliptical marking. Refer to *Marking an Image* on page 83.
	Freehand – Draw a freehand marking.
	Arrow – Draw an arrow marking.
	Measurement – Draw a line with a measured length.
	Annotation User Filter – View Annotations for the currently displayed images. Refer to *Viewing Annotations* on page 86.
	Send All Notices – Send Notices for all images to one or more DICOM devices. Refer to *Sending and Viewing Notices* on page 88.
	Send Image Notice – Send a Notice for the currently selected image.

Icon	Description
	Link Tile – Link image tiles to allow simultaneous scrolling through reconstructed slices or slabs. Refer to *Scrolling Through Linked Tiles* on page 109.
	Tag Tomo Images – Tag tomosynthesis slices or slabs for printing or exporting. Refer to *Tagging Tomosynthesis Reconstructed Slices or Slabs* on page 115.
	Export Movie – Export a scrolling movie of tomosynthesis reconstructed slices or slabs or tomosynthesis projection images. Refer to *Exporting a Movie* on page 110.
	Image Tools Menu – Open Image Tools menu.
	Rotate 90° Clockwise – Rotate an image clockwise.
	Rotate 90° Counterclockwise – Rotate an image counterclockwise.
	Rotate 180° – Rotate an image 180°.
	Flip Up/Down – Flip an image on its horizontal axis (or for tomosynthesis, flip the stack of images).
	Flip Left/Right – Flip an image on its vertical axis (or for tomosynthesis, flip the stack of images).
	Reset Flip/Rotate – Reset any flipped or rotated image to its initial orientation.

4.2.4   Using a ReportFlow

When you open a patient, SecurView automatically selects a ReportFlow (a series of image hangings). The ReportFlow that appears by default for a given patient depends on a user preference (refer to *ReportFlows Preferences* on page 146). The ReportFlow name appears on the toolbar at lower left.

Patient ID →

# Patient 214	▼

FlowBack &

ReportFlow →

3/17 SCR DIAG MLO CC P-C O-N, System	▼
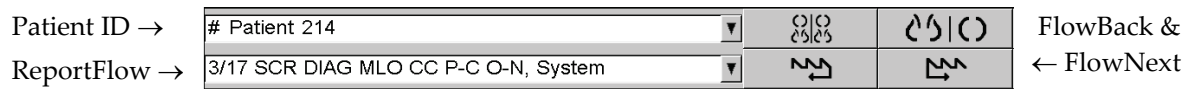
← FlowNext

- To navigate step-by-step through the ReportFlow, select **FlowNext** or **FlowBack** on the toolbar, or press **FlowNext** or **FlowBack** on the keypad.

- You can select an alternative predefined hanging from the toolbar or keypad. SecurView remembers the current ReportFlow step and, when you select **FlowNext** again, proceeds with the next ReportFlow step.

- At any time, you can select an alternative ReportFlow from the drop-down list shown in the previous figure, which shows all available ReportFlows.

For more information about ReportFlows, refer to *Hanging Snapshots and ReportFlows* on page 131.

4.2.5   Patient Reading and Lock States During Review

During patient review, SecurView indicates the patient's reading state with a symbol that appears before the patient name, as shown in the previous figure and in the following examples:

This symbol…	Indicates that the reading state is…
Smith, Jane	'Not Read' or 'Changed' (no symbol appears)
# Jones, Alice	'Read', 'Read Once' (by the current user), or 'Old'
* Kumar, Revati	Locked as 'Consultation Required', 'Additional Images Required', or 'Pending' or 'Locked' – in the latter case, the patient is being read on another workstation.
++ Brown, Kelly	Locked as 'Additional Images Arrived'
@ Wong, Brenda	'Notice Arrived'

For more about reading states, refer to *Reading States* on page 31.

A Radiologist user can lock a patient from the *Close Study* dialog box (refer to *Closing a Study* on page 89). When a radiologist locks a patient, SecurView prevents other users from closing the study and marking it as 'Read'. Other users can make and send Annotations, but SecurView does not give them access to the *Close Study* dialog box. However, other users can unlock the patient via the shortcut menu (refer to *Using the Shortcut Menu* on page 38).

The lock state is independent of the reading state. When another user reviews a locked patient, the lock state appears in the upper outside corners of the displays.

4.2.6   Panning Images

At any time during image display, you can move an image within a tile. Simply right-click and drag the image to a new location within the tile.

4.2.7   Image Hangings

At any time during reviewing, you can select a predefined hanging from the left toolbar.
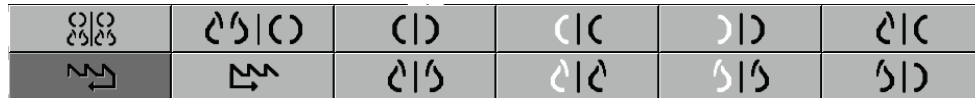
Figure 30: Predefined Image Hangings

To select a predefined image hanging:

Overview

MLO CC

- Select **Overview** to display all eight images of a standard screening patient (four current and four prior images). You can customize the image hanging assigned to the **Overview** button with a user preference (refer to *ReportFlows Preferences* on page 146).
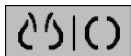
- Select **MLO CC** once to display the *current* MLO and CC images in double-tiling mode (two MLO images on the left display, and two CC images on the right).

- Select **MLO CC** again to display the *prior* images in the same manner.

The following table describes the remaining predefined hangings.

Icon	Meaning	Icon	Meaning
	CC Current		LCC Prior Current
	MLO Current		LMLO Prior Current
	RCC Prior Current		RMLO RCC Current
	RMLO Prior Current		LMLO LCC Current

When you select the button more than once:

- The viewport will display the available prior images of the same laterality and view in reverse chronological order.

- If a prior study does not contain an image of the displayed laterality, but does contain an image of the same view, the viewport will be blank.

- If a prior study does not contain an image of the displayed view (of either laterality) then the prior study will be skipped.

The appearance of the predefined hanging icons depends on a user preference (refer to *Image Presentation Preferences* on page 122). In the previous example, the user has configured SecurView to display the right breast on the left side, prior images on the left, MLO on the left, CC on the right, with chest wall orientation the same for currents and priors. Note that the icon indicates prior images in light gray.

The examples at left show how two predefined hanging icons might appear when the user preference is set with the chest wall orientation back-to-back. In this case, current images are on the left, and priors are on the right. The icons indicate the left or right breast with the letter 'L' or 'R' embedded.

4.2.8   Temporary Single Tiling Mode

Double-click any image in quadruple- or double-tiling mode to switch to the temporary single-tiling mode. Double-click the image again to return to the previous tiling. When the temporary single tiling mode is active, it is indicated in the image overlays by this icon ( ).

The displayed image in a stack as well as all Flip and Rotate operations applied prior to or during temporary single tiling mode are maintained on entering or leaving the temporary single tiling mode. Panning is reset upon entering the temporary single tiling mode and the previous panning state is restored upon leaving the temporary single tiling mode.

The temporary single tiling mode is automatically deactivated when:

- You activate a predefined hanging option.
- You change the tiling layout using the MammoNavigator feature.
- You drag an image into a temporary single tiling mode tile. In this case, the tile is changed to single tiling mode.

4.2.9   Intelligent Roaming

Use Intelligent Roaming to pan an image displayed in View Actual Pixels mode in a predefined, step-by-step order. SecurView segments the image and displays only the breast plus a safety margin, ignoring black border areas.
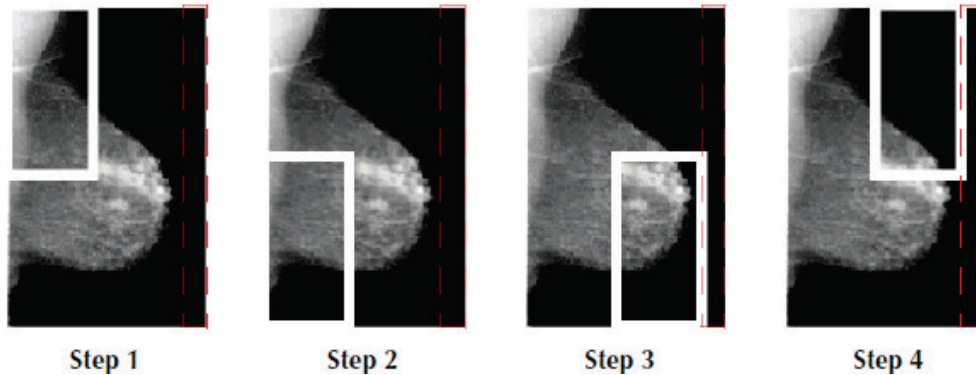
Figure 31: Intelligent Roaming

SecurView may divide the breast into two or four zones depending on the breast size. Intelligent Roaming starts in an upper corner of the image and, depending on the laterality, steps clockwise or counter-clockwise.

The **Intelligent Roaming** buttons are enabled on the right toolbar when the displays are in single tiling mode.

To step through the image:

Display any image in single-tiling mode. Then:

- Select **Intelligent Roaming Forward** to move one step forward.

- Select **Intelligent Roaming Backward** to move one step backward.

Intelligent Roaming

When you start Intelligent Roaming, the displays switch automatically to View Actual Pixels mode.

The Intelligent Roaming indicator shows a thumbnail of the image. A white bordered area within the thumbnail indicates the position of each Intelligent Roaming step.

By default, the indicator disappears after 1.5 seconds. To adjust how long the indicator appears, refer to *Tools and Overlays Preferences* on page 124.

Important

If part of an image is not visible, right-click and drag the image to a new location within the tile. The Intelligent Roaming indicator appears to show the position.
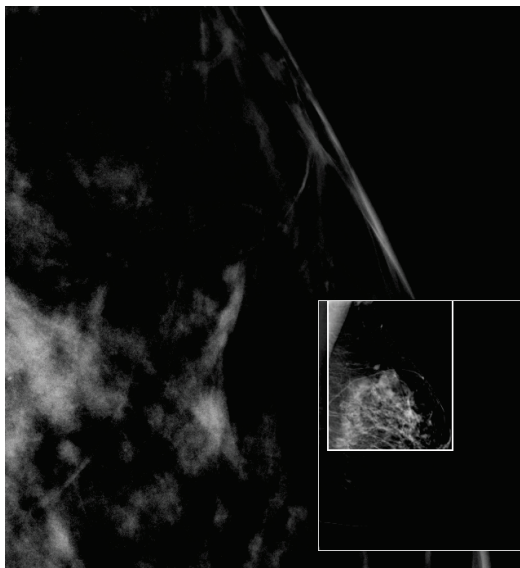
Figure 32: Intelligent Roaming Indicator

4.2.10 Scaling Modes
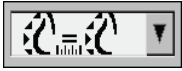
Image Scaling

Use the image scaling options to change the resolution of displayed images. When you select the **Image Scaling** icon, the scaling options appear as a pop-up. The following table describes the behavior of each icon.

Icon	Purpose / Keyboard Shortcut
	Fit to Viewport – Resize each image to fill its viewport. If the width and height dimensions of the image are smaller than the viewport, the minimum allowed expansion factor (default = 1.5) determines the behavior. If the factor is exceeded, the image will be expanded to fill the viewport. Otherwise, the image will be displayed in native resolution. A Service Engineer can change the minimum allowed expansion factor if necessary.
	Right Size – Display the images on each monitor at the same resolution based on the breast outline of the largest image with valid breast outline available for the patient. The largest image may be selected from the current images only, or from all available current and prior images, depending on user preference (refer to *Image Presentation Preferences* on page 122). • Press **[Y]** to toggle Right Size and Same Size.
	Same Size – Display the images on each monitor at the same resolution based on the entire imaged area of the largest image available for the patient. The largest image may be selected from the current images only, or from all available current and prior images, depending on user preference (refer to *Image Presentation Preferences* on page 122). • Press **[Y]** to toggle Right Size and Same Size.
	True Size – Display all images such that the breast tissue is in its true physical size, i.e., 1 cm of breast tissue measures 1 cm on the display. • Press **[X]** to display images in True Size.
	View Actual Pixels – Display 1 pixel of the original image as 1 pixel in the viewport (available when both displays are in single tiling mode). • Press **[D]** or **[7]** to View Actual Pixels on the left display. Press again to return to the previous scaling mode. • Press **[F]** or **[9]** to View Actual Pixels on the right display. Press again to return to the previous scaling mode.

Note

If part of an image is not visible, right-click the image and drag it to a new location within the tile.

If SecurView displays an image that is not in the selected scaling mode, an icon with an 'X' appears next to the displayed image (see examples at left). For example, the icon appears when you display an image on the left monitor in View Actual Pixels mode while the right monitor is displaying four images in any of the other modes.

Note
To achieve a more suitable image presentation in Double Tiling, adjust the user preference **Adjust Image Size in Double Tiling**. Depending on this setting, images may not be fit into the Viewport as described in the preceding rules. For more information on user preferences, refer to *Image Presentation Preferences* on page 122.

Displaying Diagnostic Images at Full Resolution

When reviewing FFDM images, adhere to ACR guidelines. To ensure optimum display of diagnostic information, review each image with the View Actual Pixels scaling mode.

When displaying images using a fractional Image Size zoom factor larger than one, SecurView enlarges the original images by interpolating pixel values between the source pixels. The pixel characteristics in the enlarged images may differ from the original image pixels.

- For more information on the zoom factor, refer to *Pixel Meter* on page 55.
- For instructions on setting View Actual Pixels as the default when creating a ReportFlow, refer to *Creating New ReportFlows* on page 143

4.2.11 Pixel Meter

The Pixel Meters display sizing information for each image:

Figure Legend

1. Displayed Resolution
2. Zoom Factor
3. Original Resolution
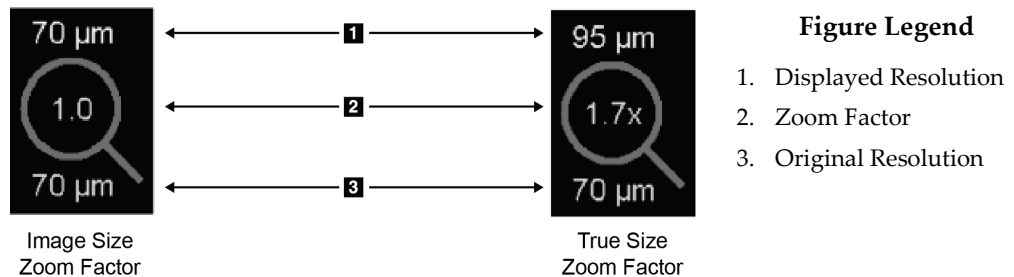
Figure 33: Pixel Meters

You can select the zoom factor setting with a user preference (refer to *Tools and Overlays Preferences* on page 124).

- **Image Size** zoom factor indicates the magnification relative to the pixel size of the original image. In the previous example, the Image Size zoom factor is '1.0', which indicates that the image appears in View Actual Pixels mode.
- **True Size** zoom factor indicates the magnification relative to the true physical size of the image, displayed in the previous figure as '1.7x'.

When displaying images using a fractional Image Size zoom factor larger than one, SecurView enlarges the original images by interpolating pixel values between the source pixels. The pixel characteristics in the enlarged images may differ from the original image pixels. When this occurs, the background inside the Pixel Meter turns white, as shown in the following figure.

Figure Legend

1. Displayed Resolution
2. Zoom Factor
3. Original Resolution
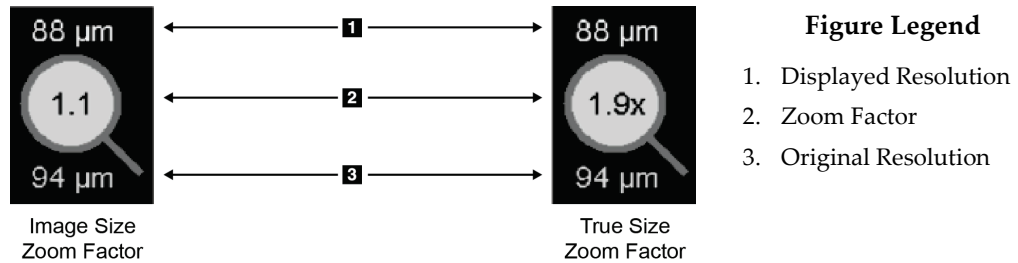
Figure 34: Pixel Meters with White Background Indicating Interpolated Pixel Values

4.2.12 Stack and Timepoint Indicators

When an image tile set contains more than one image, a Stack indicator appears in the corresponding tile. Either one or two indicators may appear, depending on your user preference (refer to *Tools and Overlays Preferences* on page 124).

Figure 35: Stack Indicator
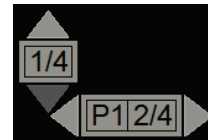
Figure 36: Stack & Timepoint Indicators

- Select the up (or down) arrow to go to the next (or previous) image in the stack.
- Select the right (or left) arrow to go to the next (or previous) timepoint.

You can also move through the images by pointing to an indicator or image and rotating the mouse wheel or the keypad scroll wheel. If desired, select and drag the Stack Indicator to another display position.

4.2.13 Working with Ultrasound Images

When an image tile set contains multiple single-frame ultrasound images or a multi-frame ultrasound image set, a horizontal slider appears in the corresponding tile. For multi-frame ultrasound images, a **Cine** button appears on the slider.

- Select and drag the slider handle to move through the images. Single-frame ultrasound images are sorted by acquisition date and time, oldest to newest. If acquisition date and time are the same, series number and instance number are used, respectively, in ascending order.

- Select any location on the slider to display a specific image.

- Scroll through multi-frame ultrasound images by rotating the scroll wheel on the mouse or keypad.

- Select the **Cine** button or press **Cine** on the workflow keypad to move through multi-frame ultrasound images automatically. Select or press **Cine** again to stop the action.

Note

The default speed is set in the user preferences. The default maximum speed is 30 frames per second. A Service Engineer can increase the maximum speed. Systems with slower processors may not be able to cine at 30 frames per second.

If desired, move the slider to another display position by pointing to the slider and dragging the tool.
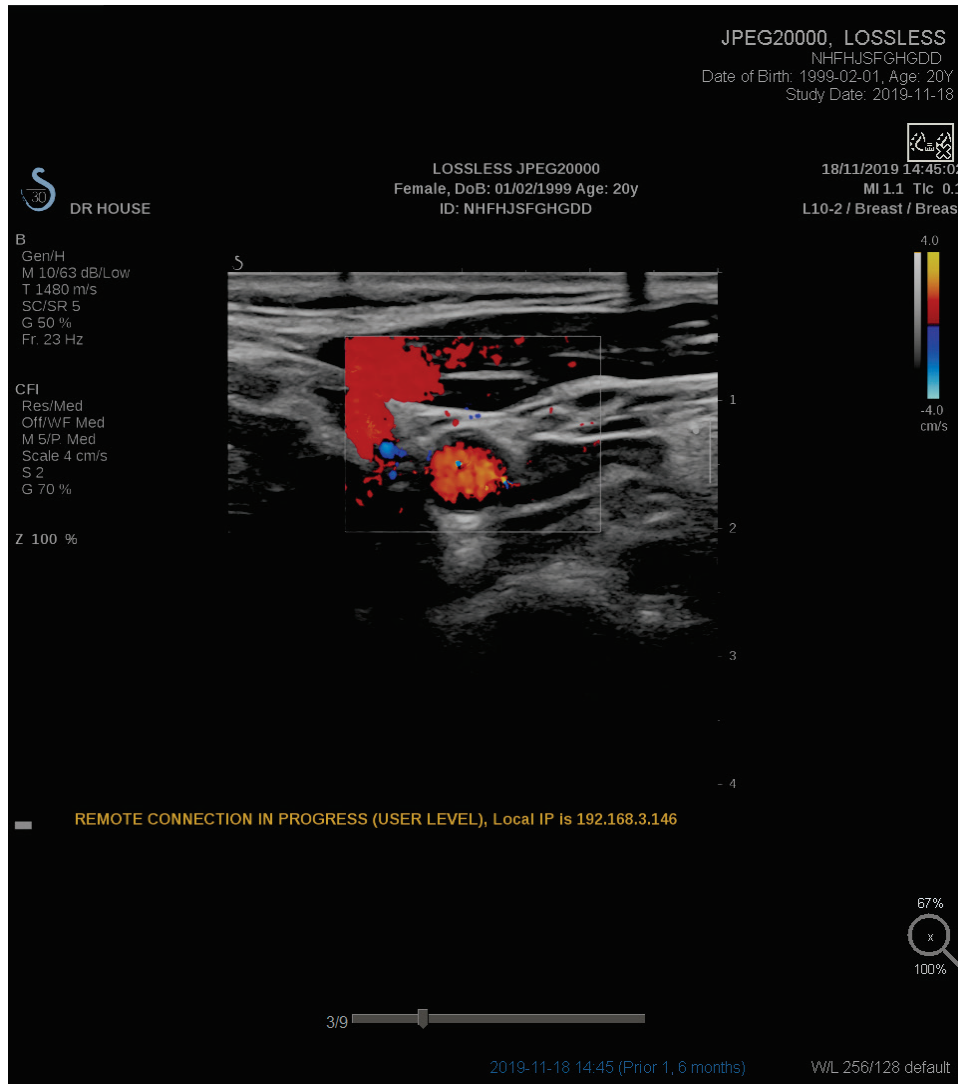
Figure 37: Ultrasound Image Navigation
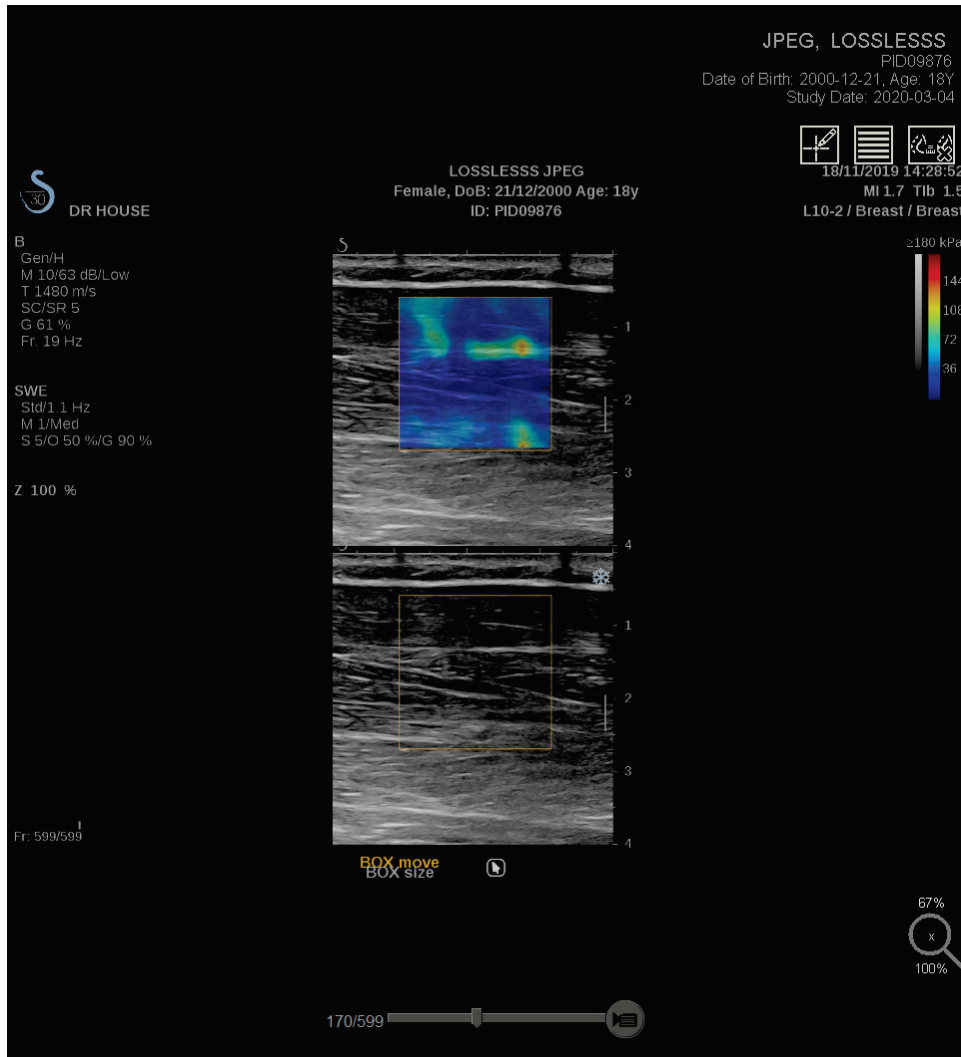
Figure 38: Ultrasound Multi-frame Image Navigation

4.2.14 The MammoNavigator Feature

The MammoNavigator feature provides quick access to all images and studies of the current patient.
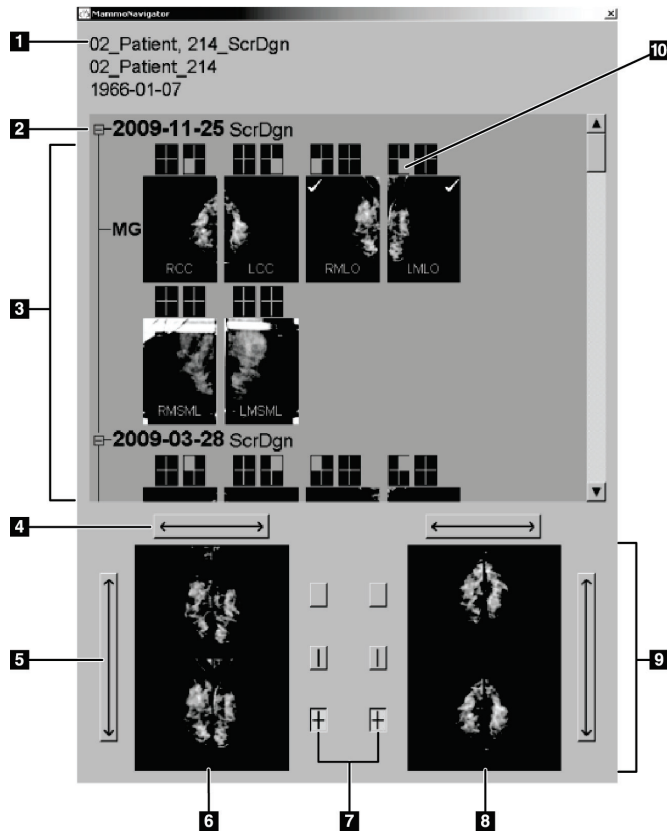
Figure Legend

1. Current Patient
2. Available Study
3. Study Overview Area (newest at top)
4. Switch Left/Right Image Position
5. Switch Top/Bottom Image Position
6. Left Display
7. Buttons for Single, Double, and Quadruple Tiling
8. Right Display
9. Currently Displayed Images
10. Position Indicator

To open the MammoNavigator feature:

MammoNavigator

- Select **MammoNavigator** on the right toolbar. Select again to close the window.

ReportFlows can be customized to open (or close) the MammoNavigator feature automatically by adding the Open (or Close) Navigator functional ReportFlow step.

At the bottom of the MammoNavigator feature display are thumbnails of the images currently appearing on the displays. At the top is an overview of all study images for the current patient including the study date and procedure description. Also appearing for each image are the laterality, view code, and any modifiers. A check mark appears on any thumbnail after you view the corresponding image in single tiling mode.

- Drag an image from top to bottom to display the image.
- Select a tiling button to change the display tiling (single tiling, double tiling, etc.).

> **Note**
>
> Starting with SecurView version 8.2, double tiling images are sized according to the selected sizing mode (Fit to Viewport, Right Size, Same Size, or True Size). Depending on the original image size and mode selected, the image may be displayed at a lower resolution than in previous versions.

> **Note**
>
> Starting with SecurView version 8.4, the viewport size used to scale images presented in Double Tiling can be configured, refer to *Image Presentation Preferences* on page 122. Depending on the user preference, the original image size, and the selected scaling mode, the image may not fit into the viewport.

- Select the horizontal arrow to switch left and right image positions (for double and quadruple tilings).
- Select the vertical arrow to switch top and bottom positions (quadruple tiling only).
- Double-click an image in the lower area to remove the image from the display.

Tomosynthesis thumbnails are labeled as follows:

- 'M' for conventional 2D mammography and CE2D (contrast-enhanced 2D mammography) low-energy images
- 'G' for synthesized 2D images
- 'T' for tomosynthesis reconstructed slices
- 'V' for tomosynthesis reconstructed slabs
- 'P' for tomosynthesis projection images
- 'S' for CE2D subtraction images

Ultrasound image thumbnails are labeled as follows:

- 'US' for single-frame ultrasound images combined in a single thumbnail per study and laterality (if identified)
- 'US-MF' for a multi-frame ultrasound image set

A Service Engineer can configure the order in which the thumbnails appear.

4.2.15 Image Information

To display detailed DICOM information for any image, open the MammoNavigator feature and right-click the image thumbnail that appears in the Study Overview area.

Name	Value
Modality	MG
Laterality	Left
View Position	LMLO
Institution	HOLOGIC, Inc.
Institution Address	35 Crosby Drive, Bedford, MA 01730
Referring Physician	NWH_913874
Acquisition Date	2009-11-25
Acquisition Time	09:53
Body Part	BREAST
Compression Thick	42.0 mm
kVp	27
Half Value Layer	0.324 mm
Exposure	164 mAs
Exposure Time	1643 ms
AGD	0.00 mGy
ESD	0 mGy
Exposure Index	460
Anode Material	MOLYBDENUM
Filter Material	MOLYBDENUM
Compression Force	125 N
C-Arm Angle	45
Focal Spot	0.3 mm
Grid	HTC_IN
Paddle	18cm x 24cm fast
Exposure Control Mode	AUTO_FILTER
Exposure Control Mode Description	LORAD AUTO AEC
Manufacturer	HOLOGIC, Inc.
Unit	Selenia
Device Serial Number	H1KRHR835b72e2
Model Name	Lorad Selenia
Detector ID	MP1570
UID	1.2.840.113681.2203808482.774.3335080556.154.1
Presentation Intent	FOR PRESENTATION
Software Versions	AWS:3_1_6_0 (AWS 3_1_5_2), PXCM:1.2.9.0, ARR:1.4.2.6, IP:4.5.2
Last Detector Calibration	2006-08-30
Gantry	n/a

Close

Figure 39: Example DICOM Information for an Image

An Administrator can configure the information that appears in the window. Refer to <u>*MammoNavigator Overlay*</u> on page 177.

Note

To view DICOM information that is not available in the MammoNavigator feature overlay, ensure that the mouse cursor is placed over the image and press **[H]**.

4.2.16 Patient Information Overlays

Patient and image information appear as overlays that you can switch on and off.

To display Patient Information overlays:

Patient Information

- Select **Patient Information** on the right toolbar to open the Patient Information overlay in 'reduced mode'.
- Select again to open the Patient Information overlay in 'extended mode'.
- Select again to close the overlays.
- Select and hold Patient Information for two seconds to 'Clear All' overlay information from the displays (except the study state and Stack indicators).

Note

For keypad users, the Clear All feature is available only on the current keypad (with a scroll wheel).

Figure Legend

1. State Indicator (Old, Read, Pending, etc.)
2. Digital Marker, Technologist & Current/Prior Identifiers (1 = Prior Study, 2 = Previous Prior Study, etc.)
3. Patient Information (upper part) with Patient Data
4. Patient Information (lower part) with DICOM Data
5. Stack Indicators and Pixel Meter
6. Ruler
7. Description

Figure 40: Patient Information Overlays

The elements that appear depend in part on your user preferences (refer to *Tools and Overlays Preferences* on page 124). In addition, an Administrator can customize the information that appears on the upper and lower Patient Information overlays (refer to *MG Viewer Image Overlay* on page 176).

A color or grayscale highlight of study date, digital marker, and stack indicator for more prominent distinction between current and prior images can be configured by a Hologic Service Engineer. If the highlight is activated, it is configured by default to apply only to study date.

When activated, the highlight for current and prior images can be toggled on or off using the keyboard shortcut [CTRL + t]. If the highlight is turned off, it will be turned on by default when the system is restarted.

Important
If Patient Information overlays hide image data, select **Patient Information** to toggle the overlays off.

Note
When a patient without current images opens, a warning is displayed informing you that no current images are available. You can disable this warning (refer to "No Currents Available Warning" in *Workflow Preferences* on page 120).

4.2.17 MG Secondary Captures and MM ScreenCaptures

MG Secondary Capture

MG Secondary Capture images can be created on close of study if the 'Destinations for an MG Secondary Capture (Annotations and Tagged Tomo Slices)' setting is configured (refer to the *SecurView DX/RT Workstation Installation & Service Manual*). MG Secondary Capture images are needed when the destination PACS does not accept GSPS, or if the PACS cannot display GSPS and a user wishes to view Annotations on the PACS workstation. When SecurView retrieves an MG Secondary Capture image from a DICOM source, an icon (shown at left) appears to identify the received image.

