Symmetry™ PACS 1.4.30_P2

User's Manual

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Introduction

Symmetry™ PACS is a web-based application that provides access to diagnostic images from any clinical device. Symmetry PACS optimizes and simplifies workflow, and includes a zero-footprint viewer. This manual covers commonly used settings and tasks in the program.

Symbols

The following symbols may appear in the product documentation or on the product.

Symbol	Symbol Name	Symbol Description	Standard Number and Name	Symbol Reference Number
	Manufacturer	Indicates the name and address of the manufacturer	ISO 15223-1:2021	5.1.1
EC REP	Authorized Representative in the European Economic Area (EEA)	Indicates the Authorized Representative, responsible for the device in the European Economic Area (EEA).	ISO 15223-1:2021	5.1.2
	Date of Manufacture	Indicates the date when the device was manufactured.	ISO 15223-1:2021	5.1.3
	Caution	Indicates information that is important for preventing loss of data or misuse of the software.	ISO 15223-1:2021	5.4.4
LOT	Batch Code	Indicates the full Software Release / Version number	ISO 15233-1:2021	5.1.5
SN	Serial number	Indicates the manufacturer's serial number so that a specific medical device can be identified	ISO 15233-1:2021	5.1.7
REF	Catalogue Number	Indicates the manufacturer's catalogue number so that the device can be identified	ISO 15233-1:2021	5.1.6
	Consults instructions for use	Indicates the need for the user to consult the instructions for use	ISO 15233-1:2021	5.4.3
Rx Only	Prescription Device	Caution: Federal law restricts this device to sale by or on the order of a licensed healthcare practitioner	21 CFR 801.109(b)(1) Prescription Devices	N/A

BS EN ISO 15223-1:2021 Medical devices - Symbols to be used with information to be supplied by the manufacturer - Part 1: General requirements

Indications for use

EXA™ is a software device that receives digital images and data from various sources (i.e. CT scanners, MR scanners, ultrasound systems, R/F Units, computed & direct radiographic devices, secondary capture devices, scanners, imaging gateways or other imaging sources). Images and data can be stored, communicated, processed, and displayed within the system and or across computer networks at distributed locations. Lossy compressed mammographic images are not intended for diagnostic review. Mammographic images should only be viewed with a monitor cleared by FDA for viewing mammographic images. For primary diagnosis, post process DICOM "for presentation" images must be used. Typical users of this system are trained professionals, nurses, and technicians.

Training

Users of this software must have received adequate training on its safe and effective use before attempting to operate the product described in this Instructions for Use. Users must make sure they receive adequate training in accordance with local laws or regulations.

Regulatory and compliance

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System requirements

The following are the system requirements for clients of Symmetry PACS based on typical usage scenarios. For the recommended requirements of your specific implementation, contact your Konica Minolta representative.

RECOMMENDED: To avoid loss of functionality and data during a power loss, connect an uninterruptible power supply. When running the system by the UPS alone, always save data immediately after modifying.

REQUIRED: Install anti-virus software on the server and each client.

Server

Component	Specification
Processor	Intel® Xeon® Gold 5120 CPU @ 2.20GHz
Physical Cores	14
Memory	31.5 GB
Storage	1.2 TB SSD
NIC	Single 1000 MB/s

Workstation - User

Component	Specification
CPU	Intel® Core™ i5 or later
RAM	8 GB or more
NIC	Single 1000 MB/s
Storage	HDD, 500 GB or more
OS	Windows 10 Pro, 64-bit
Monitor	20 inch, 1600 × 1200

Workstation – Reading Radiologist

Component	Specification
CPU	Intel Xeon® E-2176G (3.70 GHz, 12 MB) or later
Graphics Cards	2 NVIDIA® Quadro® P1000 cards
RAM	32 GB or more
NIC	Single 1000 MB/s
Storage	SDD, 500 GB or more
OS	Windows 10 Pro, 64-bit
Monitor	Diagnostic displays

Calibration and measurement accuracy

Measurement accuracy partially depends on image quality, which is subject to various factors including the skill of the technologist, the precision of the modalities, and image resolution. However, clinical users of Symmetry PACS can help ensure diagnostic image quality and accurate measurements by using appropriate viewer settings (such as window/level and zoom) and by calibrating monitors (see “Calibrate monitors”).

The clinical user is responsible to judge the accuracy of the measurements based on the image quality and based on the accuracy of placed measurement points. For a table of measurement accuracies, see “ Measurement Accuracy Limits ” in the appendix.

Getting started

Configure your working environment

Internal and external setup

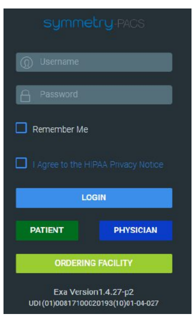
Configure the language in Chrome

You must configure the browser language of your client computer as follows.

1. In Chrome, select the customize ⋮ button, and then select **Settings**.
2. At the bottom of the **Settings** screen, select **Advanced**.
3. Under **Languages**, expand the **Language** row.
4. If the local language and culture is not already installed, select **Add languages** and add the language.
   Note: The culture must be correct. For example, in Canada, ensure that English (Canada) is installed.
5. Select the more actions ⋮ button for the local language, and then select the **Display Google Chrome in this language** check box.
6. Select the more actions ⋮ button again, and then select **Move to Top**.
7. Select **Relaunch**.

Sign in to the Exa platform

You can sign in to the main application or a portal.



1. In Chrome, go to the URL given to you by your Konica Minolta representative.
2. Enter your sign-in credentials.
3. Select the **I agree to HIPAA Privacy Notice** check box.
4. Do one of the following:
   - To sign in to Symmetry PACS, click **LOGIN**.
   - To sign in to a portal, click a portal button.

Reset your password

If you forgot your password, contact your administrator for instructions on how to reset your password.

Change your password

You can change your sign-in password.

1. Select the burger button.
2. At the top of the burger menu, select the blue Konica Minolta globe:

or  (user avatar).

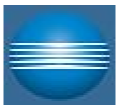
3. In the **My Profile** dialog box, select **CHANGE PASSWORD**.

Enter current and new credentials, and then select
SAVE PASSWORD.

Edit your user profile

Each user of Symmetry PACS has a profile with sign-in credentials and other information. After signing in, you can view and edit your information.

1. Select the burger  button.
2. At the top of the burger menu, select the blue Konica Minolta globe or user's avatar:

    or  (user avatar).

3. In the **My Profile** dialog box, enter the following settings.

Setting	Description
User Name	Type a user name for sign-in purposes.
Name	Type your true name.
Mobile Phone/Email	Type your mobile phone number and/or email address. An email address is required for two-factor authentication.
Default Device	[Unused]
Auto Open Dictation on Device	[Unused]
Default Location	Select a facility as your default location. When you sign in, this facility appears in various parts of the program by default. You must configure the facilities that you want to make available in this list.
Always Open Schedule Book in a New Tab	Select to cause the program to open a new browser tab for the schedule book automatically when you open it.
Rows to Display	Select how many rows to display on the worklist.
Themes	Select a default theme of Bright (default) or Dark.
Culture	Select the language/culture of the user interface.
Pin Burger Menu	Select to keep the burger menu open in the left pane of the screen.
Hide Worklist Icons	Hides the lower toolbar and study row buttons on the worklist. Hidden functions remain available in shortcut menus and other controls.
Hide Order Menu	Hides the navigation menu within the edit study screen.
Bandwidth	Select the expected speed of the network on which your client installation runs. This helps to optimize performance in your networking environment.
Session Interval	Type the number of minutes to elapse before the program times out and returns to the sign-in screen.

Default Scheduling/Radiology	[Unused]

4. Select **SAVE**.

Add an avatar

An avatar is an image such as a photo that represents you in various parts of the program.
Prerequisites: Prepare a PNG image to use as the avatar.

1. At the top of the burger menu, select the blue Konica Minolta globe.
2. In the **My Profile** dialog box, select **Choose File**.
3. Browse for and select your avatar image, and then select **Open**.
4. Select **SAVE**.

View version information

You can view version information about the application, host system, services, and external tools.

1. Select the burger button.
2. At the bottom of the burger menu, select the white Konica Minolta globe.

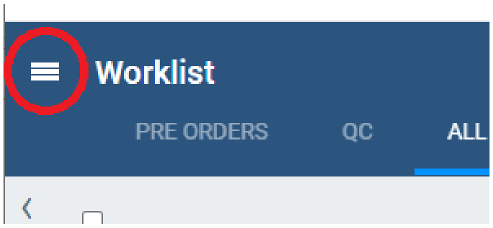
Create a shortcut for Symmetry PACS

You can create a shortcut for the local Windows user to Symmetry PACS and place it on the desktop.

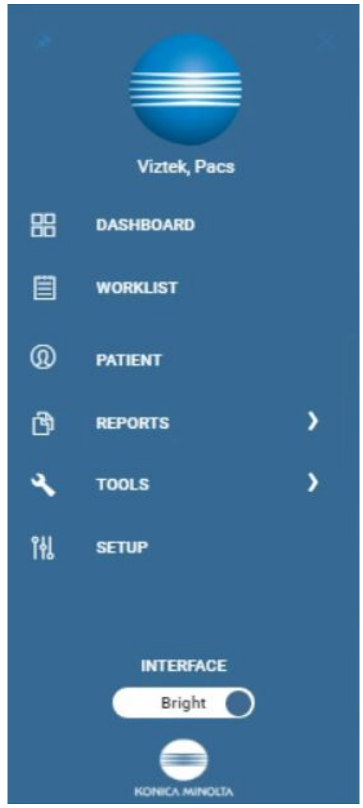
1. In Chrome, go to the Symmetry PACS sign-in page.
2. In the address bar, drag the lock icon onto the desktop.
   The Exa Login shortcut appears.
3. Optional. To change the shortcut icon:
   - Right-click the shortcut and then select **Properties**.
   - Select **Change Icon**, and then browse for and select an icon.
   - Select **OK**.

Work with the hamburger menu

The hamburger (burger) menu is the main menu of the program. To open it, click the burger menu button shown in the red circle below.



The burger menu button...



...and menu

Setup: Configure Symmetry PACS

Before using Symmetry PACS, you must configure settings and information used in various parts of the program. This section helps with the most common areas of basic configuration. For help with other detailed settings, contact your Konica Minolta representative.

Configure your company

Company settings include basic information such as name and address, but also include a range of preset options for items such as: sex, body parts, and ethnicity; patient alerts, critical findings, and cancellation reasons; MRN and accession number formats; passwords; and billing modifiers. To configure your company:

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then click **Office**.
3. On the **COMPANY** tab, enter the following settings.

Setting	Description
Code	Type your internal code for your institution.
Name	Type the name of your institution.
Timezone	Select the time zone used by your institution.
Enable RCopia Service	Select to turn on the RCopia service, if available, and display the RCOPIA CONFIG tab. Enter settings in the tab, and then click SAVE CONFIG.
Enable Payment Gateway	Select to turn on the Payment Gateway service, if available, and display the PAYMENT GATEWAY tab. Enter settings in the tab, and then click **SAVE.**
Trigger Routing on Study Flag Changed	Select to reprocess routing (DICOM transactions) automatically when a user changes a study flag.

4. Click **SAVE.**
5. Enter additional information as needed by following the steps in the subsections below.
   Note: When finished, click SAVE again at the top of the screen on the right side of the Trigger Routing on Study Flag Changed check box.

Configure general settings

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then click **Office**.
3. On the **COMPANY** tab, on the **GENERAL** sub-tab, enter the following settings.

Setting	Description	
Contact Information	Enter the company address and contact information.	
Billing Information	Corporate Office Type	Select Person for an individual practice. Otherwise, select Non-Person Entity.
	NPI No.	Type your national provider identifier.
	Taxonomy Code	Type your NPI taxonomy code.
	Tax ID	Type your national tax ID.

	EDI Submitter ID	If using an EDI service, type your submitter ID.
	EDI Receiver ID	If using an EDI service, type your receiver ID.
	Modifiers in Order	Forces the user to enter modifiers before creating an order.
	ICD9 to ICD10	Select to automatically convert diagnostic codes from the ICD9 to ICD10 standard.
Documents	File Store	Select a file store for scanned documents at your company. This is separate from the file store used by AEs to store images.
Security	Account Lockout Threshold	Set the maximum number of sign-in attempts.
Viewer	Viewer Titlebar Text	Select to display the patient name or the accession number on the title bar when opening a study in the viewer.
Patient Portal	[check boxes]	Select which demographics to display in the patient portal.
Email Information	Server Address	Type the address of your outgoing SMTP/mail server.
	Port	Type the mail server port number.
	User Name	Type the account administrator user name (or email address).
	Password	Type the email administrator password.
	Sender Address	Type the default sender address.
	Email Subject	Type a default email subject.

4. Click **SAVE ALL INFO**.

Configure settings

Settings here means presets that appear as options in other parts of the program.

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then click **Office**.
3. On the **COMPANY** tab, on the **SETTINGS** sub-tab, in the list on the left side of the screen, select one of the settings in the table below.
4. At the bottom of the screen, in the **Description** box, type a setting, and then click **SAVE.**

Setting	Description
User Titles	User prefixes, such as Mr., Mrs., and Dr.
Marital Status	Patient marital statuses, such as Single, Married, and Divorced.
Sex	Patient sexes.
Body Parts	Patient body parts under examination.

Employee Status	Statuses of employees at your institution.
Credentials	Physician credentials, such as Ph.D. and M.D.
Racial Identity	Patients’ self-identified races.
Ethnicity	Patients’ self-identified ethnicities.
Relationship	Relationships of people to patients (including self).
Priorities	Priorities that can be assigned to studies in the worklist. These are separate from STAT levels.
Sources	Sources of patient arrivals, such as clinic referral, attorney office, hospital transfer, or emergency room.
Orientation	Lateralities as they pertain to the study.
Languages	Patients’ preferred languages.
Specialties	Healthcare worker specialties such as oncology or sports medicine.
Communication Preferences	Patients’ preferred methods of communication, such as cell phone or email.
Administration Site	Immunization modes.
Regions	Geographical regions, such as for grouping markets.
Units of Measure	Units of measure, such as for doses of medication or contrast material.

Configure app settings

Settings here means presets that appear as options in other parts of the program.

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then click **Office**.
3. On the **COMPANY** tab, click the **APP SETTINGS** sub-tab.
4. In the list on the left side of the screen, select one of the settings in the table below.
5. At the bottom of the screen, in the **Description** box, type a setting and click **SAVE.**

Setting	Description
States	States, provinces, prefectures, or other regions.
Scan Document Types	Descriptions to assign to documents to be scanned, such as “Photo ID” or “Explanation of Benefits.”
Stat Levels	Descriptions for each of the STAT levels (0–5). You can also assign a background color and text color to easily identify the STAT level on the worklist and elsewhere.
TAT	Descriptions of each TAT. Click the edit icon of a TAT to modify its description, text color, and background color. You can set the max TAT for a facility under Setup > Office > Facility.
Patient Arrival Wait Times	Color-coded descriptions corresponding to lengths of time that a patient waits upon arrival. These bands of time appear in the

	wait time monitor at the top of the Patient Arrival Worklist.
Access Reasons	Reasons for accessing confidential patient records when using the Break the Glass function.

Configure reason codes

Reason codes are text strings that identify reasons for taking various actions such as cancellations, follow-ups, and rescheduling. You can pre-configure them for use in various parts of the program.

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then click **Office**.
3. On the **COMPANY** tab, on the **REASON CODES** sub-tab, select a category.
4. **Optional.** If configuring a **Pause** reason (reason for technologist pausing an exam), select the **Required** check box to require the technologist to select a reason.
5. In the dialog box, click **ADD**, type a reason code, and click the save button.
6. Click anywhere outside of the dialog box to close it.

Configure the MRN format

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then click **Office**.
3. On the **COMPANY** tab, on the **MRN INFORMATION** sub-tab, enter the following settings and then click **SAVE.**

Setting	Description
MRN Type	Select Default to use the default format included with Symmetry PACS, or Custom to define your own format.
Prefix	Type a prefix to prepend to the MRN. To be able to modify the prefix, select Can Edit.
Suffix	Type a suffix to append to the MRN.
Allow Duplicates	Select to allow duplicate MRNs.
Prefix/Suffix Max.	Select Fixed Length (above), and then type or select the maximum length of the MRN prefix and suffix.
Fixed Length	Select to specify a maximum length of the MRN.

Configure the accession number format

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then click **Office**.
3. On the **COMPANY** tab, on the **ACCESSION INFORMATION** sub-tab, enter the following settings and then click **SAVE.**

Setting	Description
Prefix	Type a prefix to prepend to the accession number.
Suffix	Type a suffix to append to the accession number.

Configure AE filters

Use these settings to restrict the AE titles, IP addresses, and institutions that are associated with your company in other parts of the program.

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then click **Office**.
3. On the **COMPANY** tab, on the **AE FILTER** sub-tab, in each box, type an item and then click the plus button.

Setting	Description
AE Title	Add an AE title.
IP	Add an IP address.
Institution	Add an institution.

Configure HL7 filters

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then click **Office**.
3. On the **COMPANY** tab, on the **HL7** sub-tab, enter the following settings and then click **SAVE.**

Setting	Description
Receiving Facilities	Add a facility that can receive HL7 messages, and then click **ADD.**
Send Ack	Select to send an acknowledgement upon receipt of an HL7 message.