MM ScreenCapture

Similarly, MM ScreenCapture images can be created on close of study when the 'Destinations for an MM ScreenCapture' setting is configured (refer to the *SecurView DX/RT Workstation Installation & Service Manual*). When SecurView retrieves an MM ScreenCapture image from a DICOM source, an icon (shown at left) appears to identify the received image.

For more information, refer to *Closing a Study* on page 89.

4.3   Visualizing Image Details

This section explains tools used for visualizing image details, including magnification and brightness/contrast adjustments.

The right toolbar provides a set of image evaluation tools:
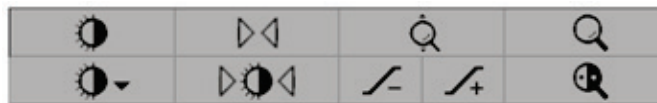
Figure 41: Image Evaluation Tools

The following table describes the purpose of each tool:

Icon	Purpose
	Window/Level: Adjust the brightness and/or contrast of any image.
	Increase / Decrease Gamma Factor: Adjust the brightness and contrast of *all* images of the current patient.
	Reset Window/Level & Gamma: Reset any changes to Window/Level and Gamma settings to their initial values.
	VOI LUT: Apply an alternative VOI LUT (e.g., Window/Level setting).
	Reset: Undo changes you made and reset images for the current patient to their initial states when opened (Annotations remain).
	Magnifier: Magnify a selected image area.
	Inverted Magnifier: Invert the magnified area.
	Continuous Zoom: Activates Continuous Zoom.
	Reset Continuous Zoom: Resets all zoomed images to the initial state.

The Pie menu provides additional image visualization tools (refer to *Using the Pie Menu* on page 46).

4.3.1 Magnifier and Inverted Magnifier

Use the Magnifier to enlarge any displayed image area by a factor of two. (For tomosynthesis data, the Magnifier uses pixel replication). Scaling marks in millimeters appear inside the magnified area.

To magnify an image area:

Magnifier

- Select **Magnifier** to change the pointer to the Magnifier icon. Point to the area you want to magnify and select. Hold the mouse button and move the pointer on the image to update the magnified area dynamically. Then release the mouse button. The magnified area remains in the current position.

- Point to another image and select to place a new Magnifier on that image.

To invert a magnified area:

Inverted Magnifier

- Select **Inverted Magnifier** to change the pointer to the Inverted Magnifier icon. Point to the area you want to invert and select. As with the Magnifier, you can move the pointer to update the inverted area dynamically.

To invert an entire image:

Invert Image

- Right-click an image to open the Pie menu and point to **Image Tools** to open the second Pie menu. Then select **Invert Image**.

To invert all displayed images:

• Press **I** on the keyboard.
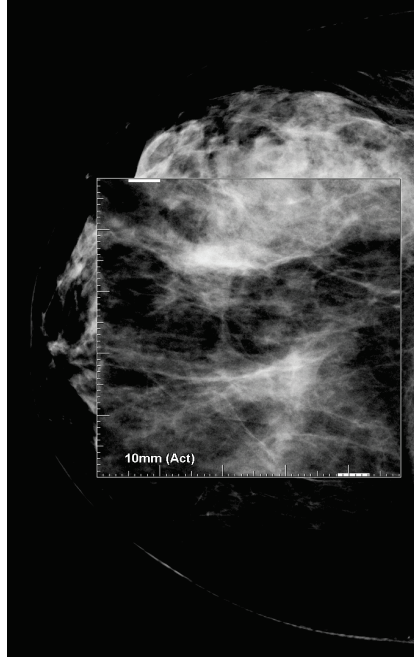
Figure 42: Magnifier   *Figure 43: Inverted Magnifier*
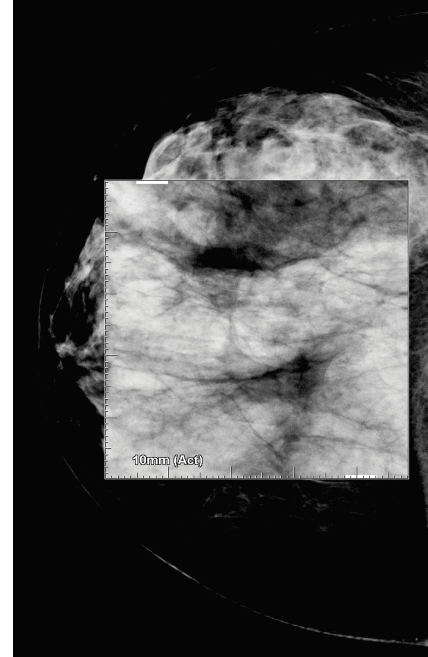
To close the Magnifiers:

- • Double-click a magnified area (a Service Engineer can configure the double-click to close either one or all Magnifiers), or
- • Change the image tiling (or move to the next ReportFlow step).

The Magnifier or Inverted Magnifier can be the default tool when you open the MG Viewer (user preference). You can also switch the scaling marks off or on. Refer to *Tools and Overlays Preferences* on page 124.

4.3.2 AIE and the Magnifier Toolbar

Advanced Image Enhancement (AIE) filtering assists in visualizing masses or calcifications. The AIE features appear only if a Service Engineer has configured your workstation with a special license.

Move the pointer to the top or bottom of the magnified area to open the AIE toolbar. The following table explains the function of each AIE tool.

Icon	Purpose
Off	**AIE On/Off** – Switch AIE filtering on/off.
AGR	**AIE Masses** – Switch AIE mass filtering on/off ('AGR' = aggressive).
MDR	**AIE Calcs** – Switch AIE calcification filtering on/off ('MDR' = moderate).
	Close All Magnifiers – Close all open Magnifiers.
	Close Magnifier – Close the currently selected Magnifier.
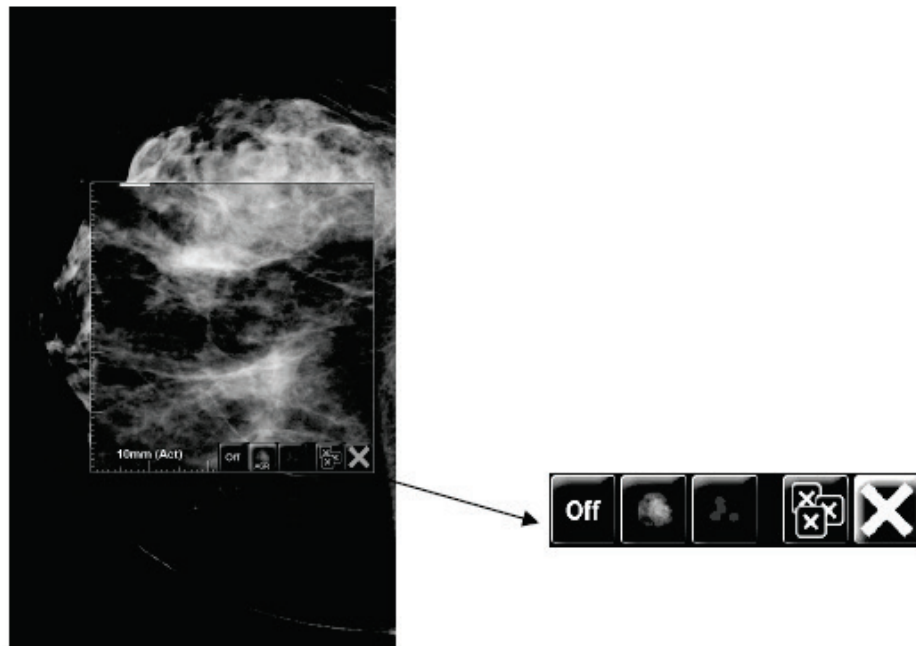
Magnifier with AIE Tools

Figure 44: Magnifier and AIE Toolbar

4.3.3 Continuous Zoom

Use Continuous Zoom to continuously increase or decrease the zoom factor of a displayed image. Continuous zooming is limited to a maximum (20x) and a minimum (50%) zoom factor. Contact Hologic Technical Support if you would like to change the default settings.

Note

Continuous Zoom is automatically applied to all combination procedure images of the same laterality and view within a single tile. For example, if you zoom one reconstructed slice and scroll to a different reconstructed slice, the new slice is also zoomed. Continuous Zoom applies to reconstructed slabs with the same behavior as reconstructed slices. If you switch to a 2D or synthesized 2D image in the same tile, that is also zoomed.

Note

Annotations are resized when changing the zoom factor of images. If an annotation is created on a zoomed image and the zoom factor is changed it may happen that either the annotation becomes very small or it will cover parts of the image that a radiologist wants to see. Thus, annotations should not be created on zoomed images.

To activate Continuous Zoom:

Continuous Zoom

1. Select **Continuous Zoom** on the toolbar or press **F7** on the keyboard. The pointer changes to the **Continuous Zoom** icon.
2. Move the pointer to the focal point on the image, select and hold the mouse button, and drag up and down to change the zoom factor:
    *   Dragging up – increases the zoom factor
    *   Dragging down – decreases the zoom factor

Note

To zoom out to a smaller size than initially displayed, first zoom out to the initially displayed size and release the mouse button. Then click the mouse button and drag again to view a smaller size image.

3. Release the mouse button when you have reached the desired size. The image remains displayed in the new size.

Note

*   After activating the Continuous Zoom mode, the toolbar button changes to the Reset Continuous Zoom icon.
*   The Flip and Rotate tools are disabled while Continuous Zoom is active.
*   Only the size of CAD mark outlines is affected by Continuous Zoom. RightOn™ CAD marks are not zoomed.

To reset Continuous Zoom:

> **Note**
>
> Continuous Zoom must be active to reset the changes.

Reset Continuous Zoom

1. Select **Reset Continuous Zoom** on the toolbar or press **F7** on the keyboard to reset all images in all tiles to the initial state.

> **Note**
>
> A Hologic Service Engineer can configure an explicit Reset Continuous Zoom command as a keyboard/keypad shortcut.

2. Select **Reset Continuous Zoom** (displayed within a tile) to reset only the image(s) in the tile to the initial state.

> **Note**
>
> All panning performed while using Continuous Zoom will be reset. Panning, flipping, and rotating performed before zooming will be maintained.

Continuous Zoom can be the preferred default tool when you open the MG Viewer (user preference). Refer to *Tools and Overlays Preferences* on page 124.

4.3.4 Window/Level and Gamma Adjustments

There are two tools used to adjust image brightness and contrast:

- Use the Window/Level tool to adjust brightness and contrast for any image. With a user preference, you can set the Window/Level tool to be the default when you open the MG Viewer (refer to *Tools and Overlays Preferences* on page 124).
- Use the Increase/Decrease Gamma tool to adjust brightness and contrast for all images of the current patient.

To adjust brightness and contrast for any image:

Window/Level

1. Select **Window/Level**, then point to an image and drag.
   - Dragging left or right changes the window width (contrast) – left increases contrast, right decreases contrast.
   - Dragging up or down changes the window level (brightness) – up brightens the image, down darkens the image.
2. Release the mouse button when you have adjusted the image to your satisfaction. The image remains displayed with the new Window/Level values.

To adjust brightness and contrast by numeric entries:

Window/Level Numeric

1. Right-click an image to open the Pie menu and point to **Image Tools** to open the second Pie menu. Then select **Window/Level Numeric**.

Window/Level Dialog

For: 2009-03-28 17:50 (Prior 2, 15 months),
Window   4096
Level   2048

Preview   OK   Cancel
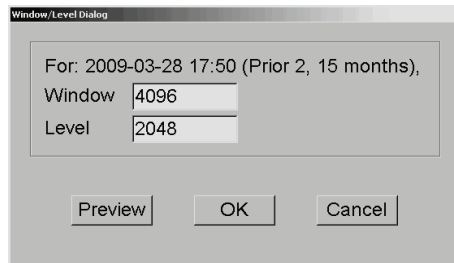
Figure 45: Window Level Dialog Box

2. Type values in the Window and Level fields.
   - Select **Preview** to test your settings.
   - Select **OK** when you are satisfied with the new settings.

To adjust brightness and contrast for all images of the current patient:
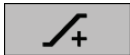
Increase Gamma

- Select **Increase Gamma** to increase brightness and contrast by one step.
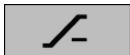
Decrease Gamma

- Select **Decrease Gamma** to decrease brightness and contrast by one step.

To reset Window/Level and/or Gamma settings to their default values:

Reset Window/Level

Reset

- Select **Reset Window/Level**, or
- Select **Reset**, or
- Switch to another patient.

4.3.5 Applying VOI LUTs

An image may contain one or more Value of Interest Look-Up Tables (VOI LUTs). A VOI LUT may be a predefined Window/Level setting or a non-linear LUT. Typically, images from a single series offer the same VOI LUT, although multiple series within one study may offer different VOI LUTs. When the MG Viewer opens, SecurView applies a default VOI LUT and makes any other embedded VOI LUTs available. A Service Engineer can configure the default VOI LUT.

To change from the default to a different VOI LUT:

Select VOI LUT

1. Select **Select VOI LUT**. A list of VOI LUTs appears if they are available in the images.
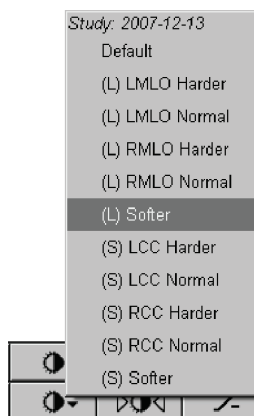
Figure 46: Example List of VOI LUT

2. Select a LUT from the list to apply the new VOI LUT.

4.3.6 MPE Images

Mammography Prior Enhancement™ (MPE) is a software module that processes conventional two-dimensional digital mammography x-ray images. MPE is designed specifically for use with screening views from prior exams originating from GE Senographe Full-Field Digital Mammography (FFDM) systems. MPE images appear only if a Service Engineer has configured your workstation with a special license.

Input to the MPE module includes image pixel data, imaging information, and image processing parameters. The module performs image processing consisting of steps to improve the appearance of the image through logarithmic conversion, skinline correction, and contrast enhancement. These are standard methods used to allow optimal display and review of mammography images with minimal window/leveling operation.

Intended Use

Mammography Prior Enhancement is a software module intended to enhance the appearance of prior non-Hologic digital mammography X-ray images so that they more closely resemble Hologic digital mammography images. MPE-processed images are intended for comparison purposes only and cannot be used for primary diagnosis.

MPE runs on a Windows-based computer. Results can be displayed on a workstation capable of displaying mammography X-ray images, such as Hologic's SecurView DX workstation.

Viewing MPE Images

The radiologist views MPE-processed images when comparing them to current digital mammography images. The SecurView DX workstation applies MPE processing automatically to all images that meet the MPE criteria and displays the images using its standard hanging protocols as defined for prior-current comparisons.

Important
Do not make a clinical decision or diagnosis from MPE-processed images alone. Always base interpretation on current study images to which MPE processing has not been applied.

Note
In rare cases, the initial presentation of some MPE-processed images may not be optimal. Use manual window/level adjustment to improve the appearance of these images.

The following images are taken from the SecurView DX workstation. The image on the left shows an example of how an image appears before MPE processing. On the right is an example of the image following MPE processing.
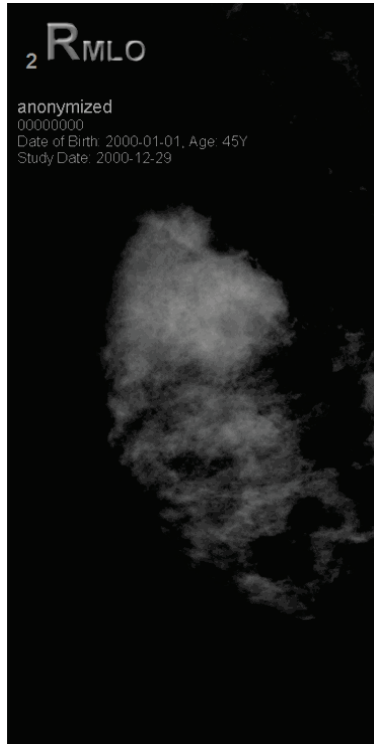
Figure 47: Without MPE Processing
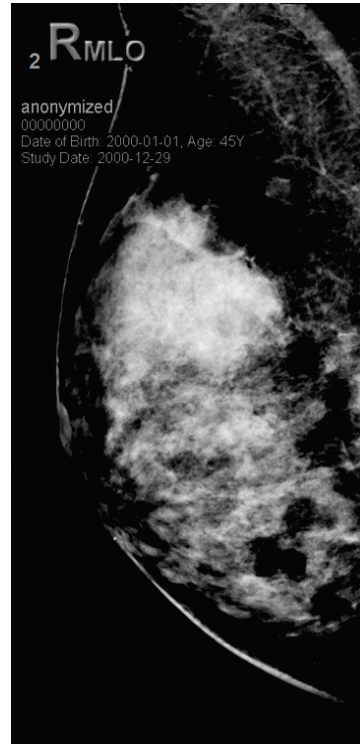
Figure 48: With MPE Processing

4.3.7   DICOM 6000 Overlays

The SecurView workstation displays overlays contained in the DICOM 6000 group within an image header. For images containing a DICOM 6000 overlay, SecurView creates an internal copy of the image with the overlay burned in.

If the display of DICOM 6000 overlays is not desired a Service Engineer can disable the feature.

Viewing DICOM 6000 Overlays

The internal copy of the image with the burned-in overlay is stacked with the corresponding original image.

> **Note**
> If a user does not scroll through all images in a stack, annotations contained in DICOM 6000 overlays could be missed.
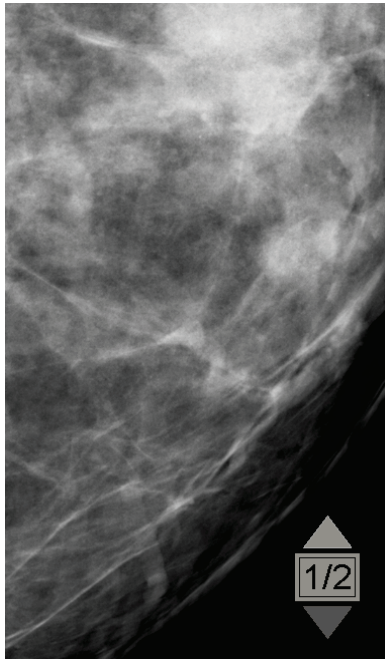
Figure 49: Original Image	*Figure 50: Image with DICOM 6000 Overlay*
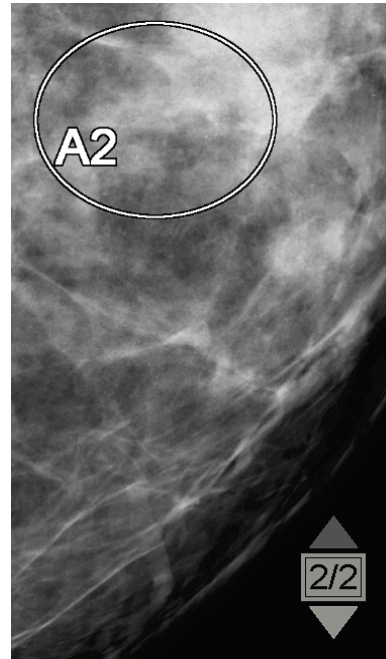
SecurView is limited to displaying only one DICOM 6000 group containing a graphical overlay that has the same size as the original image.

The overlays are burned in using white enclosed in a black outline. To enhance visibility of the overlays, a Service Engineer can configure the thickness and outline width.

The SecurView user is only permitted to create markings, annotations, and measurements on the original image. It is not possible to annotate the internal copy of the image with the burned-in overlay.

4.3.8 CLAHE Image Enhancement

The SecurView workstation supports Contrast Limited Adaptive Histogram Equalization (CLAHE) image enhancement. Images with CLAHE enhancement display the overlay 'CLAHE.' If CLAHE enhancement is configured for an image but is not applied successfully, the original image is displayed along with a system message 'Image Processing Failed.'

A Service Engineer can configure CLAHE enhancement.

Note

In rare cases, the initial presentation of some CLAHE enhanced images may not be optimal. Use manual window/level adjustment to improve the appearance of these images.

4.4 Using CAD

SecurView workstations accept Mammography CAD SR objects produced by Hologic ImageChecker CAD, Hologic Quantra, Hologic Genius AI Detection, iCAD SecondLook, iCAD PowerLook, and other applications. If the CAD SR includes CAD results, then SecurView can display the CAD results for each image.

Note

Hologic Genius AI Detection is not available in all markets.

CAD functionality is license-protected. The license controls access to CAD functionality by enabling the **CAD** button on the toolbar or keypad. For more information on each CAD application, refer to the CAD vendor user guide.

4.4.1 Displaying CAD Information

If there are CAD results for a patient, a '+' symbol appears in the CAD column of the Patient List. In addition, when you review a patient with CAD results, the toolbar CAD button becomes active (not gray). CAD results can be configured to appear automatically as a step in a ReportFlow.

To display CAD results:
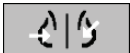
Computer Aided Detection

While viewing a study with CAD results, select **Computer Aided Detection**. The application displays the CAD overlay. CAD marks appear if they exist for the currently displayed images.

While viewing a study with CAD results it is possible to set a user preference to display the CAD overlay automatically, without selecting the button, and independent of the configured ReportFlow steps (refer to *Tools and Overlays Preferences* on page 124).

Note

All non-Hologic CAD results for calcification clusters are displayed as an outline with a white line on a black background. All non-Hologic CAD results for mammography breast densities are displayed as an outline with a black line on a white background.

4.4.2   Hologic CAD

Hologic ImageChecker CAD and Genius AI Detection results display includes:

- RightOn CAD Marks
- EmphaSize™ CAD Marks
- PeerView™ CAD Marks
- LesionMetrics™ (only for ImageChecker CAD from Cenova™ server)

RightOn CAD Marks

Hologic CAD results provide three types of RightOn CAD marks (Mass, Calc, and Malc). You can choose to display any or all three types of marks with a user preference. Each mark identifies a region of interest.

Calc – Marks regions suggestive of calcifications.

Mass – Marks regions suggestive of masses or architectural distortions.

Malc – Marks regions where Calc and Mass marks are coincident.

Hologic CAD Overlay

Computer Aided Detection

When you select **Computer Aided Detection** while viewing a study with Hologic CAD results, SecurView displays the Hologic CAD overlay. CAD marks appear if they exist for the currently displayed images.
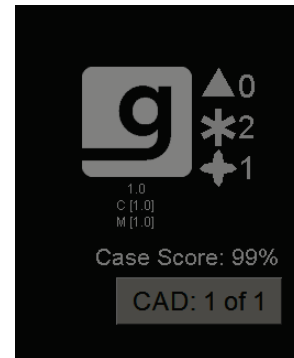
Figure 51: ImageChecker CAD and Genius AI Detection Overlays

The numbers of Calc, Mass, and Malc marks appear on the right side. On the left side, SecurView displays the ImageChecker CAD algorithm version and the operating points selected for calcifications (C) and masses (M), or the Genius AI Detection deep learning model and the algorithm version for calcifications (C) and masses (M).

If Hologic CAD fails for the image, then SecurView displays broken lines around the RightOn CAD marks and the number of marks for the corresponding algorithm does not appear:

Figure 52: ImageChecker CAD failed for the image

EmphaSize CAD Marks

This feature allows SecurView to display Hologic CAD marks of variable size, where the size correlates to the prominence of the features of the finding. When Hologic CAD determines that a region has more prominent features, the CAD mark appears larger, indicating that the region should receive more careful review from the radiologist. SecurView systems display EmphaSize marks by default. You can switch off EmphaSize marks with a user preference (refer to *Tools and Overlays Preferences* on page 124).
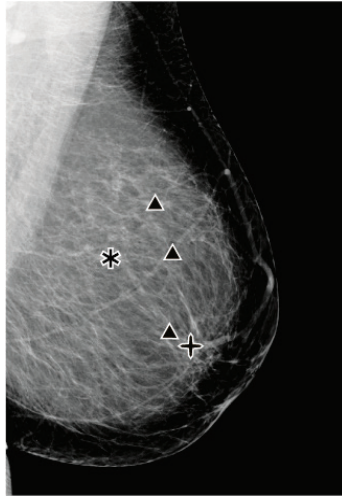
Figure 53: CAD without EmphaSize   *Figure 54: CAD with EmphaSize*
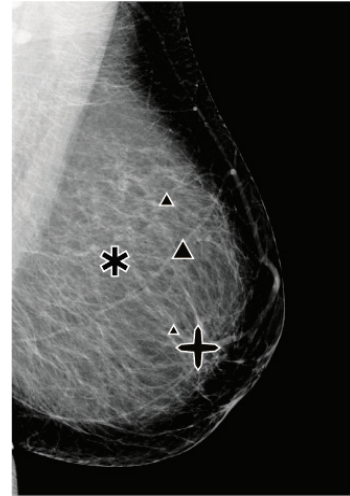
PeerView CAD Marks

PeerView highlights anatomic findings detected by the algorithm. In the example shown in the following figure, the same region is shown with and without a PeerView Malc mark (mass with calcifications). PeerView outlines the central density of a mass, and highlights the individual calcifications of a cluster.

To view PeerView results:

RightOn
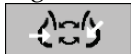
PeerView / RightOn

Select **PeerView / RightOn**. Select again to view RightOn marks.
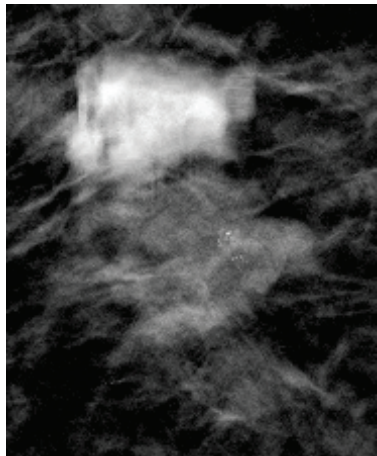
Figure 55: PeerView Off   *Figure 56: PeerView On*

PeerView results appear only when CAD display has been activated, and when at least one displayed image shows CAD results. If no PeerView information is present in the current CAD SR, SecurView shows only RightOn CAD marks.

LesionMetrics (ImageChecker CAD)

LesionMetrics provides data computed by ImageChecker CAD from a Cenova server for each region of interest marked by the algorithm. Depending on the type of lesion, the software can compute metrics such as lesion size, distance to nipple, distance to chest wall, degree of spiculation, calcification contrast, number of calcifications, and mass density.

To display LesionMetrics for each ImageChecker CAD finding:

Double-click a RightOn or PeerView CAD mark. A new window opens next to the selected CAD mark:

4.4.3   Hologic Imaging Biomarkers

Note
Display of biomarkers is subject to availability. Check with your local sales representative for information.

The Hologic Imaging Biomarkers algorithms analyze each image within a study and provide breast density assessment results. SecurView reports the assessments per patient, per breast, and per image. For more information, refer to the *Understanding Quantra User Guide*. (Note that this product is sold separately).

To display Hologic Imaging Biomarkers results:

Biomarkers

Select **Biomarkers**. The biomarkers results appear on three tabs according to your user settings (refer to *Tools and Overlays Preferences* on page 124). Using the user settings, you can configure which results will initially be displayed (per subject (default), per breast, or per image).

Note
The biomarkers result content may vary depending on the Hologic Imaging Biomarkers algorithm version.
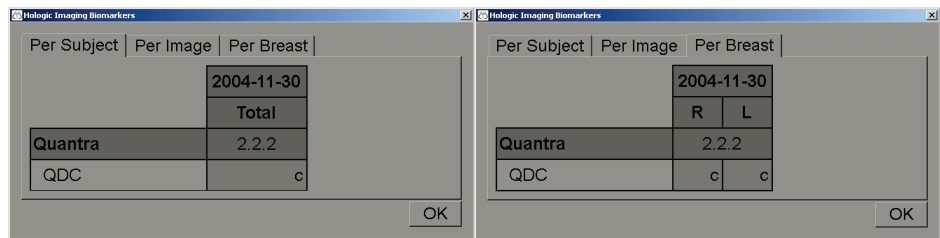
Figure 57: Hologic Imaging Biomarkers Per Subject and Per Breast Tabs

Results without any value refer to an empty cell, i.e., the report does not contain a value for the desired measurement.

To display the full name of the biomarkers result, point to the abbreviated name as shown in the following figure.
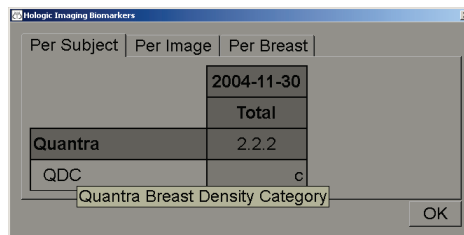
4.4.4 Switching Between Multiple Mammography CAD SRs

SecurView initially displays the marks of a specific CAD SR on each image. The default CAD SR is the newest that references the image, identified by date and time. Within a single study, there can be multiple CAD SRs, referencing different images. For example, a new CAD SR may be produced after a study is reopened at the acquisition workstation to add a new image.
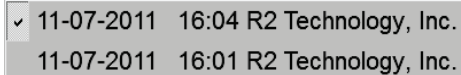
If you select a CAD SR on an image, SecurView displays the contents on all images referenced by this CAD SR. The selected CAD SR is persistent for all referenced images as long as the patient is loaded.

To switch to a new CAD SR:

CAD: 1 of 2

Select between CAD result

1. On the CAD information overlay, select **Select between CAD results**. A drop-down list displays a list of all available CAD SRs for the image. A check mark appears next to the currently displayed CAD SR.

✓	11-07-2011	16:04 R2 Technology, Inc.
	11-07-2011	16:01 R2 Technology, Inc.

Figure 58: Example CAD SR List

2. Select one of the list entries to load the referenced CAD SR and display the marks on the image.

4.5 Creating and Viewing Annotations

An Annotation consists of a marking and an optional description of a region of interest. You can mark a lesion with an ellipse, freehand drawing, arrow, or with measurements, then describe the region. SecurView links each Annotation to a specific image.

On SecurView DX the Annotation creator has exclusive revision and deletion rights. However, other users can view the Annotations (except those in second-read studies), and other users can enter their own Annotations for the patient. You can send Annotations to other Standalone workstations or multiworkstation clusters. Refer to *Sending and Viewing Notices* on page 88 and *Closing a Study* on page 89.

4.5.1   Marking an Image

Use the Ellipse, Freehand, Arrow, and/or Measurement tool to mark a region of interest.

To draw a marking:

1. Select **Ellipse**, **Freehand**, **Arrow**, or **Measurement**. Select at the starting point of the marking, drag to create the shape, then release the mouse button. (For a freehand marking, SecurView automatically connects the two endpoints.) SecurView numbers each Annotation (**1**, **2**, and **3** in the following figures).
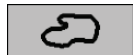
Freehand

Ellipse
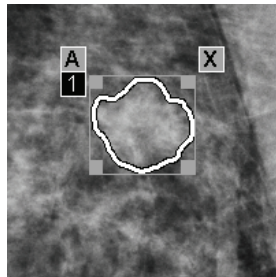
Figure 59: Freehand
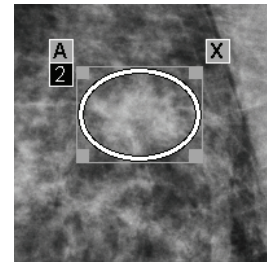
Figure 60: Ellipse

Arrow
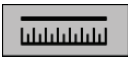
Measurement
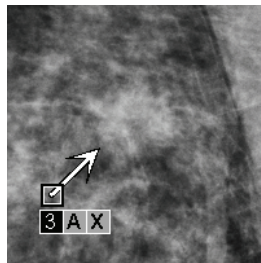
Figure 61: Arrow
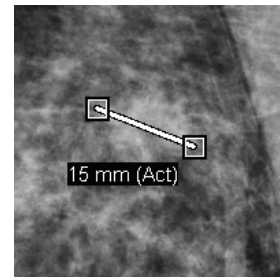
Figure 62: Measurement

- To change the marking size, select and drag a square handle.
- To move the marking, select and hold inside the bounding box (or select the measurement line), then drag the marking to the new location.
- To enter a description for an ellipse, freehand, or arrow marking, select **A** (refer to *Describing a Region of Interest* on page 84).
- To delete the ellipse, freehand, or arrow marking, select **X** (or select inside the bounding box and press **Backspace**). To delete the measurement line, select a square handle (or press **Backspace**).

2. Select another tool (or move to another image) to lock the marking in place. (To unlock a marking, first select the tool used to create it: Ellipse, Freehand, Arrow, or Measurement.)

Important

Use caution when making measurements on magnification views. For some manufacturers, the pixel spacing conversion factors may not be encoded correctly. Take measurements on unmagnified views, if available.

To measure with the ruler:

Select and drag the ruler displayed with each image. To turn the ruler 90 degrees, right-click the ruler, then drag.
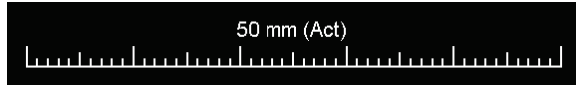
Figure 63: Ruler

Note

Measurement lengths are calculated by using pixel spacing conversion factors provided by the data source. Please refer to the data source guides for accuracy claims.

4.5.2   Describing a Region of Interest

After marking an image, you can enter a description of the region of interest by selecting lesion attributes, entering text, or inserting predefined text strings.

To enter an Annotation description:

Ellipse

Freehand

Arrow

1. Select **Ellipse, Freehand**, or **Arrow**, then select the marking to open the bounding box.

2. Select **A** (or double-click inside the bounding box) to open the *Annotation* dialog box:
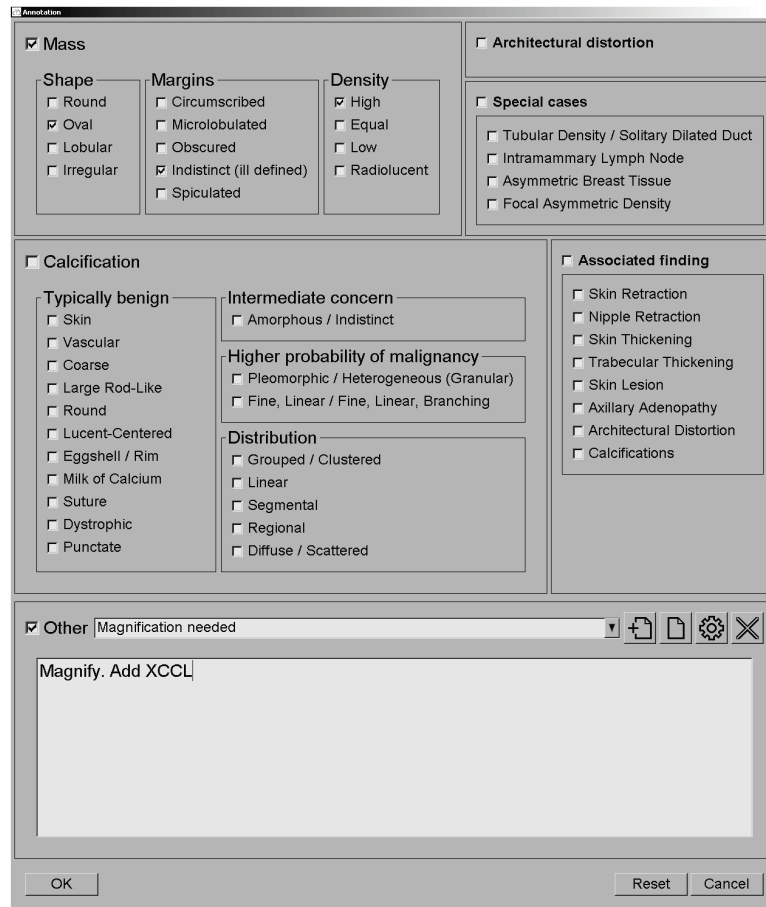
Figure 64: Annotation Dialog Box

3. Select one or more check boxes for the lesion, and enter text (or insert a predefined text string) as desired in the lower field. When done, select **OK** to save the description.

   You can configure the *Annotation* dialog box to appear with or without the check box area through a user preference (refer to *Tools and Overlays Preferences* on page 124).

New

Insert

Edit

Delete

To predefine text strings for Annotation descriptions:

1. In the *Annotation* dialog box, select **New** to open the *Enter New Text* dialog box.

2. Type your text, then select **OK** to add the new text string to the drop-down list.

> ☑ Other Magnification needed

Once you define a text string, you can select it from the drop-down list, then:

*   Select **Insert** to add the text to the Annotation description, or

*   Select **Edit** to modify the text string, or

*   Select **Delete** to delete the text string.

4.5.3   Viewing Annotations

Annotations Present

When a patient opens in the MG Viewer, SecurView hides Annotations by default. An icon (shown at left) marks any image that has one or more Annotations.

To view Annotations for all currently displayed images:

Annotation User Filter

Select **Annotation User Filter** to display annotations for all currently displayed images.

> No. 1
> Joe Smith, 2010-06-26, 18:04
> **Calcification:** (**Typically benign:** Coarse,
> **Distribution:** Diffuse / Scattered)
>
> No. 2
> Joe Smith, 2010-06-26, 18:06
> **Mass:** (**Shape:** Oval, **Margins:** Indistinct (ill
> defined), **Density:** High)
>
> **Other:** Callback. Magnification needed. Add
> XCCL
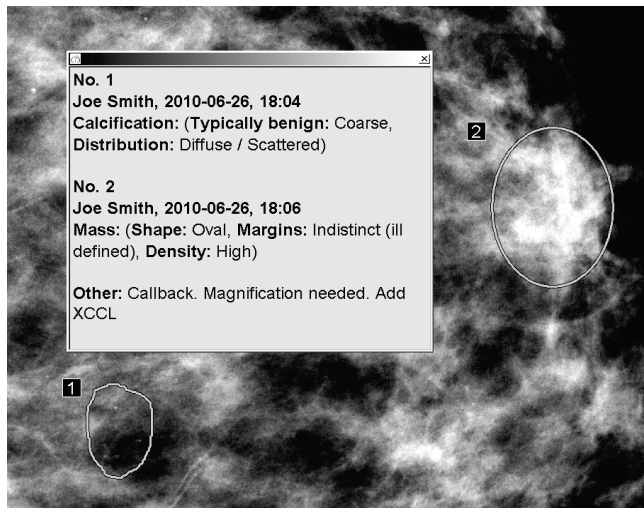
Figure 65: Example Annotations

*   To close the *Annotations* window, select the X in the upper right corner.

*   To hide the Annotations, select **Annotation User Filter** again.

To view Annotations for a single image:

Right-click the image to open the Pie menu, then select **Annotation User Filter** to display or hide annotations.

To select reviewers:

If there are Annotations from multiple reviewers, a list of reviewers appears. Select the name of the radiologist whose Annotations you want to view (or select **All** to view all Annotations). To hide the Annotations, select **None**.
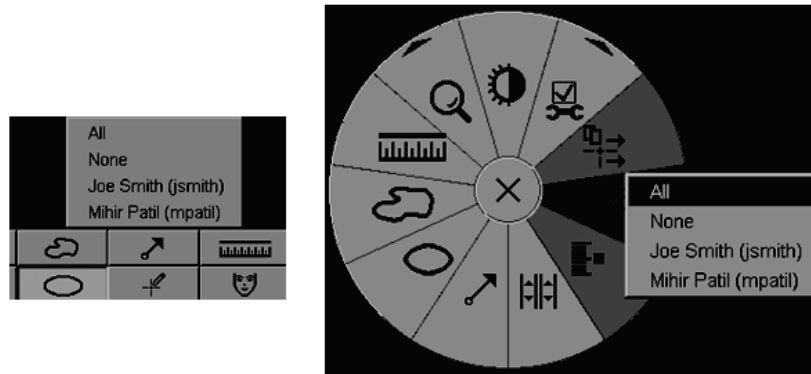
Figure 66: Selecting a Reviewer from the Pie Menu

To view third-party GSPS Annotations:

GSPS Annotations Present

SecurView can display third-party GSPS Annotations. If third-party GSPS Annotations are present for an image, the icon at left appears. When you select **Annotation User Filter**, SecurView marks GSPS Annotations with an ⚠ icon.
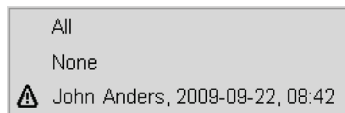
Figure 67: Example Third-party GSPS Annotation Indicator

Note

SecurView does not support all content of third-party GSPS. If GSPS Annotations from a specific manufacturer or device model do not display well on SecurView, a Service Engineer can configure SecurView not to display them.

4.6 Sending and Viewing Notices

A GSPS Notice is a message from another Hologic Standalone workstation or multiworkstation cluster that contains all Annotations for an image, with current window/level values, the user name, and the creation date and time (but not the study reading state). Notices based on tomosynthesis images (a projection image set or reconstructed slice or slab set) include all Annotations from the image set.

While viewing a patient, users can send Notices to other configured Hologic Standalone workstations or multiworkstation clusters. When received, other users can view the Annotations. In most cases, Radiologist users send Notices for viewing by Technologist users. A Service Engineer must configure the Notice destinations.

4.6.1 Sending Notices

There are three ways to send Notices. You can (1) send all Notices of the current study, (2) send all Notices when you close the study (refer to *Closing a Study* on page 89), or (3) send a Notice for the currently selected image.

To send all Notices:

Send All Notices

1. Right-click to open the Pie menu, then select **Send All Notices**.

   - If there is one configured Notice destination, then SecurView creates the Notices and sends them immediately. The Notices contain all Annotations made by either (1) the current Radiologist user on unread studies or (2) the current Technologist user on new studies (SecurView RT).

   - If there is more than one configured Notice destination, a submenu appears.
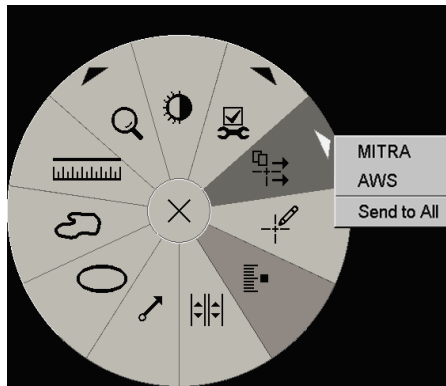
Figure 68: Send All Notices Submenu

2. To send the Notices, select a destination or 'Send to All'.

Note

'Send All Notices' applies only to unread studies. To send Notices for Read, Old or Changed studies use 'Send Image Notice' or 'Close Study' (refer to *Closing a Study* on page 89).

To send an Image Notice:

Send Image Notice

Right-click an image to open the Pie menu and point to **Image Tools** to open the second Pie menu. Then select **Send Image Notice**.
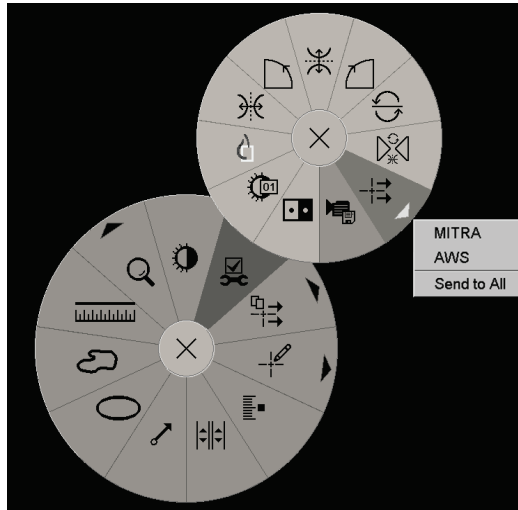
Figure 69: Send Image Notice Submenu

SecurView either sends the Notice immediately or, if there are multiple configured Notice destinations, opens a submenu to allow you select a destination. This Notice contains all Annotations on the selected image, regardless of the creator or study state.

4.6.2   Viewing Notices

Notice Present

When the workstation receives a Notice for a patient, a '+' appears in the Notice column of the Patient List. When a patient opens in the MG Viewer, SecurView hides the Notices by default. The icon at left marks any image that has one or more Notices.

To view Notices for the currently displayed images:

Annotation User Filter

1.   Select **Annotation User Filter**. The Notice Present icon appears next to each Notice.
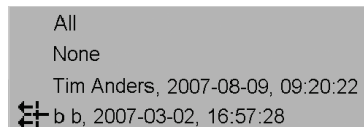
2.   Select the name of the radiologist whose Notices you want to view (or select **All** to view all Annotations). To hide the Annotations, select **None**.

4.7   Closing a Study

The last step in reviewing patients is usually to close the studies, i.e. to complete the review of currently loaded studies.

4.7.1   Closing a Study as a Radiologist

After reviewing a patient, a Radiologist user on SecurView DX opens the *Close Study* dialog box and changes the reading state for one or more studies, usually from 'Not Read' to 'Read'. If a study is still unread or requires a second reading, the radiologist can instead assign lock states.

Close Study can also be used to send Notices; store annotations, tagged tomosynthesis slices or slabs, and multimodality ScreenCaptures; or cancel second reading.

The *Close Study* dialog box opens automatically when you reach the last ReportFlow step or select **Close Study**, depending on the patient's reading state:

- The *Close Study* dialog box is available when the reading state is currently 'Not Read', 'Read Once', or 'Changed'. The *Close Study* dialog box is also available for new or changed annotations, measurements, or tagged tomosynthesis slices or slabs for 'Read' or 'Old' studies.

- The *Close Study* dialog box is not available when the reading state is 'Locked', 'Read', or 'Old' without new or changed annotations, measurements, or tagged tomosynthesis slices or slabs. However, if you locked the patient, then you can unlock it – refer to *Using the Shortcut Menu* on page 38.

For more about reading states, refer to *Reading States* on page 31.

To close a study as a Radiologist:

Close Study

1. Select **Close Study** (or proceed to the last ReportFlow step).
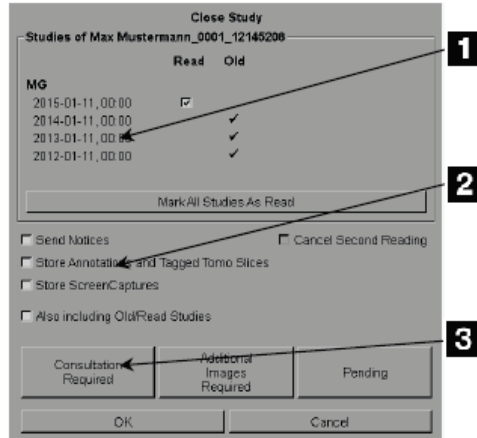
Figure Legend

1. Studies List for the Current Patient (can include MG, US, MR, OT, DX, CR, CT, & PT)

2. Options to Execute on Closing

3. Locking Options

2. Adjust study settings as needed. SecurView can execute any of the following options when you close the dialog box:

   a. In the Studies list, select one or more check boxes to set the reading status to 'Read', leave the boxes unchecked, or select **Mark All Studies As Read**.

   b. Select options for Notices, Annotations, and ScreenCaptures, if you want to send them to configured destinations when you select **OK** to close the dialog box. (Refer to *Workflow Preferences* on page 120 to set up default settings for these options.)

   Send Notices – For each unread study, when you select **OK**, this option sends a GSPS Notice containing markings of the current user ('Annotations and Tagged Tomo Slices') but not the reading state.

   Store Annotations and Tagged Tomo Slices – When you select **OK**, this option sends (1) a GSPS Report containing the study reading state and current user markings ('Annotations and Tagged Tomo Slices'), and/or (2) an MG Secondary Capture image for each image with markings of the current user and for each tagged tomosynthesis slice or slab. This option is applicable for each study marked as 'Read', and also for already 'Read' and 'Old' studies, if activated via the corresponding option below.

   Store ScreenCaptures – When you select **OK**, this option sends multimodality ScreenCaptures. This option is applicable for each study marked as 'Read', and also for already 'Read' and 'Old' studies, if activated via the corresponding option below.

   Also including Old/Read Studies – Select this option if you want to include new or changed annotations, tagged tomosynthesis slices or slabs, or multimodality ScreenCaptures for studies that are 'Read' or 'Old' in **Send Notices, Store Annotations and Tagged Tomo Slices** or **StoreScreenCaptures**, respectively.

Note

If 'Also including Old/Read Studies' is selected, only the new/changed annotations, tagged tomosynthesis slices or slabs, or multimodality ScreenCaptures will be sent to the configured destinations. Previously stored/sent Notices, GSPS Reports, MG Secondary Captures or MM ScreenCaptures are not affected.

For more information, refer to *MG Secondary Captures and MM ScreenCaptures* on page 64.

c.   Select **Cancel Second Reading** to change a study state from 'Read Once' to 'Read'.

Important

This check box is active only if double reading is configured and you set the study to 'Read' (see step 2a). If you cancel the second reading and change the reading state to 'Read', you cannot restore the reading state to 'Not Read' or 'Read Once'.

d.   Lock the patient by selecting **Consultation Required**, **Additional Images Required**, or **Pending**. Note that selecting a lock button marks all new studies as 'Not Read'.

Note

To unlock a patient after exiting the *Close Study* dialog box, refer to *Using the Shortcut Menu* on page 38.

3.   To save the settings and send data to configured destinations, select **OK** or **Next Patient**.

Note

You can configure the system to display a warning message if you have not viewed all images in single (or double) tiling mode when you close a study (refer to "Missed View Safety Warning" in *Workflow Preferences* on page 120).

4.7.2 Closing a Study as a Technologist

SecurView RT enables the **Close Study** button if at least one GSPS Notice is available for the currently opened patient. SecurView indicates studies with one or more received Notices with a (+) in the Notice column of the Patient List.

If SecurView RT receives one or more Notices for the patient, a Technologist user can close a study and mark it as 'Viewed'.

If a technologist attempts to close a patient with received Notices, SecurView displays:
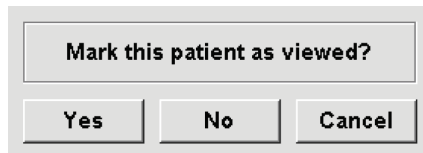
Figure 70: Close Study Message for Patients
with Received Notices

- Select **Yes** to mark the patient as viewed and proceed with your next action.
- Select **No** to proceed with your next action without marking the current patient.
- Select **Cancel** to view the current patient again.

The Viewed column of the Patient list identifies patients with received Notices that have been viewed by the technologist.

4.7.3 Closing a Study from an External Application

As a Radiologist user you can automatically mark a study as 'Read' for the currently open patient on SecurView from an external application using Application Synchronization. The external application must support sending an Update Patient State message. On receiving an Update Patient State message from an external application, SecurView will mark the identified study (or all unread studies per user preference) as 'Read' and send all Notices, Annotations, and Tagged Tomo Slices (including tagged tomosynthesis slabs) to configured destinations according to the selected user preferences (refer to *Workflow Preferences* on page 120).

To change the outputs sent on close of study temporarily, open the *Close Study* dialog box on SecurView and change the settings before triggering the Update Patient State message from the external application.

4.8   Printing Options

The DICOM print function is available to all users with viewing rights. You can print images, along with other data such as patient information, Annotations, etc., on a DICOM film printer. To learn about printing Tomosynthesis reconstructed slices and slabs, refer to *Printing Tomosynthesis Reconstructed Slices and Slabs* on page 116.

There are two printing modes for the MG Viewer:

- **Screen Capture** mode prints the images as they appear on the left and/or right display(s). The displayed images should be in the format desired for printing, usually single tiling with one image per display. SecurView prints all supplemental information (overlays, markings, magnified areas, etc.) as it appears on the display, except for Text Annotations, which print in a box opposite the chest wall.

Note

Color images that are printed using Screen Capture mode are printed as grayscale.

- **Diagnostic** mode prints all MG images of a selected study. Use this mode for printing images for ACR review. You can choose from two orientations, either dorsal (right breast chest wall on the right), or ventral (right breast chest wall on the left). Diagnostic printing is active only for patients with MG images (MG-MG, DX-MG, CR-MG, or SC-MG).

Caution:
The text message "Printed in reduced resolution" of printed images indicates that the printouts are not for diagnostic use. This message may overwrite or overlap other text information.

Note

If a smaller film size is used for diagnostic printing than required for True Size printing, the disclaimer "Image not printed in True Size" is printed on the film.

If the image to be printed is magnified (for example, includes the View modifiers magnification (M), spot-compression (S) or the ERMF value is too large), it is resized to fit and includes a disclaimer "Image adjusted to film size."

Note

Diagnostic printing is not supported for specimen images.

To print the currently viewed patient:

1. On the toolbar, select **DICOM Print** to open the MG Viewer *Print* dialog box.

DICOM Print
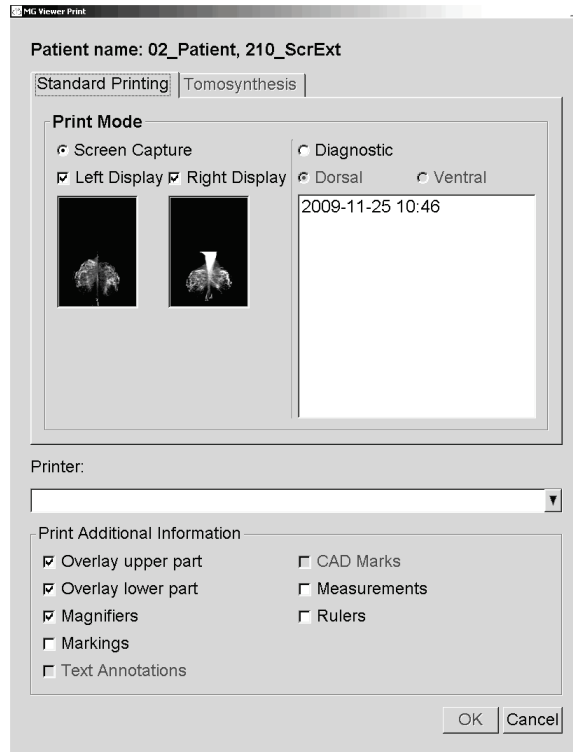
Figure 71: MG Viewer Print Dialog Box

2. Under Print Mode, select either **Screen Capture** or **Diagnostic**.
   - For Screen Capture mode, select **Left Display**, **Right Display**, or both.
   - For Diagnostic mode, select either **Dorsal** or **Ventral**.

3. From the Printer drop-down list, select the printer.
   - For Screen Capture mode, you must select a printer name that includes film size.
   - For Diagnostic mode, SecurView automatically selects the film size and DICOM presentation size mode based on the image size.

4. In the Print Additional Information section, select one or more options.
   - For Screen Capture mode, you can include the Printing Image Overlays, Magnifiers, markings, text descriptions, CAD marks, measurements, and rulers.
   - For Diagnostic mode, you can print only the overlays.

> **Note**
>
> To configure the overlays, refer to *Printing Image Overlay* on page 178.

5. Select **OK** to print the selected image(s) and information.

   If desired, select the **DICOM Print** button immediately to start a new print job before the previous print job completes.

4.9   Patient Synchronization with an External Application

If configured, your SecurView workstation can synchronize patients with an external application in several ways:

- Manual synchronization
- Automatic synchronization according to user preferences
- Automatic synchronization when SecurView receives a message

For information about configuring synchronization with an external application, refer to *Configure Synchronization Interface* on page 166.

4.9.1   Manual Synchronization

You can synchronize patients manually either from the Patient List or during patient review.

Synchronize

- On the Patient List, right-click a patient, then from the shortcut menu, select **Synchronize**.
- During patient review, select **Synchronize** on the toolbar or press [**R**] on the keyboard.

In response, SecurView sends an Open Patient message to the external application.

4.9.2   Automatic Synchronization

You can synchronize patients automatically according to your ReportFlows and user preferences (refer to *User Profile Preferences* on page 128).

- **Synchronization with a ReportFlow** – Use the Synchronize step in your ReportFlows. When Synchronize becomes the current step of your workflow, SecurView sends an Open Patient message to the external application.
- **Synchronization when you open a patient** – With your user preferences, you can set SecurView to send an Open Patient message to the external application each time you open a patient in the MG Viewer.

> **Note**
>
> If you open a patient by scanning an accession number bar code, by default only the study with the scanned accession number is sent in the Open Patient message.

- **Synchronization when marking a study as 'Read'** – With your user preferences, you can set SecurView to send an Update Patient State message to the external application each time you close a study where at least one study is marked as 'Read'.

Note

At this time, only the Hologic MultiView workstation supports synchronization at close of study.

4.9.3 Synchronization When You Receive a Message

If you log in as a Radiologist user, SecurView can open a patient automatically in the MG Viewer when the workstation receives an Open Patient message from the external application.

Chapter 5 Working with Tomosynthesis Images

This chapter describes how to view and work with tomosynthesis images. Breast tomosynthesis is a three-dimensional imaging technology based on multiple projection images of a stationary compressed breast taken from different angles. The projection images are reconstructed into a series of thin (slices) or thicker (slabs) high-resolution images that can be displayed individually or in a dynamic 'Cine' mode.

> **Note**
>
> Display and printing of tomosynthesis images requires a special license.

5.1 Overview of Tomosynthesis Imaging

A typical tomosynthesis combination procedure consists of the following types of images with image sets for each view:

- One or more mammography images (conventional mammography or synthesized 2D image).
- A number of tomosynthesis projection images.
- A number of tomosynthesis reconstructed slices.
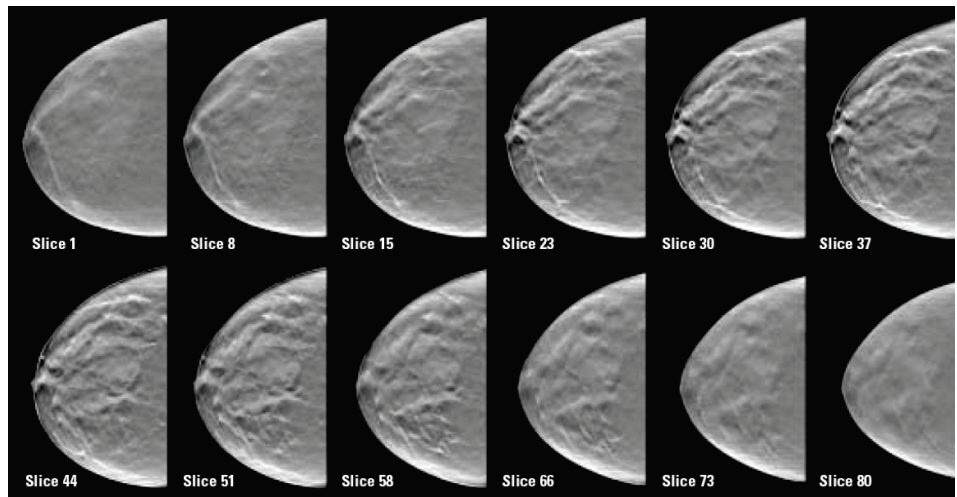
Figure 72: Tomosynthesis: Reconstructed Slices (schematic representation)

- A number of tomosynthesis reconstructed slabs.

Tomosynthesis images appear in single, double, or quadruple tilings. Projection image sets, reconstructed slice sets, reconstructed slab sets, and conventional mammography or synthesized 2D images that belong to the same laterality and view of a combination procedure appear as a stack within one tile. If CE2D (contrast-enhanced 2D mammography) is combined with tomosynthesis in a combination procedure, CE2D low-energy and subtraction images that belong to the same laterality and view will appear in the stack.

Important

Be sure to review the study thoroughly. Once you view at least one reconstruction (reconstructed slice or slab) or image of a combination procedure, SecurView does not inform you that there are unviewed images (i.e., the 'Missed View Safety Warning' will not be displayed)

Note

SecurView accepts tomosynthesis reconstructed slices in the Hologic Secondary Capture Image (private pixel data), Breast Tomosynthesis Image, and CT image formats. If tomosynthesis reconstructed slices are already available in one format and the same reconstructed slices arrive in another format, the system is designed to discard all but the first received reconstructed slices.

Note

Tomosynthesis is not applied to magnification views.

Note

SecurView accepts synthesized 2D images in the Digital Mammography X-Ray Image – For Presentation and Breast Tomosynthesis Image formats. If a synthesized 2D image is already available in one format and the same synthesized 2D image arrives in the other format both images will be made available for display.

Note

The term 'Slice' in the SecurView application user interface applies to both reconstructed slices and slabs.

5.2   Navigating Tomosynthesis Images

5.2.1   Tomosynthesis Navigation Buttons

You can select three different image types when a tomosynthesis image dataset appears within a tile or viewport:

- Projection images

- Mammography image (conventional mammography, synthesized 2D, CE2D low-energy or CE2D subtraction image)

- Reconstructed slices and slabs

Figure 73: Tomosynthesis Navigation Buttons

The navigation buttons shown in the previous figure appear with tomosynthesis images. If desired, select and drag the group of buttons to another display position. A Service Engineer can increase the active area around the navigation buttons and vertical slider if necessary.

Slabs derived manually from tomosynthesis reconstructed slices appear in Maximum Intensity Projection (MIP).

Icon	Purpose
	Projection – Displays projection images.
	MG Images – Displays conventional mammography, synthesized 2D, CE2D low-energy or CE2D subtraction images. If more than one image is available, the number of images is displayed below the icon, e.g., '1/2'. Selecting this button repeatedly switches between the available mammography images.
	MG / Tomosynthesis Toggle – Switches between mammography images and reconstructions.
	Reconstruction – Displays reconstructed slices and slabs. If both reconstructed slices and slabs are available, the number of reconstructions is displayed below the icon, e.g., '1/2'. Selecting this button repeatedly toggles between slices and slabs while keeping the same location within the volume in view.
	Cine – Starts and stops sequential display of projections or reconstructions.

You can configure the display order of conventional mammography (including CE2D low-energy), synthesized 2D and CE2D subtraction images via the Hanging Snapshot configuration (refer to *Creating and Modifying Hanging Snapshots* on page 133).

You can configure the display order of multiple reconstructions with a user preference. The initial slice or slab to be used for displaying tomosynthesis reconstructions or the initial slice used for displaying projection images can also be configured with a user preference. Refer to *Image Presentation Preferences* on page 122.

5.2.2 Viewing Tomosynthesis Slices or Slabs

Use the slider tool to view reconstructed slices or slabs or change slab thickness. Use the mouse or keypad wheel to scroll through the slices or slabs.

To view Tomosynthesis slices or slabs:

Reconstruction

Select **Reconstruction** (one of the tomosynthesis navigation buttons) to display reconstructed slices or slabs. A vertical slider tool appears.

Figure Legend

1. Orientation Indicator (H, F, L, M)
2. Slider Handle
3. Slab Thickness Bar
4. Slab Thickness Indicator (only if viewing slabs)
5. Current Slice, SmartSlice, or Slab; Total Number of Slices, SmartSlices, or Slabs; Depth of the current Slice, SmartSlice, or Slab in the breast, relative to the first one in the set
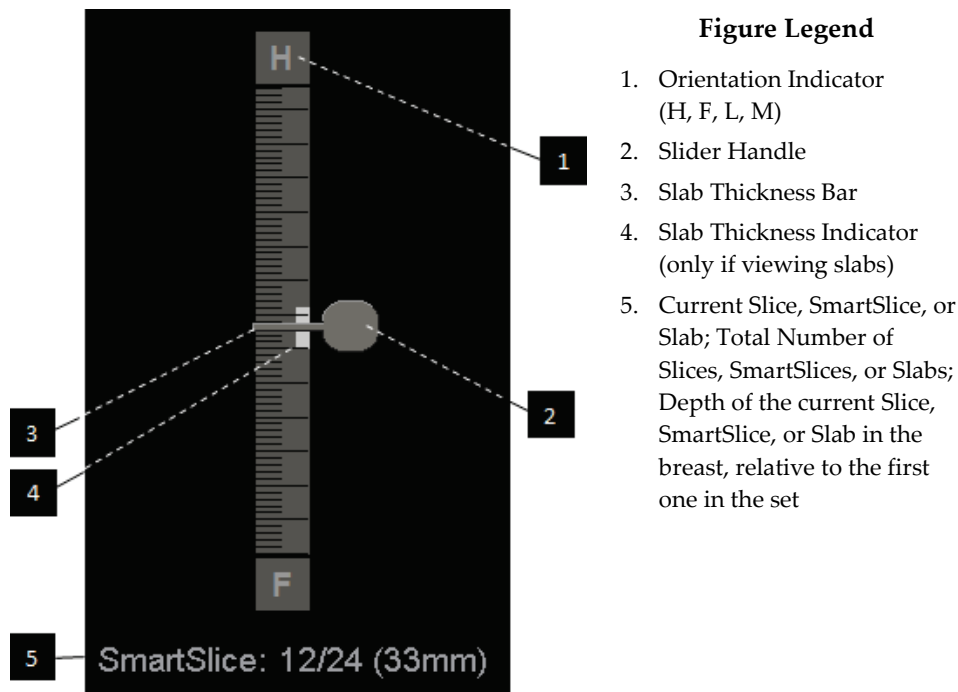
Figure 74: Slider Tool

The orientation indicators at the top and bottom of the ruler depend on the current view direction (ML, MLO, LM, LMO, CC, SIO, ISO, XCCL, XCCM, FB) of the image. 'H' indicates head, 'F' foot, 'M' medial, and 'L' lateral.

If desired, move the slider tool to another display position by pointing to the ruler and dragging the tool.
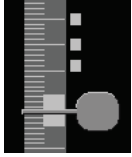
Tagged Slices

Use the Tag Tomo Images tool to identify a reconstructed slice or slab for printing, exporting to external media, or storing to configured destinations on close of study. A small mark next to the vertical slider tool indicates a tagged reconstruction. This mark is stored in the database and is visible as long as the patient remains on the SecurView workstation. Refer to *Tagging Tomosynthesis Reconstructed Slices or Slabs* on page 115.