Configure password options

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then click **Office**.
3. On the **COMPANY** tab, on the **PASSWORD MGT**. sub-tab, enter the following settings and then click **SAVE.**

<table>
<tr><th>Setting</th><th colspan="2">Description</th></tr>
<tr><td>Password Must Be between…</td><td colspan="2">Type a minimum and maximum number of characters that passwords can contain.</td></tr>
<tr><td rowspan="4">Passwords Must Contain …</td><td>Uppercase Letters</td><td rowspan="4">Symmetry PACS validates passwords based on these selections.</td></tr>
<tr><td>Lowercase Letters</td></tr>
<tr><td>Numbers</td></tr>
<tr><td>Symbols or Special Characters</td></tr>
<tr><td>‘User Must Change Password Next Login’ Is Checked by Default</td><td colspan="2">Select or clear to assign the default state of the setting.</td></tr>
<tr><td>Force Users to Reset Their Password on a Set Schedule</td><td colspan="2">Select to require password resets of a specified interval.</td></tr>
</table>

Configure modifiers

Modifiers are codes that provide additional detail to billing transactions.

1. On the burger menu, click **SETUP**.

2. Next to the burger button, click the word in all caps, and then click **Office**.
3. On the **COMPANY** tab, on the **MODIFIERS** sub-tab, scroll to the bottom of the screen, enter the following settings, and then click **SAVE.**

Setting	Description
Code	Type the CPT modifier, or other modifier code.
Description	Type the description for the code.
Fee Level	Select the fee level in the list.
Fee Override	Type the fee override code which takes precedence over any modifier created previously. To configure an override amount: In the first list select an operator (+ or -), in the box type an amount, and then in the last list select Value or %.
M1–M4	Select the modifier number to which to assign the code.
Display on Schedule Book and Print Order	Select or clear to control visibility of modifiers.

Add a facility

You must add at least one facility to your institution.

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then click **Office**.
3. On the **FACILITY** tab, click **ADD**.
4. Enter the following settings for the facility.

Setting	Description
Code	Type your internal code for the facility (up to eight characters).
Name	Type the name of your facility.
Market	Select the market that the facility serves.
Contact No.	Type the phone number of the primary contact person at the facility.
Fax No.	Type the fax number for receiving approved reports.
Send Reports to Fax No.	Select to automatically send reports to the fax number you entered above.
Email	Type the email address of the primary contact at the facility.
Email Report Link	Select to automatically send an email when a report is created to the email address entered earlier that contains a link to view the reports on the ReportLink service.
Report Password	Type the password needed to view reports on ReportLink.
Email Attachment	Select to receive reports by attachment.
Timezone	Select the time zone used by your facility.
Mammo License ID	Type the facility’s mammography license ID.

Setting	Description
Max TAT	Type the maximum allowed turnaround time, in minutes, before a breach of contract occurs.
Enable Alt. Acc. No.	Select to use of more than one account number for a patient.
Required SSN	Select to require a social security number to provide treatment.
Require Primary Phys.	Select to require a primary physician’s information to provide treatment.
PokitDok Response	[Unused]
Upload Logo	Click **Choose File**, browse for and select a logo file for the facility, and then click **Open**. Logo files can be in JPEG or PNG format.
Remove Logo	To remove the current logo, click **REMOVE LOGO**.
[Address]	Type the address of the facility.
Modality Display Width	Type the column width for each modality room, in numbers of pixels.
File Store	Select the default file store to use at the facility.
Show Patient Alerts	Select to show a patient alert window when scheduling in the schedule book.
Show Recent Schedules	Select to display the recent schedules dialog box when: 1) scheduling a pre-order; and 2) double-clicking a patient in the Patient tab of the New Appointment screen. Days: Type the number of days in the past and future to control which exams appear in the recent schedule screen.
Enable Veterinary Registration	Select to be able to register veterinarians as physicians.
Mobile Rad Dispatching Address	Type the address of the office that dispatches mobile radiology.
Do Not Allow Overlapping Procedures to Be Scheduled	Select to prevent users from scheduling more than one procedure in the same time slot in the schedule book.
Import Documents into Study as DICOMs	Select to automatically convert documents to DICOM images before importing. If not selected, the user can select whether to convert at the time of import.
Global Auto-Print	Select to automatically send radiology reports to printer that is configured on the Exa server.
Abbreviated Receipt	Select to use an abbreviated format for payment receipts.
Custom Receipt	Select to use a custom receipt for payments, such as co-pays.
Required Fields at Scheduling	Select fields to specify as mandatory when scheduling an exam.

Setting	Description
Study Status When Patient Arrives	Select the status to assign to the study when the patient arrives at check-in.
Study Status When Patient in Room	Select the status to assign to the study when the patient arrives in the exam room.
Report Delay to Patient Portal	Type the number of days to wait before making reports available on the patient portal.
Formal Name	Type the formal name of the facility, if different from the commonly used name.
MRN Information: Inherit	Select to copy the MRN from the EMR of origin.
Other MRN settings	See "Configure the MRN format."
The following settings become available after you save.	
NPI No.	Type the national provider identifier of the facility.
Enable Insurance Eligibility	[Unused]
Federal Tax ID	Type the tax ID of the facility.
Enable Insurance Claims	[Unused]
Default Billing Provider	If using Exa Billing, select the default billing provider (the provider issuing invoices for treatment).
Service Facility	The facility providing treatment.
POS Type	Select the place of service code for the facility. To use this value as the default for all facilities, select the **Always set POS to This Value** check box.
Fee Schedule	Select the fee schedule for the facility.
Rendering Provider	The primary radiologist at the facility.

5. Click **SAVE & CLOSE**.

Add modalities

You must set up each modality available to your facility or institution in Symmetry PACS. In particular, you must add modalities before entering DICOM settings.

⚠ Do not add non-DICOM modalities, as this could result in problems sending studies to external PACS.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Office**.
3. On the **MODALITY** tab, select **ADD**.
4. In the add/edit modality screen, enter the following settings.

Setting	Description
Code	Type the standard DICOM modality code. For example, for

Setting	Description
	ultrasound, type US.
Name	Type a unique name for the modality.
Hidden on Physician Portal	Select to hide the modality name on the physician portal to prevent unwanted scheduling. Useful for hiding non-scheduled modalities such as SR.

5. Select **SAVE**.
6. In the list of modalities, select the buttons to order the new modality.
   Note: During modality-related tasks, Symmetry PACS matches modalities by the order in the list. Therefore, for example, you should list MG before SR.

Add modality rooms

Modality rooms are named locations where modalities are used for exams. You can add modality rooms for your institution for use in scheduling exams.

Prerequisite: Configure at least one modality, facility, and DICOM modality worklist.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Office**.
3. On the **MODALITY ROOM** tab, select **ADD**.
4. Enter the following settings.

Setting	Description
Code	Type your internal code or name for the modality room.
Facility	Select the facility where the modality room is located.
Name	Type a name for the modality room.
From Date/To Date	Select the dates of operation.
Color Code	Select in the box, and then select a color from the picker to assign to the modality room. The color appears in a bar below the name of the modality room in the schedule book.
Display Order	Type a number to determine the horizontal display position of the modality room in the schedule book. Lower numbers appear on the left side of higher numbers.
Modalities	Select all modalities that are in use in the modality room.
DMWL	Select the AEs in the room to which to serve the worklist. Only the selected AEs will receive orders for that room.

5. On the **MODALITYTIMES** sub-tab, enter settings as needed.
6. On the **LINKED RESOURCES** sub-tab, select which treatment resource is associated with the modality room (Technologist or mobile rad Vehicle), and then type or select the name of the resource.
7. Select **SAVE**.

Add a notification

You can add preset notifications that appear on the dashboard and the physician portal sign-in page under "Organizational News."

Prerequisite: Add at least one facility.

1. On the burger ☰ menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Office**.
3. On the **NOTIFICATION** tab, select **ADD**.
4. Enter the following settings.

Setting	Description
Title	Type a title for the notification.
Show on Provider Portal Login	Select to display the notification on the sign-in page of the physician portal.
Show on Attorney Portal Login	Select to display the notification on the sign-in page of the attorney portal.
Description	Type the body of the notification.
Office Location	Select one or more facilities to which to send the notification.

5. Select **SAVE**.

Add tasks

Administrators can add tasks for marketing representatives, such as "Tell referring physician offices that we will start offering 3D mammography in January."

1. On the burger ☰ menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Office**.
3. On the **TASKS** tab, select **ADD.**
4. Enter the following settings.

Setting	Description
Title	Type a title for the task.
Description	Type a description of the task.
Due Date	Select a due date for the task.
Completed	Select when the task is completed.

5. Select **SAVE.**

Create a study flag

You can create a study flag that users can apply to studies and orders on the worklist. Sorting the worklist by flags is one way for users to easily find groups of studies or orders to work on. You can also use them to trigger routing rules. When you create a study flag, you specify its scope of availability by institution, facility, modality, and other parameters.

1. On the burger ☰ menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Office**.
3. On the **STUDY FLAG** tab, select **ADD.**
4. In the **Description** box, type a name for the flag.

5. Enter the following settings.

Setting	Description
Available in Portal	Select to make the flag available in the physicians' portal. If selected, all other settings become unavailable.
Color Code	Select the box, and then select a color in the picker. This color appears in the Study Flag column in the worklist.
Institutions	Select the institutions for which the study flag is available.
Facilities	Select the facilities for which the study flag is available.
Modalities	Select the modalities for which the study flag is available.

6. Select **SAVE.**

Set monthly goals

You can set monthly goals for the number of studies to perform, for example.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Office**.
3. On the **MONTHLY GOALS** tab, select **ADD.**
4. Enter the following settings.

Setting	Description
Modality	Select the modality for which to set a goal.
Goal Period	Select the month for the goal.
Monthly Goal	Type the target number of studies to perform with the selected modality.
Working Days per Month	Type the number of days in the selected month.

5. Select **SAVE.**

Configure providers and resources

You can set up individual healthcare providers, their groups and facilities, and provider pay schedules.

Add a provider group

If your institution works with a provider group, add it to the system.

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then select **Providers & Resources**.
3. On the **PROVIDER GROUP** tab, click **Add**, and then enter the following settings.

Setting	Description
Code	Type your internal code for the group.
Name	Type the name of the group.
[Address]	Type and select the address and country or region of the group.

Setting	Description
Phone/Fax No.	Type the primary contact information for the group.
Email	Type the email address of the primary contact at the group.
Report Password	Type the password that the provider group must use to view reports generated from exams that they ordered.

4. Click **SAVE**.
5. Use the **PROVIDERS** sub-tab to view or edit the list of configured providers.
6. Use the **MARKETING REP** sub-tab to add a marketing rep to the provider group.

Add a resource

A *resource* is an attorney, nurse, provider, laboratory, radiologist, technologist, or referring provider. You can add individual resources and add them to one or more provider groups. See also “Add a technologist resource.”

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then select **Providers & Resources**.
3. On the **RESOURCE** tab, click **Add**, and then enter the following settings.
   Note: The settings available differ depending on your selection in the **Type** list.

Tab/Sub-tab	Setting	Description
RESOURCE	Type	Select an Symmetry PACS provider type.
	Code	Type your internal code for the provider.
	Name	Type the name of the provider.
	Modality	Select the technologist’s allowed modalities (see “Add a technologist resource”).
	Title	Type the academic credentials of the provider (e.g. MD)
	NPI No.	Type the national provider identifier of the facility.
	Taxonomy Code	The Medicare/Medicaid taxonomy code (refer to CMS.gov).
	Dr. Office Name	Type the business name of the provider’s office.
	SSN	Type the social security number of the provider.
	Federal Tax ID	Type the federal tax ID of the provider.
	EIN No.	Type the employer identification number of the provider.
	ETIN No.	Type the ETIN to be able to use electronic transfers.
	Medicare UPIN	If the provider has no NPI, type the unique physician identification number of the provider.
	Market	Select the market that the resource serves. All facilities in the Facilities field (below) that are

Tab/Sub-tab	Setting	Description
		associated with the selected market become selected.
	Facilities	Select all facilities with which the provider is associated.
	Specialty	Select the specialties of the provider.
	License No.	Type the state medical license number of the provider.
	Medicare Provider No.	Type the Medicare provider number of the provider.
	Medicaid Provider No.	Type the Medicaid provider number of the provider.
	Prov. Agreement Code	Type the code for the legal provider agreement code.
	POS Type	Displayed when Referring Provider is selected as the provider type.
	Fee Schedule	Displayed when Referring Provider is selected as the provider type.
	Max TAT	Assign a maximum turnaround time for the provider, in minutes. Symmetry PACS divides this time into 4 segments on the TAT monitor on the worklist.
Locations / Contacts	Code	Type your internal code for the provider.
	Group	Select the provider group to which the provider belongs.
	Email	Type the email address of the provider. This is required to receive email reports, notifications, or attachments.
	Contact Name	Type a contact name, such as the name of the administrative assistant of the provider.
	[Address]	Type or select the country or region and address of the provider.
	Provider Alerts	Type any alerts for the provider, such as “only takes referrals.”
	Office Phone/Fax	Type the contact information for the provider’s office.
	Mobile/Pager No.	Type the mobile and/or pager number of the provider.
	Phone No.	Type the personal phone number of the provider.
	Fax No.	Type the personal fax number of the provider.

Tab/Sub-tab	Setting	Description
	Primary Contact	Select to send reports to the referring provider only.
Reports to Me/Contact Information	Email Report Link Email Attachment Postal Mail Fax Office Fax	Select to send reports only to the individual provider, and select which methods to use. **Note**: If you select **Email Report Link** and/or **Email Attachment**, you must enter the recipient email address in the **Contact Information** area.
Reports to Group	Email ReportLink Email Attachment Postal Mail Fax Office Fax	Select to send reports to all members of the group, and select which methods to use. Provider groups have their own fields for email and fax.
Report Password	--	If you selected Email Report Link above, type the password that the provider must use to view reports generated from exams that they ordered.
Reports to Patient Portal	Delay	Type the number of days to wait before posting reports on the patient portal.
Image Delivery Options	CD Film Paper	Select which media to use to deliver images.
Notification Settings	Email	Select to receive notifications by email and/or fax.
	Receive When Added as CC Provider	Select to have the provider receive notifications by email if they are added as a CC (carbon copy) provider.

4. Click **SAVE**.

Configure scheduling and codes

You can set up information related to scheduling exams, including fees, body parts, appointment types, diagnostic and procedure codes, and various kinds of templates.

Configure body parts

You can define body parts for use in other parts of the program.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Scheduling & Codes**.
3. On the **BODY PARTS** tab, select **ADD.**
4. Type the name and alternative name for the body part, and then select **SAVE.**

Configure diagnostic codes

You can enter SNOMED, ICD, or LOINC codes for use in other parts of the program.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Scheduling & Codes**.
3. On the **DIAGNOSTIC CODES** tab, select **ADD.**
4. Enter the following settings.
   Code – Type the code to enter.

Description – Type the code's diagnosis description.
Code Type – Select the code standard to which the code belongs.

5. Select **SAVE.**

Import diagnostic codes

If you obtain exported diagnostic codes, such as from the CMS or AMA, you can import them.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Scheduling & Codes**.
3. On the **DIAGNOSTIC CODES** tab, select **IMPORT**.
4. Select **Choose File**, browse for and select the file to import, and select **Open**.
5. Optional. To overwrite existing facilities, select the **Update Existing** check box.
6. Select **IMPORT**.

Configure procedure codes

A *procedure code* is an internal code that identifies a medical procedure. Additionally, procedure code entries serve as detailed sets of information about procedures that Symmetry PACS uses for billing, ordering, and other functions.

When you configure a procedure code, you can add (associate) NDCs from which future technologists can select when performing the exam. This makes the process of searching for and adding the appropriate contrast material and other medications more efficient and accurate.

Prerequisites: For adding NDCs to a procedure code, complete the steps in "Configure NDCs."

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then select **Scheduling & Codes**.
3. On the **PROCEDURE CODES** tab, click **ADD**.
4. Enter the following settings.

Setting	Description
Facilities	Select one or more facilities that perform the procedure.
Code	Type your code for the procedure.
Short Description	Type a short description for the procedure.
Description	Type a full description of the procedure.
Service Type	Select the service type to which the procedure belongs.
Ref. Code	Type the reference code of the procedure. In most cases this can be the CPT or LOINC code.
NDC Code	Type the national drug code associated with the procedure, if any. For a more advanced NDC function, see later steps in this topic.
NDC Measure	Type the unit of measure for contrast and/or liquid medications. The value for this is usually UN.
Color Code	Click in the box, and then select a color in the picker to assign to the procedure.
SDE Study	Select the check box if the procedure is associated with echo ultrasound.

5. Click **SAVE**.
6. Optional. On the **GENERAL** sub-tab, enter the settings described below, and then click **SAVE**.

Setting	Description
Body Part	Select the body part associated with the procedure.
Non-Transcribable	Select if the procedure cannot be transcribed.
Require Copay	Select if the procedure requires a copayment.
Require Physician	Select if the procedure must be performed by a physician.
Require Waiting Time	Select if the procedure requires a waiting time before beginning (such as drinking Barium some number of hours before a procedure).
Notes	Type notes for the procedure as needed.
Duration	Type the expected duration of the procedure.
Default Units	Type the number of procedure units.
RVU	Type or select the relative value units of the procedure for Medicare reimbursement.
Level	The provider level code that determines the pay rate to the radiologist.
Modalities	Select one or more modalities used in the procedure.