SecurView indicates received MG Secondary Capture tomosynthesis Annotations with the camera icon shown at left. If an MG Secondary Capture represents a tagged tomosynthesis slice or slab, location information for the slice or slab also appears.

To navigate the slices or slabs:

- Select any location on the tool (or point to the slider handle and move the slider up and down). SecurView displays the corresponding reconstructed slice or slab.

- Change the location by rotating the scroll wheel on the mouse or keypad.

- Use the slab thickness bar to adjust the number of displayed slices or slabs (refer to *Changing Slab Thickness* on page 104).

With a user preference, you can set the mouse/keypad wheel mode to either Sequential (one slice or slab at a time) or Advanced (several slices or slabs at a time). Refer to *Image Presentation Preferences* on page 122.

5.2.3   Changing Slab Thickness

Use the slab thickness bar to manually change the number of displayed slices.

1. Point the mouse at the slab thickness bar to display the V-Split Cursor. The current slab thickness (number of slices) is displayed to the right of the slider tool.

Figure Legend

1. Current Slab Thickness
2. V-Split Cursor on Slab Thickness Bar
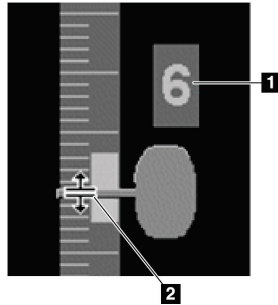
Figure 75: V-Split Cursor

2. Select and drag the pointer up or down to increase or decrease slab thickness. Vertical bars on the slab thickness indicator show the original slab thickness and the manually adjusted slab thickness.

Figure Legend

3. Manually Adjusted Slab Thickness
4. Original Slab Thickness
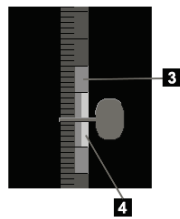
Figure 76: Slab Thickness Indicator

3. To reset slab thickness to the default, double-click when the V-Split Cursor is active.

Set the default slab thickness with a user preference (refer to *Image Presentation Preferences* on page 122).

5.2.4   Annotating a Tomosynthesis Image

Tomosynthesis images are annotated in the same manner as conventional MG images (refer to *Creating and Viewing Annotations* on page 82). However, if you increase the slab thickness of the tomosynthesis image you are annotating, the freehand, ellipse, or arrow mark appears in the middle slice of the slab and displays as a dotted line, as shown in the following images.
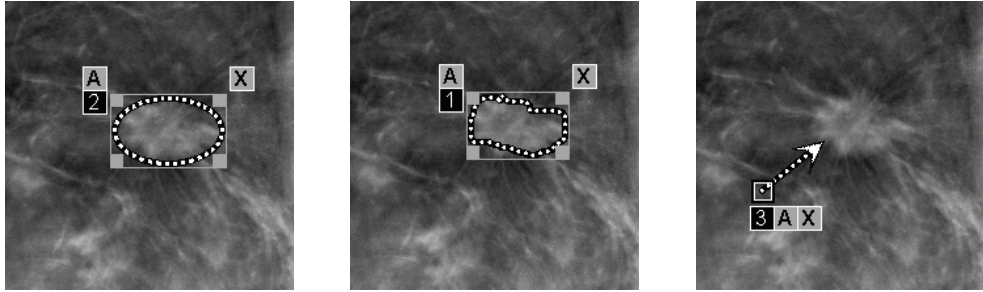
Note

A Hologic GSPS-Report or GSPS-Notice references the specific DICOM image objects on which the user created annotations. If the same reconstructed slices or synthesized 2D images exist in more than one DICOM format (for example, Hologic Secondary Capture Image, Breast Tomosynthesis Image and CT Image for reconstructed slices; Digital Mammography X-Ray Image – For Presentation and Breast Tomosynthesis Image for synthesized 2D), the annotations will be displayed only with the images matching the DICOM format referenced in the GSPS.

5.2.5 Using Cine Mode

You can 'Cine' through a set of tomosynthesis projection images or reconstructions in a single tile. Cine mode applies simultaneously to all linked tiles.

When cine mode is started manually in multiple unlinked tiles, the starting position is synchronized such that approximately the same position in the breast is maintained simultaneously in each tile. The cine position for each tile with cine already in progress is set to match the starting position of the tile where cine mode is started last. You can disable synchronization of cine for unlinked tiles with a user preference (refer to *Tools and Overlays Preferences* on page 124).

To configure automatic activation of cine mode for tomosynthesis reconstructions when entering a ReportFlow step that contains a single tiling hanging snapshot, refer to *Image Presentation Preferences* on page 122.

Note

Cine mode only starts automatically for hanging snapshots that are part of a ReportFlow.

To start Cine mode:

Cine

1. Select the **Cine** button or press **Cine** on the workflow keypad. SecurView starts with the current slice or slab and moves through increasing slice or slab numbers. Cine mode reverses when it reaches the last (or first) slice or slab.

Note

When ImageChecker 3D calcification marks are displayed, Cine mode sequences only through the slices of the currently selected calcification cluster.

2. To stop Cine mode, select the **Cine** button again or rotate the mouse or keypad scroll wheel.

To change Cine speed:

1. Select the boundary of the **Cine** button to display the speed control slider handle (if it is not visible).
2. Move the **slider handle** to adjust the speed from slow/left (5 frames per second) to fast/right (up to 30 frames per second).

Note

The default speed is set in the user preferences. The default maximum speed is 30 frames per second. A Service Engineer can increase the maximum speed. Systems with slower processors may not be able to cine at 30 frames per second.

3. If desired, select the **Cine** button boundary again to hide the speed control.
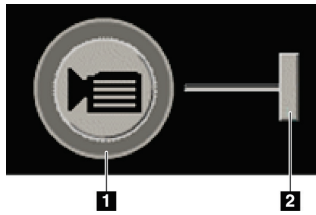
Figure Legend

1. Boundary
2. Speed Control Slider Handle

Figure 77: Cine Button and Speed Control Slider

5.2.6   Using Local Cine Mode

Use Local Cine mode to view a limited range of slices or slabs in a single tile. To set the slice or slab range, refer to *Image Presentation Preferences* on page 122.

To use Local Cine mode:

1. There are three ways to start Local Cine mode:
   - Press and hold **Cine** on the workflow keypad, or
   - Press and hold **[F6]** on the keyboard, or
   - Select and hold the **Cine** button with the mouse.

   SecurView starts with the current slice (or slab) and travels back and forth through the specified number of slices. For example, if the current slice is 25 and the range is 20, SecurView scrolls through slices 15–35.

   If normal Cine mode is running when you start Local Cine mode, SecurView changes to the Local Cine range.

2. While Local Cine mode is running, change the Local Cine center slice (or slab) by rotating the mouse wheel or keypad scroll wheel forward or back – the center slice shifts up or down, but the slice range does not change.

3. There are three ways to stop Local Cine mode:
   - Press **Cine** on the workflow keypad, or
   - Press **[F6]** on the keyboard, or
   - Select the **Cine** button.

5.2.7   Smart Mapping

Smart Mapping can be used to easily visualize the correlation from a region of interest in a Hologic synthesized 2D (Intelligent 2D™ or C-View™) image to the most representative reconstructed slice or SmartSlice.

To use Smart Mapping:

1. To activate Smart Mapping for all displayed synthesized 2D images, select **Smart Mapping** on the left toolbar, press the [**V**] key on the keyboard, or advance to a step within the ReportFlow that includes the Activate Smart Mapping tool property (refer to *Creating New ReportFlows* on page 143). The pointer changes to a crosshair within each tile that is displaying a synthesized 2D image to indicate Smart Mapping is active.

2. Select a region of interest within a synthesized 2D image. The associated reconstructed slice or SmartSlice (whichever is available, or whichever is configured to display on top when both are available) is displayed in single tiling on the adjacent display. A color or grayscale highlighted frame indicates which viewports are paired for Smart Mapping (a Service Engineer can adjust or disable the frame highlight).

    a. When the pointer is in the tile with the synthesized 2D image, scrolling (for example, using the scroll wheel) is applied to the tile with the corresponding reconstructed slices or SmartSlices.

    b. If the Magnifier is active when Smart Mapping is activated, selecting inside the Magnifier on the synthesized 2D image displays the associated reconstructed slice or SmartSlice with a Magnifier in the same location.

    c. Smart Mapping remains active while using different image evaluation tools.

    d. Double-click in the Smart Mapping slices viewport to close it, while keeping Smart Mapping active.

    e. Smart Mapping remains active during Intelligent Roaming, selecting a predefined hanging, or changing the displayed stacked image in a synthesized 2D viewport, but the Smart Mapping slices viewport is closed.

3. Select **Smart Mapping** on the left toolbar, press the [**V**] key, or change the ReportFlow step to deactivate Smart Mapping for all displayed synthesized 2D images.

    a. Smart Mapping is deactivated automatically when a different image is dropped into a tile that is currently displaying a synthesized 2D image using the MammoNavigator feature.

Note:

For temporary quick access to Smart Mapping hold the [**Ctrl**] key while selecting in a synthesized 2D image. On releasing the [**Ctrl**] key, Smart Mapping is no longer active.

Note:
It is not possible to drop an image from the MammoNavigator feature into a tile that is currently displaying Smart Mapping slices.

Note:
You cannot apply Smart Mapping to rotated images, and you cannot rotate images that are in the Smart Mapping slices viewport.

Note:
If the Smart Mapping data is corrupt, the displayed reconstructed slice or SmartSlice may not be the most representative slice.

Note:
Selecting the background of a synthesized 2D image when Smart Mapping is active does not change the display, because no corresponding reconstructed slice or SmartSlice is assigned.

5.2.8   Scrolling Through Linked Tiles

When tiles are linked, scrolling through reconstructions or projection images in one tile automatically scrolls the reconstructions or projection images in all other linked tiles. Linked scrolling operates on reconstructed slices, slabs, or projection images of the same or different spacing.

Note
Linked scrolling is available only when images of the same type (tomosynthesis reconstructed slices, slabs, or projections) are displayed in different tiles.

To use linked scrolling:

1. To initiate linked scrolling, display reconstructions (or projection images) on two or more tiles.

Link Tile

2. Right-click the image and select **Link Tile** from the Pie menu. Repeat for each tile to be linked. An indicator icon appears on each linked tile.

Note
You can also switch linking on and off via the Hanging Snapshot configuration.

3. To perform linked scrolling:
    *   Rotate the mouse wheel, or
    *   Move the slider handle for a linked tile, or
    *   Start Cine mode.

    When using the mouse wheel or slider, you can switch off linked scrolling temporarily by holding down **Shift**.

5.2.9 Exporting a Movie

You can export a scrolling movie of tomosynthesis reconstructions or tomosynthesis projections.

To export a movie:

1. Right-click an image to open the Pie menu, then point to **Image Tools** to open the second Pie menu.

Export Movie

2. Select **Export Movie** to open the *Export Tomosynthesis Movie* dialog box. The button is available only when the viewer shows a tomosynthesis projection image or reconstructed slice or slab.
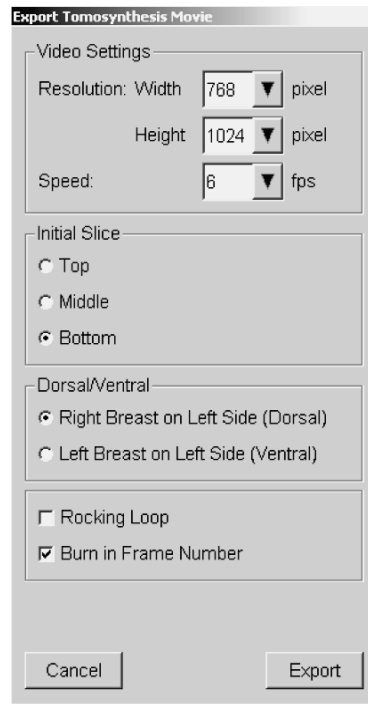
Figure 78: Export Tomosynthesis Movie Dialog Box

- Under Video Settings select the Resolution (Width and Height) and the Speed (frames per second). The maximum resolution is 2048 × 2460 pixels; the maximum speed is 120 fps.

- Select the Initial Slice (or slab) for the movie. By selecting the middle slice, you also select Rocking Loop mode (defined in the following text).

- Under Dorsal/Ventral, select the movie orientation.

- Select Rocking Loop to start the movie at the middle slice (or slab), scroll to the topmost slice, then to the lowermost slice, and up again to the middle slice.

- Select Burn in Frame Number to indicate every slice (or slab) with the slice number and the total number of slices.

3. Select **Export** to open a *Save As* dialog box. Select the path, enter the file name for the movie, then confirm. A progress bar appears until the movie export is finished.

5.3   Displaying 3D CAD Results

For CAD applications that detect calcification clusters or mammography breast densities on tomosynthesis reconstructed slices, such as Hologic Genius AI Detection and iCAD PowerLook ProFound AI, the CAD results can be displayed.(Refer to *Displaying CAD Information* on page 76).

Note

Hologic Genius AI Detection is not available in all markets.

To display 3D CAD results:

1.   While viewing tomosynthesis slices, select the **Computer Aided Detection** button. If 3D CAD results are available, SecurView displays a set of CAD indicators next to the tomosynthesis slider tool.
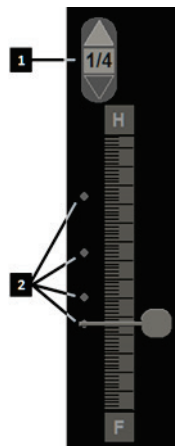
Figure Legend

1.   Navigation controls for 3D CAD marks

2.   Visualization of slices with 3D CAD marks

Figure 79: Tomosynthesis Slider with 3D CAD Indicators

2.   To display the first slice containing CAD marks, select the **Up** arrow on the navigation control for 3D CAD marks. SecurView displays the first slice that best represents one or more CAD marks. The CAD marks are displayed as faded on the two consecutive next and previous slices. By default, the CAD Score is displayed with each CAD mark and the Case Score is displayed in the CAD information overlay. Display of these values can be disabled (refer to *Configuring System-Level Settings* on page 154).

3.   To display another slice containing CAD marks, select the **Up** and **Down** arrows on the navigation control for 3D CAD marks. The slider goes to the corresponding slice.

In addition, 3D CAD results can be projected onto corresponding conventional 2D, synthesized 2D, or tomosynthesis slabs for the same view, provided the referenced tomosynthesis reconstructed slices are present. Select the **Computer Aided Detection** button when viewing the corresponding images to display the projected 3D CAD results. By default, the projection of the 3D CAD results onto the corresponding images is enabled. This feature can be disabled per image type (conventional 2D, synthesized 2D, tomosynthesis slabs) for a specific tomosynthesis manufacturer using Manufacturer Settings (refer to *Configuring System-Level Settings* on page 154).

When viewing 3D CAD marks projected onto a conventional 2D or synthesized 2D image, double-click the CAD mark to display the corresponding tomosynthesis reconstructed slice in the adjacent viewport. The corresponding tomosynthesis reconstructed slice can be closed by double-clicking in the slice viewport, similar to Smart Mapping temporary single tiling mode (refer to *Smart Mapping* on page 108).

Note:
You cannot apply Smart Mapping to rotated images, and you cannot rotate images that are in the Smart Mapping slices viewport.

5.4   Displaying ImageChecker 3D Calc CAD Results

Note
ImageChecker 3D Calc CAD is not available in the United States.

ImageChecker 3D Calc CAD is a software algorithm that identifies regions of interest in Hologic tomosynthesis slices. To produce and view ImageChecker 3D Calc CAD results, you will need both the:

- Cenova digital mammography server with Hologic's ImageChecker 3D Calc CAD license, and the
- SecurView DX workstation (version 7.2 or later) with Hologic's Tomosynthesis CAD Display license.

If there are CAD results for a patient, a '+' symbol appears in the CAD column of the Patient List. In addition, when you review a patient with CAD results, the toolbar CAD button is enabled (not gray).

An Administrator can configure CAD results to appear automatically as a step in a ReportFlow.

To display ImageChecker 3D Calc CAD results:

Computer Aided Detection

1. While viewing tomosynthesis slices, select the **Computer Aided Detection** button.

   If tomosynthesis CAD results are available, SecurView displays a set of CAD indicator bars next to the tomosynthesis slider tool. Each bar indicates slices that include at least one prominent calcification. The CAD overlay also appears.
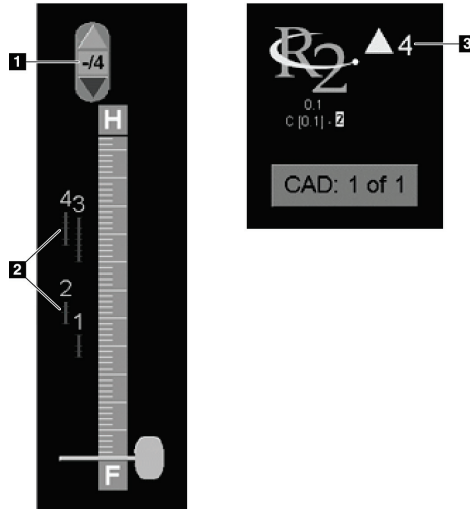
Figure Legend

1. CAD Navigation Tool (select to display the first CAD mark)
2. CAD Mark Indicator Bars
3. Number of CAD Marks

Figure 80: Slider Tool with ImageChecker 3D Calc CAD Indicators; R2 Logo

2. To display the first mark, select the **Up** arrow on the CAD navigation tool or press [**W**] on the keyboard.

    SecurView displays the first CAD mark and the corresponding 'slice of interest', which is the slice that best represents the region of interest as a whole, generally the slice that contains the most calcifications. SecurView also highlights the selected cluster and the corresponding CAD indicator bar. Other visible clusters appear gray.

    The first appearance of the CAD marks depends on the view tiling and the default settings for each user (refer to *Tools and Overlays Preferences* on page 124).

    •   In quadruple tiling, the results appear as RightOn CAD marks.

    •   In double or single tiling, each CAD mark appears as a dotted boundary line around the region of interest and/or as outlined individual calcifications.

Figure 81: RightOn CAD Mark
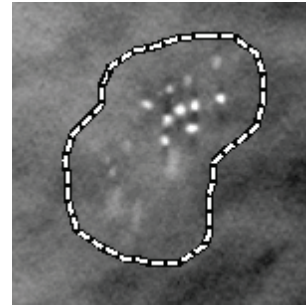
Figure 82: CAD Mark Boundary
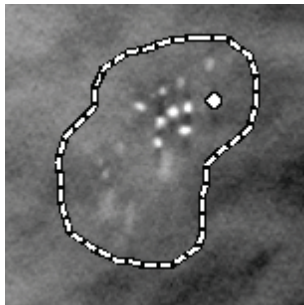
Figure 83: PeerView (1 slice)
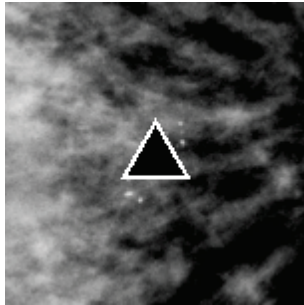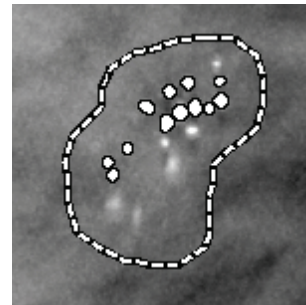

Figure 84: PeerView (4 slices)

ImageChecker 3D Calc CAD Marks

3. In single or double tiling, adjust the CAD mark display as follows:

    - Press [B] on the keyboard to toggle the boundary lines on or off.

    - Press [C] to toggle PeerView marks on and off.

    - Increase slab thickness to visualize the full extent of calcifications within a cluster (refer to *Changing Slab Thickness* on page 104).

4. To select another CAD mark:

    - Select the **Up** and **Down** arrows on the CAD navigation tool.

    - Press [W] on the keyboard to move to the next mark.

    - Press [S] to move to the previous mark.

    - Select any CAD indicator bar.

    The slider jumps to the slice of interest of the selected mark.

Cine

5. To use Cine mode, select a CAD mark and select the **Cine** button (or select **Cine** on the Pie menu).

    SecurView starts with the current slice and travels up through the slices that correspond to the CAD mark. Cine mode reverses when it reaches the first/last slice of the cluster.

6. To stop Cine mode, select **Cine** again.

5.5   Tagging Tomosynthesis Reconstructed Slices or Slabs

Use these instructions to identify slices or slabs to be printed, exported to external media, or stored to configured destinations on close of study.

To tag tomosynthesis reconstructed slices or slabs:

Tag Tomo Image

Display the slice or slab, then:

- Select **Tag Tomo Images** on the Pie menu, or
- Press **Spacebar** on the keyboard.

SecurView tags the corresponding slice (or slab). On the right side of the slider tool, small marks indicate the tagged slices:
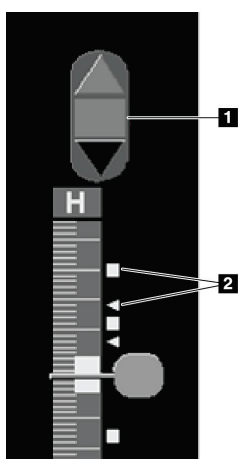
Figure Legend

1. Tagged Images Navigation Tool
2. Tag Indicators

Figure 85: Slider Tool with Tag Indicators

The Tagged Images Navigation tool appears whenever you tag at least one reconstructed slice (or slab) for printing or exporting. The icon shown at left also appears.

- To display the next or previous tagged slice, select **Arrow Up** or **Arrow Down** on the navigation tool.
- To remove a tag indicator, display the tagged slice and press **Spacebar** (or select **Tag Tomo Images** again).

Working with triangle tag indicators:

A triangle tag indicates another reviewer's tag mark from a received GSPS object. Triangle marks cannot be edited. However, if you tag a triangle-marked slice (or slab), your tag overwrites the triangle and appears as a square tag indicator.

5.6   Printing Tomosynthesis Reconstructed Slices and Slabs

To print tomosynthesis reconstructed slices or slabs, you must first identify the slices or slabs to be printed; either by tagging them (refer to *Tagging Tomosynthesis Reconstructed Slices or Slabs* on page 115 or identifying them with the MG Viewer *Print* dialog box.

1. On the toolbar, select **DICOM Print** to open the MG Viewer *Print* dialog box.

DICOM Print
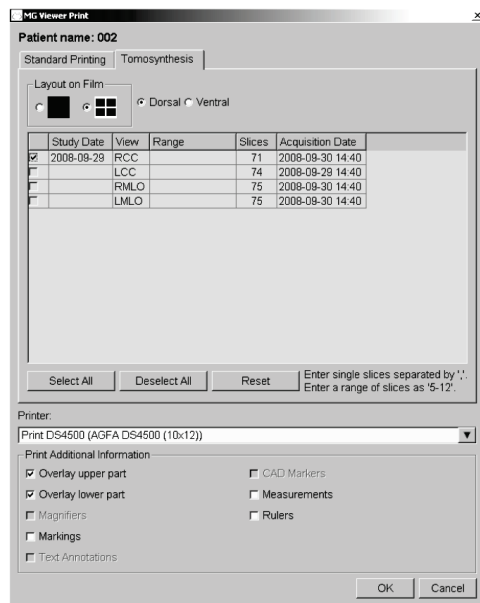
Figure 86: MG Viewer Print Dialog Box

2. Select the Layout on Film and either Dorsal or Ventral.

    •   When you select quadruple tiling, the images print to fit in the corresponding quadrant according to the selected film size.

    •   When you select single tiling, the image prints in true size if possible. If the film size does not allow true size printing, then it prints to fit the film area.

    •   If the number of reconstructed slices or slabs to be printed exceeds one film, SecurView distributes the images on several films.

    •   A new film starts for a new laterality and view.

3. In the first column, check the box to select **reconstructed views of a study**. The **Range** column lists the numbers of the slices or slabs tagged for printing.

4. Select the box and enter an individual slice (or slab) number, a range of slices with a hyphen (e.g., '10-15'), or individual slices in ascending order separated by a comma (e.g., '10,12,20,25').

5. Select **Select All** to select all reconstructed views. Select **Deselect All** to clear all selections. Select **Reset** to reset all changes made on the **Tomosynthesis** tab.

6. On the lower area, select the Additional Information to be printed.

7. Select **OK** to print the images. (If desired, select **DICOM Print** immediately to start a new print job before the previous print job completes.)

Chapter 6 Setting User Preferences

This chapter explains how to define preferences for individual users. SecurView allows each Radiologist and Technologist user to customize the interface in order to optimize workflow. Once an Administrator has added you as a new SecurView user, you can configure your own system profile.

Note that the User Preferences are default settings. When you view patients, you can change view options at any time on an as-needed basis.

To display the User Preferences tabs:

On the SecurView *Startup* screen, select **Administration**. Then select the **User Preferences** tab to display the **Workflow** tab (partial view shown).
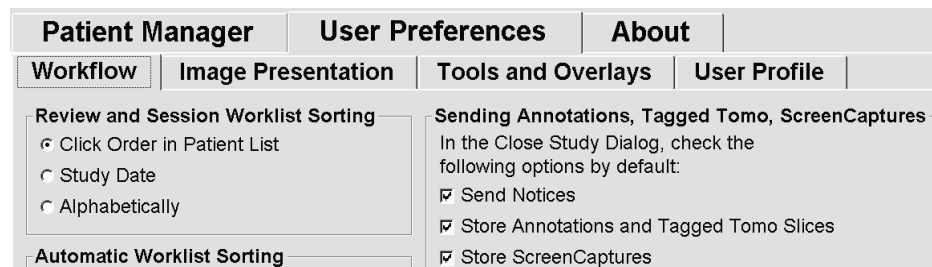
Figure 87: User Preferences Workflow Tab (partial view)

> **Note**
> The **User Preferences** tabs shown are those available to Radiologist users.

The following pages describe the four **User Preferences** tabs. For each tab, select the desired settings. When done, save your settings by selecting the **Apply** button (at the lower right corner of the window).

> **Note**
> The term 'Slice' in the SecurView application user interface applies to both reconstructed slices and slabs.

6.1   Workflow Preferences

The **Workflow** tab opens when you select **User Preferences** from the Administration module:

Figure 88: Workflow Tab

After you make your selections, save your settings by selecting the **Apply** button (at the lower right corner of the window).

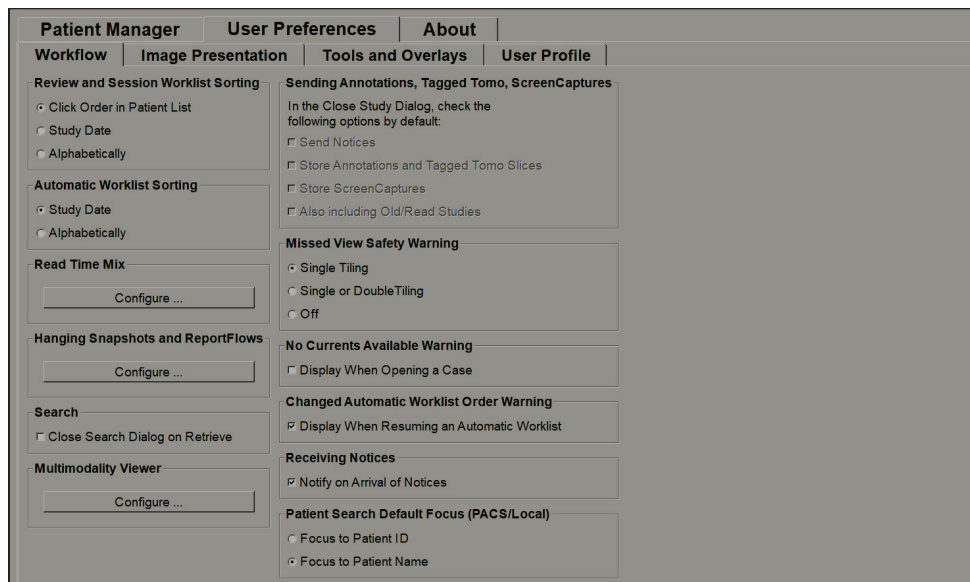- **Review and Session Worklist Sorting** – Sets the order in which SecurView displays patients selected manually (refer to *Using the Patient List* on page 26) or patients in a Session worklist (refer to *Creating Sessions* on page 36).

- **Automatic Worklist Sorting** – Sets the order in which SecurView displays new patients queued automatically as they arrive (refer to *Automatically Generated Worklists* on page 40).

- **Read Time Mix** – Select **Configure...** to set up a user defined Read Time mix for automatic worklists that include Screening patients with CAD reports that include Read Time Indicator (for example, Hologic Genius AI Detection) (refer to *Automatically Generated Worklists* on page 40).

  - Maximum Number of patients in Worklist -- Sets the maximum number of patients to include in the automatic worklist with user defined Read Time mix filter applied.

  - Use the two sliders to adjust the mix of cases with each Read Time Indicator value (Low, Medium, and High).
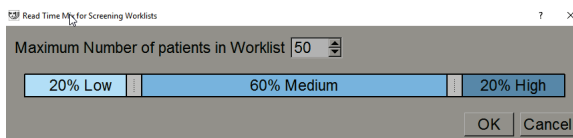

Figure 89: Read Time Mix Configuration

- **Hanging Snapshots and ReportFlows** – Select **Configure…** to set up image hangings and ReportFlows, including your personal preferences for default ReportFlows. Refer to *Hanging Snapshots and ReportFlows* on page 131.

  - **Search** – Select to close the search dialog box automatically after you select **Retrieve** (refer to *Searching for Patients* on page 39).

  - **Multimodality Viewer** – Select **Configure…** to open the Multimodality Configuration Editor (refer to the *SecurView Advanced Multimodality Option User Guide*).

  - **Sending Notices, Annotations, Tagged Tomo, ScreenCaptures, Also including Old/Read Studies** – For SecurView DX, these options apply if the Service Engineer has configured respective destinations. If you check any of these options then, when you open the *Close Study* dialog box, SecurView checks them automatically. Note that you can override these settings on a per-patient basis in the *Close Study* dialog box (refer to *Closing a Study* on page 89).

  - **Missed View Safety Warning** – For SecurView DX, you can configure the system to display a warning message if you have not viewed all images in single (or double) tiling mode when you close a study (refer to *Closing a Study* on page 89).

  - **No Currents Available Warning** – Select to have SecurView inform you when a patient without current images is opened (refer to *MG Viewer* on page 42).

  - **Changed Automatic Worklist Order Warning** – Select to have SecurView inform you when returning to an automatic worklist after Suspend And Review, that the patient order may have changed (refer to *Patient List Buttons* on page 27).

  - **Receiving Notices** – Select to have SecurView inform you when it receives a Notice from another Hologic workstation (refer to *Sending and Viewing Notices* on page 88).

  - **Patient Search Default Focus (PACS/Local)** – Sets either the Patient ID or Patient Name as the default input field when performing a patient search (refer to *Searching for Patients* on page 39).

6.2 Image Presentation Preferences

The following window opens when you select the **Image Presentation** tab:
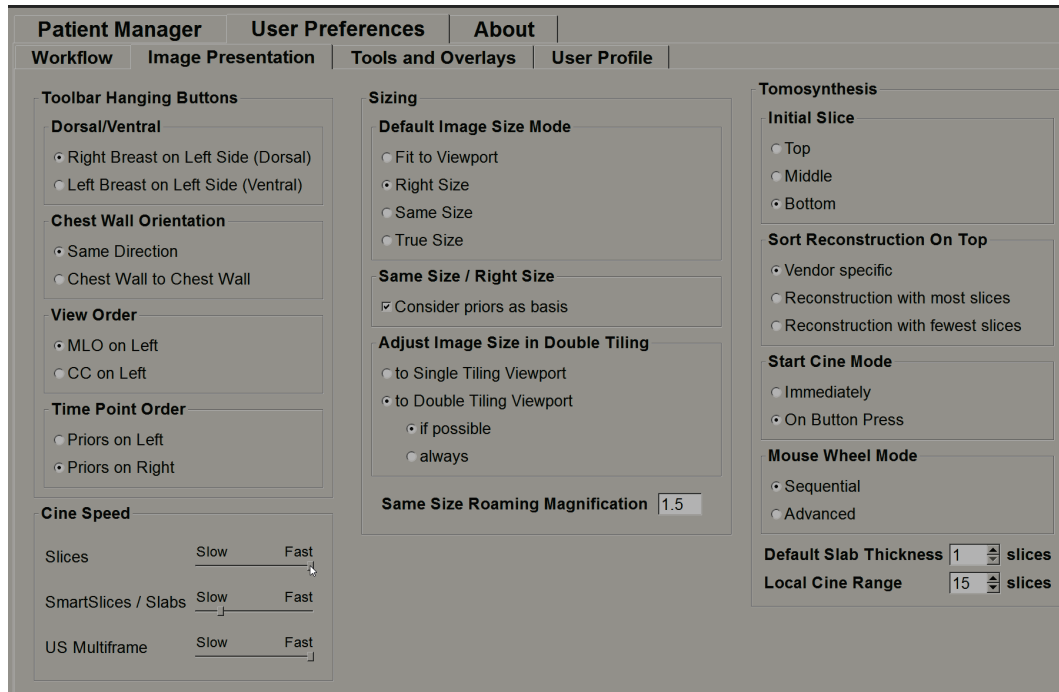

Figure 90: Image Presentation Tab

After you make your selections, save the settings by selecting the **Apply** button (at the lower right corner of the screen).