7. Optional. For **EXAM PREP. INSTRUCTIONS**, see “Configure exam prep instructions”.
8. Optional. To add diagnostic codes (other than standard ones already on your system), on the **DIAGNOSTIC CODES** sub-tab, select codes from the list.
9. Optional. To associate a diagnostic code with the procedure code, on the **DIAGNOSTIC CODES** sub-tab, select a code.
10. Optional. To specify a report template to be used for the procedure, on the **DEFAULT REPORT TEMPLATE** sub-tab, do one of the following.
    - In the **Template** List, select an existing template.
    - Click **NEW TEMPLATE**, type a template name, create a template in the word processing area, and then click **SAVE TEMPLATE**.
11. Click **SAVE & CLOSE**.

Import procedure codes

If you obtain exported procedure (CPT) codes, such as from the AMA or third-party billing companies, you can import them.

1. On the burger ☰ menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Scheduling & Codes**.
3. On the **PROCEDURE CODES** tab, select **IMPORT CPT**.
4. Select **Choose File**, browse for and select the file to import, and select **Open**.
5. Optional. To overwrite existing facilities, select the **Update Existing** check box.
6. Select **IMPORT**.

Import specimen catalogs

If you obtain specimen catalogs in CSV format, you can import them.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Scheduling & Codes**.
3. On the **PROCEDURE CODES** tab, select **SPECIMEN CATALOG**.
4. Select **Choose File**, browse for and select the file to import, and select **Open**.
5. Optional. To overwrite existing facilities, select the **Update Existing** check box.
6. Select **IMPORT**.

Configure study statuses

Workflows in Symmetry PACS are status-driven. To create or tailor workflows, you can create a set of study statuses, and then configure how studies move from status to status (see "Configure study flow").

To add statuses:

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then select **Scheduling & Codes**.
3. On the **STUDY STATUS** tab, on the **STUDY STATUS** sub-tab, in the **Facility** list, select a facility, and then click **ADD.**
4. Enter the following settings.

Group	Setting	Description
General Information	Status Code	Type your internal code for the status.
	Add to Study Shortcut Menu on Worklist	Select to add the status to the study shortcut menu.
	Status Description	Type the name of the status.
	MobileRad Related	Select if the status is for MobileRad. For use with the MobileRad app.
	Color Code	Click in the box, and then select a color from the picker to color code the status.
	Order Related	Select if the status is related to orders only.
	Max Wait Time	Type the number of minutes to complete check-in. If the time is exceeded, the "Exceeds maximum time limit" count at the bottom of the worklist increments.
Things to Validate	Always Show Validation Window	Reserved for encounters.
	[Other check boxes]	Select the items that Symmetry PACS validates (checks for inclusion) before moving the study to the next status.
Notification Settings	Email Template	Select templates that determine whether and to whom notification is made when a study arrives at the status.

5. Click **SAVE.**

Configure study flow

Symmetry PACS provides a graphical representation of the flow of studies from status to status at each facility. You can define these flows, and also apply routing rules to control whether data can move to the next status in the flow. You do not need to apply routing rules for manual DICOM send operations.
CAUTION: Changing the study flow incorrectly can "orphan" studies, leaving them unable to move to the next status in the workflow.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Scheduling & Codes**.
3. On the **STUDY STATUS** tab, select the **STUDY FLOW** tab.
4. In the **Facility** list, select a facility.
5. The flow diagram appears, with arrows indicating the direction of flow.
6. To add a flow, drag the orange bar in a node to another node.
7. To add a routing rule to a flow, select the triangle on an arrow connecting status nodes, select a routing rule, and then select **OK**.
8. Select **SAVE.**

Add a transcription template

You can add a template for use during transcription. A *transcription template* is for streamlining transcription, whereas a *report template* is for final formatting of approved reports.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Scheduling & Codes**.
3. On the **TRANSCRIPTION TEMPLATE** tab, select **ADD.**
4. Enter the following settings.

Setting	Description
Template Name	Type a name for the template.
Global	Select to make the template available to all users.
Macro Keyword	Type a macro keywords that can be voice-recognized to open a template.
User	You can restrict availability of the template by assigning users to it. Select a user in the list and then select the plus button. You can assign the template to multiple users.
Appointment Types	Restricts availability of the template to studies of the selected CPT code.
Require ALL Match	Restricts availability of the template to users and studies who match all criteria entered in these settings.
Facilities	Select one or more facilities to which to assign the template.
Modality	Restricts availability of the template for use with one or more modalities.
Body Part	Restricts availability to the template for use with one or more body parts.
Study Description	Restricts availability of the template to studies with the entered study description.

Setting	Description
Institution	Select one or more institution to which to assign the template.

5. Select **SAVE.**
6. In the template editor, type and format text for the template, and then select **SAVE & CLOSE**.
7. Optional. To paste items onto the template that you copied from outside of Symmetry PACS, on the **HOME** tab, select **Paste**, and then in the button shortcut menu, select **Paste**.

About report templates

A *report template* is for final formatting of approved reports, whereas a *transcription template* is for streamlining transcription. You can create report templates and enhance them with logos, tables, and merge fields. When you prepare a report based on your template, Symmetry PACS substitutes merge fields with study and patient information.

Add a report template

Add a report template by following the steps below, and then continue to the next procedure to edit the header or footer.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Scheduling & Codes**.
3. On the **REPORT TEMPLATE** tab, do one of the following.
   - To base the new template on an existing one, select the copy button of the existing template.
   - To start a new template from scratch, select **ADD**.

Setting	Description
Template Name	Type a name for the template.
Market	Optional. Select the market to associate with the template. All facilities in the selected market become selected in the Facilities field below.
Facilities	Select all facilities that use the template.
Institution	Select institutions that use the template.
Modality	Select all modalities to which the template can apply.
Summary	Type explanatory information about the template.
Study Description	Type study descriptions for the templates to be applied. For example, US Abdomen could have a different template than MRI Abdomen.

4. Select **SAVE**.
5. Follow the procedures below as needed.

Configure the header and footer of a report template

You can configure the header and footer of a report template, or edit existing ones.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Scheduling & Codes**.
3. On the **REPORT TEMPLATE** tab, double-select a template.
4. At the bottom of the page, select the **PAGE HEADER/FOOTER** sub-tab.
5. The word processor appears (it may take a few moments).

6. On the **INSERT** tab, select Header, and then in the button shortcut menu, select **Edit Header**.
7. Type information for the header.
8. Perform similar steps to add a footer.
9. Optional. To add logos, merge fields, and other design elements, see topics below.
10. Select **SAVE.**

Configure a report template signature

You can configure a standardized signature on your report templates to add to reports.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Scheduling & Codes**.
3. On the **REPORT TEMPLATE** tab, double-select a template.
4. At the bottom of the page, select the **REPORT SIGNATURE** sub-tab.
5. Type information for the signature.
6. Optional. To add merge fields, see “Add merge fields.”
7. Select **SAVE**.

Add a logo

1. Prepare a bitmap image and save it in the following folder.
   [drive]:/EXA/WebImages
2. Place the cursor in the header or footer where you want to place the logo.
   Note: It may be helpful to add carriage returns to make room for the logo.
3. On the **INSERT** tab, select **Image**, and then in the button shortcut menu, select **Image**.
4. In the **Open File** dialog box, type the name of the bitmap image and then select **Open**.
5. In the image shortcut menu, select **Format**.
6. In the **Image Attributes** dialog box, under Wrapping Style, select **In Line**, and then select **OK**.
7. Optional. On the **HOME** tab, select the text alignment tools, or drag the image to position it.
8. Select **Save**.

Add a table

1. On the **INSERT** tab, select **Table**.
2. In the **Insert Table** dialog box, enter table settings and then select **OK**.
3. Type information in the table as needed.
4. Optional. Add merge fields to the table.
5. Select **Save**.

Add merge fields

1. Place the cursor in the header or footer where you want to add the merge field.
2. On the **REPORTS** tab, select **Merge Field**.
3. On the **Merge Field** button shortcut menu, hover over a category, and the select a field in the submenu.
4. Select **Save**.

Configure functional and cognitive statuses

Functional and cognitive statuses are preset descriptions of a patient’s level of physical and mental functioning that can be used in other parts of the program.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Scheduling & Codes**.
3. On the **FUNCTIONAL STATUS** tab, in the **Description** box, type a functional status and then select **SAVE.**
4. On the **COGNITIVE STATUS** tab, in the **Description** box, type a cognitive status and then select **SAVE.**

Configure DICOM settings

You can configure DICOM settings such as by configuring AEs, setting up file stores, and defining receiver and routing rules.

Note: The default AE title for Symmetry PACS is EXA_SCP, or EXA_MWL when acting as a worklist source. These titles are configured elsewhere in the program by a Konica Minolta installation engineer.

Configure application entities

In Symmetry PACS, an *application entity* (*AE*) *title* is a named configuration for a DICOM application that includes information such as its type, host machine, and port number. You must set up AE titles for Modality Worklist, send, receive/store, print, query/retrieve, and other functions to make them available on Symmetry PACS. To configure an AE, use the following procedure and then continue to "Configure a DICOM printer."

Failure to correctly configure application entities can cause general failure of DICOM communication between Symmetry PACS and those entities.

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then select **DICOM**.
3. On the **AE TITLE** tab, click **ADD.**
4. Enter the following settings, and then click **SAVE.**
   Note: Depending on the AE type, not all of the following settings are available.

Setting	Description
AE Type	Select one or more transactions that Symmetry PACS makes with the AE.
AE Title (Remote)	Type the title of the AE. If an AE title is pre-configured on the device hosting the AE, use the same title.
Ignore Scan Docs (Send)	Select to prevent sending of scanned documents to the AE (only DICOM studies are sent).
My AE Title	Type a title to set the identity of Symmetry PACS individually for each DICOM node. In most cases, leave blank to use the default (EXA_SCP for PACS/RIS functions, and EXA_MWL for modality worklist functions).
Host Name	Type the host name or IP address of the AE.
Description	Type a description for easy identification of the AE.
Disable QC2LIVE	Select to disable the automatic transfer of studies from QC to live.
Retries	Type the number of times the system attempts to reconnect with the AE after a communication failure.
Send Single Instance per Study	Select to send one image per study.
Max Concurrent	Type the maximum number of concurrent threads that the system can use for the transaction.

Setting	Description
Facility	Select the facility to associate with the AE.
Send Annotations as	Select how to process annotations for sending. **Burned in**: "Flattens" the image and overlay into a single image. **DICOM Overlay**: Converts the annotations to a DICOM overlay and sends along with the study. **GSPS/PR Object**: Converts the annotations to a presentation state and sends along with the study.
Send Unique Image UID from Viewer	Select to generate a new UID for each image (rather than just for the series or study).
DMWL Modalities	Select to which modalities to serve a modality worklist.
DMWL Facilities	Select to which facility to serve a modality worklist.
Issuer	Select the issuer of PIDs.
AE Flag	Select one of the following services to use to send studies. **DICOM**: C-MOVE **DICOM SSL**: C-MOVE, secured **HL7**: Standard HL7 protocols. **OPAL**: The Opal Transfer service.
Institution	Type the name of the institution for easier identification.
File Store	Select a file store for storing received data.
Port	Type the port number through which the AE can connect to Symmetry PACS (the Symmetry PACS listening port).
Require SSL	Select this check box if: 1) you selected the **DICOM SSL** AE flag; and 2) the port number requires an SSL certificate.
Transfer Syntax (Send)	Select the transfer syntax for sending.
Transfer Syntax (Receive)	Select the transfer syntax for storing and receiving.
Vehicle	Select vehicles to which to assign received studies.
SDE Modality	Select if the AE is a dedicated echo ultrasound.
Include Approved Reports	Select to include approved reports in transactions.

Configure a DICOM printer

Configure and save AE with AE type of "Print," and then perform the following procedure.

1. On the **AE TITLE** tab, double-select your printer.
2. Under **Extra Printer Options**, enter the following settings.

Setting	Description
ARTIM Timeout	Type the number of minutes to wait for an acceptance or rejection response to an association request before timing out.
Read Timeout	Type the number of minutes the printer waits to receive data before timing out.

Setting	Description
Write Timeout	Type the number of minutes the printer waits to send data before timing out.
Max PDU Length	Type the maximum number of bytes of a protocol data unit that the printer can receive.
Border Margins	[Unused]
True Size	[Unused]

3. Open the printer AE that you just configured.
4. Select **ADD CONFIGURATION**.
5. In the **Configuration** dialog box, enter the following settings.

Setting	Description
Name	Type a name for the printer.
Medium	Select the printer medium.
Film Size	Select the film size for the printer.
Border Density	Select a border density of Black or White.
Memory Allocation (KB)	For most printers, accept the default of **Auto**. Otherwise, type the amount of memory in kilobytes to allocate for a print session.
Film Destination	Select the destination for exposed film.
Film Orientation	Select the orientation of the film.
Magnification	Select a magnification factor for printing images.
Empty Density	Select the density of the image box area on the film that contains no image.

6. Select **SAVE**.

Configure a file store

File stores are directories on servers that Symmetry PACS uses to store files received in a DICOM transaction, such as images from a modality.

CAUTION: Changing an existing file store can prevent the study from opening.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **DICOM**.
3. On the **FILE STORE** tab, select **ADD.**
4. Type the server name, root directory, and notes, and then select **SAVE.**

Configure routing rules

With routing rules, you can define how certain types of data flow between Symmetry PACS and other AEs. For example, you could create a routing rule that tells Symmetry PACS to automatically send all data that it receives from ultrasound modalities to another PACS. You can also add criteria to your rule for more precise control. For example, you could specify to only send ultrasound data coming from a specific facility.

Use the following procedure to configure a routing rule, and then apply the rule by following the steps in "Configure study flow." It is not necessary to apply routing rules for manual DICOM send operations.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **DICOM**.
3. On the **ROUTING RULES** tab, select **ADD.**
4. Enter the following settings. Not all settings are available depending on the type you select.

Setting	Description
Rule Name	Type a name for the rule.
Type	Select the transaction to perform with the AE (for example, SEND).
Interface/Trigger Name	Select an interface and/or trigger for HL7 send actions.
AE Title	Select the AE with which to perform the transaction (for example, select Remote_Hospital to send to that AE).
Priority	Type a number to indicate which rules to evaluate first. Lower numbers take higher priority. Refer to your current list of rules on the ROUTING RULES tab to determine the priority to use for the rule you are adding.
Attempts	Type the number of attempts the program should make to apply the rule.
Priors	Type the number of priors to retrieve. Type `0` (zero) to specify all priors.
Modality	Select an option to filter which priors to retrieve.
Number of Priors to Send	Type the number of priors to send along with the study.
Auto Send Priors	Select to send any priors found in the system along with the current study, and to enable functionality of the Relevant Priors check box. • The system sends as many priors as it can find, up to the number you specify above. • The system sends the most recent priors first.
Relevant Priors	Select to send relevant priors when auto-sending, and then enter criteria to define what is relevant. Selecting this check box enables the functionality of the Force Relevant Only check box below. • If you do not specify criteria, the system considers relevant priors to be studies of the same modality and/or body part. • The system sends as many relevant priors as it can find, up to the number you specify above. • If the system finds fewer relevant priors than the number specified, it adds non-relevant priors up to the number specified.
Force Relevant Only	Select to prevent sending of non-relevant priors.

Setting	Description
	• If the system finds fewer relevant priors than the number specified above, it does not send any additional priors.

5. Optional. Configure a criterion for the rule:
6. In the **Field** list, select an argument
   For example, *Modality*.
7. In the entry field that appears, select a matching value for the argument.
   For example, in the *Modality* list, select *MG*.
8. Select **ADD TO RULES**.
   Result: In this example, when Symmetry PACS receives an MG study, it automatically sends it to the AE named Remote_Hospital.
9. Optional. Add more criteria.
10. Select **SAVE.**

Configure AE scripts

You can write scripts that modify DICOM tags when carrying out a DICOM-related transaction such as sending, printing, or receiving.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **DICOM**.
3. On the **AE SCRIPTS** tab, select **ADD.**
4. Enter the following settings.

Setting	Description
AE Type AE Title	Select a transaction and node. The script runs when Exa makes the selected transaction with the selected node.
All	Select all AEs of the selected AE Type.
Script Description	Type a description of the script.
Asynchronous	Select to run the script asynchronously.

5. In the **Script** area, type the script to run when the previous conditions are true.
   Note: For syntax, select the help ? button.
6. Select **COMPILE**, and correct any errors that occur.
7. When the script is free of errors, select **SAVE.**

Understanding receiver rules

A *receiver rule* is a detailed set of criteria and instructions that tells Symmetry PACS where to place studies that it receives, and what status to assign them. For example, you can configure a receiver rule such that studies with unrecognized account numbers are placed on the QC tab to await reconciliation by the user before going live.

> **Note**: Receiver rules also have an important role in accelerating the processing of incoming data. Symmetry PACS processes each receiver rule in order on a given machine. Therefore, to improve speed, you can apply different rules on different machines.

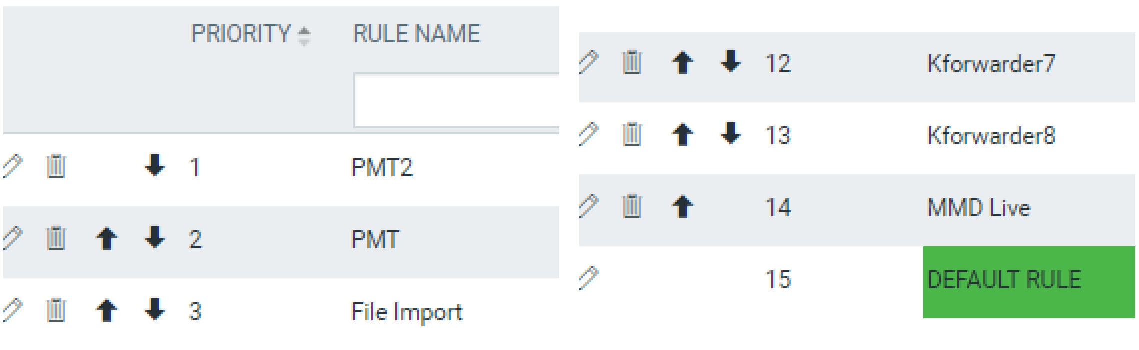
To understand how receiver rules are evaluated and applied, it is helpful to imagine a 4-step process that Symmetry PACS performs for each incoming study.