- **Toolbar Hanging Buttons:** Use to set how you want images to be positioned, oriented, and ordered when you use the image hanging buttons. Refer to *Image Hangings* on page 50.

- **Cine Speed:** The range is 5–30 frames per second. The default maximum speed is 30 frames per second. A Service Engineer can increase the maximum speed.

  - **Slices** sets the speed at which SecurView displays a sequence of tomosynthesis reconstructed slices in Cine mode.

  - **SmartSlices / Slabs** sets the speed at which SecurView displays a sequence of tomosynthesis reconstructed slabs or SmartSlices in Cine mode.

  - **US Multiframe** sets the speed at which SecurView displays a sequence of multi-frame ultrasound images in Cine mode.

- **Sizing:**
  - **Default Image Size Mode** sets the default image scaling mode.
  - **Same Size / Right Size:** 'Consider priors as basis' sets the Same Size and Right Size image scaling modes to include current and prior studies when selecting the largest image to use as scaling master. The setting is enabled by default. When the setting is disabled, the largest image to use as scaling master is selected from the current study.
  - **Adjust Image Size in Double Tiling** configures the viewport size used to scale images presented in Double Tiling. Applies to the Scaling Modes Fit to Viewport, Right Size and Same Size. Refer to *Scaling Modes* on page 54 for more information. In order to activate the behavior shown in SecurView versions prior to 8.2, use the option **to Single Tiling Viewport**.
  - The **Same Size Roaming Magnification** sets the digital magnification factor for this image size mode (a decimal value from 1.0 to 2.0). Refer to *Scaling Modes* on page 54.
- **Tomosynthesis:** Use to configure how SecurView displays images from tomosynthesis combination studies. Refer to *Working with Tomosynthesis Images* on page 99.
  - **Initial Slice** sets the slice or slab that appears first when you view a tomosynthesis reconstruction or the image that appears first when you view a projection image set.
  - **Sort Reconstruction on Top** sets the display order of multiple reconstructions in the same combination procedure:
    - **Vendor specific**: If selected, the display order of reconstructions can be configured per manufacturer. To configure vendor-specific sort order, refer to *Manufacturer Settings* on page 168.
    - **Reconstruction with most slices**: If selected, reconstructions are displayed in descending order, with the reconstruction with the most images (slices) at the top and the reconstruction with the least images (slabs) at the bottom.
    - **Reconstruction with fewest slices**: If selected, the reconstructions are displayed in ascending order, with the reconstruction with the least images (slabs) at the top and the reconstruction with the most images (slices) at the bottom.
  - **Start Cine Mode** can be used to configure automatic or manual start of cine mode for tomosynthesis reconstructed slices in single tiling ReportFlow hanging snapshots.
  - **Mouse Wheel Mode** sets the behavior of the mouse wheel when you scroll through tomosynthesis slices or slabs, either Sequential (one slice or slab at a time) or Advanced (several at a time).
  - **Default Slab Thickness** sets the default number of slices to be combined into a single viewable entity during image display.
  - **Local Cine Range** sets the number of slices (or slabs) that SecurView displays in local Cine mode. The range is 3–99 slices.

6.3   Tools and Overlays Preferences

The following screen appears when you select the **Tools and Overlays** tab:
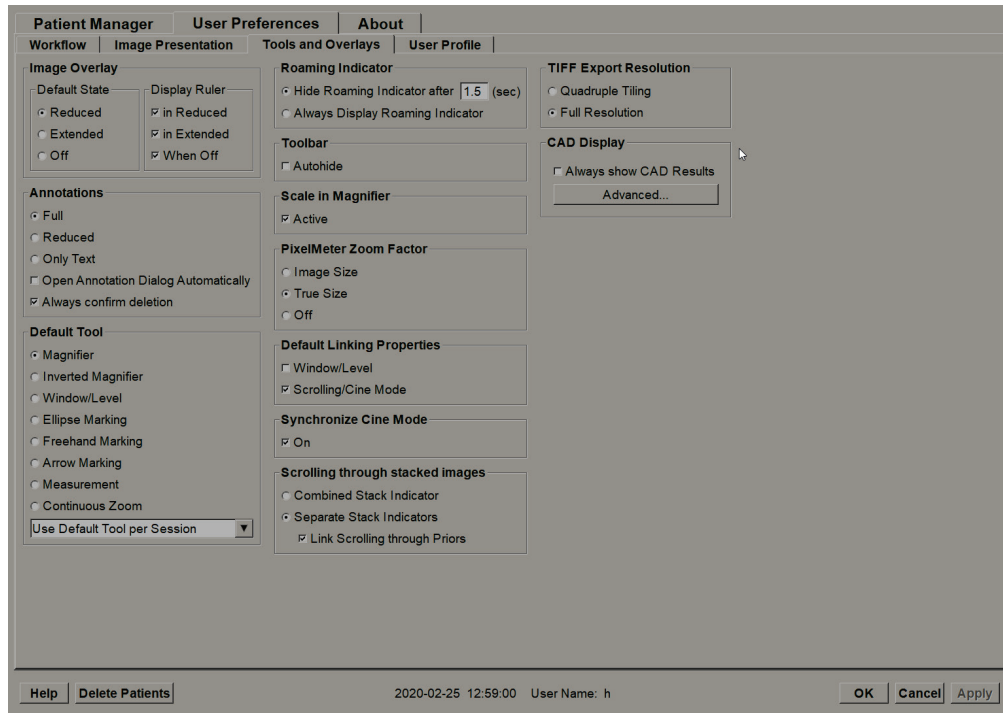

Figure 91: Tools and Overlays Tab

After you make your selections, save your settings by selecting **Apply** (at the lower right corner of the screen).

- **Image Overlay:** During review, the image overlay provides patient information for the currently viewed image. In Reduced or Extended mode, the system displays the information configured by the Administrator for that mode (refer to *Patient Information Overlays* on page 63).

- **Annotations:** Use to set how SecurView responds when you add a text description to an ellipse, freehand, or arrow marking, for example, by selecting from a Full or Reduced set of predefined classifications, selecting from predefined text you create, and/or providing dialog space where you can enter text (refer to *Creating and Viewing Annotations* on page 82).

- **Default Tool:** Determines the default image tool for the left mouse button.

  - **Use Default Tool per Session** - when you select a new left mouse button tool during a patient review session, the chosen tool remains selected when you review the next patient.

  - **Use Default Tool per Patient** - when you select a new left mouse button tool during a patient review session, the tool reverts to the user default when you review the next patient.

- **Roaming Indicator:** Determines the behavior of the roaming indicator. Refer to *Intelligent Roaming* on page 52.

- **Toolbar:** Determines whether the MG Viewer toolbar is visible. If you hide the toolbar, you must use the keypad and keyboard to enter commands. To display (or hide) the toolbar at any time, press [*].

- **Scale in Magnifier:** Determines whether metric scaling lines appear when you use the Magnifier tool (refer to *Magnifier and Inverted Magnifier* on page 66).

- **PixelMeter Zoom Factor:** Determines the zoom factor used by the Pixel Meter, either Image Size (relative to the pixel size of the original image) or True Size (relative to true physical size). You can also turn the Pixel Meter off (refer to *Pixel Meter* on page 55).

- **Default Linking Properties:** Sets the behavior of all tiles you designate as linked.

  - Selecting **Window/Level** allows you to change window/level parameters simultaneously in all linked tiles (refer to *Window/Level and Gamma Adjustments* on page 70).

  - Selecting **Scrolling/Cine Mode** allows you to cine through all linked tiles (refer to *Using Cine Mode* on page 106).

- **Synchronize Cine Mode:** Sets whether synchronization of cine mode for unlinked tiles is enabled or disabled (refer to *Using Cine Mode* on page 106)**.**

- **Scrolling through stacked images:** When a single tile contains multiple images, you can elect to display either one or two Stack indicators (refer to *Stack and Timepoint Indicators* on page 56). If you select Link Scrolling through Priors, then you can use the Stack indicator to scroll through all stacked tiles simultaneously.

- **TIFF Export Resolution:** Configures the resolution of exported TIFF images (refer to *Exporting Currently Displayed Image Files* on page 183).

- **CAD Display:**
  - **Always show CAD Results:** Sets whether to display available CAD results automatically, without selecting the button, and independent of the configured ReportFlow steps (refer to *Displaying CAD Information* on page 76).
  - Specify how CAD Marks appear on the MG Viewer. When you select **Advanced...**, the *CAD Display Configuration* screen opens.
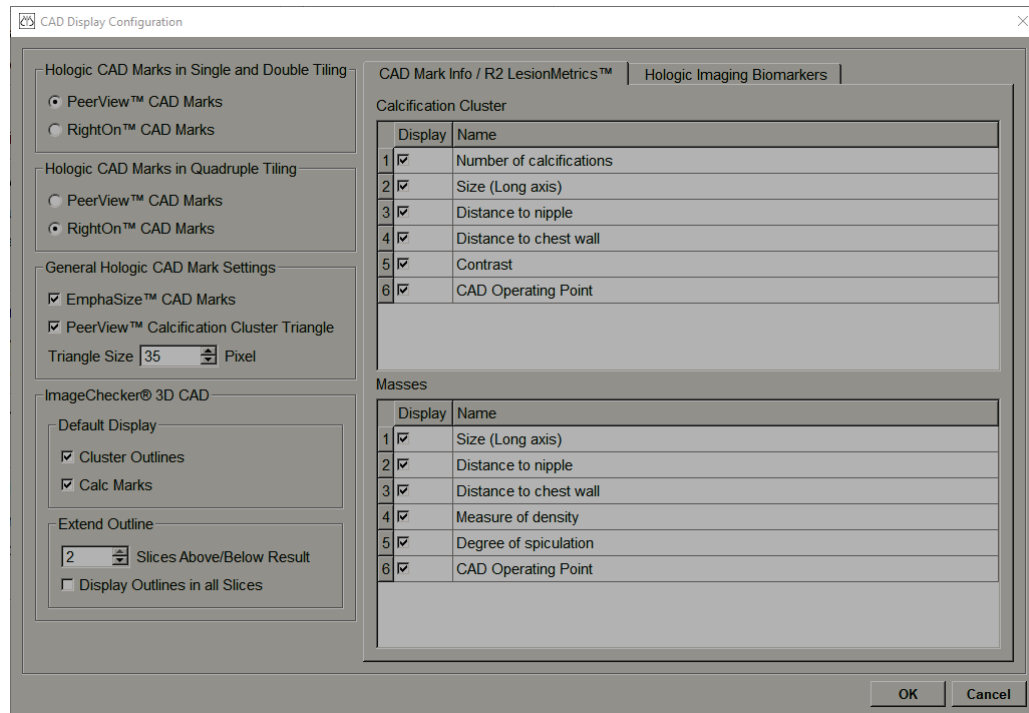

Figure 92: CAD Display Configuration Screen

Note

The ImageChecker 3D CAD section appears only if the product license is present.

If you select the **Hologic Imaging Biomarkers** tab, the following screen opens:
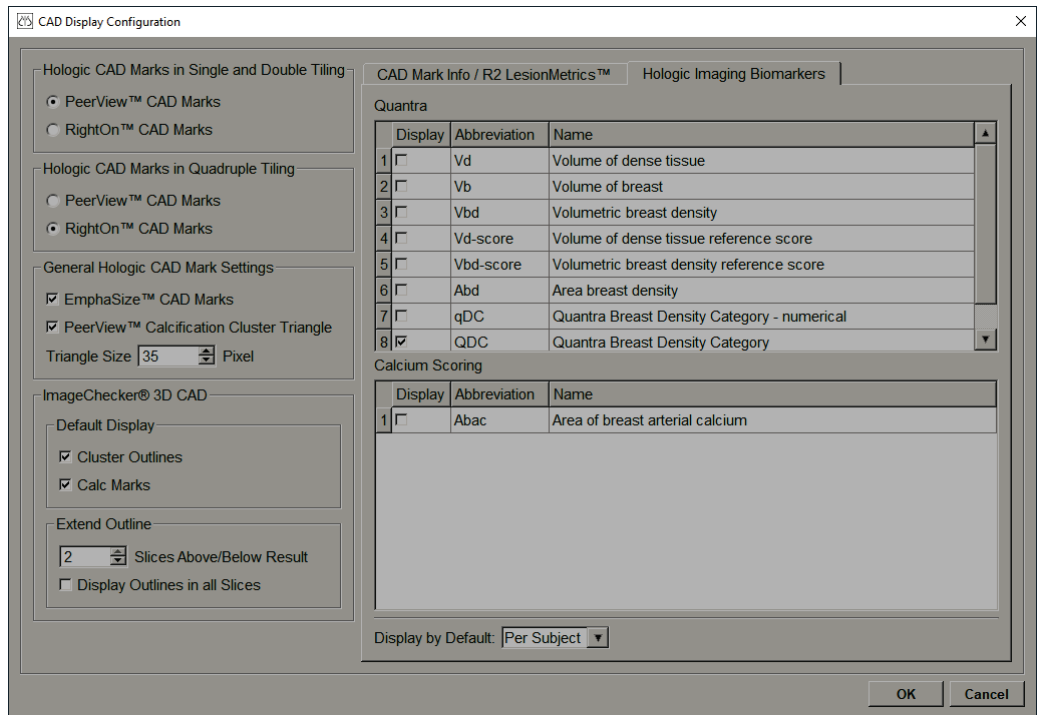

Figure 93: Hologic Imaging Biomarkers Tab

Note

Display of biomarkers is subject to availability. Check with your local sales representative for information.

Note

The biomarkers result content may vary depending on the Hologic Imaging Biomarkers algorithm version.

6.4   User Profile Preferences

When you select the **User Profile** tab, the following screen opens:

Figure 94: User Profile Tab

When done with your settings, select **Apply** (at the lower right corner of screen).

- **User Profile:** Allows you to enter your name, password, and, if desired, an e-mail address. Note that an Administrator must set the User Name field.

- **Auto Log-off:** Sets how long the application waits for activity before automatically logging you off.

- **Synchronization Credentials:** Use to enter the reviewer's user name on the external application (if it differs from the SecurView user name and login/logout synchronization is supported). If the reviewer's password is the same on the external application, select 'Use SecurView Password'. If the password differs, enter the reviewer's password on the external application. Active Directory users may select 'Use SecurView Password' if login/logout synchronization is supported.

- **Synchronize with External Application:** Use to set preferences for synchronizing with an external application. Refer to *Patient Synchronization with an External Application* on page 96.
  - **On login and logout:** This setting applies only if the external application supports receiving login and logout messages. When the box is checked and you log into (or out of) SecurView, the workstation sends a synchronization message to log you into (or out of) the external application.
  - **When opening a patient:** This setting applies only if the external application supports receiving Open Patient messages. When the box is checked and you open a patient on SecurView, the workstation sends a synchronization message to open the patient on the external application.
  - **When marking a study as 'Read':** This setting applies only if the external application supports receiving the Update Patient State message. When the box is checked and you close a study on SecurView, the workstation sends a synchronization message to update the patient state on the external application.

Note

At this time, only the Hologic MultiView workstation supports synchronization at close of study.

- **Ask me to select the study to synchronize:** This setting applies only if the external application supports receiving Open Patient messages. When the box is selected and you open a patient on SecurView, the workstation opens a dialog box with a list of studies available for the patient on SecurView. When you select a study from the list, the workstation sends a synchronization message to open the same study on the external application. This setting is useful when more than one unread study for a patient is a common occurrence (e.g., mammography and ultrasound), patients are not being opened by barcoding an accession number, and you want to control which study is sent.

- **Incoming Synchronization Requests:**
  - **When Opening a Patient:** The 'Notify if patient not available' setting applies only if the external application supports sending Open Patient messages. Check this box if you want SecurView to display an error message when it receives an Open Patient message for a patient that is not available on SecurView.
  - **When Updating the Patient State:** These settings apply only if the external application supports sending Update Patient State messages.
    - **Mark only specified studies as read**: Only studies that match the criteria of the incoming synchronization request from an external application will be marked as 'Read.' If the external application does not provide information at the study level, all studies of the patient will be marked as 'Read.'
    - **Mark all studies of the patient as read:** All applicable studies of the patient will be marked as 'Read.' Study level information received from the external application will be ignored.

Note

SecurView acts on received Open Patient messages only if a Radiologist user is logged in. If the identified patient or study is not found on SecurView, the Viewer is closed.

Caution:

SecurView acts on received Update Patient State messages only if a Radiologist user is logged in, the identified patient is open in the Viewer, and the identified patient is not locked by another user. If SecurView rejects or ignores a received Update Patient State message the study states are not changed and could be out of sync with the external application.

Chapter 7 Hanging Snapshots and ReportFlows

This chapter describes Hanging Snapshots and ReportFlows, how a Radiologist user can select specific ReportFlows for everyday use, and how to create and modify Hanging Snapshots and ReportFlows.

7.1   Viewing ReportFlows

SecurView provides a default set of ReportFlows that you can use for viewing many common study types.

To view available ReportFlows:

1.   In the Administration module, select **User Preferences**, then **Workflow**.

2.   In the Hanging Snapshots and ReportFlows group, select **Configure...** to open the configuration window showing the **ReportFlows** tab, which appears by default.

At the top, there are three tabs for Hanging Snapshots, ReportFlows, and Preferences. A list of Available Hangings appears at left. At right is the current list of ReportFlows.
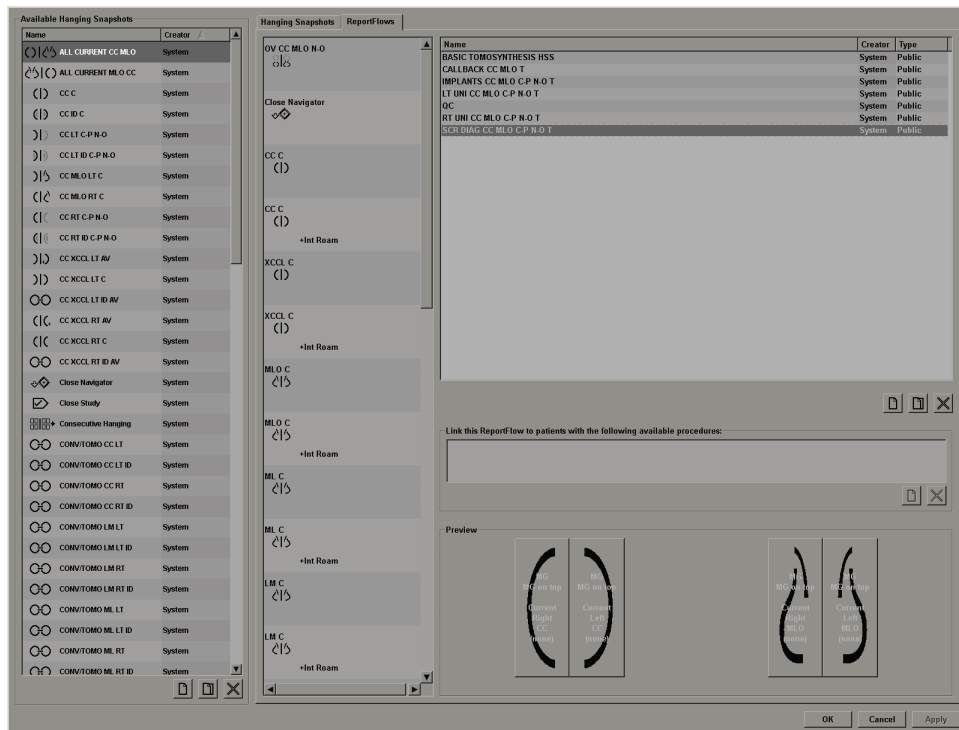

Figure 95: ReportFlows Tab

7.2   Viewing Hanging Snapshots

A Hanging Snapshot is a set of images in a specified layout on one or more displays. When you select the **Hanging Snapshots** tab, the editing pane for the currently selected Hanging Snapshot opens.
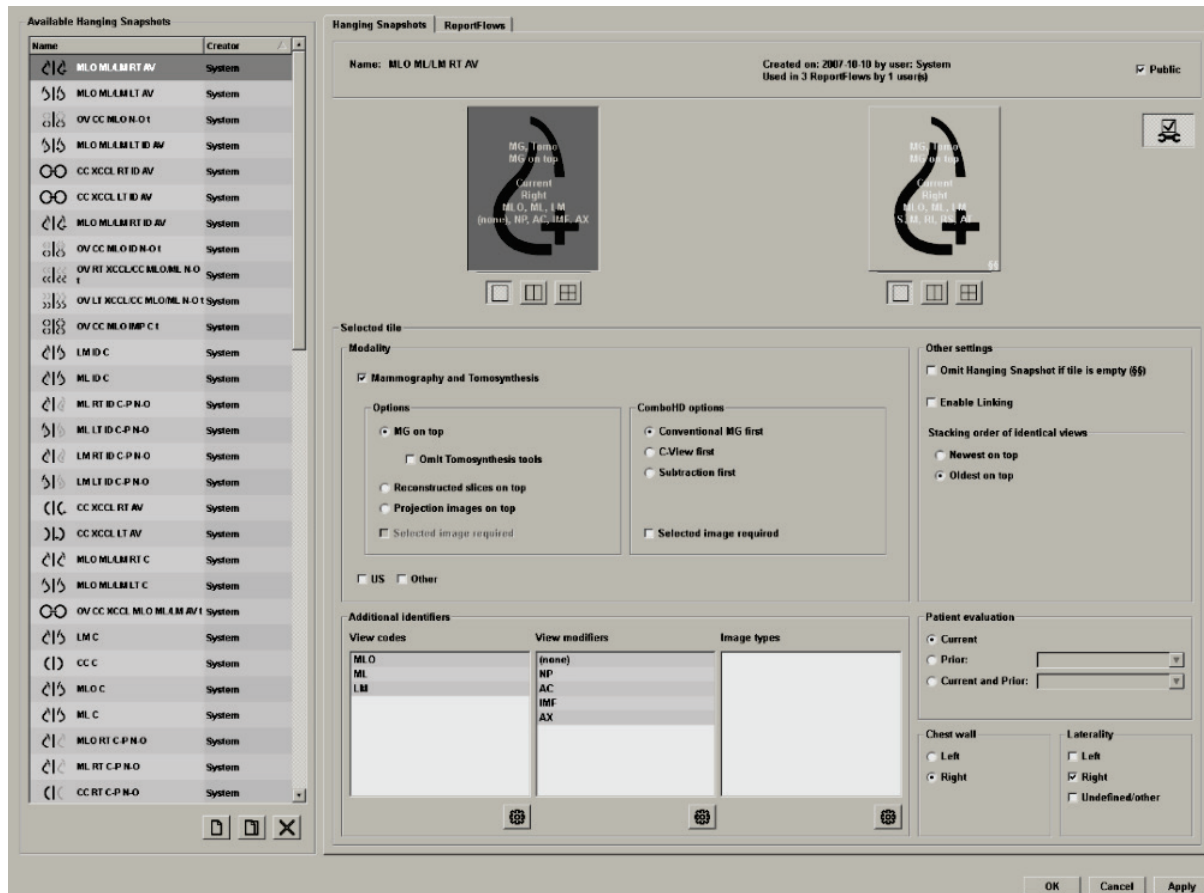

Figure 96: Hanging Snapshots Tab

For each hanging snapshot:

*   The Name and Type appear at the top.

*   Below are individual tilings, where each large tile represents one display. The preview shows the modalities, time points (current or prior), lateralities, view codes, view code icons, view modifiers, image types, and Hanging Snapshot modifiers.

*   Properties for the selected tile appear at the bottom.

7.3   Creating and Modifying Hanging Snapshots

SecurView workstations provide two levels of Hanging Snapshots:

- System-level Hanging Snapshots are either delivered with the system or created by an Administrator user. These Hanging Snapshots can be modified only by an Administrator user.

- User-defined Hanging Snapshots are created by a Radiologist user, and configured either for:

  - All users - 'Public' is selected by default, or

  - Individual use - 'Public' must not be selected

  If you create a new Hanging Snapshot, your name appears in the Creator column of the Available Hangings list.

You can create and modify Hanging Snapshots as explained in the following sections.

### 7.3.1   Creating New Hanging Snapshots

Use the **New** button to create a new Hanging Snapshot. Alternatively, use the **Copy** button to copy and modify an existing Hanging Snapshot (refer to *Copying and Editing a Hanging Snapshot* on page 137).

To create a new Hanging Snapshot:

New

1. Select the **Hanging Snapsho**t tab. Then select the **New** button below the list of Available Hangings.

2. Type a name for the new Hanging Snapshot and select **OK**.
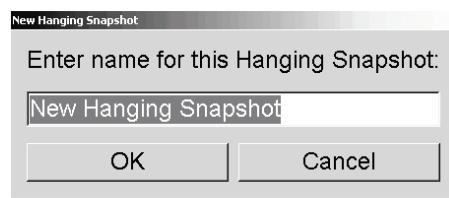
SecurView adds a new Hanging Snapshot icon at the very bottom of the Available Hangings list. Your user name appears to the right of the new Hanging Snapshot name.

By default, SecurView indicates "custom" hangings with the icon shown at left in the previous figure.

Note
To rename your custom hanging or to assign a different icon, right-click the Hanging Snapshot name in the Available Hangings column.

Single Tiling

Double Tiling

Quadruple Tiling

3. Select **Single Tiling**, **Double Tiling**, or **Quadruple Tiling** to choose a tiling for each display in the preview area.

4. Select the tile you wish to configure, then assign properties from the 'Selected tile' region:
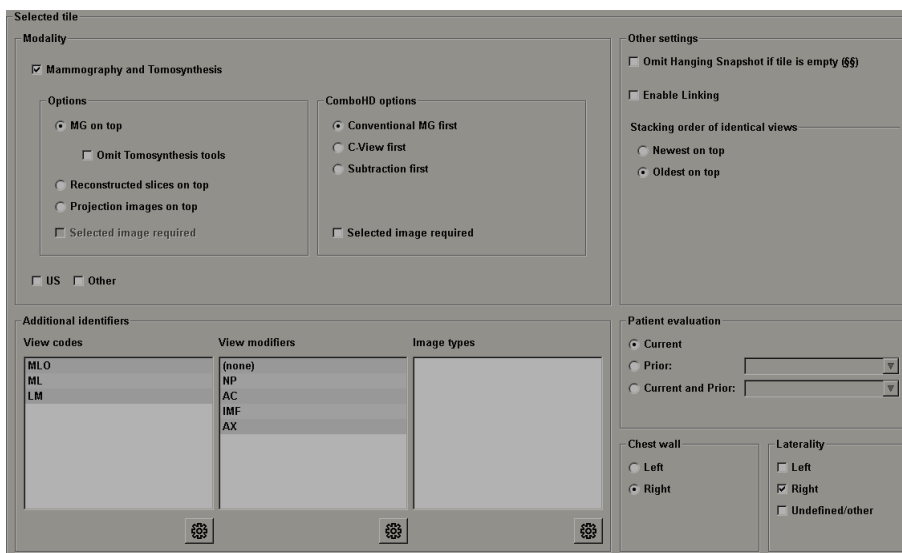

Figure 97: Selected Tile Region

Modality – Mammography (including Tomosynthesis), Ultrasound, or Other. For Mammography images you can configure which image type is initially shown in the viewport.

- **Options** – *MG on top*, *Reconstructed slices on top*, or *Projection images on top*. Displays the configured image on top.

- **Omit Tomosynthesis tools** (only in combination with *MG on top*) – Tomosynthesis images and Tomosynthesis tools are not displayed. The MG images are stacked. Within the stack the MG images are grouped together according to the ComboHD options defining which image to display first.

- **Selected image required** (only in combination with *Reconstructed slices on top* or *Projection images on top*) - This option can be selected only if the Reconstructions or Projection images are to be displayed on top. If this option is selected, the corresponding tile will be empty if the selected image type to display on top is not available. If this option is not selected the MG image will be displayed on top if the selected image type is not available.

- **ComboHD options** – Displays the configured Hologic MG image first in the following order:

  > **Note**
  > **ComboHD** options require a tomosynthesis license.

  - **Conventional MG** (sort order: MG, synthesized 2D, CE2D subtraction)
  - **C-View 2D** (sort order: synthesized 2D, MG, CE2D subtraction)
  - **Subtraction** (sort order: CE2D subtraction, MG, synthesized 2D)

- **Selected image required** - If this option is selected, the corresponding tile will be empty if the selected MG image type to display on top is not available. If this option is not selected, the available tomosynthesis images will be displayed on top if the selected MG image type is not available.

> **Note**
> If *Selected image required* is not selected but *Omit Tomosynthesis tools* is selected, the available MG images will be displayed if the selected MG image type is not available.

Patient evaluation – Sets the time point for the image display. 'Current' refers to the most recent study. Select 'Prior' either to view images from a specific prior time point or to view all priors. 'Current and Prior' allows viewing current and prior images in one image stack either from newest to oldest *(Current, Prior All (Newest))* or oldest to newest *(Prior All (Oldest), Current)*.

Laterality – Left, right, or undefined/other.

Chest Wall – Image orientation for MG images.

Omit Hanging Snapshot if tile is empty – If selected, SecurView omits this Hanging Snapshot from the ReportFlow if the tile is empty.

Enable Linking – For MG images, use this setting to adjust window width/center values for linked tiles simultaneously. For Tomosynthesis images, this setting synchronizes the tile so it scrolls automatically with other linked tiles. (This setting corresponds to the **Link Tile** option on the Pie menu. Refer to *Scrolling Through Linked Tiles* on page 109.

Stacking order of identical views – Stacks identical views within the same tile by the time sequence in which they were taken. If the acquisition date and time are the same, then the stacking order is determined by the Instance Number.

Edit

5. Choose Additional identifiers for the tile.

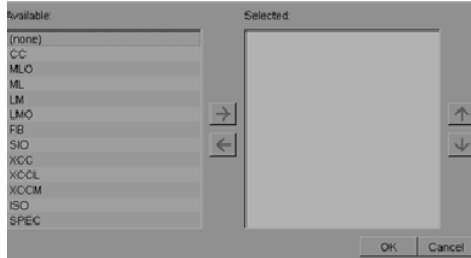   a.   Select **Edit** under View Codes to open the *Edit Views* dialog box.

Figure 98: Edit Views
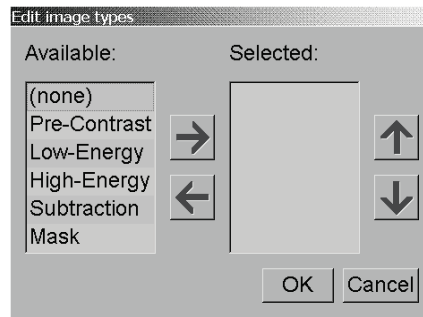

Figure 99: Edit View Modifiers

Figure 100: Edit Image Types

    b.   Select the view(s) you want in the Available column (you can select more than one). Then either drag the views to the Selected column or use the arrow to move them.

        - You can stack any or all views in the tile. They stack in the order you choose.

        - Change the order by selecting a view and selecting the arrow buttons at right.

        - If you choose '(none)', the system hangs images that have no view (view modifier or image type) identifier in the tile.

    c.   Select **OK** to close the *Edit Views* dialog box.

6. Choose **View Modifiers** for the tile by repeating the sequence in step 5.

7. Choose **Image Type** for the tile by repeating the sequence in step 5.

8. Repeat steps 4–7 for other tiles in this hanging.

9. When you finish defining all tiles for the hanging:

    •   Select **Apply** to save your new Hanging Snapshot. (Continue editing, if desired.)

   •   Select **OK** to save your new Hanging Snapshot and close the **Hanging Snapshot** tab.

7.3.2   Copying and Editing a Hanging Snapshot

Use the **Copy** button to create a new Hanging Snapshot from an old one.

Copy

1. Select any Hanging Snapshot in the Available Hangings list.

2. Select **Copy**, then enter a name for the copied Hanging Snapshot.

> **New Hanging Snapshot**
>
> Enter name for this Hanging Snapshot:
>
> Copy of CC Current
>
> OK   Cancel
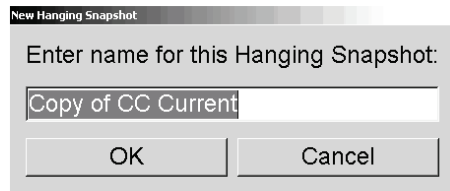
3. Modify any properties of the Hanging Snapshot using steps 3–9 of the previous procedure.