Find a receiver rule that matches the study.
Validate the study against existing PACS studies and/or match it to existing RIS orders.
Process the successes (studies that passed validation and/or matched orders).
Process the failures (studies that failed validation or did not match an order).

A detailed explanation of each of these steps follows.

Step 1 – Find a matching receiver rule

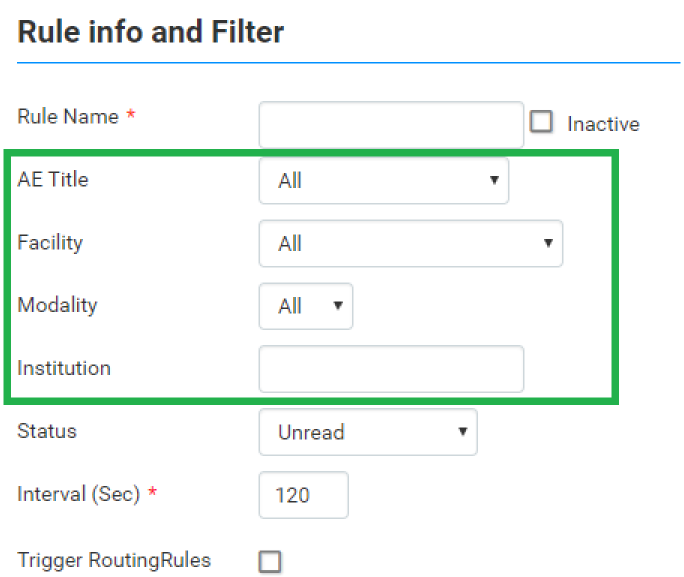
When Symmetry PACS receives a DICOM study, it evaluates the study against each receiver rule on the RECEIVER RULES tab in order of "Priority" (starting from the top) until it finds one that matches.



From top... ...to bottom

If no user-defined rule matches, Symmetry PACS uses a "default" rule that has a minimum number of criteria to ensure that all legitimate studies match at least one rule. (If a study did not match any rule, Symmetry PACS would not receive it.)

To evaluate whether a study matches a rule, Symmetry PACS compares the settings you enter under **Rule Info and Filter** (in the green box in the figure below) to the information in the study. If all relevant criteria match, the rule becomes active, and the process continues to step 2.



Step 2 – Validate and match against PACS and/or RIS

A "rule" is actually not a single rule, but rather a combination of the "Rule Info and Filter" above, plus one of four possible preset "Applied Rules," such as in the figure below.

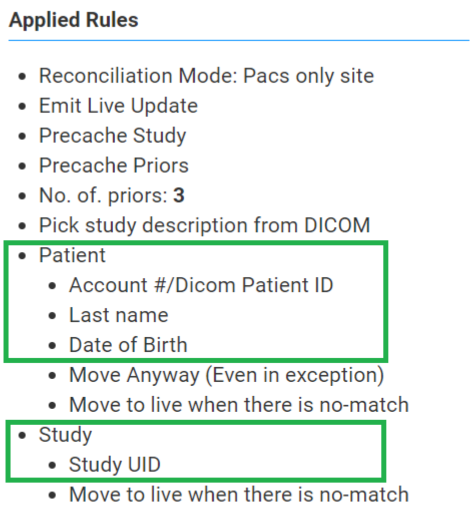


Figure: Applied rules in the PACS ONLY preset.

Symmetry PACS compares the items in the green boxes from the incoming study against PACS, RIS, or both, depending on the reconciliation mode (the first bullet item in the figure). The items under Patient (such as "Last name" in the figure) and Study ("Study UID") must match a patient in PACS and/or a RIS order. Symmetry PACS stores the result of the match (success or failure) in this step, and then evaluation continues to step 3 or 4.

Step 3 – Process successes

If matching succeeded, Symmetry PACS waits the number of seconds specified in the **Interval** setting from step 1, moves the study from the QC tab to the ALL STUDIES tab (the study "goes live"), and assigns to the study the status selected in the **Status** list from step 1. At the same time, it performs the actions and applies the options in the blue box below.

Applied Rules

- Reconciliation Mode: Pacs only site
- Emit Live Update
- Precache Study
- Precache Priors
- No. of. priors: **3**
- Pick study description from DICOM
- Patient
  - Account #/Dicom Patient ID
  - Last name
  - Date of Birth
  - Move Anyway (Even in exception)
  - Move to live when there is no-match
- Study
  - Study UID
  - Move to live when there is no-match

Step 4 – Process failures

If matching failed, the study initially remains on the QC tab with a status of *Conflicts* to await reconciliation by the user. However, there is one more set of evaluations left to make, based on the items in the orange boxes in the figure below.

Applied Rules

- Reconciliation Mode: Pacs only site
- Emit Live Update
- Precache Study
- Precache Priors
- No. of. priors: **3**
- Pick study description from DICOM
- Patient
  - Account #/Dicom Patient ID
  - Last name
  - Date of Birth
  - Move Anyway (Even in exception)
  - Move to live when there is no-match
- Study
  - Study UID
  - Move to live when there is no-match

If any of these items are present, the study status is set to *Completed* in the QC tab. Additionally, each item results in the following.

Move Anyway (Even in exception)

If duplicate matching demographics are found, or if at least one matching criterion fails, the study also appears on the ALL STUDIES tab with a status of “FIX_.”

Patient: Move to live when there is no-match
The study moves to the ALL STUDIES tab even if patient demographic validation fails. Generally, this is used only when no modality worklist is available.

Study: Move to live when there is no-match
The study moves to the ALL STUDIES tab, even if no matching order is found.

> **Note**: If "Move to live when there is no-match" is present both under Patient and Study, Symmetry PACS processes the study as a success.

Configure a receiver rule

You can configure receiver rules to tell Symmetry PACS where to place studies that it receives, and what status to assign to them. For more information, see "Understanding receiver rules."

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **DICOM**.
3. On the **RECEIVER RULES** tab, select **ADD.**
4. Under **Rule Information and Filter**, enter the following settings as needed.

Setting	Description
Rule Name	Type a name for the rule.
AE Title	Use these settings as filtering criteria. For example, to evaluate the rule only against mammography studies, on the Modality list, select MG. To evaluate the rule only if the study comes from a specific AE, select one under **AE Title**.
Facility	
Modality	
Institution	
Status	Select the status to assign the study if it matches the rule.
Interval	Select a number of seconds to wait before moving the study from the QC tab to the ALL STUDIES tab (go live).
Trigger Routing Rules	Select to force evaluation of matching studies against routing rules.
Issuer of Alternate Account Number	Select to enable alternate account functionality. See "Use alternate account numbers."

5. Select one of the following preset buttons to assign a reconciliation mode and to add "applied rules" (matching criteria and actions to perform) to your receiver rule.

Preset Button	Reconciliation Mode	Description
PACS ONLY	PACS	Validate patient and study items against existing PACS records.
PACS/RIS	PACS + RIS	Validate patient and study items against existing PACS records and/or RIS orders.
PACS/DMWL	PACS + RIS	--same--
MIGRATION	PACS	Use when migrating data from another PACS. Allows everything to be received.

6. Select **SAVE.**

Configure matching rules

See "Work with Display Management."

Configure hanging protocols

See "Work with Display Management."

Manage jobs in the transfer queue

DICOM studies that you send appear as jobs in the transfer queue. You can view and change job status and priority, cancel jobs, and requeue failed jobs.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **DICOM**.
3. On the **TRANSFER QUEUE** tab, perform any of the following tasks.

View job status

In the list of jobs, the status is listed in the CURRENT STATUS column. The available statuses are as follows.

Queued	Processing not yet started.
In-progress	Sending of data has started but not finished.
Completed	Sending of all data is finished.
Canceled	Sending of data canceled by the user. You can only cancel a job with a status of Queued.
Error	Sending was aborted due to failed association or the request was rejected by the destination.

View demographics

To view the demographics of a study in the transfer queue, select the expand button.

Change the job priority

To change the priority of a job, select the edit button, select a new priority, and then select **SAVE.**

View job details

To view demographics and other queue details, select the view button.

Cancel a job

To cancel a job, select the cancel button.

Requeue a job

To *requeue* a job means to repeat or retry sending. If the status of a job is Queued, Error, Completed, or Cancelled, you can requeue the job by selecting the requeue button. Requeued jobs remain in the transfer queue for 15 minutes before reprocessing begins.

Reprocess non-failed jobs

Rather than requeuing jobs one at a time, you can select multiple jobs for reprocessing, and then select REPROCESS SELECTED.

Reprocess failed jobs

Failed jobs are ones with a status of "Error." You can select a range of failed jobs (such as by filtering the worklist) and reprocess them all at once.

1. On the transfer queue, select **REPROCESS FAILED**.
2. In the date boxes, enter a date range of jobs to reprocess.
   Note: To select all dates, leave the boxes blank.
3. In the AE Title list, select the AE whose jobs you want to reprocess.
4. Select **REPROCESS**.

Reprint DICOM Print jobs

1. On the transfer queue, find a job with type **PRINT** and status **Completed**.
2. Right-click the job, and select **REPRINT**.

Cancel a DICOM Print job

1. On the transfer queue, find a job with type **PRINT** and status **Queued**.
2. Right-click the job, and select **Cancel**.

Configure an issuer of a PID

See "Use alternate account numbers."

Manage users

Administrators can configure individual users, user groups, Active Directory, and assign roles (rights) to users. In Symmetry PACS, you assign user roles to user groups, and then you assign user groups to individual users.

Incorrect user configuration can lead to security risks such as leaked patient information.

Create a user role

A *user role* is a named collection of user rights that you can assign to user groups. To create a user role, complete the following steps.

1. On the burger menu, select **Setup**.
2. Next to the burger button, select the word in all caps, and then select **User Management**.
3. On the **USER ROLES** tab, select **ADD**, type a name and description of the role, and the select **SAVE**.
   For example, type `BILLING`, and then select **SAVE**.
4. In the **User Role Permission** area, select all of the user rights that you want to assign to the user role.
5. Select **SAVE & CLOSE**.

Create a user group

A *user group* is a named collection of individual users to which you can assign roles and access to certain document types and areas of the program.
Prerequisite: Create a user role.

1. On the burger menu, select **Setup**.
2. Next to the burger button, select the word in all caps, and then select **User Management**.
3. On the **USER GROUPS** tab, select **ADD**, and then enter the following settings.

Setting	Description
Group Code	Type your internal code for the group. For example, RAD.
Group Name	Type your internal name for the group. For example, Radiologist.

Setting	Description
Group Description	Type a description for the group.
Document Types	Select the document types that group members can access. For example, select **All Documents**.
Roles	Select all user roles that you want the group members to have.
Navigation	Select the areas of the program that group members can access (items available on the burger menu).

4. Select **SAVE**.

Create a user

A *user* is a member of a user group, for whom you can configure custom rights and limitations in addition to those defined in user roles.

Prerequisite: Configure a user group.

1. On the burger menu, click **Setup**.
2. Next to the burger button, click the word in all caps, and then click **User Management**.
3. On the **USERS** tab, click **ADD**, and the enter the following settings.

Setting	Description
Group Name	Select the user group to which the user belongs.
Name	Type the user's name.
User Name	Type a sign-in user name for the user.
Login with Google	When selected, the user can sign in through their Google account.
Password	Type a sign in password for the user. This field is only available the first time you configure the user.
Session Interval	Type or select the number of minutes before the user's session times out.
Allow Emergency Access	Select to grant "super user" rights to the user regardless of roles or groups.
Linked Ordering Facility	This list becomes available when you select Ordering Facility in the Linked Provider User Type list. Select ordering facilities to which to link the user.
Access Expires After	Type and select a duration after which the user's account expires. Leave blank to keep the account open indefinitely.
One-Time Access	When selected, the user can sign in only one time.
User Must Change Password Next Login	Select to force the user to create their own unique password after logging on the first time.
User Can Change Accounting Dates	When selected, the user can edit accounting dates under Billing > Payments.
Dragon 360	Select to make Dragon available to the user.

Setting	Description
Market	Select the market that the user serves. This setting narrows search results in other parts of the program. For example, when the user searches for a patient chart, Symmetry PACS only returns charts of patients in the same market as the user.
Facilities	Select the facilities that the user can view and modify.
Linked Provider User Type	Select the user type if linking to one. If you select Ordering Facility, select options in the Linked Ordering Facility list.
Search Type	(Available when Provider or Ordering Facility is selected.) Select the range of patient and other data that the user may search: full patient database, or only the associated patients in the portal.
Scheduled By	(Available when Ordering Facility is selected.) Select an option to control the dates available to the user when requesting an appointment in the ordering facility portal.

4. Click **SAVE**.
5. Optional.
    - To limit what the user can view on the worklist, see “Configure a user worklist filter.”
    - To view a user’s devices, click the **ATTACHED DEVICES** sub-tab.
    - To restrict the user’s access to specific ordering facilities, click the **USER PERMISSIONS** sub-tab.

Configure a user worklist filter

In addition to user roles, administrators can customize rights and limitations for individual users. You can customize which items appear in the worklist for individual users or user groups.

1. On the burger ☰ menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **User Management**.
3. On the **USERS** tab, double-select a user row to open a user.
4. On the **WORKLIST FILTER** sub-tab, perform one or more of the following procedures.

Configure general user worklist filter settings

You can finely control the information on the worklist to which the user has access.

1. In the left pane, select **GENERAL**.
2. Enter the following settings, and then select **SAVE**.

Setting	Description
Show Encounters Only	Select to show only studies involving interaction between a patient and provider.
Show DICOM Studies Only	Select to show only DICOM (imaging) studies.
Disable Right-click on Worklist	Select to prevent the user from opening the worklist shortcut menu.
Show RIS Orders Only	Select to show only orders from RIS.
STAT Studies Override Current Sub-Filter	Select to always show studies with assigned STAT levels, regardless of any other filtering criteria.

Setting	Description
Show Assigned Studies Only	Select to show only studies to which a user is assigned.
Deleted	Select whether to show all, only, or no (None) deleted studies.
Configure the settings below together to compose a single filtering condition.	
Date Operations By	Select a study property against which to apply criteria. **Study Date** **Study Received Date** **Scheduled Date** **Last Call Made** **Created Date**
Preformatted	Select from a list of preformatted date ranges, rather than manually entering one by using the settings in the table rows below. *Example*: Date Operations = **Study Date** Preformatted = **Last 7 Days** "If the study date falls within the last 7 days, display the study on the user's worklist"
Last/Next	Select a time range for the selected property. *Example*: Date Operations = **Study Received Date** Select **Last**, type 8, select **Week(s)** "If the study was received some time during the last 8 weeks, display the study on the user's worklist."
Date From / Date To	Select and enter a date range for the selected property.
From / To	Select and enter a time range for the selected property.

Limit access to patient information

You can limit the worklist to only display studies for patients who satisfy certain criteria.

1. In the left pane, select **PATIENT INFORMATION**.
2. Under **Patient Name**, select a logic option, type the exact portion of the patient name that corresponds to the selected logic option, and then select the plus + button to add the criterion.
3. Under **Account No.**, perform the previous step as appropriate for the account number.
4. Select **SAVE**.

Limit access to study information

You can limit the worklist to only display studies that satisfy certain criteria.

1. In the left pane, select **STUDY INFORMATION**.
2. For each criterion, select a logic option, and then type or select a value.
3. For example, to display only abdominal studies, under Body Part:
    - Select the **Is** option
    - In the list of body parts, select **Abdomen**
4. Select **SAVE**.

Limit access to information related to specific resources

You can limit the worklist to only display studies whose resources satisfy certain criteria.

1. In the left pane, select **RESOURCE**.
2. For each criterion, select a logic option, and then type or select a value.
   For example, to display only studies whose referring physician is *Jane Doe*, under **Ref. Phys.**:
   - Select the **Is** option
   - In the box, type JANE DOE, and then select the plus button.
3. Select **SAVE**.

Limit access to information from specific insurance providers

You can limit the worklist to only display studies for patients who satisfy certain criteria.

1. In the left pane, select **INSURANCE**.
2. For each criterion, select a logic option, and then type or select a value. For example, to hide studies under litigation, under **Insurance Provider Type**:
   - Select the **Is Not** option
   - In the box, select **Litigation**, and then select the plus button.
3. Select **SAVE**.

Configure general settings

You can set up study forms, custom forms, templates, and queues, and perform limited database queries.

Create a study form

Study forms are interactive electronic forms that people inside and outside of your organization can use to gather or provide needed information quickly—and often automatically. Examples include consent forms for HIPPA or treatments, screening forms, pain sheets, affidavits, customer payment plans, and procedure checklists. For information on how to use forms, see “Add a study form to a patient record” and “Attach study forms.”

Set up a study form

Use the following procedure to initially set up the form, and then see other topics to add and edit form contents.

1. On the burger menu, click **SETUP**.
2. Next to the burger button, click the word in all caps, and then click **General**.
3. On the **FORM BUILDER** tab, click **ADD**.
4. Type a name for the form, and then click **SAVE**.
5. In the left pane, on the **ASSIGN** sub-tab, enter the following settings to define the scope of the form and filter its availability.

Setting	Description
Document Type	Select a type in order to group forms and make them easier to find.
Viewable on Patient Portal	Select to make the form available from the patient portal and in Patient Kiosk.
Auto Assign to Study	Select and then enter criteria for studies to which to automatically assign the form. Assigned forms appear in the Study Forms tab of the edit study screen, making them available to users without performing dedicated searches.

Insurance Provider Allow All with Empty Allow All without Empty	Select to restrict availability to the form to specific insurance providers. Select to make all providers available if none are specified. Select to make the field required.
Physician Allow All with Empty Allow All without Empty	Select to restrict availability to the form to specific physicians. Select to make all physicians available if none are specified. Select to make the field required.
CPT Codes Allow All with Empty Allow All without Empty	Select to restrict availability to the form for studies with specific CPT codes. Select to make available for all CPT codes if none are specified. Select to make the field required.
ICD Codes Allow All with Empty Allow All without Empty	Select to restrict availability to the form for studies with specific ICD codes. Select to make available for all ICD codes if none are specified. Select to make the field required.
Markets	The form is available to patients in, or having exams scheduled in the markets you select. All facilities in the selected markets become selected in the Facilities field below.
Facilities	The form is available to patients in, or having exams scheduled in the facilities you select.
Modalities	Select to restrict availability to the form to studies from specific modalities.
Male Patient Only	Select to restrict availability to the form for male patients only, such as for prostate exams.
Female Patient Only	Select to restrict availability to the form for female patients only, such as for HSG exams.
Mammo Patient Only	Select to restrict availability to the form for mammography patients only.

6. Click **SAVE**.

Add a header to a study form

1. At the top of the **FORM BUILDER** tab, select the **Header** check box.
2. In the form area, click the word “Header.”
3. In the left pane, on the **PROPERTIES** tab, click **CHANGE LOGO**.
4. Browse for and select a logo, and then click **Open**.
5. In your form header, select the word “Header” and then replace it by typing a new field name.
   For example, type `Study Date:`
6. In the left pane, on the **MERGE FIELDS** tab, in the search box, type search term to look for a relevant merge field.
   For example, type `study`.
7. In the list of results, double-click a merge field to add it to the form header.
   For example, double-click **StudyDate**.
8. To the right of the $$StudyDate$$ merge field, type a new field name.
   For example, type `Patient Name:`

9. Repeat steps 5–6 to find and add a merge field for the patient name.
   Hint: Search for "name" rather than "patient."
10. In the left pane, on the **PROPERTIES** tab, use the **Spacing** and **Style** controls to modify the layout.
11. Click **Save**.
    Your header could look something like the following.

Add text fields to a study form

Use text fields to **gather typed information from** or **provide typed information to** the person filling out the form. In general, consider using:

Text Boxes to gather one-line user input
Text Areas to provide boilerplates
Free Text boxes to gather or provide information longer than one line.

The following compares the properties of text fields.

	Text Formatting	Variable Height	Scrollable	Minimum Height	Printer Friendly	Inline Controls
Text Box	No	Yes1	No	1 line	Yes	Yes
Text Area	No	No	Yes	1 line	No	No
Free Text	Yes2	No	Yes	5 lines	Yes	No

1. With **Dynamic Input** selected.
2. Font family, size, emphasis, and alignment.

To add a text field:

1. Drag the **Text Box**, **Text Area**, or **Free Text** button onto the form.
2. Click the word "Untitled," and then in the left pane, in the **Question** box, type text to introduce or label the text input box. For example:
   For an information gathering box, type `Please list all allergies.`
   For an information providing box, type `Liability waiver.`
3. If the text field is for providing information, enter the information in the box.
   Adjust vertical spacing:
   - To adjust the space between the question and the box, use the **Line Height** slider.
   - To adjust the space before and after the text field, use the **Padding** slider.
   - To apply adjustments to all fields on the form at once, select **Apply Spacing to All** check box, and then use the sliders.
   - If using a Text Box, select the following options for **Inline Controls**.

Setting	Description

Fit on One Line	Select to place the label one the same line as, and to the right of, the text input box.
Inline Multiple Controls	Select this option for two adjacent text boxes to place both on the same line.
Question First	Select to move the label to the left of the text input box.
Append Text Input	Select to add a new input box between the label and the original input box. This new input box is only available to the person filling out the form.
Dynamic Input	Select to fit the height and width of the text box to the text it contains.

- If using Free Text to provide information, format your text as needed by using the Style controls.
- To adjust the width of the text field, select an option in the **Size** list.

4. Click **SAVE**.

Add check boxes to a study form

1. To add a group of check boxes, drag the **Check Box** button onto the form.
2. Click the word “Untitled,” and then in the left pane, in the **Question** box, type text to label the check box group.
   For example, type: `Allergies`.
3. Adjust the vertical **Spacing**, **Inline Controls**, and check box label **Style** (see “Add text fields to your form”).
4. To add a new check box to the group, click **ADD ANSWER**.
5. To label individual check boxes, type labels in the boxes under **Answers**.
   For example, type `Peanuts` for the first check box, and `Mold` for the second.
6. To arrange the check boxes in columns, select a number in the **No. of columns for Answers** list.
7. To add an “Other” check box with accompanying text input box, select the **Add Other** check box.
8. Click **SAVE**.

Add options to a study form

While check boxes make the person filling out the form able to select more than one option, options provide an “either/or” setting. You add an option group to your form by using the same procedure as for check box groups, except that you drag the **Radio Button** button onto the form instead of the **Check Box** button.

Add a group box to a study form

A *group box* is a named group that can contain one or more check box groups and/or one or more option groups. To add a group box:

1. Drag the **Group** button onto the form.
2. Click the word “Group Title,” and then in the left pane, in the **Question** box, type text to label the group.
3. To add a background image to the group, in the left pane, click **CHANGE IMAGE**, browse for and select an image, and then click **Open**.
4. To divide the group into columns, in the **Grid Columns** list, select a number of columns.

5. To add a check box group or radio button group into a particular column, in the **New Control Placement** list, select the number of the column, and then drag the **Check Box** or **Radio Button** button onto the group.
6. Configure the check boxes and/or radio buttons as described in "Add check boxes to your form."
7. Click **SAVE**.

Add a footer to a study form

You can add and modify footers in the same way as headers. However, we often recommend using the footer for a signature line with a signature merge field. After the person electronically signs the form, their signature appears in the location of the merge field. To create a signature line in the footer:

1. At the top of the **FORM BUILDER** tab, select the **Footer** check box.
2. In the form area, select the word "Footer," and overwrite it by typing `Signature`.
3. In the left pane, on the **MERGE FIELDS** tab, search for "signature" and then double-click **SudyFormSignature** in the list of results.
4. Click **SAVE**.

Export and import a study form

To save time creating a form for "Facility A," it may be helpful to import an existing form from "Facility B" and then modify it.

Export an existing study form

1. At Facility B, on the burger ☰ menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **General**.
3. On the **FORM BUILDER** tab, select a form, and then select **EXPORT**.
   The form appears in the Windows Downloads folder as a JSON file.
4. Copy the JSON file to the computer at Facility A.

Import a study form

1. At Facility A, on the burger ☰ menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **General**.
3. On the **FORM BUILDER** tab, select **IMPORT.**
4. In the **Import Study Forms** dialog box, select **CHOOSE FILE**, browse for and select the copied JSON file, and then select **Open**.
5. On the **FORM BUILDER** tab, find the new form and edit it for use at Facility A.

Create a custom form

Custom forms are non-interactive electronic forms intended for delivering information. For interactive electronic forms that can both deliver and gather information, see "Create a study form."

Set up a custom form

1. On the burger ☰ menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **General**.
3. On the **CUSTOM FORMS** tab, select **ADD**.
4. In the **Document Name** box, type a name for the form, and then enter the following settings.

Setting	Description
Description	Type a general description.
Labels	[Unused]

Patient Review Patient Mammo Form	[Unused]
Education Material	Select to make the form available in the EDUCATIONAL MATERIAL area of the patient chart.
Reference Document	Select to make the form available in the DOCUMENTS and CUSTOM FORMS areas of the patient chart.

5. In the word processing area, type your form (see “About adding contents to a custom form”).
6. Below the word processing area, under **Assign Document**, enter the following settings.

Setting	Description
Modalities	Select modalities to which to assign the custom form.
Facility	Select a facility to which to assign the custom form, and then select the add + button.
ICD Codes Allow All with Empty Allow All without Empty	Select to restrict availability for specific ICD codes. Select to make available for all ICD codes if none are specified. Select to make the field required.
Medication Allow All with Empty Allow All without Empty	Select to restrict availability for specific medications. Select to be available for all medications if none are specified. Select to make the field required.
Lab Codes Allow All with Empty Allow All without Empty	Select to restrict availability for specific lab codes. Select to make available for all lab codes if none are specified. Select to make the field required.
Male/Female/Mammo Patient Only	Select to restrict availability of the form to male, female, and/or mammography patients.

7. Select **SAVE**.

About adding contents to a custom form

The custom form word processing area provides commonly recognizable tools to type, align, and format text, and insert images and merge fields. You can copy and paste contents by using the **Ctrl + C** ad **Ctrl + V** keyboard shortcuts. To change font sizes, select text that you want to resize, and then select a size in the **Formats** list.

Add merge fields to a custom form

In this example we show you how to add a signature merge field to a custom form. You must add a signature merge field to be able to electronically sign the form.

1. In the right pane, in the **Merge Fields** area, in the search box, type search term to look for a relevant merge field.
   For example, type `sign`.
2. In the list of results, double-select a merge field to add it to the form.
   For example, double-select **CustomFormSign**.
3. To the left of the $$CustomFormSignature$$ merge field, type a new field name.
   For example, type `Signature:`
4. Select **SAVE**.

Editing a custom form

Note: If you edit an existing form, your changes will *not* appear on forms that are already attached to a patient chart. To edit a form:

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **General**.
3. On the **CUSTOM FORMS** tab, select the form button of the custom form that you want to edit.
4. Edit the form as needed, and then select **SAVE**.

DB Totals

As an alternative to reports, the DB Totals tab contains a tool for quickly searching the PACS and RIS databases with customizable queries. A DB total search tells you how many patients, studies, and images in your databases match the search criteria.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **General**.
3. On the **DB TOTALS** tab, enter the following search criteria.
   Note: If you performed a search previously during the current session, refresh your browser before entering new criteria.

Setting	Description
Date Range	Select a date range within which to search.
Study Date Study Received Date Approved Date	Select a category for the date range: Search all studies with a study date within the date range. Search studies whose DICOM receive date is within the date range. Search studies that were approved during the date range.
Facility	Filter the search by facility.
Modalities	Filter the search by modality.
Study Description	Filter the search by study description.
Institutions	Filter the search by institution.
ADD	To add a new institution to the list, clear the **All** check box, type the name of the institution in the box, and then select **ADD**.

4. To run the search, select **UPDATE TOTALS**.
5. The search results appear below the button under **DB Details**.
6. Optional. To export a more detailed report of your search and results, select **CSV REPORTS**.

Configure email templates

Email templates define the contents and format of emails that are automatically sent from a provider to the referring provider at the specified stage. After configuring email templates, you must turn on the emailing feature by following the procedures in “Set up emailing of exam results.”

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **General**.
3. On the **EMAIL TEMPLATE** tab, select **ADD**, and then enter the following settings.

Setting	Description

Template Name	Type a name for the template.
Category	Select the stage at which to send the email.
Subject	Type text to appear on the email's Subject line.
Market	Select the market for the template. All facilities associated with the select market become selected in the Facilities field below.
Facilities	The template applies to studies associated with or scheduled in the facilities you select.

4. Use the word processing tools to compose the body of the email.
5. To automatically insert exam details into the email:
    a. In the right pane, in the search box, type a category of information (e.g. patient).
    b. In the resultant **Merge Fields** list, double-select a merge field to add it (e.g. Fullname).
6. Select **SAVE**.

Set up emailing of exam results

You can configure Symmetry PACS to automatically send exam results to referring providers by email.
Prerequisite: Configure email templates.

1. Configure the company's email server (under "Configure your company," see "Configure general settings").
2. Configure a facility, and select the facility's **Email Report Link** and/or **Email Attachment** check boxes (see "Add a facility").
3. Configure a referring provider, and select provider's **Email Report Link** and/or **Email Attachment** check boxes (see "Add a resource").

Configure notification templates

Notifications here means automatic fax or email notification from a provider to a referring provider about an exam, such as when the provider completes an approved report. When you configure a referring provider, you select whether and how to receive notifications (see "Add a resource"). In the following procedure you can create a notification template that defines the contents of the notification.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **General**.
3. On the **NOTIFICATION TEMPLATES** tab, select **ADD**, and then enter the following settings.

Setting	Description
Template Name	Type a name for the template.
Subject	Type text to appear on the email's Subject line.
Market	Select the market for the template. All facilities associated with the select market become selected in the Facilities field below.
Facilities	Select facilities to which you want to associate the template.

4. Use the word processing tools to compose the template.
5. To automatically insert exam details into the notification:
    a. In the left pane, in the search box, type a category of information (e.g. patient).
    b. In the resultant **Merge Fields** list, select a merge field group (e.g. **Exam Details**).
    c. To add a merge field to the template, double-select it (e.g. PatientLocation).
6. Select **SAVE**.

Create fax cover sheets

You can create a cover sheet to automatically attach to faxes. You can create one cover sheet for each facility. To create a cover sheet:

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **General**.
3. On the **COVER SHEETS** tab, select **ADD**.
4. Type a name for your cover sheet, select the facility where the cover sheet will be available, and then select **SAVE**.
5. Use the word processing tools create your cover sheet, and then select **SAVE**.
6. Select **SAVE & CLOSE**.

View logs

To view the various logs that are available in Symmetry PACS, do the following.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **Log**.
3. Enter information as needed in the following tabs (AUDIT LOG, USER LOG, etc.).

Work with the worklist

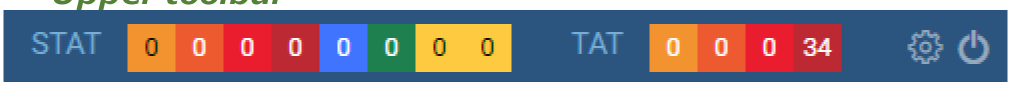
The worklist is the starting point for most operations in Symmetry PACS. The worklist is a searchable and highly customizable list of patients, studies, and series, providing full access to demographics and images.

Worklist settings

About toolbars and elements in the worklist

The worklist provides the following toolbars and other items. Notice that there is a settings menu button in both the upper and lower toolbar, but they open different menus.

Upper toolbar



1 2 3 4

The upper toolbar contains the following elements, from left to right.

1	**STAT meter**	Shows the number of studies at each STAT (urgency) level.
2	**TAT meter**	Shows the number of studies at each TAT (turnaround time).
3	**Settings**	Opens the settings menu.
4	**Log off**	Logs off the current user.

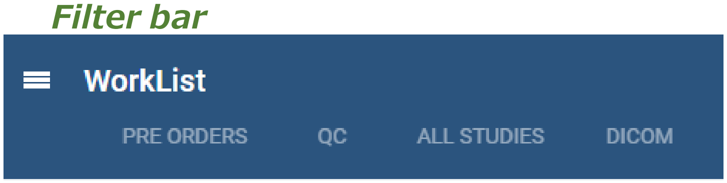
Lower toolbar

1 2 3 4 5 6 7

The lower toolbar contains the following elements.

1	**Move tabs left/right**	Left/right justifies the worklist filter tabs.
2	**Filter menu**	Select from any available filter tab.
3	**Refresh**	Updates the worklist, but keeps manually entered filters.
4	**Refresh all**	Updates the worklist, clearing all filters.
5	**Settings**	Opens the PACS Actions menu.
6	**Filters**	Opens the Study Filters dialog box.
7	**Search tools**	Shows/hides the search bar.

Filter bar



Filter tabs appear on the left side of the worklist by their labels.

About filter tabs in the worklist

The following table describes the four types of filter tab (filters) that are available in the worklist.

Type	Name	Description
Permanent (Cannot be hidden)	**ALL STUDIES**	Lists all DICOM studies and scheduled RIS orders that are not currently on the QC tab.

Optional (Can be hidden)	**PRE ORDERS**	Lists unscheduled orders. Pre orders often have no referring physician, and come from the patient portal (such as exams requested by the patient).
	QC	Lists studies needing reconciliation.
User Filters (Can be hidden)	[*user defined*]	Provide a highly customized view of the worklist.
Temporary	**TIME EXCEEDS STUDIES**	When you select the Exceeds Maximum Time Limit link at the bottom of the worklist, this tab opens and lists relevant studies. Select the pushpin button on the tab to display a dialog box with options, including "Remove."

Display a filter of the worklist

You can display optional filters (such as PRE ORDERS or QC) in the following two ways. To display user filters, you can use these steps if the filter was configured to appear as a tab or in the tabs list.

1. On the worklist, in the filter bar, select a tab to display the filter.
2. In the lower toolbar, select the **Show all Tabs by list** button, and then select a filter.

Create a filter of the worklist

Symmetry PACS comes with the PRE ORDERS, QC, and other filters, but you can also create your own filters to customize the worklist at a high level of precision.

1. On the worklist, on the lower toolbar, select the filter button.
2. In the **Study Filter** dialog box, select **ADD.**
3. Enter the following criteria.