7.3.3   Deleting Hanging Snapshots

Use the **Delete** button or the **Delete** item in the shortcut menu to delete Hanging Snapshots.

Delete Button

1. In the Available Hangings list, select the Hanging Snapshots you want to delete.

2. Select **Delete**. The *Delete Hanging Snapshots* dialog box opens to indicate which selected Hanging Snapshots are used in a ReportFlow or an Overview. By default, the dialog box selects only the unused Hanging Snapshots for deletion.

> **Delete Hanging Snapshots**   ×
>
> Do you want to delete the selected Hanging Snapshot(s)?
>
> ☐ All
>
> | Hanging Snapshot | Conflict | Delete |
> | --- | --- | --- |
> | 4_MLO C | | ☑ |
> | 6_OV CC MLO ID N-O | own RF | ☐ |
> | 7_Overview 1 | other user's RF | ☐ |
> | 12_C-V CC XCCL RT C | cannot delete | ☐ |
>
> For more information, click on a Hanging Snapshot with a conflict.
>
> Delete   Cancel
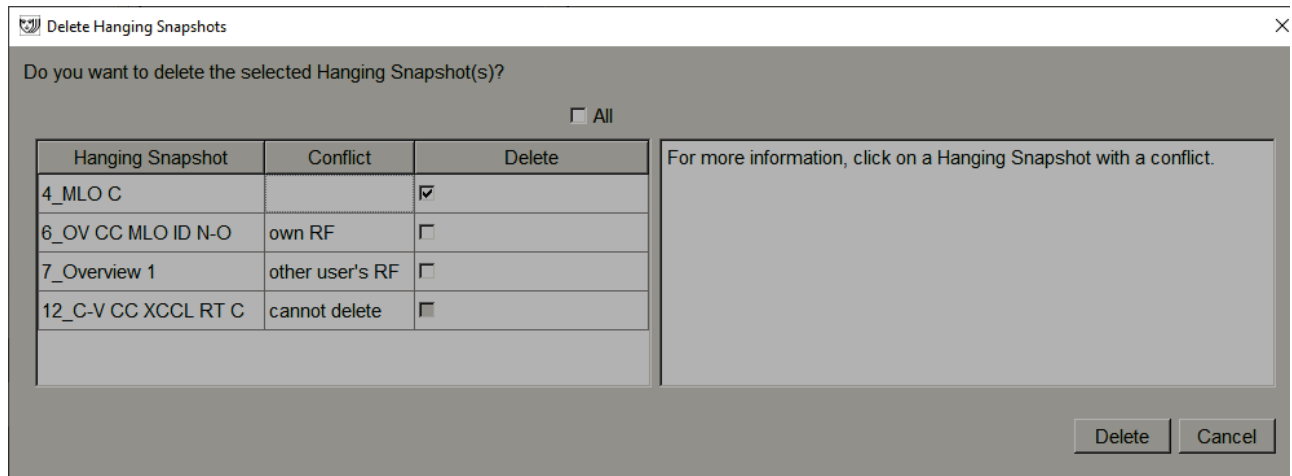
Figure 101: Delete Hanging Snapshots Dialog Box

3. Select a Hanging Snapshot that has a conflict to view additional information.

4. Select the check box in the Delete column to select or deselect an individual Hanging Snapshot for deletion.

5. Select the **All** check box to select or deselect all Hanging Snapshots in the dialog box for deletion.

6. Select **Delete** to delete the selected Hanging Snapshots.
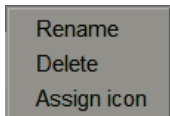
7.3.4 Renaming a Hanging Snapshot

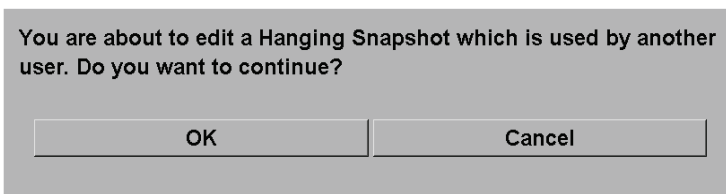You can rename a Hanging Snapshot, with some restrictions:

- Radiologist users can rename their own custom Hanging Snapshots.
- Administrator users can rename some system-level Hanging Snapshots.
- Some system-level Hanging Snapshots cannot be renamed.
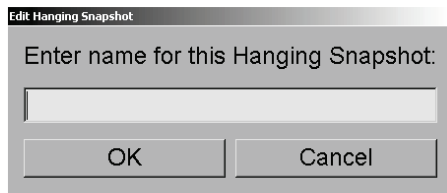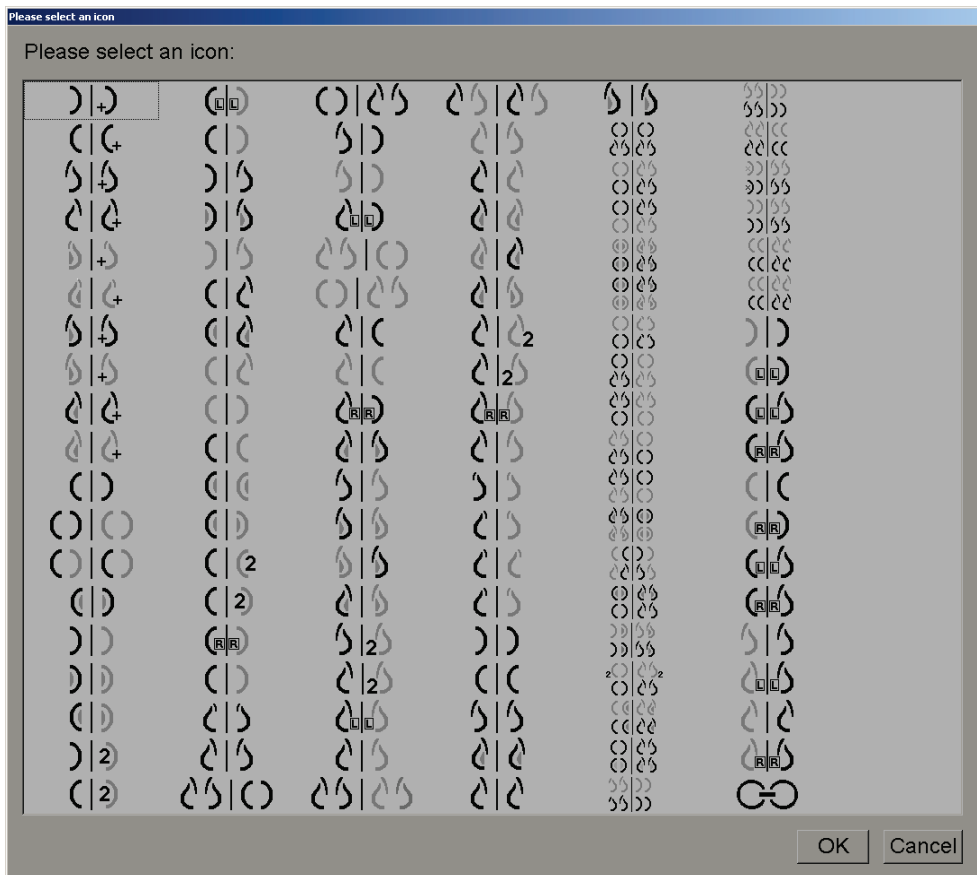
To rename a Hanging Snapshot:

Rename
Delete
Assign icon

Shortcut Menu

1. In the Available Hangings list, right-click a Hanging Snapshot and select **Rename** from the shortcut menu. If you are renaming a system-level Hanging Snapshot, SecurView displays:

   You are about to edit a Hanging Snapshot which is used by another user. Do you want to continue?

   OK   Cancel

2. Select **OK**, then enter the new name:

   Edit Hanging Snapshot

   Enter name for this Hanging Snapshot:

   OK   Cancel

3. When done, select **OK**.

7.3.5   Changing a Hanging Snapshot Icon

Service users can change the icon assigned to system-level and custom user Hanging Snapshots. Radiologist users can change the icon assigned to their own custom Hanging Snapshots.

To change a Hanging Snapshot icon:

*Rename
Delete
Assign icon*
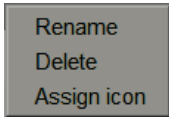
Shortcut Menu

1. In the Available Hangings list, right-click a Hanging Snapshot and select **Assign icon** from the shortcut menu. If you are modifying a system-level Hanging Snapshot, SecurView displays:

    You are about to edit a Hanging Snapshot which is used by another user. Do you want to continue?

    OK   Cancel
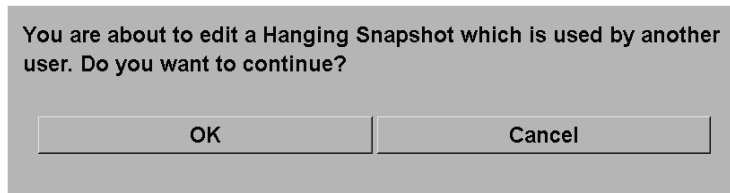
2. Select **OK** then select a new icon:

3. When done, select **OK**.

7.4 ReportFlows

A **ReportFlow** is a sequence of Hanging Snapshots and reviewing steps.

Figure 102: Example ReportFlow (partial view)

This ReportFlow 'SCR DIAG MLO CC C-P N-O' refers to a ReportFlow used for a Screening or Diagnostic mammogram that presents images as explained in the following text:

- MLO images are shown at left, CC images at right.
- Current images are shown first, then Prior images.
- Newer images are shown at the top of the stack, older images at bottom.

When installed, SecurView includes a set of ReportFlows, available to all radiologists, which provide hangings suitable for most practices. Radiologists and Administrators can create new ReportFlows as needed (refer to *Creating New ReportFlows* on page 143). You can configure SecurView to automatically select the best matching ReportFlow when opening a patient (refer to *ReportFlows Preferences* on page 146). You can also manually select any available ReportFlow during patient review.

The ReportFlow steps appear in sequence in the column at left in the previous figure. If you select any step, the details of that hanging appear in the Preview area at bottom right as shown in the following figure.

When selecting a ReportFlow step of a ReportFlow, the corresponding hanging snapshot will be selected in the list of hangings.

A private hanging of another user appears in the list of ReportFlow steps of the ReportFlow with a lock icon. This hanging does not appear in the list of hangings. The selected hanging is not changed.

On the right side of the ReportFlow list are three columns:

Enabled	Creator	Type
✓	System	Public
✓	System	Public
✓	System	Public
✓	System	Public
✓	System	Public

- **Enabled:** When checked, indicates that this ReportFlow is available to the current radiologist.
- **Creator:** Indicates whether the ReportFlow was defined by an Administrator ('System'), or by a user such as a radiologist. If you create a new ReportFlow, your name appears in the Creator column next to the ReportFlow name.
- **Type:** Indicates whether the ReportFlow is available to all users ('Public'), or available only to the creator ('Private'). 'System' ReportFlows are always 'Public', that is, available to all Radiologist users.

By right-clicking in the Enabled column, you can (1) select and deselect ReportFlows to use or leave out, and (2) assign a ReportFlow to be either Public or Private.

7.5   Linking a ReportFlow to a Procedure

The *Link this ReportFlow* window opens just below the ReportFlow list.
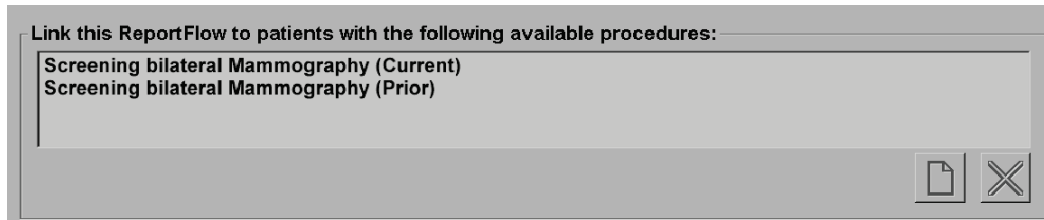
You can link a specific ReportFlow to a procedure selected by a technologist at the mammography acquisition workstation. Each procedure corresponds to a predefined set of images associated with the study type. SecurView uses a specific ReportFlow based on information in the DICOM header(s) of the patient's images and the encoded procedure name.

To use this feature, an Administrator user must configure SecurView with the procedure names (refer to *Configuring Examination Procedure Names* on page 174). Also, the **Select ReportFlow, based on procedure names** option must be selected on the **ReportFlow Preferences** tab. (Refer to *Workflow Selection* on page 146.)

To link a ReportFlow to a procedure:

New

1. In the Name column at top, select a ReportFlow name.

2. Below the *Link this ReportFlow* window, select **New** (shown in the previous figure) to display a list of procedure names:
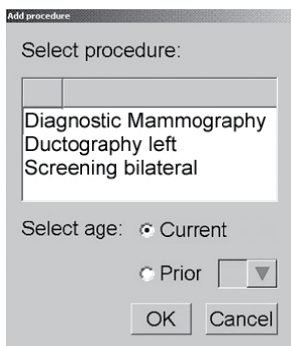
3. Select a procedure to link to the ReportFlow, specify either Current or Prior images, and select **OK**.

7.6 Creating New ReportFlows

The **ReportFlows** tab also allows you to create, modify, and delete ReportFlows. It is the Administrator's task to create and modify system-level ReportFlows, but every Radiologist user can create and modify ReportFlows for private or public use.

To create a new ReportFlow:

New

Copy

1. Select the **ReportFlows** tab. Then select the **New** button below the list of ReportFlow names.
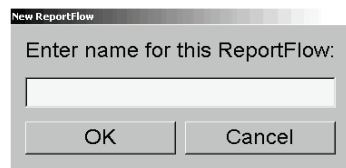
Alternatively, copy an existing ReportFlow by pointing at the ReportFlow name, then selecting **Copy**.

2. Type a unique name for the new ReportFlow and select **OK**. The new ReportFlow is added to the list labeled with your user name as 'Creator', 'Enabled', and 'Private'.

   - To make the ReportFlow available to other users, right-click the ReportFlow name and select **Public**.
   - To change the name of a Private ReportFlow, right-click the ReportFlow name, and select **Rename**.

3. Drag and drop a Hanging Snapshot from the Available Hangings list into the list of ReportFlow steps.
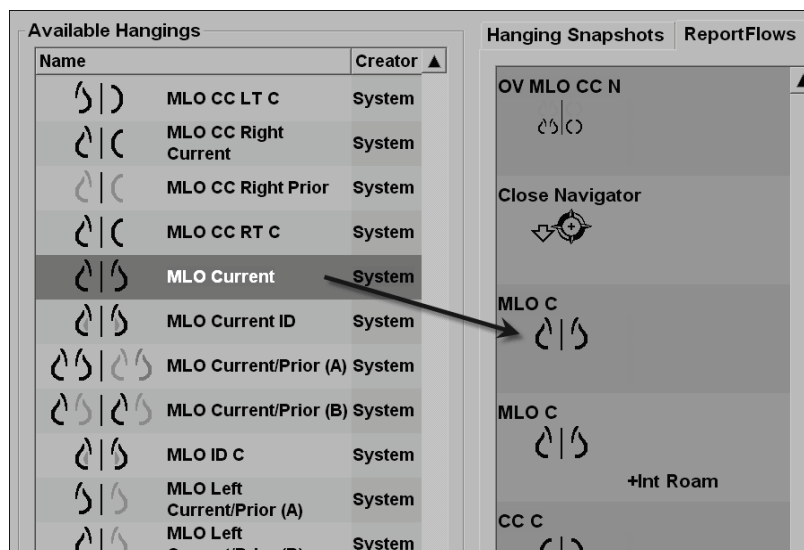
4. Repeat for each hanging needed in the ReportFlow. You can:

   - Move a Hanging Snapshot by dragging it to a new position.
   - Remove a Hanging Snapshot by dragging it back to the Available Hangings list.

The Available Hangings area also includes several functional ReportFlow steps that you can use in your ReportFlow.

Icon	ReportFlow Step
	Open the MammoNavigator feature
	Close the MammoNavigator feature
	Consecutive Hanging – a Hanging Snapshot that displays additional images not covered by the current ReportFlow.
	Synchronize with an external application
	Close Study
	Open *Hologic Imaging Biomarkers* dialog box. Changing to the next or previous ReportFlow step will close this dialog box automatically.

5. Assign additional properties as needed to the Hanging Snapshots in your ReportFlow. Right-click the Hanging Snapshot to open the shortcut menu, then make your selections:
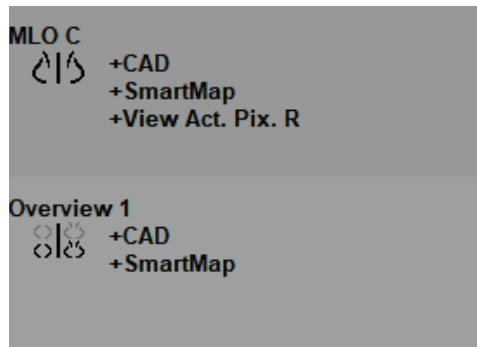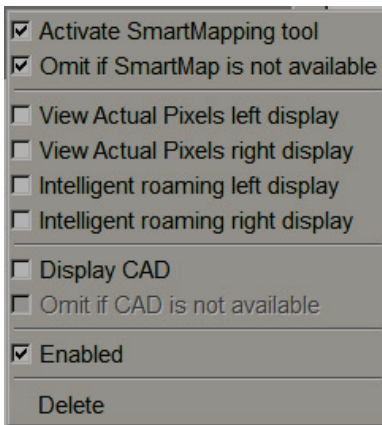
Note

Intelligent Roaming and View Actual Pixels are available if the hanging display is configured in single tilling. The hanging tilling should not be changed after enabling Intelligent Roaming or View Actual Pixels.

6. If your ReportFlow includes the Consecutive Hanging, then you can modify the step by right-clicking it to open its shortcut menu.
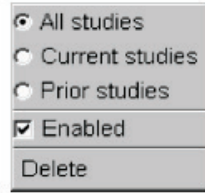
7. After defining the steps:

    a. Select **Apply** to save your new ReportFlow. (Continue editing, if desired.)

    b. Select **OK** to save your new ReportFlow and close the **ReportFlows** tab.

7.7   Deleting ReportFlows

Delete Button

Use the Delete button or the Delete option in the shortcut menu to delete ReportFlows.

1. Select the **ReportFlows** tab, then select the ReportFlows you want to delete.

2. Select Delete. The *Delete ReportFlows* dialog box opens to indicate which selected ReportFlows are enabled by another user. By default, the dialog box selects only the ReportFlows that are not enabled by another user for deletion.
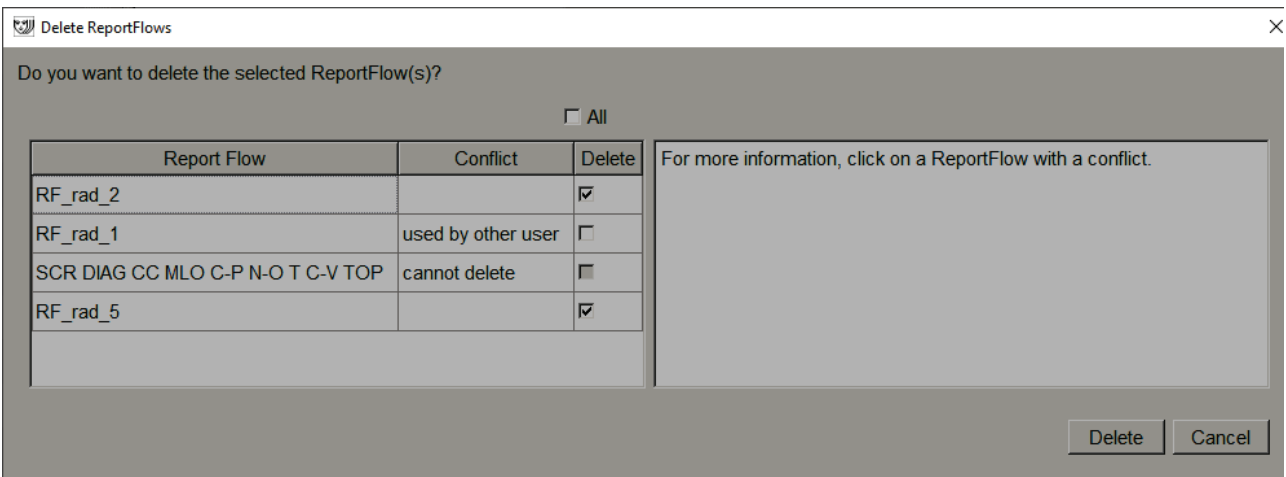
Figure 103: Delete ReportFlows Dialog Box

3. Select a ReportFlow that has a conflict to view additional information.

4. Select the check box in the Delete column to select or deselect an individual ReportFlow for deletion.

5. Select the **All** check box to select or deselect all ReportFlows in the dialog box for deletion.

6. Select **Delete** to delete the selected ReportFlows.

7.8   ReportFlows Preferences

Use the **Preferences** tab to configure the system to select the best matching ReportFlows for your procedures.
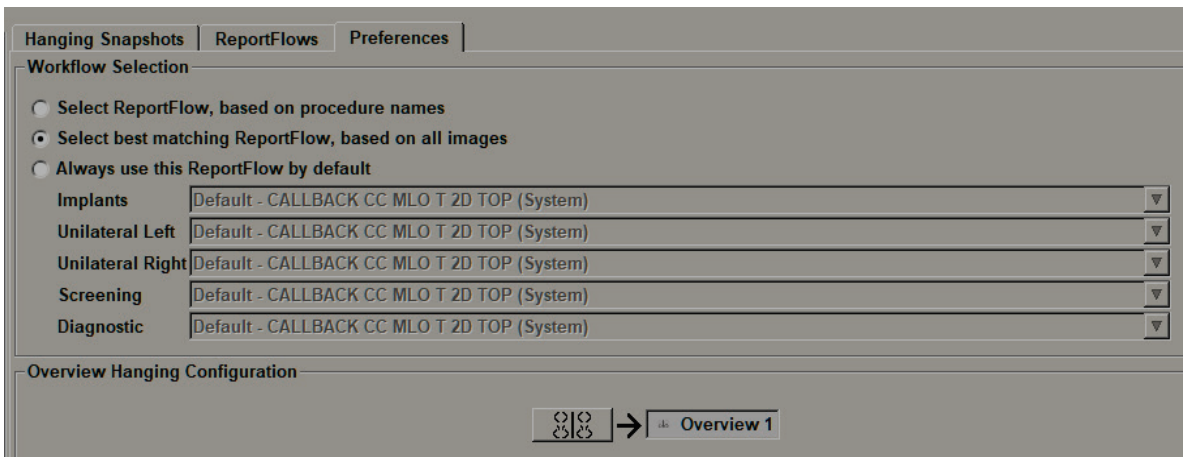
7.8.1   Workflow Selection

Choose one of three option buttons. The button selected determines how SecurView chooses the ReportFlow to apply automatically when you open a patient.

- **Select ReportFlow, based on procedure names** – SecurView chooses the ReportFlow from the set of procedure descriptions that are associated with the available studies (refer to *Linking a ReportFlow to a Procedure* on page 142).

- **Select best matching ReportFlow, based on all images** – SecurView chooses the ReportFlow based on the images and views contained in the available studies.

- **Always use this ReportFlow by default** – For each procedure type listed, SecurView uses the ReportFlow you select from the drop-down list of all ReportFlows available to you.

Note

When you review a patient, you may choose a different ReportFlow as desired

7.8.2   Overview Hanging Configuration

Overview

You can select a Hanging Snapshot to serve as your personal overview display. The configured setting is linked to the **Overview** button on the left toolbar of the MG Viewer, and with the Overview key on the special keypad (refer to *Image Hangings* on page 50).

To select a personal overview display:

On the Available Hangings list, select a Hanging Snapshot and drag it to the configuration button.
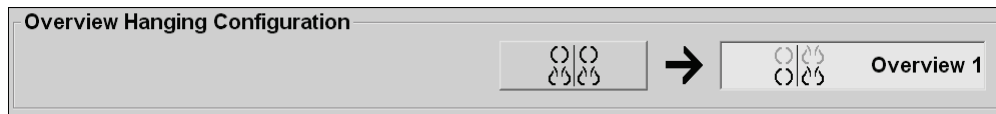
Chapter 8 Administrator Tasks

This chapter describes how the SecurView system Administrator can manage users, configure system-level settings, and back up the database.

8.1   Opening the Administration Module

Use the Administration module for managing user profiles, configuring system-level settings, and backing up the database.

To open the Administration module:

1.   Log into SecurView as "admin".

2.   Select the **Administration** tab to display the **User Setup** tab.

Figure 104: User Setup Tab

The Administration module provides the following tabs:

- **Patient Manager** – Displays the Patient List with all patient IDs, their studies, and series currently in the database. The system Administrator does not have the option to create a new session, merge or synchronize patients.

- **User Setup** (opens by default) – Use for adding, editing, and deleting users. Refer to *Managing User Profiles* on page 150.

- **User Preferences** – Displays the system Administrator's user profile. Refer to *Administrator User Profile* on page 153.

- **Settings** – Use for configuring system settings such as disk space monitoring and synchronization with an external application. Refer to *Configuring System-Level Settings* on page 154.

- **ReportFlow** – Use for defining procedure names and configuring system-level image hangings for Radiologist users. Refer to *Configuring System-Level Hanging Snapshots and ReportFlows* on page 173. You can also use the **ReportFlow** tab to configure procedure names. Refer to *Configuring Examination Procedure Names* on page 174.

- **Maintenance** – Use for backing up and maintaining the database, and collecting multiworkstation cluster log files. Refer to *Maintaining the Database* on page 178.

- **Overlay** – Use for configuring image overlay information for Radiologist users. Refer to *Configuring Image Overlays* on page 176.

- **About** – Displays application information. Refer to this information when contacting the Hologic Help Desk.

8.2 Managing User Profiles

The **User Setup** tab displays profile information for all registered users. Use the three buttons to add, edit, or delete user profiles.

User Name	Name	Groups	Rights
admin	admin admin	Administrator	User Setup
application	application application	Administrator	User Setup
jsmith	jsmith jsmith	Radiologist, Technologist	Diagnostic Setup, Diagnostic Reading, Screening Setup, Screening Reading
mpatil	mpatil mpatil	Radiologist	Diagnostic Setup, Diagnostic Reading, Screening Setup, Screening Reading
msmith	Michael Smith	Technologist	Diagnostic Setup, Screening Setup
r2reader	r2reader r2reader	Radiologist	Diagnostic Setup, Diagnostic Reading, Screening Setup, Screening Reading
review	User Review	Radiologist, Technologist	Diagnostic Setup, Diagnostic Reading, Screening Setup, Screening Reading
service	service service	Service	
tzhang	tzhang tzhang	Case Administrator	

User Setup | User Preferences | Settings | ReportFlow | Maintenance | Overlay | About ◄ ►

Add   Edit   Delete

Help   08-11-2011 04:24:33 pm User Name: admin   OK

Figure 105: User Setup Buttons

To add a new user profile:

1. In the **User Setup** tab, select **Add** to display the following dialog box:

User Name:
Last Name:
First Name:
Password:
Confirm Password:

Authentication
☐ Use Active Directory

Groups
☐ Administrator
☐ Radiologist
☐ Technologist
☐ Service
☐ Case Administrator

Rights
Diagnostic
☐ Setup
☐ Reading
Screening
☐ Setup
☐ Reading
User
☐ Setup

OK   Cancel

The password has at least 8 characters

The password meets at least three of the following rules:

- contains at least 1 special character
- contains at least 1 upper case letter
- contains at least 1 lower case letter
- contains at least 1 number

Old and new passwords are not the same

Figure 106: New User Dialog Box

> **Note**
> On SecurView RT, the 'Rights' options do not appear.

2. Enter the user name, last name, and first name. Then:
   - Enter a password in the Password and Confirm Password fields, or
   - Select 'Use Active Directory' to authenticate the user via Active Directory server.

> **Note**
> Password content rules are displayed in the *New User* dialog box.

> **Note**
> For sites using Active Directory authentication:
> - Active Directory must be configured before adding new users. Refer to *Active Directory Setup* on page 160.
> - The user name must not contain a backslash (\) character.
> - Use the '@' character only in the form username@domain, which restricts the user to authenticate against a specific domain. This is useful when different users with the same name exist in different domains.
> - There is no requirement to add the domain to the user name. If no domain is specified, the system can authenticate the user against any domain.

3. Assign the user to a group. (As a special case, you can assign a user to both the radiologist and technologist groups.)
   - **Administrators** have rights to configure system settings, as explained in this chapter.
   - **Radiologists** have rights to review patient images on SecurView DX and set up Sessions of diagnostic and/or screening studies (refer to *Creating Sessions* on page 36).
   - **Technologists** have rights to set up Sessions of diagnostic and/or screening studies (refer to *Creating Sessions* on page 36).
   - **Service** users have rights to configure certain system settings (refer to the *SecurView Workstation Installation and Service Manual*).
   - **Case Administrators** have rights to merge multiple records for a single patient and delete patients from the Patient List (refer to *Case Administrator Tasks* on page 181).

4. Customize access rights (for Administrators, Radiologists, and Technologists only on SecurView DX).

    •   **Diagnostic or Screening Setup:** If checked, radiologist and Technologist users can create Sessions. Refer to *Creating Sessions* on page 36.

    •   **Diagnostic or Screening Reading:** If checked, Radiologist users can review patient images.

    •   **User Setup:** If checked, the Administrator user has rights to create and edit user profile information.

5. Select **OK** to save the new user settings.

To edit a user profile:

1. Do one of the following:

    •   Select a user name from the **User Setup** tab then select **Edit**, or

    •   Double-click a user name that appears in the **User Setup** tab.

2. Edit the user profile then select **OK** to save.

To delete a user profile:

1. Select a user name from the **User Setup** tab then select **Delete**. SecurView displays 'Do you want to delete this user?'

2. Select **OK** to delete the user profile.

	Note

Application and Service users cannot be deleted from the User Setup list.