Setting	Description
Filter Name	Type a name for the filter
Show Encounters Only	Shows only studies for outpatient encounters.
Joined Filters	Selects another filter to combine with the current filter. Studies must meet the criteria in both filters to appear in the worklist.
Filter Order	Determines the order in which filters appear as tabs or list items, from low to high.
Is Private	Restricts availability of the filter to the user who created it.
Display as a Tab	Shows the tab for the filter on the worklist.
Display in Dropdown	Shows the filter in the Show Tabs by list list on the worklist.
Show Only Exceeding Max Time	Shows only studies that are exceeding their max time as specified in “Configure study statuses.”
Show DICOM Studies Only	Shows only DICOM studies (studies containing images).
Show RIS Orders Only	Shows only RIS orders.
Show Assigned Studies Only	Shows only studies that were assigned to the current user.
Show Pre-Orders Only	Shows only pre-orders.

Setting	Description
Deleted	Shows all (deleted and non-deleted) studies, no deleted studies, or only deleted studies.
Assign	Assigns the filter to specific users or user groups.
Default Column/Sort By	Sorts the worklist by the column and order that you select.
DATE/TIME	Filters studies by a range of dates and times.
PATIENT INFORMATION	Filters studies by patient or account number.
STUDY INFORMATION	Filters studies by institution, facility, modality, body part, and other categories.
RESOURCE	Filters studies by physician or attorney.
INSURANCE	Filters studies by insurance provider.

4. Select **SAVE.**

Edit or delete a worklist filter

You can edit or delete a filter that you created.

1. On the worklist, on the lower toolbar, select the filter button.
2. In the **Study Filter** dialog box, find the filter to edit or delete.
3. Select the edit or delete button of the filter to delete.

Show or hide a worklist filter

You can show filters as tabs on the worklist, as items in the filter menu, as both, or as neither (you can hide them for later use without deleting them).

1. On the worklist, on the lower toolbar, select the filter button.
2. In the **Study Filter** dialog box, double-select the filter to show or hide.
3. In the second **Study Filter** dialog box, select or clear the **Display as a Tab** check box and the **Display in Dropdown** check box.

Select a quick filter of the pre orders tab

At the bottom of the PRE ORDERS tab, you can select from the following check boxes to quickly filter the list of pre-orders.

Quick Filter Check Box	Description
Waiting for Authorization	Shows only unauthorized pre-orders.
Show Only Expired	Shows only pre-orders that are past the authorization date.
Show Only Physician Orders	Show only pre-orders created from Referring Provider Portal.
Show Only Ordering Facility Orders	Show only pre-orders created from the ordering facility portal.

User settings

User settings (from the worklist) control how the worklist appears and functions when the user who configured them signs in. User settings override global settings, except for security settings.

Configure worklist columns

You can show, hide, and order columns in the worklist.

1. On the worklist, on the upper toolbar, select the settings button, and then in the button shortcut menu, select **User Settings**.
2. In the **User Settings** dialog box, under **Column Order**, do one or more of the following.
   - To show or hide a column, select or clear its check box.
   - To reorder a column, drag the column to a new position in the list.

   Note: You can also drag columns directly on the worklist.
3. Select **SAVE.**

Configure other user settings

You can configure a variety of behaviors and settings for worklist tabs, columns and rows, and other user settings.

1. On the upper toolbar, select the settings button, and then in the button shortcut menu, select **User Settings**.
2. In the right side of the **User Settings** dialog box, configure the following settings and then select **SAVE.**

Setting	Description
Show Row Number	Select to display the row number column in the worklist. The column is labeled as "#" or "No."
Show Priors	Select to show prior studies on the worklist, or clear to show series and images instead. Whether you choose to show priors or series, you can view them by selecting the expand + or collapse − button in a study row.
Show QC	Select to show the QC tab, and select the Show Completed in Pending List check box to show include completed orders in the QC tab.
Show Orders Tab	Select to show the PRE ORDERS tab in the worklist.
Auto-Open New Order	Select to automatically open the edit study screen after selecting the CREATE ORDER button (see "Work with scheduling").
Auto-Open Appointment Confirmation	Select to automatically open the appointment confirmation screen after selecting the CREATE ORDER button (see "Work with scheduling"). This screen provides a convenient summary to read to the patient over the phone, or to send as an email.
Double-Select Behavior	The view or app in which a study appears when double-selecting a row, unless the study is scheduled.
Double-Select (Scheduled)	The view in which a scheduled study appears when you double-select it.

Setting	Description
Default Tab	The default tab for the worklist.
Default Filter (Local Cache)	The default filter for the worklist.
Default Column	The default column for the worklist that determines the sort.
Sort By	Whether the list is sorted in ascending or descending order.
audioPlayerLagTime	The amount of delay before starting audio playback.
Auto Open Priors	Turns automatic opening of priors in the viewer on and off.
Open Prior Reports	Automatically opens prior reports when opening a study.
Voice recognition	When opening a DICOM study in the Symmetry PACS viewer: **Dragon (Exa Trans)**: Opens Dragon Naturally Speaking for radiologist transcriptions rather than Exa Dictation. You must install Exa Trans on the local workstation to use this option. **Dictation (Web Trans)**: Opens Exa Dictation. **Off (None)**: Does not open a voice recognition tool
Delay Load of Exa Trans	Delays loading of the Exa Trans transcription screen, to focus attention on images before the transcription.
Exa Trans Font	Sets the font used by Exa Trans.
Exa Trans Font Size	Sets the font size used by Exa Trans.
Default Time Increment	Sets the default time increment for time blocks in the schedule book.

Viewer settings

See “Configure the viewer.”

Local service settings

See “Install local cache” in the appendix.

Use the worklist

Open the worklist

- On the burger ☰ menu, select **WORKLIST**.
  Initially, the worklist is empty until you add filtering criteria (see “Find and view studies,” and “Create a filter”).

Find and view studies

You can find a study and open it to view or edit details.

1. In the worklist, on the **ALL STUDIES** tab, in the search bar, do one or both of the following:
   - Type or select one or more criteria in a column header and select **Enter**.
   - Select a column header to sort the list.

   Note: For tips on searching, see “Search syntax.”
2. Double-select a study in the list to open it for viewing or editing.

View priors

You can view the prior studies of any study in the worklist that includes them.
Prerequisite: In the user settings, select the **Show Priors** check box.

1. In the worklist, find a study.
2. On the study toolbar, select the expand + button.
   The priors appear in rows below the study row.

View series and images

You can view series and images of any study in the worklist that includes them.
Prerequisite: In the user settings, clear the **Show Priors** check box.

1. In the worklist, find a study.
2. On the study toolbar, select the expand + button.
3. The series appear in rows below the study row. You can double-select a series row to open the series in the viewer.
4. On the series row, select the expand + button.
5. The images in the series appear in rows below the series row.
6. To view a large thumbnail of an image, select the button in the image row.
   Note: To view an image thumbnail, the status must be Incomplete or Unread.
7. To view an image in the viewer, double-select it.

Use the study toolbar buttons

Each study on the ALL STUDIES tab or corresponding user filters of the worklist has its own toolbar on the left side of the study row. Depending on the properties of the study, one or more of the following tools are available.

Tool	Name	Description
+ / −	Expand/Collapse	Expands or collapses the study row to show or hide series or priors.
	Prior	Displays a list of prior studies in a custom filter.
	Check box	Click to select the study for further processing by commands in the PACS Actions menu.
	DICOM Viewer	Open the study in the Exa PACS viewer. See "Work with the Symmetry PACS viewer." This button is only available for studies that contain images.
	Opal Viewer	Open the study in the Opal viewer (requires installation). This button is only available for studies that contain images.
	Edit	Opens the study for editing. See "Edit study screen."
	View Transcription	Opens the dictation and transcription editor. See "Dictation and transcription."
	Multi-panel	Opens the study in the multi-panel, an operating panel for working with dictation, transcription, documents, notes, and other information.
	Approved Report	Opens approved reports of the study.

Tool	Name	Description
	External app.	Opens the current study in an external application if configured (see "Configure opening of a third-party program.").
	Unread DICOMs	Click to view unread images. In the Unread DICOMs dialog box, click MARK AS READ, or OPEN IN VIEWER to read the images in the Symmetry PACS viewer.
	Notes	Opens a screen for entering and viewing notes related to patient, study, schedule, and reason for study, and for updating the call log. The button turns blue if study notes are available.
	Study menu	Displays the study shortcut menu (you can also right-click anywhere on the study row to display the shortcut menu). See "Worklist shortcut menus."

Use the order toolbar buttons

Each order on the PRE ORDER tab or corresponding user filters of the worklist has its own toolbar on the left side of the order row. Depending on the properties of the order, one or more of the following tools are available.

Tool	Name	Description
	Select	Click to select the order for deletion.
	Edit	Click to open the order in the Edit Order screen.

Update the worklist or viewer

After performing tasks that modify studies it may be necessary to update the worklist or viewer to show changes. To do so:

- While viewing the worklist or viewer, select **F5**.

PACS Actions menu

The PACS Actions menu on the worklist provides top-level access to common functions. To open the menu, on the worklist, select the settings button on the lower toolbar. The commands on the menu are described below.

Burn studies to a CD or hard disk

You can burn studies to a CD or hard disk for sharing with other facilities, physicians, or patients.
Prerequisite: Install OPAL Tools (see appendix).

1. Place a CD in the drive.
2. In the worklist, find and select studies that you want to burn, and then do one of the following.
    - On the lower toolbar, select the settings button, and then in the **PACS ACTIONS** menu, select **CD Burn**.
    - On the study shortcut menu, select **Send**, and then select the AE title of the CD Burner in the dialog box (see “Send a study.”)
3. In the **Opal CD Burning** dialog box, enter the following settings as needed, and then select **START**.

Setting	Description
Include Viewer	Burns a viewer program onto the CD along with the studies. Required for viewing off site.
Write to Disk Only	Writes the study to the hard disk instead of a CD. Browse for and select a destination folder under Path.
Create Annotations Overlay	Converts annotations to an overlay and includes them with the images.
Compression	Specifies a compression algorithm.
Anonymize DICOM	Removes identifying patient demographics.
Remove Annotations	Omits annotations from the burned studies.
Report	Specifies a report storing method.

4. After burning, test the results by opening an image from the CD using the included viewer.

Compare studies

You can open two studies of the same patient in separate viewer screens for purposes of comparison.
Prerequisite: Disable single instance mode (see “Configure other interface settings”).

1. In the worklist, select two studies of the same patient to compare.
2. On the lower toolbar, select the settings button, and then in the **PACS ACTIONS** menu, select **Compare Study**.

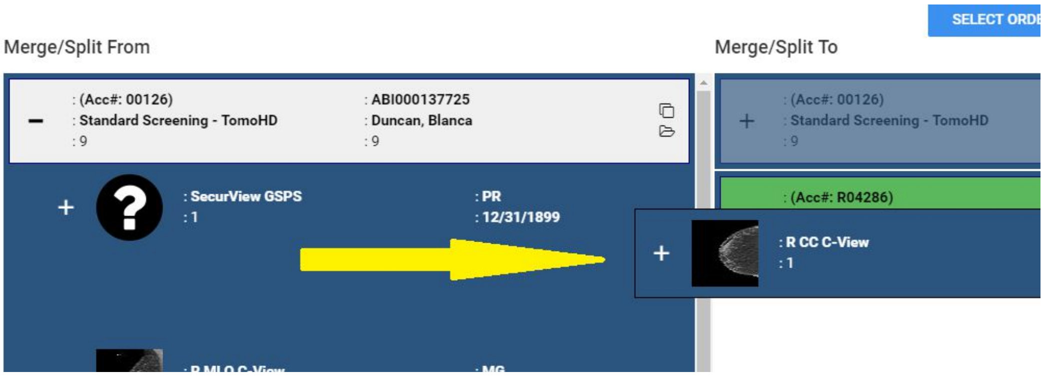
Merge or split studies

In Symmetry PACS, *merge* and *split* refer to a category of operations in which you move series and images from one study to another. Additionally, *split* refers to moving images from a study with an incorrect accession number to the correct order. There are many ways to perform merge/split operations, but the following procedures are useful examples. Moving all series and images out of a study deletes the study.

See also, “Add studies to the merge queue.” As an alternative to merging studies, see “About alternate account numbers.”

Move a series from one study to another study

1. In the worklist, select two different studies that contain series.
2. On the lower toolbar, select the settings button, and then in the **PACS ACTIONS** menu, select Merge/Split.
3. In the **Merge/Split Study** screen, in the upper-left corner, select the button once or twice to activate **Move Selected** mode.
4. in the **Merge/Split From** column, select the plus sign of the *first* study (the one on top) to reveal its series.
5. Drag the series onto the *second* study (the one on the lower-right) in the **Merge/Split To** column.



Note: As you drag over the second study, it turns green to indicate when you can release the mouse button.

6. Select **SAVE CHANGES**.

Move all images in one series to a series in another study

1. Repeat steps 1 through 4 in “Move a series from one study to another study.”.
2. In the Merge/Split To column, select the plus sign of the second study to reveal its series.
3. Drag a series in the left column onto a series in the right column.
4. Select **SAVE CHANGES**.

Move one or more images from one series to a series in another study

1. Repeat steps 1 through 4 in “Move a series from one study to another study.”.
2. In the **Merge/Split To** column, select the plus sign of the second study to reveal its series.
3. In the left column, select one or more images to select them, then drag them onto a series in the right column.
4. Select **SAVE CHANGES**.

Move an image from one series to another series in the same study

1. In the worklist select a study that has multiple series.
2. In the **PACS ACTIONS** menu, select **Merge/Split**.
3. Select the plus sign in both columns to reveal the series.
4. Drag an image from the left column onto a series in the right column.
5. Select **SAVE CHANGES**.

“Split” images into their correct order

1. In the worklist, select one study.
2. In the **PACS ACTIONS** menu, select **Merge/Split**.
3. In the **Merge/Split Stud**y screen, select **SELECT ORDER**, find the correct RIS order, and then select its **SELECT** button.
4. Drag the images to the correct order, and then select **SAVE CHANGES**.

Add a new series to a study

1. In the worklist, select one study.
2. In the **PACS ACTIONS** menu, select **Merge/Split**.
3. In the **Merge/Split To** column, select the new series button.
   Note: The new series is added to the bottom of the list.
4. On the new series row, select the edit button.
5. In the **Edit Study Info**. dialog box, type a description and then select the **EDIT** button.
   Note: You can move series or images into the new series.
6. Select **SAVE CHANGES**.

Duplicate a study

1. In the worklist, select one study.
2. In the **PACS ACTIONS** menu, select **Merge/Split**.
3. In the **Merge/Split From** column, select the duplicate study button.
   Note: You can move series or images into or out of the new study.
4. Select **SAVE CHANGES**.

Import DICOM images

You can import DICOM images to a study.
Prerequisite: Install OPAL Tools (see appendix).

1. In the worklist, select a study into which to import images.
2. On the lower toolbar, select the settings button, and then in the **PACS ACTIONS** menu, select **Import Images**.
3. In **OpalImport**, select **Select Files/Folder or DICOMDIR to Import**.
4. In the **Open** dialog box, browse for and select files to import, and then select **Open**.
5. In **OpalImport**, configure the settings in the table below.
   Note: This is a partial list. Other settings are self-explanatory or generally unused.

Setting	Description
Do Not Compress	Select to store in DICOM Little Endian format. Clear to compress in DICOM JPEG200 Lossless format.
Overwrite	Select to overwrite any existing instances of the studies.
DB Only	Select to import DICOM data only (no images).
Save before Encode	For troubleshooting purposes: Select to place the images in a folder on the server, and not update the database.
Isolate Fails	Select to place files that failed to be imported into a separate folder.
Modify Demographics	Select to reconcile demographics before import.
Max Files	Type a maximum number of files to import.
Max Size	Type a maximum data size to import.

6. Select **Import**.
7. Optional. If you selected the Modify Demographics check box, the Modify/Confirm Demographics dialog box appears. Do one of the following.
   - Under **New Info**, edit the demographics and then select **MODIFY**.
   - Under **New Info**, confirm that the demographics are correct, and then select **USE CURRENT**.
8. Select **Exit**.

Purge all deleted

See “Undelete or purge a deleted study.”

Export the worklist

You can export the worklist to a CSV file.

1. On the lower toolbar, select the settings button, and then in the **PACS ACTIONS** menu, select **Export Worklist**.
2. In the **Export Worklist** dialog box:
    - Optional: In the **Filename** box, edit the default file name.
    - Modify the name of the exported file by selecting or clearing the **Include Timestamp** and **Include Filter Name** check boxes.
    - Under **Link to Download**, select the link.

Worklist shortcut menus

There are two worklist shortcut menus: the order shortcut menu (for PRE ORDERS and studies in the Ordered status), and the study shortcut menu (for studies in the Unread and later statuses). The tasks you can perform by using each shortcut menu are described in the topics in this section. Note that the commands available on the shortcut menus vary depending on the order or study status and other factors.

Any errors in patient and study information resulting from incorrectly performing the procedures in this section can result in problems with data integrity. Take care to ensure that entered and imported data is correct.

Open a shortcut menu

You can open a shortcut menu by right-clicking its parent object, such as a study or order row.

About drawing attention to studies

There are several methods to draw attention to orders and studies that are of special consideration. You can use different individual or combined methods to best meet your needs. The following gives a general description of the available options.

STAT level	The medical urgency. Setting a STAT level places the study at the top of the worklist. You can edit STAT levels and descriptions, and add new ones. STAT levels drive workflows. See "Change the urgency of an order" or "Change the urgency of a study."
TAT	The turnaround time. Studies that are near or beyond the TAT are flagged in red and appear at the top of a radiologist’s unread studies worklist.
Priority	By default you can set the priority to High, Medium, and Low, but you can edit these and add more options. Priority is primarily used to sort the worklist (on the Priority column). See "Change the priority of an order" or “Change the priority of a study."
Critical findings	Medical findings that you can customize. In Exa Trans, you can select critical findings in a list to send notification the referring physician. See "Assign critical findings to an order" or "Assign critical findings to a study."
Flag	With flags you can mark a study with a customized description that can serve as a filter. You can only assign one flag per study. See "Flag an order" or "Flag a study."

Assign a study to users

You can assign one study to one or more users (such as a radiologist). When the user signs in, they can create a filter of the worklist that displays all studies assigned to them. This feature also works in conjunction with the “Show assigned studies only” option under Setup > User Management > [user profile] > WORKLIST FILTER.

1. On the worklist, select the **ALL STUDIES** tab.
2. On a study shortcut menu, hover over **Exam**, and then select **Assign Study**.
3. In the **Study Assignment** dialog box, select a user from the list and then select the add  button.
   Note: You can repeat this step to assign additional users.
4. Optional. In the **Select radiologist to assign** list, select a radiologist as the referring provider.
5. Optional. In the **Assign for peer review** list, select a radiologist as the peer reviewer. See also "Assign a peer reviewer for a study."
6. Select **SAVE.**

Add studies to the merge queue

You can add studies to a merge queue from the worklist, and then merge or split them by following the procedures in “Merge or split studies.”

1. In the worklist, select the **ALL STUDIES** tab.
2. Optional. To start merging or splitting with one study at a time, on a study shortcut menu, hover over **Exam**, select **Merge/Split**, and then skip to the last step.
3. Right-click the first study, hover over **Exam**, hover over **Merge Queue**, and then select **Add to Merge Queue**.
4. Repeat the previous step for all studies that you want to work with.
5. Right-click one of the studies that you added to the merge queue, hover over **Exam**, hover over **Merge Queue**, and then select **View Merge Queue**.
6. Perform merge and split operations.

Create a teaching study

You can create a teaching study based on an existing DICOM study. The teaching study is anonymized.

1. In the worklist, find a DICOM study.
2. On the study shortcut menu, hover over **Images**, and then select **Create Teaching Study**.
3. In the **Teaching Study** dialog box, in the **AE Title** list, select an **AE title**.
4. In the **New Value** column, type or select anonymous values for the new study, and then select **CREATE TEACHING STUDY**.

Reset a study

If the status of a study is beyond “Scheduled” in the study flow, you can reset the status to “Scheduled”

1. In the worklist, select the **ALL STUDIES** tab.
2. On a study shortcut menu, hover over **Exam**, and then select **Reset Study**.
3. In the confirmation dialog box, select **YES**.

Delete a study

When you delete a study it remains on the worklist but Symmetry PACS applies strikethrough text formatting to it and disables access. You can undelete or purge a deleted study.

1. In the worklist, select the **ALL STUDIES** tab.
2. On a study shortcut menu, hover over **Exam**, and then select **Delete Study**.
3. In the confirmation dialog box, select **YES**.
4. In the **Delete Reason** dialog box, select a reason and then select **SAVE.**

Download approved reports

If an approved report is attached to a study, you can download the approved reports directly from the worklist.

1. On the worklist, select the **ALL STUDIES** tab.
2. On a study shortcut menu, hover over **Send Report** > **Download**, and then select the format of the report.
   Result: Symmetry PACS downloads the report to your Windows Downloads folder.

Assign critical findings to a study

You can assign critical findings to a study (for example, “Acute Positive”).
Prerequisite: Define critical findings (see "Configure reason codes").

1. On the worklist, select the **ALL STUDIES** tab.
2. On the study shortcut menu, hover over **Actions**, hover over **Critical Findings**, and then select a finding.

Undelete or purge a deleted study

Undeleting a study removes the strikethrough text formatting and restores availability. *Purging* a study permanently removes it from the worklist and the database.

1. On the worklist, select the **ALL STUDIES** tab.
2. To undelete a deleted study, on the study shortcut menu, select **Restore Study**.
3. To purge a deleted study, on the study shortcut menu, select **Purge (Permanently)**, and then select **OK**.
4. To purge all deleted studies at once, on the **PACS Actions** menu, select **Purge All Deleted**.

Flag a study

You can flag a study in the worklist as being of special consideration, such as a case study. Users can filter the worklist by individual flags. To configure the flags that are available, see “Create a study flag.”

1. On the worklist, select the **ALL STUDIES** tab.
2. On a study shortcut menu, hover over **Actions**, hover over **Flag**, and then select a flag.

Copy the API URL

If you need the API URL, you can copy it from the worklist.

1. On the worklist, select the **ALL STUDIES** tab.
2. On a study shortcut menu, hover over **Actions**, and then select **Copy API URL**.
3. A message box appears with the **API URL**.

Reset a stack

To *reset* a stack means to restore its images to their last-saved ordering. It can also be helpful to reset the stack if any problems occur when displaying it in the viewer.

1. On the worklist, select the **ALL STUDIES** tab.
2. On the shortcut menu of a study that contains images, hover over **Images** and then select **Reset Stack**.
3. In the confirmation dialog box, select **YES**.

Lock and unlock a study

You can lock a study to warn other users attempting to open it, and to prevent other users from using transcription. You can unlock a study that someone previously locked.

1. On the worklist, select the **ALL STUDIES** tab.
2. To lock a study, on the study shortcut menu, hover over **Exam** > **Lock Study**.
3. To unlock a locked study, on the study shortcut menu, hover over **Exam** > **Unlock Study**.

Edit a patient, study, or order

To edit a patient, study, or order you can access the edit study screen from the worklist by selecting the Edit Study, Edit Order, or Patient Information commands on the shortcut menu. For details, see topics under “Edit study screen.”

Change the priority of a study

You can assign or change the priority (for example, High, Low, or Lowest) of a study in the worklist. To configure priorities, see “Configure settings” under “Configure your company.”

1. On the worklist, select the **ALL STUDIES** tab.
2. On the study shortcut menu, hover over **Priority**, and then select a priority.

Change the study status

You can assign or change the status (such as Approved or Transcribed) of a study in the worklist. To configure the statuses that are available, see “Configure study flow.”

1. On the worklist, select the **ALL STUDIES** tab.
2. On the study shortcut menu, hover over **Change Status**, and then select a status.

Change the urgency of a study

You can assign or change the urgency (Stat 1–5, or Off) of a study in the worklist.

1. On the worklist, select the **ALL STUDIES** tab.
2. On the study shortcut menu, hover over **Stat**, and then select a stat level.

Send a study

You can send a DICOM study to PACS or another destination. To configure destinations, see “Configure application entities.”

1. In the worklist, on the **ALL STUDIES** tab, select one or more studies.
2. On the shortcut menu of one of the selected studies, select **DICOM Send**.
3. In the **Send Study** dialog box, to filter the list of available AEs, type at least one character in the filter box and then select **Enter**.
4. In the **Priority** list, select a priority.
5. Do one of the following.
    - Select to select destinations in the list, and then select **SEND TO SELECTED**.

    Optional: To send any attached approved reports, select the **Include Approved Report** check box.

    - To send the study to all available destinations, select **SEND TO ALL**.
6. Optional. To manage in-process send jobs, see “Manage jobs in the transfer queue.”

DICOM-print a study

You can print the currently viewed image to a preconfigured DICOM printer. The current image prints, including any displayed annotations and overlays.

Note: You cannot print multi-frame MR/CT or MG tomography images, or US echocardio series.

Prerequisite: Enable the DICOM Print shortcut menu command (see “Add or remove tools from the image shortcut menu”).

1. Open a study in the Symmetry PACS viewer, right-click any image, and then select **DICOM Print**.
2. In the **DICOM Print** dialog box, in the **Printer** list, select a printer.
3. Enter the following remaining settings.

Setting	Description
Annotations	Select to include annotations, or clear to exclude.

Setting	Description
W/L (Default)	Select to print the image with its original window/level settings. Clear to select the current window/level setting.
Overlay Text	Select to include the DICOM overlay (as per-image detail), or clear to exclude.
Selected Image Selected Series Current Page All Images	Select to print the selected image, selected series, current page of images, or all images.
Prev / Next	Select to move through pages of the print preview.
Printer	Select a printer (selected earlier in this procedure).
Configuration	Select a printer profile.

4. Select **DICOM Print**.

Manage jobs in the transfer queue

DICOM studies that you send appear as jobs in the transfer queue. You can view and change job status and priority, cancel jobs, and requeue failed jobs.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **DICOM**.
3. On the **TRANSFER QUEUE** tab, perform any of the following tasks.

View job status

In the list of jobs, the status is listed in the CURRENT STATUS column. The available statuses are as follows.

Queued	Processing not yet started.
In-progress	Sending of data has started but not finished.
Completed	Sending of all data is finished.
Canceled	Sending of data canceled by the user. You can only cancel a job with a status of Queued.
Error	Sending was aborted due to failed association or the request was rejected by the destination.

View demographics

To view the demographics of a study in the transfer queue, select the expand button.

Change the job priority

To change the priority of a job, select the edit button, select a new priority, and then select **SAVE.**

View job details

To view demographics and other queue details, select the view button.

Cancel a job

To cancel a job, select the cancel button.

Requeue a job

To *requeue* a job means to repeat or retry sending. If the status of a job is Queued, Error, Completed, or Cancelled, you can requeue the job by selecting the requeue button. Requeued jobs remain in the transfer queue for 15 minutes before reprocessing begins.

Reprocess non-failed jobs

Rather than requeuing jobs one at a time, you can select multiple jobs for reprocessing, and then select REPROCESS SELECTED.

Reprocess failed jobs

Failed jobs are ones with a status of "Error." You can select a range of failed jobs (such as by filtering the worklist) and reprocess them all at once.

1. On the transfer queue, select **REPROCESS FAILED**.
2. In the date boxes, enter a date range of jobs to reprocess.
   Note: To select all dates, leave the boxes blank.
3. In the AE Title list, select the AE whose jobs you want to reprocess.
4. Select **REPROCESS**.

Reprint DICOM Print jobs

1. On the transfer queue, find a job with type **PRINT** and status **Completed**.
2. Right-click the job, and select **REPRINT**.

Cancel a DICOM Print job

1. On the transfer queue, find a job with type **PRINT** and status **Queued**.
2. Right-click the job, and select **Cancel**.

Send an approved report via Opal

You can send approved reports of DICOM studies to another Opal/Exa system.
Prerequisite: Ensure that the referring physician is configured on the sending server (your Symmetry PACS server) and receiving server. You may need to contact the receiving facility to confirm.

1. On the worklist, select the **ALL STUDIES** tab.
2. On the shortcut menu of a DICOM study, hover over **Send Report** > **Send Report via Opal**.
3. In the **Send Report via Opal** dialog box, to filter the list of available AEs, type at least one character in the filter box and then select **Enter**.
4. In the **Priority** list, select a priority.
5. Select send destinations in the list.
6. Select **SEND TO SELECTED**, or **SEND TO ALL**.

Send an approved report via fax or email

You can send approved reports of DICOM studies via fax or email.

1. On the worklist, select the **ALL STUDIES** tab.
2. Select one or more DICOM studies containing reports you want to send.
3. On the shortcut menu of one of the selected studies, hover over **Send Report** and then:
   - To fax to the default recipient, select it. The report is sent to the fax queue.
   - To send to selected recipients, select **Fax/Email**.
4. In the **Send Report** dialog box, select the recipient types and individual recipient, and then select the **SEND FAX** and/or **SEND EMAIL** button.
5. Optional. Repeat the previous step to send to additional recipients.

View and export audit logs

You can view audit logs, and export them to an XLS file.

1. In the worklist, on the study or order shortcut menu, select **Log**.
2. In the **Audit Log** dialog box, select a date range for the logs to view, and then select **RELOAD**.
3. If any logs match the date range, an entry appears in the list.
4. Optional. To export a log in the list, select it and then select **EXPORT TO EXCEL**.
5. To view information in a log, double-select the log entry in the list.

View documents attached to a study

You can view documents that are attached to a patient record.

1. In the worklist, select the **ALL STUDIES** tab.
2. On the study shortcut menu, select **Attach Files**.
3. Optional. To find a document, do one of the following.
    - To show all available documents, select the **Show All Documents** check box.
    - Use the search bar to find a document by type, source, or other criteria, and then select **RELOAD**.
    - To view a document in the list, double-select it.

About linking patients

Linking patients means to merge patients to the master patient record by using alternate account numbers (see “About alternate account numbers”). You can link patients from the worklist by following the procedure in “Link patients,” or from the patient chart by following the procedures in “Use alternate account numbers.” Note that the Link Patient procedure allows you to create a new account number “on the fly” whereas the other method does not.

Generally, you can use *linking* to merge patients, and use *merging* to move studies, series, and images between patients.

Link patients

If a patient has multiple records, each with different account numbers (or MRNs or PIDs), you can link them from the worklist. See also “About linking patients.”

Linking an external patient record to an internal one results in deleting the external record.
Prerequisite: Perform the procedures under “Configure alternate account number functionality.”

1. On the worklist, on the shortcut menu of a study whose patient you want to link, select **Link Patient**.
2. In the **Link Patient** dialog box, in the **Alt Account No** search box, type the exact account number to link to the current account number, and then select **Enter**.
3. In the **Issuer** list, select the issuer of the PID, and then select **ADD**.
   Note: If the account number was found (it already exists in Symmetry PACS), a message appears. Type a different number or select a different issuer.
4. Select **SAVE**.

Upload a DICOM file to a study

You can upload DICOM-compatible files and add them to a study.

1. In the worklist, on the shortcut menu of a DICOM study, hover over **DICOM Upload** and then select **Upload File**.
2. In the **DICOM Upload** dialog box, do the following.
    a. Select a series description.

b. Select **SELECT FILES**, navigate to a file to upload, and then select **Open**.
c. Select **UPLOAD**.

Scan and attach paper documents to a patient

You can scan paper documents and forms, and attach them to the patient chart. Symmetry PACS converts the scans to a DICOM-compatible format.

Prerequisite: Connect a TWAIN-compliant scanner, and install Exa Scans (see "Install Exa Scans").

1. In the worklist, on the study shortcut menu of an unread study, select **Attach Files**.
2. In the **Patient Documents** screen, select a document type.
3. Place a document in the scanner, and do one of the following.
   - To scan without scanning options, select the **QUICK SCAN** arrow button, and in the shortcut menu, select **QUICK SCAN TO PATIENT**.
   - To scan with scanning options, select the **QUICK SCAN** arrow button, and in the shortcut menu, select *FULL SCAN TO PATIENT*.
   - To upload the scan to the patient chart, select **UPLOAD**, and then in the second **Patient Document** dialog box, do the following.
     - Enter metadata for the document.
     - Select **SELECT FILES**, navigate to and select a file, and then select **Open**.
4. Select **SAVE.**

Scan to a study

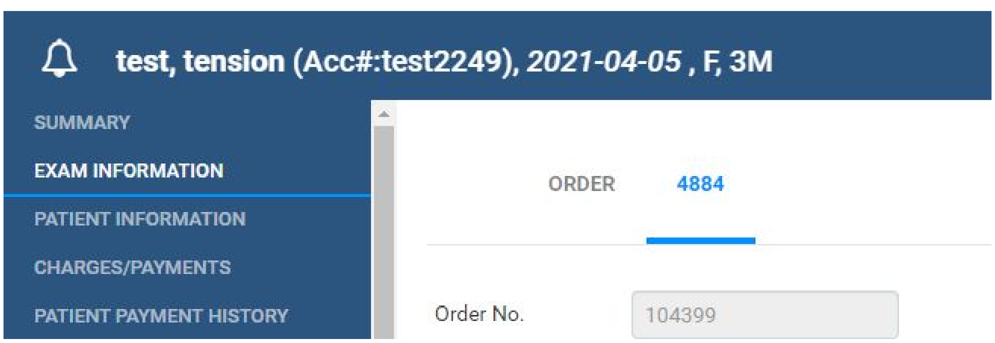
You can scan an image to a DICOM file and attach the file to one or all studies in an order.

1. On the worklist, select the **ALL STUDIES** tab.
2. On the study shortcut menu, do one of the following.
   - To scan to the study, hover over **DICOM Upload** and then select **Scan to Study**.
   - To scan to all studies in the order, hover over **DICOM Upload** and then select **Scan to Order**.

Edit study screen

The edit study screen enables you to view or edit most information about an order or study. To open the edit study screen, select the edit button in a worklist study row. The topics in this section describe all of the tasks you can complete in the edit study screen.

Technologists: For you, selecting the edit button opens the Exam screen for technologists (see “Exam screen for technologists”).



The upper left corner of the edit study screen

⚠ When working in the edit study screen, ensure that you enter all information correctly and with correct spelling. Incorrect information can result in failure to find patient records in future operations.

View patient alerts

You can view summary of patient alerts.

1. In the worklist, select the edit button of a study.
2. At the top of the edit study screen, select the alert button.

View a summary of an order

You can view a summary of an order and its studies.

1. In the worklist, select the edit button of a study.
2. In the edit study screen, on the left pane, select **SUMMARY**.

Edit order information

An *order* defines information for one or more studies. You can edit properties of an order.