8.3 Administrator User Profile

Select the **User Preferences** tab to display the **User Profile** tab for the Administrator user who is currently logged in. You can edit your User Profile and set the system **Auto Log-Off** time (i.e., the amount of time the application waits for activity before automatically logging you off).
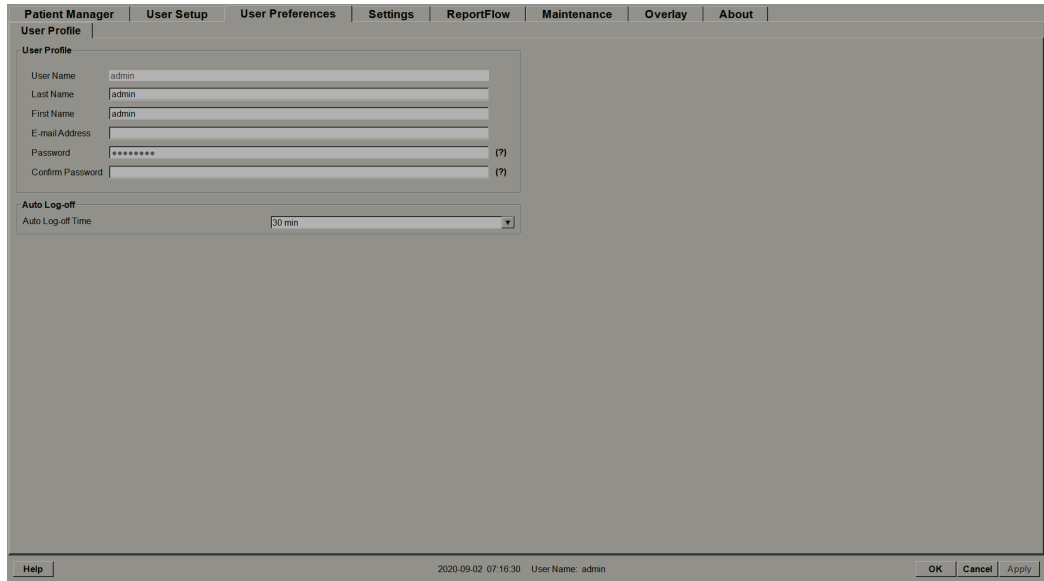
Figure 107: User Profile Tab

8.4   Configuring System-Level Settings

Use the *Settings* window to configure system-level settings. (Note that the following screen is for SecurView DX. Some settings do not apply to SecurView RT.)
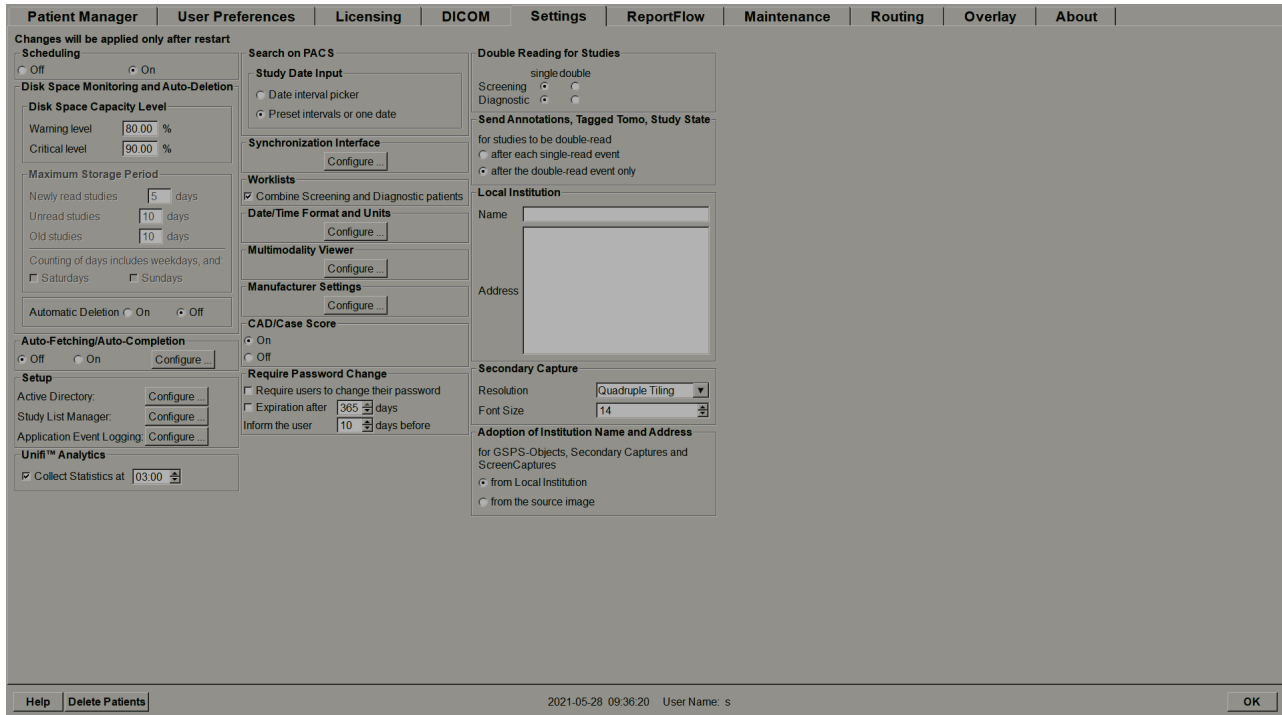
Figure 108: Settings Window

Adjust settings as described in the following sections. After you make your selections, save your settings by selecting **OK**. Some of the settings (e.g., Scheduling, Worklists, and Date/Time Format and Units, etc.) require a SecurView restart to save changes.

8.4.1   Scheduling

On SecurView DX, use this setting to activate the **Create Session** option (refer to *Patient List Buttons* on page 27 and *Creating Sessions* on page 36).

- **Off:** The **Create Session** option is unavailable.
- **On:** The **Create Session** option is available. Users may create a Session if they have Screening or Diagnostic Setup rights.

8.4.2 Disk Space Monitoring and Auto-Deletion

These settings specify how long SecurView stores patients in its database and what happens when the hard disk reaches its storage capacity.

Figure 109: Disk Space Monitoring and Auto-Deletion Settings

Disk Space Capacity Level

A warning message appears when disk storage reaches each of the specified limits. Two levels of disk capacity produce alert messages:

- **Warning level:** The default threshold is 80%. Messages appear every 20 minutes until disk space becomes available.
- **Critical level:** The default threshold is 90%. The system does not accept incoming information (e.g., DICOM messages or images) until disk space becomes available.

Maximum Storage Period

These settings are available only when Automatic Deletion is **On**. The Maximum Storage Period is the number of days that SecurView stores patients before automatically deleting patients that meet the configured criteria. The storage period is based on the date and time SecurView receives the last image of a given study.

On SecurView RT workstations, the settings for Newly Read and Unread studies are replaced with one setting called New studies.

Automatic Deletion

When set to **On**, SecurView automatically deletes patients (image data and other objects) according to predefined criteria. Automatic Deletion functions in two ways:

- **Ongoing automatic deletion** – SecurView deletes patients with expired storage periods. The available disk capacity has no influence. As an example on SecurView DX, when a patient's state is *Read* and the *Newly Read studies* storage period expires, SecurView deletes the patient even if the patient has *Old studies* for which the storage period has not expired.

- **Forced automatic deletion** – When available disk capacity exceeds the Warning level, SecurView deletes the oldest patients with status *Read* until the available disk capacity falls below the Warning level. The maximum storage period settings have no influence.

The following table summarizes the behavior.

Event	Automatic Deletion On	Automatic Deletion Off
Check hourly	Perform ongoing Automatic Deletion	No action
System reaches Warning level	Perform forced Automatic Deletion	Display Warning level message
System reaches Critical level	Display Critical level message. Refuse further incoming DICOM data. Perform forced Automatic Deletion when no user is logged in.	Display Critical level message. Refuse further incoming DICOM data. Perform forced Automatic Deletion when user select **Cleanup** in the **Patient Manager** tab.

SecurView does not automatically delete a patient if:

- A user is currently viewing the patient.
- A user is logged in on a multiworkstation system.
- The patient has a pending store-annotations job or printing job.
- The patient is locked (e.g., Pending) and/or protected against automatic deletion (SecurView DX only).
- The patient includes an image with a Notice, and the study is not marked as 'viewed' (SecurView RT only).
- The patient has only non-local studies.

When deleting merged patients, SecurView considers the studies of both the primary and secondary patients.

Patients having both local and non-local studies can be automatically deleted. Afterward SLM synchronization may add the patient to the Patient List with just the non-local studies.

Automatic Deletion in a Multiworkstation Configuration

In a multiworkstation configuration, the Automatic Deletion function behaves differently than on a Standalone system:

- On the **Manager**, the Maximum Storage Period settings are global. Warning and Critical level settings are local. If Automatic Deletion is **On**, the Manager performs hourly checks, ongoing patient deletions (propagated to all Clients), and cleanup procedures. During cleanup, the Manager deletes copies of prepared images from the Clients. (The Clients' Automatic Deletion settings have no influence).

- On the **Client**, Automatic Deletion settings are local; they do not influence other Clients or the Manager. If Automatic Deletion is **On** and the Warning level has been reached, the Client deletes locally stored patients. The datasets removed from the local system still reside on the Manager.

Cleanup on Multiworkstation Clients

On a Client you can delete patients with the **Cleanup** button. If you select **Cleanup**, a message appears asking whether you want to start the Automatic Deletion function. If you select **Yes**, SecurView logs you off the system and carries out forced Automatic Deletion.

- For Radiologist users, the **Cleanup** button appears in the **Patient Manager** tab (next to the **OK** button) whenever the Critical level is exceeded.

- For Administrators and Service users, the **Cleanup** button is always available. If the available disk capacity is below the Warning level, then the Cleanup function deletes a predetermined number of patients (default is 50).

8.4.3 Auto-Fetching/Auto-Completion Configuration

The Auto-Fetching function automatically retrieves prior objects from an archive when SecurView receives new studies. The objects can be images, CAD SRs, study states with or without Annotations, and third-party GSPS objects in studies that meet the Auto-Fetching criteria. Refer to *Auto-Fetching Patient Data* on page 32.

The Auto-Completion function automatically retrieves all objects of the referenced study when SecurView receives a GSPS or CAD SR object.
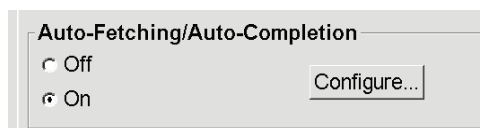
If you select **Configure…**, you can select options from the following dialog box:

Figure 110: Auto-Fetching/Auto-Completion Configuration Dialog Box

- **Mode**: Select **Auto-Fetching of prior images** if SecurView is responsible for retrieving prior studies from the archive.

    - For SecurView DX, Auto-Completion is usually unnecessary because it adds redundant network traffic.

Note

If MG Secondary Capture from a first reader is sent to PACS, and GSPS Report from the first reader is received before the second reading is complete, then selecting 'Auto-Completion of study on incoming GSPS' can violate a double-blind reading protocol by retrieving the MG Secondary Capture (refer to *Sending Annotations, Tagged Tomo, Study State* on page 171).

    - For SecurView RT, Auto-Completion may be appropriate (e.g., SecurView RT may receive a Notice for which it does not have the images, depending on the site's image routing and/or SecurView RT automatic deletion settings).

- **Auto-Fetching Limit:** Select either a time interval (**years back**) or the number of **most recent studies**.

- **Retrieve Modalities:** Select which modalities to retrieve. (The 'MG' setting retrieves prior digital mammography studies with associated GSPS Annotations and Mammography CAD SRs.)

- **DICOM Query/Retrieve Level**: Select a level based on PACS 1 requirements, where PACS 1 is configured in DICOM Setup by the Service Engineer.

    - **Series level** is preferred if PACS 1 supports it.

    - **Study level** is also an acceptable setting. This level requires that PACS 1 supports Modalities in Study (0008,0061) correctly in DICOM queries.

- **Auto-Fetching/Auto-Completion Execution:**

    - For a multiworkstation system, the Manager uses the **All the time** option. (**Not logged in** is not available.)

    - For a Standalone system, select either setting. If you select **Not logged in**, the system performs auto-fetching only when no user is logged into the system.

8.4.4 Active Directory Setup

Active Directory is a Microsoft Windows directory service used to help manage network security. When you add or edit a user profile, SecurView gives you the option to use Active Directory for user authentication. Refer to *Managing User Profiles* on page 150.

Active Directory is configurable from the **Administration > Settings** window:

To set up Active Directory:

1. Select **Configure…** to open the *Active Directory Setup* dialog box:
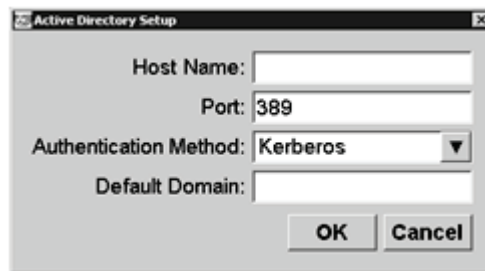
Figure 111: Active Directory Setup Dialog Box

2. Enter the fully qualified host name of the Active Directory server.

3. Enter the port of the Active Directory server. The default setting is 389.

4. Select an authentication method:

    • Kerberos – the default setting.

    • Digest – not usable in multiple domain scenarios, as different users with the same username but in separate domains cannot be distinguished (one user will not be able to log in).

    • Plaintext Password – not recommended, as passwords are transmitted without encryption.

5. As an option, enter the default domain to use if an Active Directory user does not specify a domain when logging in.

6. Select **OK** to save the settings.

8.4.5   Study List Manager (SLM) Configuration

Communication with a Study List Manager is configurable from the **Administration** > **Settings** tab:
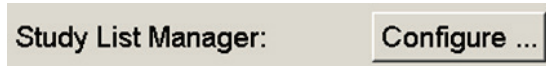
To set up a Study List Manager

1. Select **Configure…** to open the *SLM Configuration* dialog box:
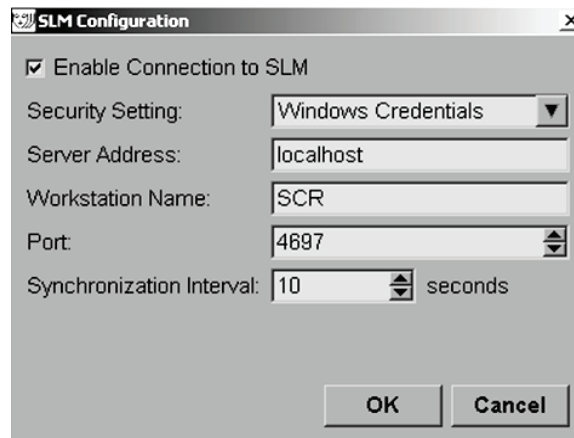
Figure 112: SLM Configuration Dialog Box

2. Select **Enable Connection to SLM** to activate connection to a Study List Manager.

3. Select a security setting to be used for the communication between SecurView and the Study List Manager. If you select Windows Credentials, the credentials of the currently logged in Windows user are used for connection to the Study List Manager.

    Select one of the following security settings:

    a. No Security

    b. HTTPS Anonymous Client

    c. Windows Credentials – default

4. Enter the **Server Address** (IP address or name) of the server hosting the Study List Manager. The default name is localhost, which can be used when the Study List Manager is running on a SecurView Standalone or the SecurView Manager in a multiworkstation configuration.

5. Enter the **Workstation Name** used for the communication with the Study List Manager. The default name is the AE Title of SecurView.

6. Enter the **Port** of the server hosting the Study List Manager.

    a. The default port for Security Setting 'No Security' is 4699.

    b. The default port for Security Setting 'HTTPS Anonymous Client' is 4698.

    c. The default port for Security Setting 'Windows Credentials' is 4697.

7. Select an interval in seconds for the frequency of synchronization with the Study List Manager. The default setting is 10 seconds.

8. Select **OK** to save the settings.

8.4.6 Application Event Logging

SecurView can create a log file that captures key application level events. Customers may access these logs to monitor activity on the system or to help demonstrate compliance with HIPAA or other patient privacy policies. An Administrator or Service user can configure application event logging through the **Settings** tab on the *Administration* screen. Configuration options allow for enabling or disabling of logging and specifying a target directory for the log file.

The application event log is in CSV format. Each line of the file represents a single event and contains comma-separated values specific to that event. The file can be easily imported into a spreadsheet to allow for detailed analysis.

Note
The application event log files are encrypted. Contact Hologic Technical Support to request the decryption tool.

The following fields are captured for events recorded in the log file. Not all fields apply to all events.

- Date and time stamp
- User Group (Radiologist, Administrator, Case Administrator, and/or Service)
- User (login name)
- Event
- Patient ID
- Study Instance UID
- Other (captures additional information specific to certain events)

The following application level events are captured in the log file:

Event	Text Appearing in Event Field	Additional Information in Other Field
Failed login attempt	login failed	
Successful login	logged in	
Successful logout	logged out	
Patient deletion (either manual or automatic)	deleted	
Patient study opened for review	opened	
Patient study imported into system	imported	
Patient study exported from system	exported	type of exported content
Patient study printed	printed	
Patients merged (primary patient information)	merged as primary	secondary Patient ID
Patients merged (secondary patient information)	merged as secondary	primary Patient ID
Patients un-merged	un-merged	primary Patient ID
Password changed	password changed	If changed by Administrator user, contains Administrator user name and groups
Patient study received from external system (each received DICOM file is considered a single event)	received	Remote AE title and IP address
Logging disabled	logging disabled	old log file path
Logging enabled (also configuration changes)	logging enabled	new log file path

Application event logging is configurable from the **Administration** > **Settings** tab:

When you select **Configure…**, you can enable or disable the feature and define the log folder (the default is F:/ApplicationEventLogging).
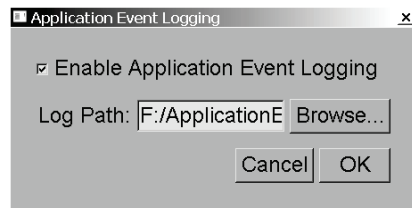
Important

Hologic recommends that the Application Event Log folder be maintained on a secure drive external to the SecurView workstation.

Note

In a multiworkstation cluster, this configuration screen is accessible only on the Manager.

8.4.7   Unifi Analytics

SecurView can provide analytics data for Unifi™ Analytics in one XML file per day, in a predefined folder location, per configuration, where the default folder is F:\Unifi. A license is required for Manager or Standalone.

- **Collect Statistics at**: Select the check box to enable analytics data collection when licensed. Select the time of day (in 24-hour time) to collect the data. The default setting is enabled, and the default time is 03:00, which is 3:00am. For multiworkstation systems this is a cluster-wide setting.

Note

Make sure the configured time of day for analytics data collection does not coincide with the configured automatic system restart time.

The analytics data includes:

- Receipt of DICOM objects: time, IP address of event source and sender
- Preparation started / Preparation finished: time started, IP address of event source, object IDs, time finished, status
- Distribution of images: time, IP address of event source, object IDs, object type
- Reviewing events: time, IP address of event source, unique ID for the patient, unique ID for the study, study reading state, study lock state, study type, reviewing user
  - Study opened
  - Study closed (quit)
  - Study closed (finalized)
  - Study added to currently reviewed patient

Note
Patient information is anonymized in analytics data.

8.4.8   Search on PACS

Use to select the Radiologist user input for the Study Date field of the *Search on PACS* dialog box (refer to *Searching for Patients* on page 39). The date format can be either a specific date range selected by the user or a preset interval/date.

- **Date interval picker:** Displays a calendar sheet, which allows the Radiologist user to select specific start and end dates for the PACS search.
- **Preset intervals or one date**: Displays a preset interval (e.g., today, last month, etc.) in the Study Date text field.
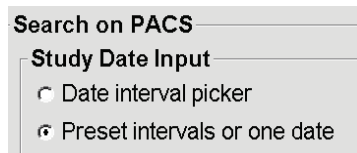
8.4.9   Configure Synchronization Interface

Enter the IP address and Port information to allow synchronization between the SecurView workstation and an external application. Synchronization with non-Hologic applications requires an Application Synchronization license.

On a SecurView Client workstation, enter the name of a specific SLM client (e.g., MultiView client) in order to add only the named SLM client's studies to the SecurView Client's patient list.

The Synchronization Interface is configurable from the **Administration** > **Settings** tab:

To set up the Synchronization Interface

1.   Select **Configure…** to open the *Synchronization Interface Configuration* dialog box:
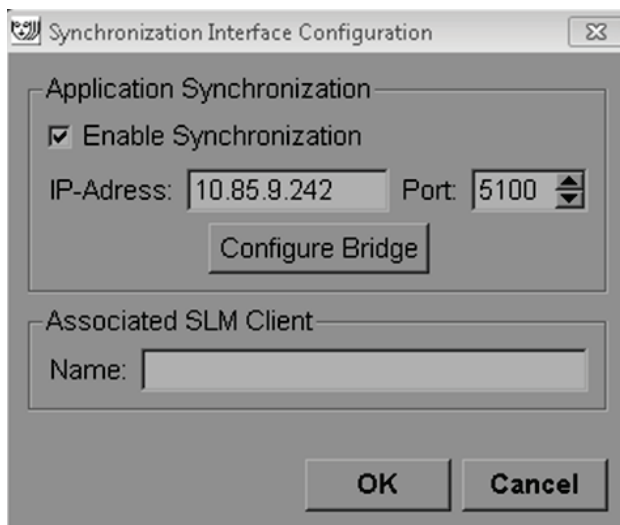
Figure 113: Synchronization Interface Configuration Dialog Box

2.   Select **Enable Synchronization** to enable communication with Application Synchronization.

3.   Enter the Application Synchronization IP address.

4.   Enter the Application Synchronization Port. The default setting is 5100.

5.   Select **Configure Bridge** with valid IP-Address and Port settings, then the Application Synchronization Configuration interface appears if Application Synchronization is installed on SecurView. For more information, refer to the *Application Synchronization Installation Manual*.

6. On a Client workstation, enter the **Associated SLM Client Name**.

- Enter a name only if SLM is configured.

- This option is available on SecurView Standalone and SecurView Client in multiworkstation configurations. This value has to be set on all workstations that have an associated SLM client (e.g., MultiView).

- Ensure that the entered value matches the associated SLM client's name as registered with the SLM.

8.4.10 Worklists

On SecurView DX, use to define how SecurView generates worklists automatically.

```
Worklists
☐ Combine Screening and Diagnostic patients
```
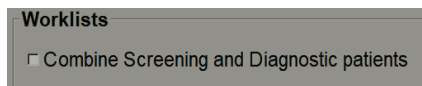
- **Combine Screening and Diagnostic patients:** Select to combine screening and diagnostic patients in the same worklist (unread or second read). Refer to *Automatically Generated Worklists* on page 40.

8.4.11 Date/Time Format and Units

Select **Configure…** to choose settings for date, time, and force units used with the compression paddle.

```
Date/Time Format and Units
  Configure...
```
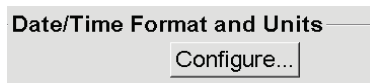
8.4.12 Multimodality Viewer

On SecurView DX, select **Configure…** to display the Multimodality (MM) Configuration Editor to modify MM Viewer settings. This function is only available with a valid Advanced Multimodality Option license. For more information, refer to the *SecurView Advanced Multimodality Option User Guide*.

8.4.13 Manufacturer Settings

Manufacturer settings control per mammography x-ray system manufacturer (and model) specific behaviors when displaying tomosynthesis images (synthesized 2D, reconstructed slices, reconstructed slabs) acquired in combination with conventional 2D images, or displaying 3D CAD results.

Manufacturer ▽	Model	Date From	Date To	Property	Value
HOLOGIC, Inc.	(Any)	(Any)	(Any)	Sort synthesized 3D by num…	ascending
GE MEDICAL …	(Any)	(Any)	(Any)	Create Combination Procedu…	enabled
GE MEDICAL …	(Any)	(Any)	(Any)	Display 3D CAD Marks On S…	enabled
GE HEALTHC…	(Any)	(Any)	(Any)	Create Combination Procedu…	enabled
GE HEALTHC…	(Any)	(Any)	(Any)	Display 3D CAD Marks On S…	enabled
FUJIFILM Cor…	(Any)	(Any)	(Any)	Registered scaling for Combi…	enabled
FUJIFILM Cor…	(Any)	(Any)	(Any)	Display 3D CAD Marks On C…	enabled

Figure 114: Manufacturer Settings Dialog Box

To change Manufacturer Settings:

1. Select **Configure…** in Manufacturer Settings to open the *Manufacturer Settings* dialog box.

2. To filter the settings list by any field, enter the first few characters in the Search field.

3. Select **+** to add a new setting.

    a. Enter a Manufacturer name that exactly matches the value of Manufacturer (0008,0070) in the affected DICOM image headers.

    b. Enter a Model name that exactly matches Manufacturer's Model Name (0008,1090) in the affected DICOM image headers, only if the desired behavior is limited to a specific product model from the Manufacturer. Otherwise leave empty (Any).

    c. Enter a study date range (year, or month and year) in Date From and Date To, only if the desired behavior is limited to studies acquired during a specific date range for the identified Manufacturer and/or Model. Otherwise leave empty (Any).

    d. Select a Property.

    e. Select a Value for the selected Property.

4. To edit a setting, select any field for the setting and change the value.

5. To delete a setting, select any field in a setting, then select **–**.

6. Select **OK** to save changes and close the *Manufacturer Settings* window or select **Cancel** to close the *Manufacturer Settings* window without saving changes.

Manufacturer Settings Property and Value List:

Sort synthesized 3D by number of slices: ascending | descending

*   For a specific manufacturer or model, defines which reconstruction is displayed on top in the Tomosynthesis Navigation tool **Reconstruction** button when more than one reconstruction is available for a view (slices, slabs). Applies only when the Sort Reconstruction on Top user preference is set to Vendor specific (refer to *Image Presentation Preferences* on page 122).

*   ascending: The reconstruction with the least slices is displayed on top.

*   descending: The reconstruction with the most slices is displayed on top.

Create Combination Procedure by View: enabled | disabled

*   For non-Hologic manufacturers only, combine images of the same study, laterality, and view in the Tomosynthesis Navigation tool even if Frame of Reference UID is missing (conventional 2D, synthesized 2D, tomosynthesis projections, reconstructions). Does not apply to magnification, spot compression or specimen views. Primarily for manufacturer GE. Ignored if Exclude from Combination Procedure Creation is enabled.

Exclude from Combination Procedure Creation: enabled | disabled

*   For non-Hologic manufacturers only, disables combining images of the same study, laterality, and view in the Tomosynthesis Navigation tool (conventional 2D, synthesized 2D, tomosynthesis projections, reconstructions), ignoring Frame of Reference UID. Use only if combining these images causes a problem.

Registered scaling for Combination Procedures: enabled | disabled

*   For non-Hologic manufacturers only, scales the images in a combination procedure (conventional 2D, synthesized 2D, reconstructions) to the same height. This should be configured only if the manufacturer provides registered images. Otherwise, the display of images might lead to unexpected results. Primarily for manufacturer Fuji.

Reset Zoom and Panning When Switching in Combination Procedure: enabled

*   For non-Hologic manufacturers only that do not scale images by height, resets zoom and pan when switching from one image type to another (conventional 2D, synthesized 2D, reconstructions) in a combination view. Otherwise different areas of the image may be displayed when switching images during zoom and pan.

Display 3D CAD Marks on Synthesized 2D: enabled | disabled

- Project 3D CAD marks for reconstructed slices onto corresponding synthesized 2D image in a combination view.

Display 3D CAD Marks on Conventional 2D: enabled | disabled

- Project 3D CAD marks for reconstructed slices onto corresponding conventional 2D image in a combination view.

Display 3D CAD Marks on Synthesized 3D Slabs: enabled | disabled

- Project 3D CAD marks for reconstructed slices onto corresponding slabs or SmartSlices in a combination view.

8.4.14 CAD/Case Score

Use this setting to turn on or off the display of Case Score and CAD Score with 3D CAD results (refer to *Displaying 3D CAD Results* on page 111).
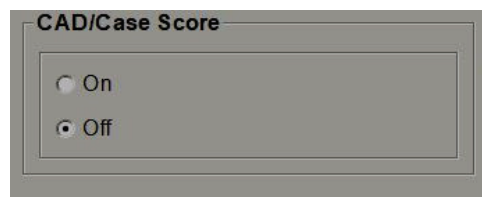
8.4.15 Require Password Change

Use these settings to configure additional password security for all users that do not use Active Directory.

- **Require users to change their password**: Select the check box to require the users to change the password at first or next login. The user is not allowed to log in until the password is changed. If you disable this setting and then enable it again later, all users are required to change the password again at next login.

- **Expiration after <x> days**: Select the check box to force users to change the password after a specific number of days and configure the number of days. The expiration period begins on the day the setting is enabled, or the day the user changes the password.

- **Inform the user <x> days before**: If password expiration is enabled, configure the number of days before expiration to inform the user. The user may continue to use the existing password until the day the password expires.

8.4.16 Double Reading for Studies

On SecurView DX, use to activate automatic double reading for each type of study (Screening or Diagnostic). The default is single reading. When the double reading option is selected, two Radiologist users can independently view the same study without knowledge of each other's findings. (Refer to *Automatically Generated Worklists* on page 40).
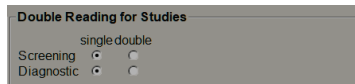
Important

Once SecurView assigns a study for single reading, there is no way to reassign it for double reading. However, for double reading studies, a user can cancel the second reading at close of study. Refer to *Closing a Study* on page 89.

8.4.17 Sending Annotations, Tagged Tomo, Study State

In a double reading scenario, SecurView DX can send a GSPS Report (study reading state with or without Annotations and tagged tomosynthesis slices or slabs) and MG Secondary Capture images after each reader marks a study as 'Read'. This setting allows the GSPS mechanism to synchronize reading states between multiple Standalone systems configured for double reading.
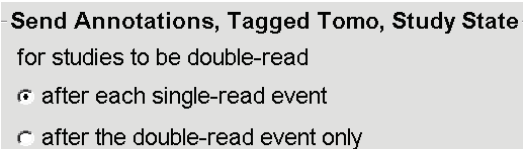
- **after each single-read event:** SecurView sends the GSPS Report and MG Secondary Capture images after any reader marks the study as 'Read'.
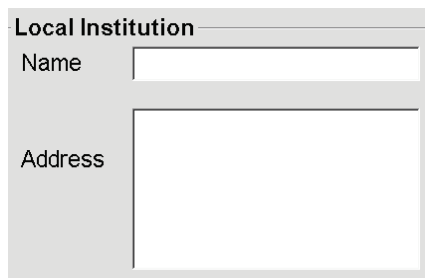
Note

If GSPS or MG Secondary Capture is sent to PACS after the first read, then access to the information before the second reading is complete can violate a double-blind reading protocol.

- **after the double-read event only:** SecurView sends the GSPS Report and MG Secondary Capture images only after the second reader marks the study as 'Read'.

SecurView sends the GSPS Reports and MG Secondary Capture images to destinations configured through the service interface.

8.4.18 Local Institution
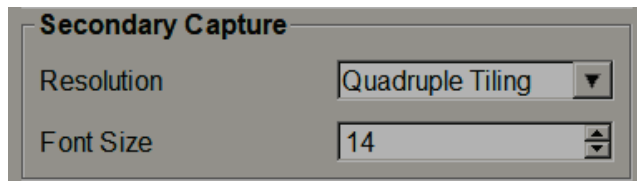
SecurView can include your institution name and address when it creates GSPS Reports, GSPS Notices, MG Secondary Captures, and MM ScreenCaptures. Refer to *Adoption of Institution Name and Address* on page 172. If you select this option, enter the institution name and address.

8.4.19 Secondary Capture
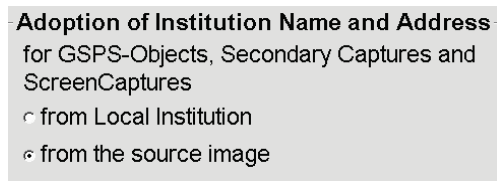
On SecurView DX, use this setting to format any MG Secondary Capture images automatically sent at close of study. An MG Secondary Capture image is created only if the destination PACS does not accept GSPS or cannot display GSPS and the customer wants to view Annotations on the PACS workstation. Refer to *Closing a Study* on page 89.

8.4.20 Adoption of Institution Name and Address

Selects source of institution information for GSPS Reports, GSPS Notices, MG Secondary Captures, and MM ScreenCaptures.

- **from Local Institution:** Information entered in the **Local Institution** area is applied to all SecurView-created GSPS objects, MG Secondary Captures, and MM ScreenCaptures.
- **from the source image:** Institution information contained in the DICOM header of the source image (from which the GSPS object, MG Secondary Capture, or MM ScreenCapture was created) is applied.

8.5   Configuring System-Level Hanging Snapshots and ReportFlows

Administrator users can configure system-level Hanging Snapshots and ReportFlows by selecting the **ReportFlow** tab, then selecting **Configure**.
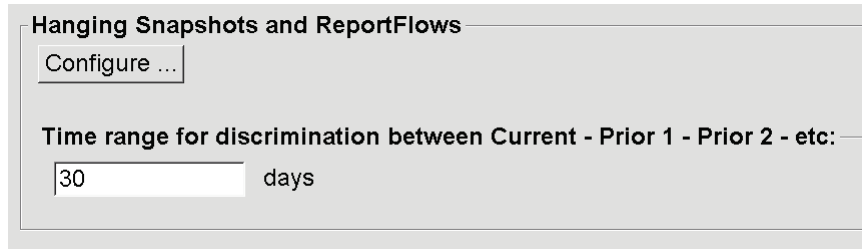
The *ReportFlows* window opens with lists of Available Hanging Snapshots and ReportFlows. For more information, refer to *Hanging Snapshots and ReportFlows* on page 131.

8.5.1   Current–Prior Time Range

Use the Time range field to set the number of days a study is Current. The default setting is 30, which means a Current study changes to a Prior 1 study if it resides more than 30 days on the system.

8.6 Configuring Examination Procedure Names

Use the *Examination Procedure Identification* window to add, edit, or delete procedure names. A procedure corresponds to a predefined set of images associated with a study type. When producing images, the mammography acquisition workstation encodes the name of the examination procedure into the image DICOM headers. When SecurView receives these images, it determines which ReportFlow to select based on the procedure name. Refer to *Linking a ReportFlow to a Procedure* on page 142.
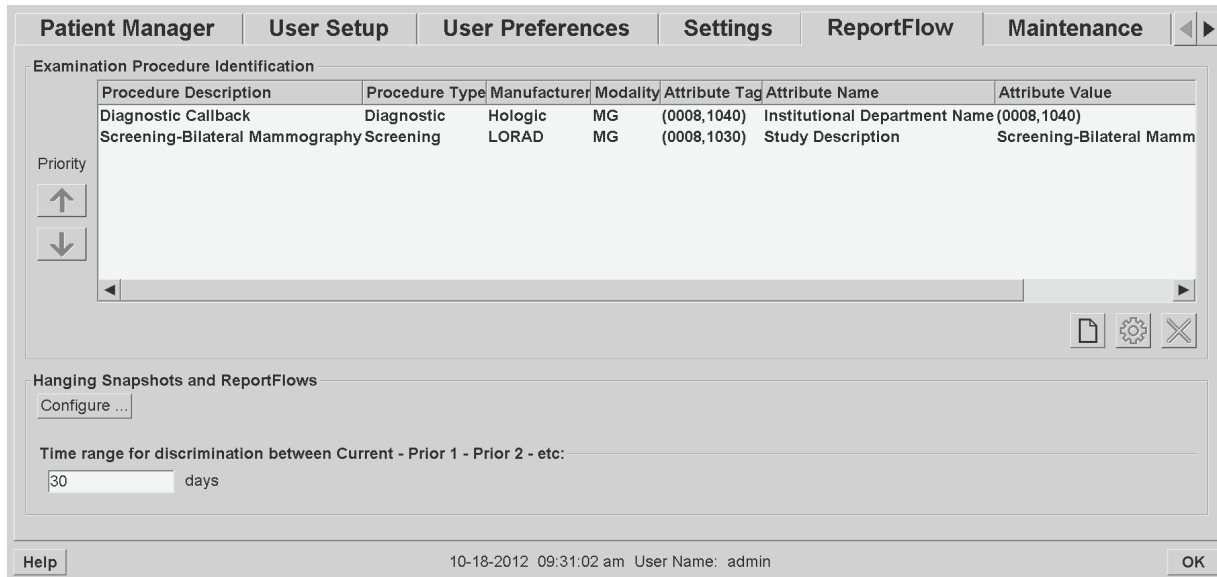
Figure 115: Examination Procedure Identification Window

To add a new procedure:

New

1. Select the **ReportFlow** tab to display the *Examination Procedure Identification* window.

2. Select the **New** button to open the *New Procedure Identification* dialog box.

Important

Be sure to enter the following procedure attributes correctly. Failure to do so can lead to missing studies in the automatic worklists.

3. In the *New Procedure Identification* dialog box:

   a. Enter a procedure name in the Description field (for example, Screening Bi-Lateral Mammography).

   b. Select the appropriate Type from the drop-down list.

   c. Enter the Manufacturer name (optional).

   d. Select the Modality from the drop-down list. MG is the default.

   e. Enter a valid Attribute Tag associated with the procedure. The default is (0008,1030), which is the tag for "Study Description".

   f. Enter the procedure name exactly as it appears on the acquisition workstation, including abbreviations, case, and punctuations in the Attribute Value field.

   g. When done with your settings, select **OK**.

To edit a procedure:

Edit

1. Select the **ReportFlow** tab to display the *Examination Procedure Identification* window.

2. Select the **Edit** button to open the *Edit Procedure Identification* dialog box.

3. When finished editing the procedure, select **OK**.

To delete a procedure:

Delete

1. Select a procedure from the *Procedure Identification* window and select the **Delete** button. The system checks for ReportFlows linked to the procedure you wish to delete. If a ReportFlow is linked to the procedure, the following message appears:

Warning: At least one ReportFlow is linked to this procedure description. By removing this procedure description it will be deleted from the list of linked procedures of one or more ReportFlows. Do you want to continue?
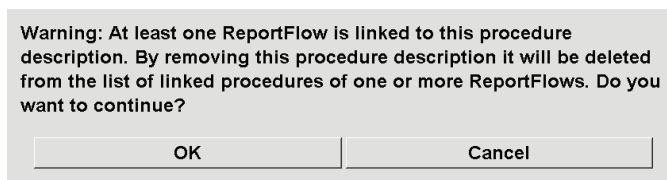
OK   Cancel

2. Select **OK** to delete the procedure or select **Cancel** to exit without deleting.

8.7 Configuring Image Overlays

Use the **Overlay** tab to select which information appears in the MG Viewer, the MammoNavigator feature, and Printing Image Overlays.

- *MG Viewer Image Overlay* on page 176
- *MammoNavigator Overlay* on page 177
- *Printing Image Overlay* on page 178

8.7.1 MG Viewer Image Overlay

The MG Viewer displays images for review by the Radiologist user. Patient, study, and image information appear as overlays that the user can switch on and off. Refer to *Patient Information Overlays* on page 63.

To customize the MG Viewer Image Overlay:

1. In the **Overlay** tab, select the **MG Viewer Image Overlay** tab.
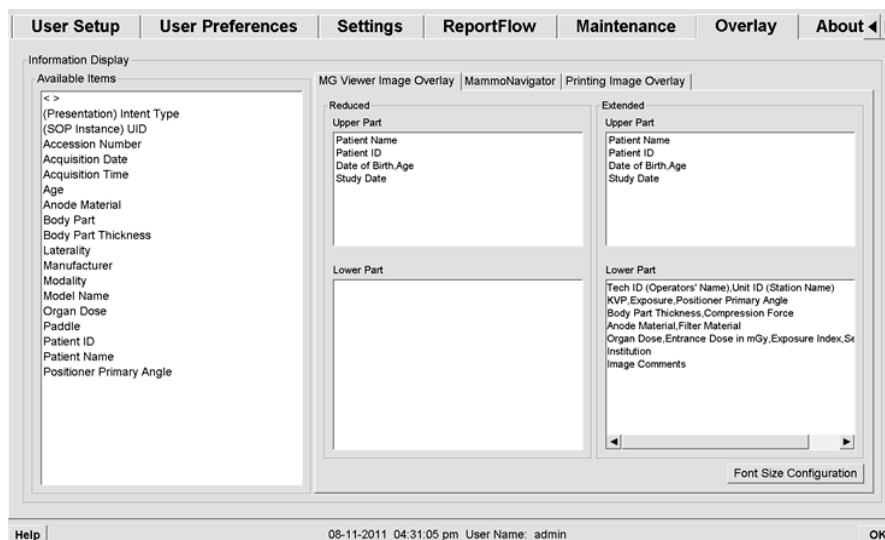
Figure 116: MG Viewer Image Overlay Tab

2. Select an item from the Available Items list and drag it into the Reduced state's Upper/Lower Part or Extended state's Upper/Lower Part areas.

Note

Radiologist users can set their own Image Overlay preferences to display in either Reduced or Extended mode. Refer to *Tools and Overlays Preferences* on page 124.

---

3. To adjust font size, select **Font Size Configuration**. Select the font sizes for each tiling, then select **OK** to save your settings.
4. After configuring the overlay, select **OK** to save your settings.

8.7.2   MammoNavigator Feature Overlay

Use the **MammoNavigator** tab to select which data fields appear in the *MammoNavigator Image Information* window. The *Image Information* window displays DICOM header data associated with the image. Refer to *Image Information* on page 62.

To customize the MammoNavigator feature overlay:

1.   In the **Overlay** tab, select the **MammoNavigator** tab.

2.   Select an item from the Available Items list and drag it into the *MammoNavigator Image Information* window area.
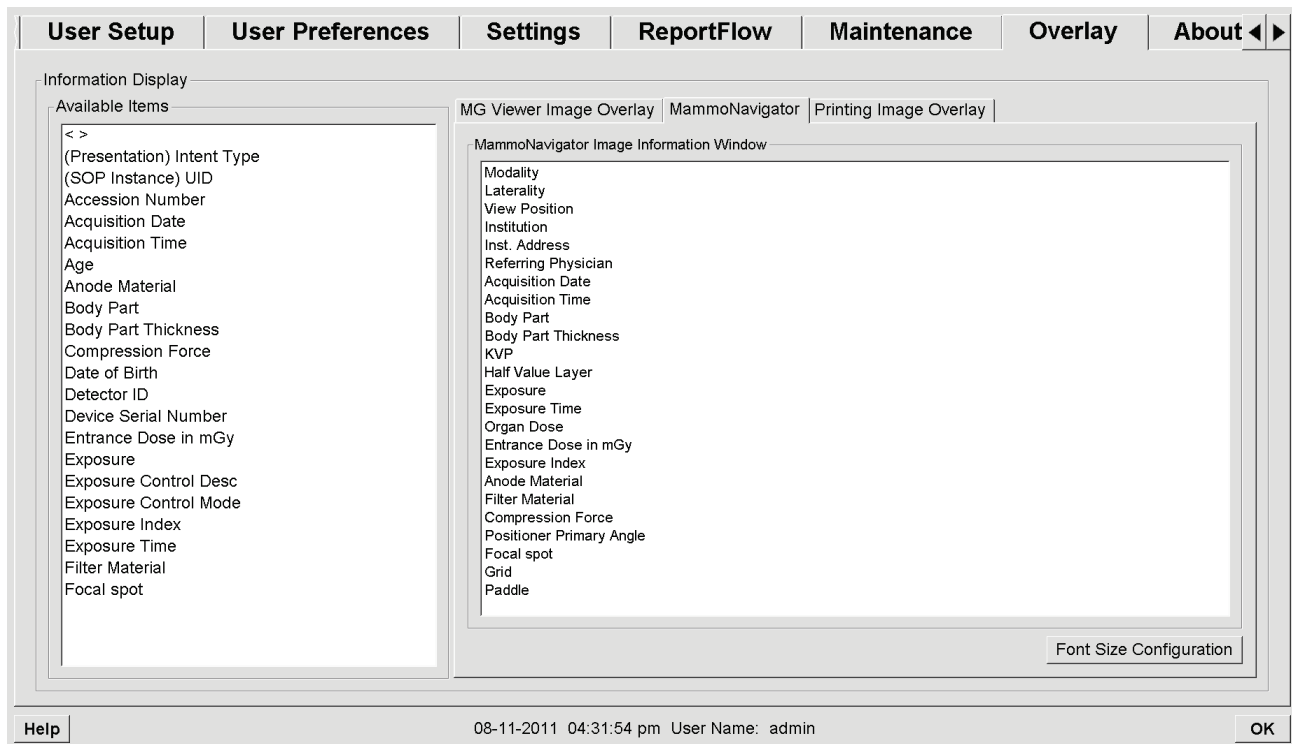
Figure 117: MammoNavigator Tab

3.   To adjust font size, select **Font Size Configuration**. Select the font size for MammoNavigator Image Information, then select **OK** to save your settings.

4.   After configuring the overlay, select **OK** to save your settings.

8.7.3   Printing Image Overlay

You can use the **Printing Image Overlay** tab to select which data fields appear in a printed image. A Radiologist user can print images, along with data (e.g., patient information, Annotations, etc.) on a DICOM film printer. The user selects areas to print (Upper Part, Lower Part, or both) using the MG Viewer *Print* dialog box. Refer to *Printing Options* on page 94.

To customize the Printing Image Overlay information:

1.   In the **Overlay** tab, select the **Printing Image Overlay** tab.

2.   Select an item from the Available Items list and drag it into the 'Upper Part' or 'Lower Part' area.
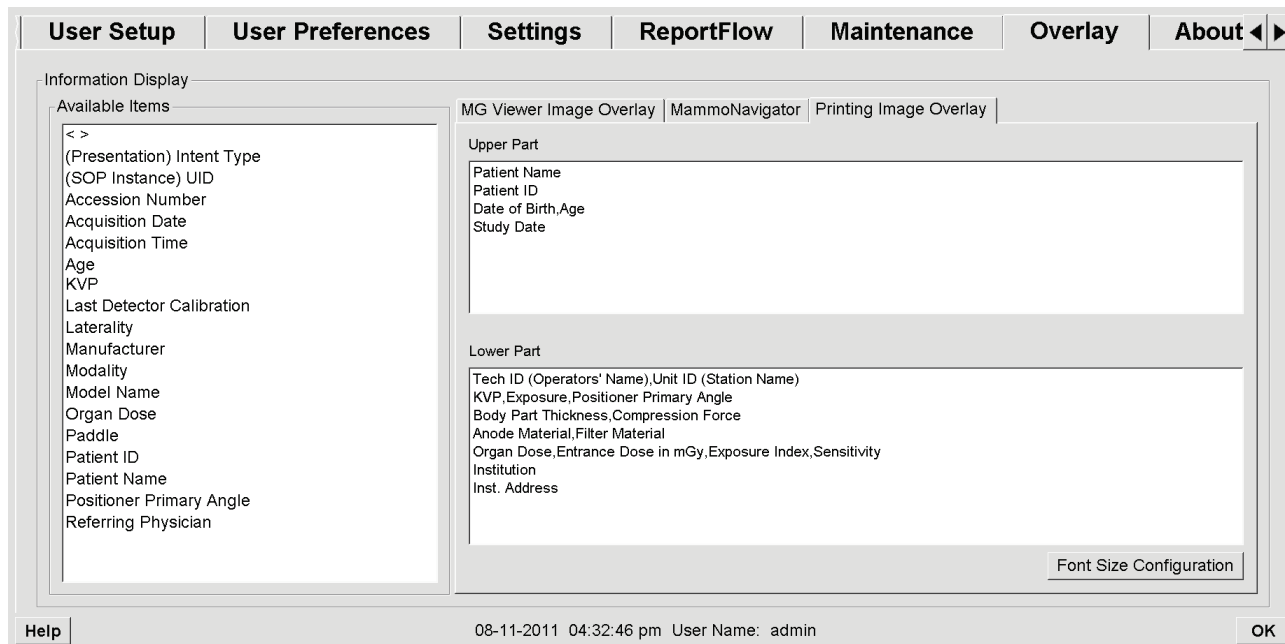
Figure 118: Printing Image Overlay Tab

3.   To adjust font size, select **Font Size Configuration**. Select the font sizes for each tiling, then select **OK** to save your settings.

4.   After configuring the overlay, select **OK** to save your settings.

8.8   Maintaining the Database

The **Maintenance** tab provides options for backing up the database and scheduling database maintenance.

8.8.1 Backing Up the Database

Back up the patient database onto a CD-R/DVD disk. During the backup process, no other functions (such as accepting new images) are available until the process is complete. Schedule convenient time slots for maintenance and make sure that all configured senders have appropriate retry mechanisms.

Important

SecurView backs up the Patient List, ReportFlows, annotations, reading states, and configuration settings available on the user interface. It does not back up image data.

To back up the database:

To avoid loss of data in the event of a system failure, back up the patient database monthly or when known configuration changes have occurred.

Important

In a multiworkstation environment, perform the database backup only on the Manager.

1. Select the **Maintenance** tab to display the following window:
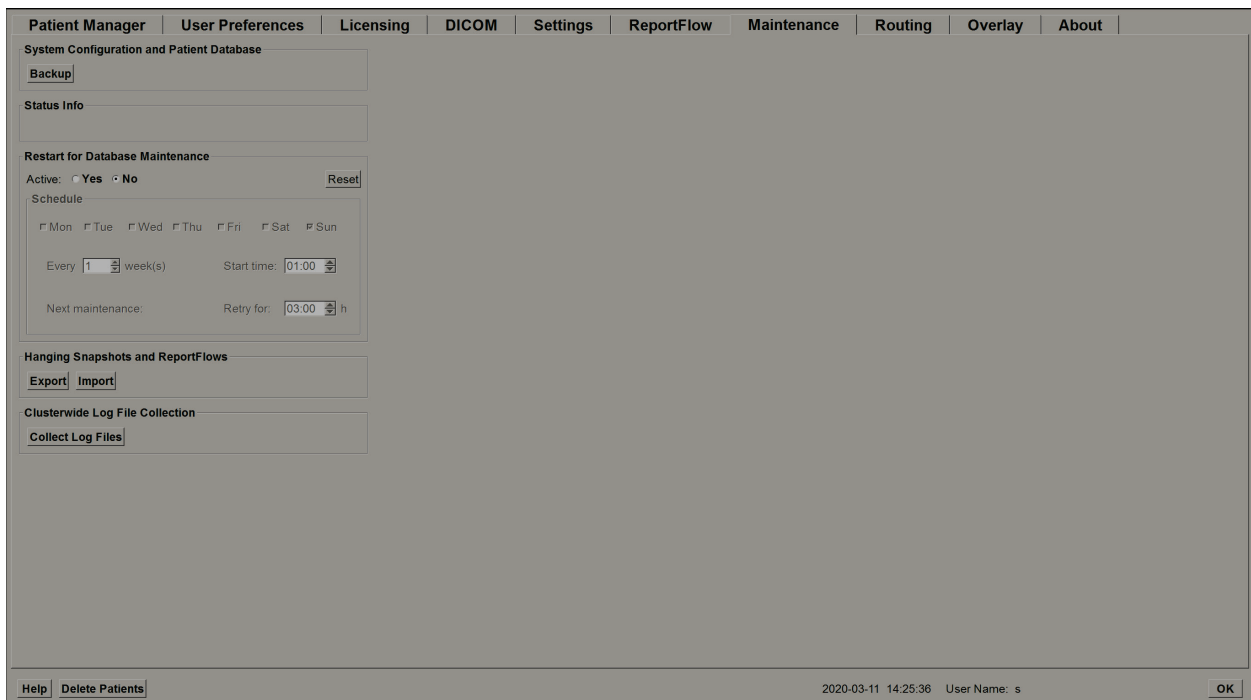
Figure 119: Maintenance Tab

2. Select **Backup**. The insert CD prompt appears.

3.   Insert disk into CD/DVD tray, then select **OK**. When the backup process is complete, the message 'Backup Completed Successfully' appears.

> **Note**
> SecurView displays a message in the Status Info area if the database size exceeds the disk capacity. In such cases, use a DVD.

8.8.2   Scheduling Database Maintenance

When the Restart for Database Maintenance function is 'Active', SecurView automatically restarts the workstation at the interval specified, then analyzes and reindexes the database. Enable this function only if directed to do so by a Hologic Technical Support representative.

The **Reset** button changes all settings back to their default values.

8.8.3   Clusterwide Log File Collection

On the Manager, the **Maintenance** tab includes an option for centralized log file collection. Select **Collect Log Files** to select a folder to collect and store all connected Client log files. The *Clusterwide Log-File Collection* dialog box provides **Start** and **Cancel** buttons and shows log file collection progress.

Chapter 9 Case Administrator Tasks

Case Administrators can merge multiple patient records for a single patient and delete patients from the Patient List. This chapter provides an overview of the Administration module for Case Administrators and describes how to delete patients.

9.1   Opening the Administration Module

When you log in as a Case Administrator, the Administration module includes the **Patient Manager**, **User Preferences**, and **About** tabs.

To open the Administration module:

1.   Log into SecurView.

2.   Select the **Administration** tab to display the Patient List:
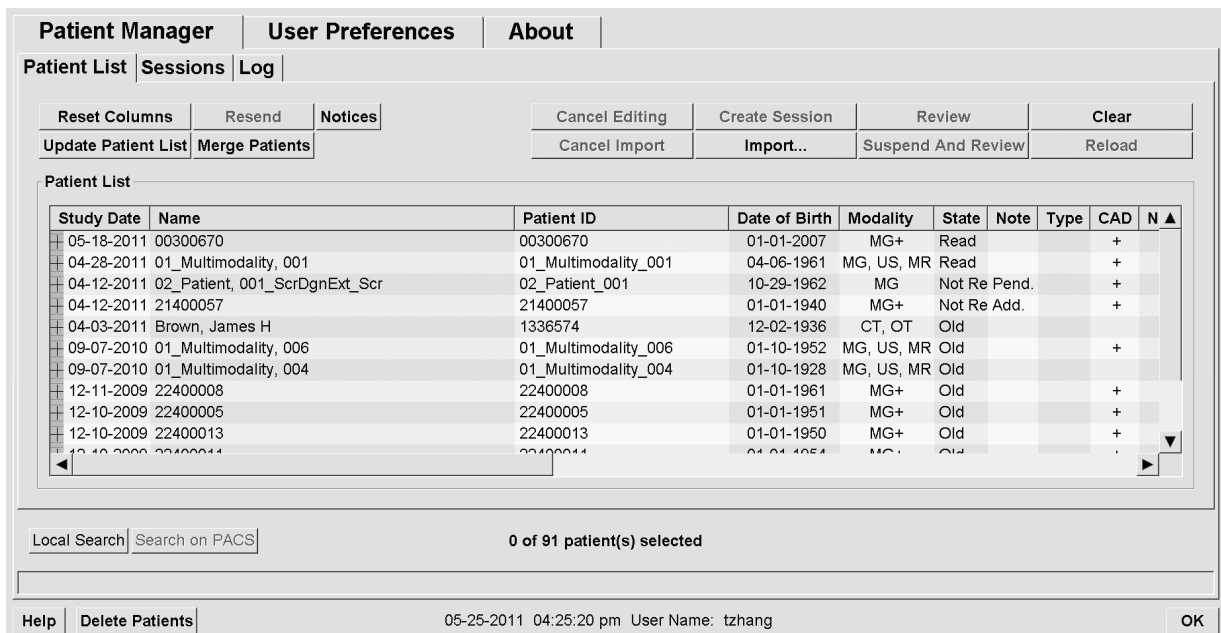
The *Administration* window displays three tabs:

- **Patient Manager** – Displays the Patient List with all patients, their studies, and series currently in the database. The Case Administrator does not have the option to create a new session or synchronize patients.

- **User Preferences** – Displays the Case Administrator's user profile.

- **About** – Displays software information. Refer to this information when contacting the Hologic Help Desk.

9.2   Deleting Patients

Case Administrators can manually delete patients and associated images from the Patient List. In general, you can delete patients with the reading states 'Read', 'Read Once', 'Not Read', and 'Old'. Patients that are part of a Session or in a locked state cannot be deleted.

To delete patients:

1. From the Patient List, select one or more patients, then select the **Delete Patients** button. In response, SecurView:

    •   Deletes all selected patients with the reading state 'Old'.

    •   Posts a message for other selected patients such as:

<div align="center">

Do you want to delete the selected patient(s)?

[OK]   [Cancel]

</div>
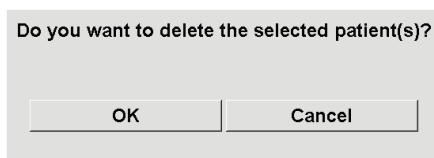
2. Select **OK** to confirm or **Cancel**.

    SecurView posts alternative confirmation messages for patients in other states. For example, if a patient is protected against Automatic Deletion, SecurView displays:

<div align="center">

One or more patients are protected against Auto-Deletion. Press Yes to delete them anyway or Cancel to delete all other patients.

[Yes]   [Cancel]

</div>
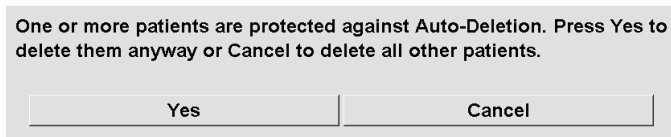
    SecurView posts a similar message for patients that have unsent Annotations (if there is a configured destination).

    SecurView does not allow deletion of:

    •   Patients with the reading state 'Changed' (new images arrived after the study was read)

    •   Patients that are locked (for example, 'Additional Images Required' – refer to *Closing a Study* on page 89)

    •   Patients currently in use on another workstation connected to the same Manager

    •   Patients that are part of a Session

    •   Patients that are being printed

    If you delete a merged patient, SecurView deletes the primary patient, secondary patient, and all associated objects.

Note

If a patient with non-local studies is deleted, the patient may reappear on the patient list after the next Study List Manager update. If such a patient was a merged patient prior to deletion, it will reappear as an unmerged patient.

Chapter 10 Patient and ReportFlow Files

This chapter provides procedures to support the technologist in managing DICOM and ReportFlow files.

10.1 Exporting Currently Displayed Image Files

With this procedure, SecurView exports images that currently appear on the displays to a user-designated folder. By default, SecurView exports the images to F:\Exports. Be aware of the following:

- You can export TIFF image files in two resolutions, depending on the setting in your User Preferences (refer to *Tools and Overlays Preferences* on page 124).

- SecurView creates filenames for each image in the form: [Patient Name_Examination Date_View_SOP Instance UID.ext], where 'ext' can be 'tif' or 'dcm', depending on the file type.

- If a DICOM Mammography CAD Structured Report is available for any displayed image(s), SecurView exports it with the filename [Patient Name-CAD_Examination Date_SOP Instance UID.sr]. You cannot export CAD SR files in .tif format.

For tomosynthesis images:

- SecurView exports all tagged slices or slabs. If none are tagged, SecurView exports only the currently displayed image (conventional mammography, synthesized 2D, CE2D low-energy or CE2D subtraction image, projection image, or reconstructed slice or slab), not the entire stack.

- SecurView identifies the exported slice (or slab) by appending the slice (or slab) number to the end of the filename (e.g., '_42' for slice 42).

- If you set the slab thickness to greater than the original thickness (e.g., 1 or 6), then for TIFF images only, SecurView exports the slab view, not just the middle slice, and appends the number of slices to the file name (e.g., '_42(7)' for a view of seven slices).

To export currently displayed image files to a workstation folder:

1. Display the images on the SecurView DX workstation. If you are exporting tomosynthesis images, refer to *Tagging Tomosynthesis Reconstructed Slices or Slabs* on page 115 for tagging information.

2. On the keyboard, press [E] (for **Export**).

3. When the dialog box opens, select either **DICOM** or **TIFF** format.

Important

Do not use exported TIFF files for diagnostic use. Use DICOM format instead.

4. Select **Export** and browse to the drive and folder where you wish to store the images. When you select **OK**, SecurView exports the images currently appearing on both displays to the designated folder. When all files have been exported, the dialog box closes automatically.

Important

Do not select **Cancel** until all files have been exported. If you select **Cancel** too soon, SecurView may export an incomplete data set.

10.2 Exporting DICOM Files

Use this procedure to transfer DICOM Part 10 files for one or more patients from SecurView to external media (USB drive or disk). If there is a Manager, it is best to use it when possible.

Note

To import images, refer to *Importing DICOM Images* on page 38.

1. Log into SecurView and select the **Administration** tab.

2. On the Patient List, highlight the patient or patients you want to export.

3. Right-click the highlighted patient (or patient group), then select **Export to media**. Then either:

    •   Insert disk into CD/DVD tray and close tray, or

    •   Select **Browse...** Under My Computer, find and select the USB or DVD drive. Highlight the destination folder and select **OK**. If the Windows *Burn a Disc* dialog box opens, select **Cancel**.

Note

If you select a write mode in the Windows *Burn a Disc* dialog box and select **OK**, the CD/DVD may not be usable to burn data from SecurView.
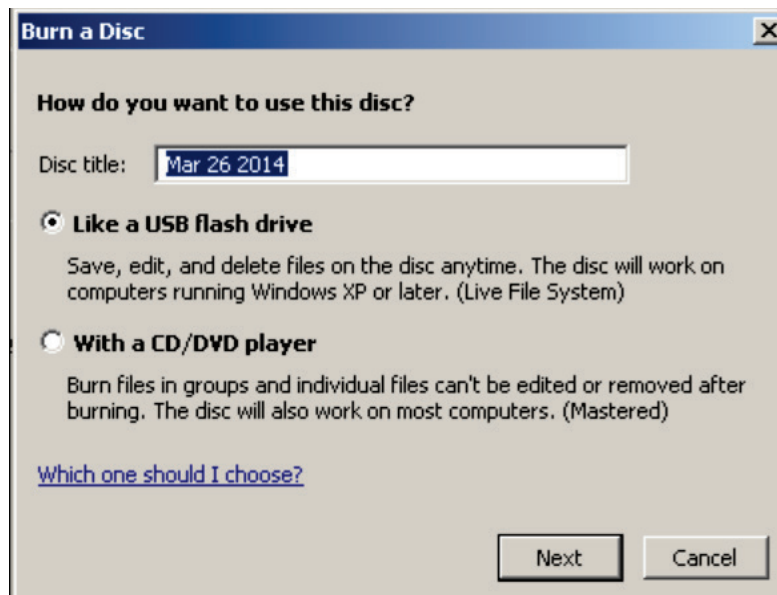
Figure 120: Windows Burn a Disc Dialog Box

4. Select **Export** to begin exporting all files for the selected patient(s), which can take several minutes (the DICOM files are large). At the selected destination, SecurView creates a FILES folder and copies the DICOM files to the folder. When done, SecurView displays 'Export was successful'.

5. If you exported the files to a disk, the CD/DVD tray opens automatically. Remove the disk and label it. Close the tray.

6. Select **Close**, then select **OK**.

10.3 Importing and Exporting ReportFlows

If there is a Manager, it is best to use it when possible.

Note

To import, the ReportFlows must have been created for SecurView 6-x or later. You cannot import ReportFlows that were created for SecurView 5-x or earlier.

10.3.1 Importing ReportFlows from a USB Drive to SecurView

1. Insert a USB drive into a USB port on the SecurView workstation.

2. Log into SecurView using "admin".

3. Select the **Administration** tab, then the **Maintenance** tab.

4. Under Hanging Snapshots and ReportFlows, select **Import**. The *Open* dialog box opens.

5. In the **Look in** drop-down list, find and select the **G:** drive. (If there is no G drive, look for the removable drive.)

6. Find, then select the ReportFlow or ReportFlow group you want to import.

7. Select **Open**. The *Import of ReportFlows* dialog box opens.

8. Highlight the ReportFlow(s) you want to import.

9. Select **Import**. The *Import of ReportFlows* dialog box closes, and SecurView writes the ReportFlows to its database.

10.3.2 Exporting ReportFlows from SecurView to a USB Drive

1. Insert a USB drive into a USB port on the SecurView workstation.

2. Log into SecurView using "admin".

3. Select the **Administration** tab, then select the **Maintenance** tab.

4. Under Hanging Snapshots and ReportFlows, select **Export**. The *Export of ReportFlows* dialog box opens.

5. Highlight the ReportFlow(s) to export, then select **Export** to open the *Save as* dialog box.

6. In the **Look in** drop-down list, select the **G**: drive. (If there is no G drive, look for the removable drive.)

7. If desired, rename the ReportFlow or the group of ReportFlows that you are exporting to your USB drive at the bottom of the window where it says File name. Do not use '/' as part of your ReportFlow name.

8. Select **Save**. The *Save as* dialog box closes and SecurView writes the ReportFlows to the USB drive, which takes just a few seconds.

9. Remove the USB drive.

Appendix A Keyboard Shortcuts

Tool	Key	Function	Tool	Key	Function
	[1] or [End]	FlowBack	—	[CTRL] and [t]	Toggle current / prior color indication
	[4] or [Left Arrow]	FlowNext		[F9]	Window / Level
	[0] or [Ins]	Overview		[F3] or [N]	Increase Gamma
	[-]	CC Current		[F1] or [M]	Decrease Gamma
	[+]	MLO Current		[F2]	Reset Window/Level
	[/]	CAD		[F8]	Reset
	[7], [D], [Home] or [Up Arrow]	View Actual Pixels **Left**		[Delete]	Previous Patient
	[9], [8], [F] or [Page Up]	View Actual Pixels **Right**		[Enter]	Next Patient
	[Y]	Same Size		**[Q]**	Exit
		Right Size		**[?]**	Help
	[X]	True Size	—	**[Backspace]**	Delete Selected Marking
	[F5]	Fit to Viewport	—	**[Z]**	Undo Delete Marking
	[R]	Synchronize	—	[I]	Invert All Images
	[F10]	Arrow	—	[E]	Export Images
	[F11]	Ellipse	—	[*]	Display/Hide Toolbar
	[F12]	Freehand		**[J]**	Toggle MG / Tomo
	[2] or [Down Arrow]	Measurement		**[F6]**	Cine Start/Stop
	[A]	Magnifier	—	**[Spacebar]**	Tag Tomo Images
	[6] or [Right Arrow]	MammoNavigator		[W]	Next 3D CAD Mark
	[3] or [Pg Down]	Patient Information		[S]	Previous 3D CAD Mark

Tool	Key	Function	Tool	Key	Function
	[G]	Patient List	—	[B]	3D CAD Boundaries
	[5]	Close Study	—	[C]	3D CAD Clusters
	[F7]	Continuous Zoom	—	**[F4]**	Display Mouse Cursor Position (if configured)
		Reset Cont. Zoom	—	**[H]**	Display full DICOM header content
	[V]	Smart Mapping			

Appendix B Technologist's Guide

This appendix provides a quick reference for procedures commonly used by radiologic technologists.

For this procedure…	Refer to section…
To add a new user to SecurView	*Managing User Profiles* on page 150
To create and manage Sessions on SecurView DX	*Creating Sessions* on page 36
To send and view Notices	*Sending and Viewing Notices* on page 88
To close a study on SecurView RT	*Closing a Study as a Technologist* on page 93
To create and manage Hanging Snapshots	*Creating and Modifying Hanging Snapshots* on page 133
To create and manage ReportFlows	*ReportFlows* on page 140 *Linking a ReportFlow to a Procedure* on page 142 *Creating New ReportFlows* on page 143 *ReportFlows Preferences* on page 146
To print standard mammography images	*Printing Options* on page 94
To print tomosynthesis images	*Printing Tomosynthesis Reconstructed Slices and Slabs* on page 116
To export images to external media	*Exporting Currently Displayed Image Files* on page 183 *Exporting DICOM Files* on page*184*
To import images into SecurView	*Importing DICOM Images* on page 38
To import or export ReportFlows	*Importing and Exporting ReportFlows* on page 184

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