1. In the worklist, select the edit button of a study.
2. In the edit study screen, on the left pane, select **EXAM INFORMATION**.
3. Near the top of the screen, click the **ORDER** sub-tab and make changes to the following settings.

Setting	Description
Facility	The facilities performing the studies (to change, reschedule).
Modality	The modalities used for the studies (to change, reschedule).
Resource	The resources used for the studies (to change, reschedule).
Ordering Facility Location	Select the ordering facility location of the studies.
Patient Location	Select the current location of the patient.
Patient Room No.	Type the room number of the patient location.
Patient Condition	Select a patient condition to consider for studies (such as "wheelchair").
Source	Select the source of the patient (such as referral or previous medical facility).
Place of Service	Select the place of service for billing purposes (Box24B).
Supervising Physician	Select the supervising physician (Medicare requires a supervising physician to be present in the department or location during the exam).
Functional Status	Select the patient's functional status.
Cognitive Status	Select the patient's cognitive status.
Transition of Care in	[Unused]
Patient Visit No.	The enterprise-specific serial number number for the study.
SDE Study	Select the check box if the order contains an echo ultrasound-related study.

Setting	Description
Schedule Notes	Type or select schedule notes (such as messages from the front desk).
Justification of Mobile Service	Type the justification of mobile service for reference by the physician.
Technologist	Select the technologist performing the studies.
Discharge Instructions	Type any discharge instructions.
Physician Order Status	Status from the Referring Provider portal.
PRINT ORDER	To print a summary of the order information, select one or more of the following options, and then select PRINT ORDER.
Include Disclaimer/ Signature Area	Includes a pre-configured disclaimer to be signed by the patient.
Include Notes	Includes schedule and study notes on the printed order.
Include Barcode Page	Prints a barcode on the order.

4. If DICOM fields are not available to edit, at the bottom of the screen, select **DICOM STUDY**, and then make changes to DICOM fields as needed.
5. To edit or add CPT codes, at the bottom of the screen, select the edit or add button, enter changes, and then select **SAVE.**
6. Select **SAVE.**

Edit study information

You can edit properties of an ordered study, including DICOM fields and CPT codes.

1. In the worklist, select the edit button of a study.
2. In the edit study screen, on the left pane, select **EXAM INFORMATION**.
3. Near the top of the screen, click a study sub-tab (labeled with the accession number) and make changes to the following settings.

Setting	Description
Order No.	The order number to which the study belongs (to change, reschedule).
Accession No.	The accession number of the study (users with rights can edit here).
Study UID	The study UID as determined by the selected appointment type.
Date	The date of the study (to change, reschedule).
Study Status	The current status of the study in the Exa PACS/RIS study flow.
Body Part	Select the relevant body part for the study (for example, hand).
Orientation	Select which side of the body (for example, right).
Appointment Type	Select the study's appointment type (the type of exam for scheduling purposes).

Setting	Description
Code	The internal procedure code of the study (associated with the appointment type).
Modality Room	The modality room where the study is performed (to change, reschedule).
Reason	Type the patient-specific reason for performing the study.
Study Notes	Type or select study notes (such as basic study history or notes from technologist to radiologist).
Diagnosis Codes	Select diagnosis (e.g. ICD10) codes for the study.
Referring Physician	Select the physician who referred the patient for the study.
Ordering Physician	Select the physician who ordered the study. If left blank, Exa PACS/RIS automatically enters the referring physician.
Reading Physician	Select the radiologist or other physician who will read the study.
Attorney	Select the attorney for the patient. This attorney is given access to the study through Attorney Portal.
Department	Type the department of the facility performing the study.
Institution	Type the institution of the facility performing the study.
Station	Type an identifier for the station of the location performing the study.

4. If DICOM fields are not available to edit, at the bottom of the screen, select **DICOM STUDY**, and then make changes to DICOM fields as needed.
5. To edit or add CPT codes, at the bottom of the screen, select the edit or add button, enter changes, and then select **SAVE.**
6. Select **SAVE.**

Edit basic patient demographics

The edit study screen gives you convenient access to some patient demographics in the patient chart. For a description of the settings, see "Create and modify a patient chart."

1. In the worklist, select the edit button of a study.
2. In the edit study screen, on the left pane, select **PATIENT INFORMATION**.
3. Make changes, and then select **SAVE.**

Add or edit a patient's portal account

You can edit a patient's portal credentials and other account information.

1. In the worklist, select the edit button of a study.
2. In the edit study screen, on the left pane, select **PATIENT INFORMATION**.
3. At the top of the **Patient Information** area, select **PORTAL CREDENTIALS**.
4. In the **Create Portal Account** dialog box, do the following.
   a. Under **Patient Account**, edit fields as needed.
   b. Under **Representative Account**, to assign a representative account (such as for a relative), select the account in the list.
   c. To create a new representative account, select the plus button, fill in the fields and

select the save button.
   d. Select **CREATE**.
5. Select **SAVE.**

View or add patient documents

You can view all documents attached to a patient record and their metadata, and add new documents.

1. In the worklist, select the edit button of a study.
2. In the edit study screen, on the left pane, select **DOCUMENTS**.
3. To view a document in the list, double-select it.
4. To add a document, place the document in the scanner, and do one of the following.
5. To scan one page without scanning options, select **QUICK SCAN**.
6. To scan with scanning options, select the **QUICK SCAN** arrow button, and in the shortcut menu, select a scan type.
7. To upload the scan to RIS, select **UPLOAD**, or select the arrow button for a patient level document, and then in the second **Patient Document** dialog box, do the following.
   - Enter metadata for the document.
   - Select **SELECT FILES**, navigate to and select a file, and then select **Open**.
8. Select **SAVE.**

View approved reports

1. In the worklist, select the edit button of a study.
2. In the edit study screen, on the left pane, select **APPROVED REPORTS** to open a window and display the report.

Open the transcription screen

Use this procedure to open the transcription multi-panel from the edit study screen. For more advanced features, see “Dictation and transcription with Exa Trans2.”

1. In the worklist, select the edit button of a study.
2. In the edit study screen, on the left pane, select **TRANSCRIPTION** to open a window and display the transcription editor within the multi-panel.

Enter notes and reason for study

You can enter patient notes, study notes, schedule notes, and reasons for the patient’s studies. Generally, you can use: *patient notes* for patient specific information; *study notes* for basic study history or notes from technologist to radiologist; *schedule notes* for messages from the front desk; and *reason notes* for more specific study history.
CAUTION: Notes are permanent, and may be visible to the patient.

1. In the worklist, select the edit button of a study.
2. In the edit study screen, on the left pane, select **NOTES**.
3. Select the **PATIENT NOTES**, **STUDY NOTES**, or **SCHEDULE NOTES** sub-tab.
4. Select **ADD**, type notes, and then select **SAVE.**
5. Select the **REASON FOR STUDY** tab.
6. Type reasons in the box, and then select **SAVE.**

Update the patient call log

You can use the call log to save a record of communication to and from a patient regarding an appointment or order. The worklist has columns for displaying the following information that you enter in the call log: last call made, last call category, and last call notes. To add call categories, see “Configure app settings.” To update the call log:

1. In the worklist, select the edit button of a DICOM study.
2. In the edit study screen, on the left pane, select **NOTES**.
3. On the **CALL LOG** sub-tab, select **ADD**.
4. In the **Call Category** list, select a call category.
5. In the **Call Note** box, type notes, and then select **SAVE**.

Enter employment and transfer-related information

You can enter various information on whether the illness or injury was employment-related, the dates of illness, work absence, and hospitalization. You can also enter information related to the source of a transferred patient.

1. In the worklist, select the edit button of a study.
2. In the edit study screen, on the left pane, select **ADDITIONAL INFORMATION**.
3. Enter the information as needed and then select **SAVE.**

Assign or remove patient alerts

Failure to add a needed patient alert could result in incorrect treatment or diagnosis.

You can assign or remove alerts for a patient.

1. In the worklist, select the edit button of a study.
2. In the edit study screen, on the left pane, select **PATIENT ALERTS**.
3. Select or clear the check boxes corresponding to the alerts that you want to assign or remove.
4. Optional. To create a new alert, type it in the **Custom Alerts** box and then select the plus button.
5. Select **SAVE.**

View activity logs

You can view a log of program activity and export the log to Excel.

1. In the worklist, select the edit button of a study.
2. In the edit study screen, on the left pane, select **ACTIVITY LOG**.
3. Change the range of dates to filter the activity that you want to view.
4. Optional. To export the longs, select **EXPORT TO EXCEL**.

Exam screen for technologists

Technologists, users linked to a technologist, and facility administrators can automatically open a technologist-specific version of the Exam screen that helps them work more efficiently.

Link a user to a technologist

You must link a user to a technologist resource to enable that user to view the exam screen for technologists.

Prerequisite: Add the Technologist right to the user's user role (see "Create a user role").

1. On the burger menu, select **SETUP.**
2. Next to the burger button, select the word in all caps, and then select **Providers & Resources**.
3. On the **RESOURCE** tab, create a technologist resource, or open an existing one.
4. On the **LOGIN DETAILS** sub-tab, select the user to link to the technologist, select **LINK USER**.

Use the exam screen for technologists

Prerequisite: Link the current user with a technologist (see "Link a user with a technologist"). Sign in to Symmetry PACS as a technologist.

1. To open the exam screen for technologists (the Technologist screen), open a worklist study for

editing in the usual manner (open the edit study screen).

2. Proceed with technologist workflow in the Technologist screen. The screen is self-explanatory, but note the following major features.
   - Information fields – In the left pane, edit information in all fields as necessary.
   - **TECH START/PAUSE/END** buttons – Select TECH START and TECH END upon starting and ending the exam. You can select TECH PAUSE when an exam is interrupted, such as by a difficult patient. Exam duration statistics are recorded based on the times these buttons are selected, and used in reporting.
   - UNREAD – Select to reset the study's status to Unread.
   - Notes – You can select Study Notes, Schedule Notes, Patient Notes, or Reason for Study, type notes in the box, and then select SAVE.
   - Documents – Select to view or add documents to the study.
   - Studies – Select to view a list of prior studies for the current study.
   - Study Forms – Select to add, edit, or delete study forms from the study.
   - **ABORT** – Select to abort the study.
   - **ADD CHARGES** – Add new charges to an exam (see, “Add charges in the Technologist screen”).

Dictation and transcription with Exa Trans2

You can dictate findings in Exa Dictation and transcribe them in Exa Trans2 (formerly Web Trans). Exa Trans2 features a multi-panel interface with advanced functionality. If your configuration includes Exa Trans and Dragon, see also “Dictation and transcription with Exa Trans”).

Turn on Exa Dictation and Exa Trans2

Depending on your installation configuration, you must turn on Exa Dictation and Exa Trans2 before using them by following the steps below.

1. On the worklist, select the settings button, and then in the button shortcut menu, select **User Settings**.
2. On the right side of the screen, under **Voice recognition**, select **Dictation**.
3. Select **SAVE.**

Dictate a study

Exa Trans2 transcription editor does not currently support dictation, but radiologists can use the following procedure to record dictation without simultaneous transcription (while Dragon is OFF). This feature uses a dictation toolbar with record, rewind, play/pause/stop, fast forward, and upload buttons.

1. In the worklist, double-select an unread study to open it in the viewer.
2. On the dictation toolbar, select the record button, and then dictate your findings.
   Note: If needed, you can select pause during dictation.
3. When finished, select the stop button.
4. To review your dictation, rewind the recording and then select the play button.
   Note: You can record over parts of your dictation that you want to change.
5. When you are satisfied with the results, select the upload button to add your dictation to the study.
   Note: Skip this step if you selected Auto Upload Dictation on Close (see “Configure autosave options”).

Open and organize Exa Trans2

The Exa Trans2 window contains dedicated panels for managing transcription, notes, documents, and prior reports.

Prerequisite: Turn on Exa Dictation and Exa Trans2.

1. In the worklist, find an unread study and select its multi-panel transcription button.
2. In the Exa Trans2 multi-panel, on the toolbar, select one or more of the following buttons:

1	Open or close **all** panels
2	Open or close the **Notes** panel
3	Open or close the **Documents** panel
4	Open or close the **Prior Reports** panel

3. Drag panels within the Exa Trans2 screen to reposition them.

Edit and approve transcriptions in Exa Trans2

The Exa Trans2 transcription editor does not currently support dictation playback, but you can edit and approve submitted transcriptions.

Prerequisite: Turn on Exa Dictation and Exa Trans2.

1. On the worklist, in the relevant study row, select the multi-panel button.
2. In the **Transcription editor** panel, review the transcription, make any needed changes, and then select **Save**.
3. Select **Approve** or **Approve & Next**.
4. In the **Providers** dialog box, select the approving provider and select **Approve**.

Enter notes in Exa Trans2

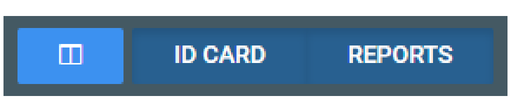
You can add study notes and reasons for study in the Notes panel of Exa Trans2.

1. On the worklist, in the relevant study row, select the multi-panel button.
2. In the multi-panel, open the **Notes** panel.
3. In the **Notes** panel, select the **STUDY NOTES** or **REASON FOR STUDY** tab.
4. If entering a study note, select a study date.
5. Type notes in the space provided, and then select **SAVE**.

Manage documents in Exa Trans2

You can view all documents attached to a study in the Documents panel of Exa Trans2. The Documents panel displays up to two documents at once, and you can select which documents to display.

1. On the worklist, in the relevant study row, select the multi-panel button.
2. In the **Documents** panel, select the document buttons to show or hide currently open documents in viewing frames.



The buttons labels indicate the document selected for viewing, the default document type set by the user in the panel, or the last-viewed document types

3. If more than two documents are available, you can open a new one by dragging a document metadata block from the top of the panel into a document viewing frame.

Manage prior reports in Exa Trans2

You can view, download, and print prior reports from the Prior reports panel of Exa Trans2.

1. On the worklist, in the relevant study row, select the multi-panel button.
2. In the **Prior reports** panel, in the left pane, select the block of metadata corresponding to the report that you want to view.
3. To download or print the report, in the right pane, hover over the report, and then select the download or print button in the toolbar that appears.

Dictation and transcription with Exa Trans

With Exa Trans, you can dictate and transcribe simultaneously with Dragon voice recognition. Alternatively, you can dictate findings in Exa Dictation and transcribe them manually. To use the features of the Exa Panel for transcription related tasks, see "Dictation and transcription with Exa Trans2."

Turn on Exa Trans

You must turn on Exa Trans before using it by following the steps below. You turn on Exa Trans indirectly by turning on the Dragon speech-to-text option in the user settings.

Prerequisite: Install Exa Trans (see appendix).

1. On the worklist, select the settings button, and then in the button shortcut menu, select **User Settings**.
2. On the right side, under **Voice recognition**, select **Dragon**.
3. Select **SAVE.**

Dictate and transcribe a study

With the integrated Dragon speech-to-text application, you can use Exa Trans to dictate and transcribe findings simultaneously.

Prerequisite: Turn on Exa Trans.

1. In the worklist, find an unread study and select its transcription button.
2. In the **Exa Trans** window, in the **Templates** list, select a template.
3. Optional. To use a voice command, with the **Templates** list open, say, "Macro [*template name*].
4. Place the cursor where you want to add text.
5. On the Dragon toolbar, select the record button, and then begin dictating.
   Select stop when finished.
6. Select **Save**.

Edit and approve transcriptions

You can edit and approve saved transcriptions by using the features within Dragon.

Prerequisite: Turn on Exa Trans.

1. In the worklist, select the transcription button of a dictated study.
2. In the editing screen, review the transcription, make any needed changes, and then select **Save**.
3. Select **e-Sign & Approve**, or **Approve and Next**.

Add a dictation or transcription addendum

After approval, transcriptions cannot be edited. However, physicians and transcriptionists can add addendums in order to correct mistakes or insert new information.

Prerequisite: Turn on Exa Trans.

1. In the worklist, select the transcription button of an approved study.
2. To add a *dictation* addendum, repeat the steps in "Dictate a study."
   Symmetry PACS reverts the status of the dictation from Approved to Dictated.

3. To add a *transcription* addendum, select **Add Addendum**.
4. Type new text, and then select **Addendum Save**.
5. If not using Dragon, select **Addendum Submit for Review**.
   Symmetry PACS reverts the status of the dictation from Approved to Transcribed.

About using Exa Trans and Exa Trans2

Exa Trans and Exa Trans2 (with the multi-panel) are designed to work in sync. Exact behavior depends on various user rights, actions, and settings, as in the following examples.

Action/Condition	Effect
Close Exa Trans	Also closes Exa Trans2
Exa Trans2 rights assigned	Exa Trans2 available
Exa Trans rights assigned	Exa Trans available only if the Dragon user setting is also turned ON.
Auto-Open Orders + "Documents" selected	If an order auto-opens, the Documents screen auto-opens.
Auto Open Orders enabled AND Viewer Settings > General > Display Settings > Monitor 1 = Documents	Documents auto-open in the Documents screen of the multi-panel in Monitor 1.
Auto Open Orders disabled AND Viewer Settings > General > Display Settings > Monitor 1 = Documents	Documents do not auto-open, but if manually opened, they open in the multi-panel in monitor 1.
Exa Trans and Exa Trans2 enabled within Auto Open Orders	Exa Trans and Exa Trans2 both open when an order auto-opens. You can configure which monitor they open in in the Display Settings, or leave blank to open in the main monitor.
Exa Trans set to auto-open AND Exa Trans2 not enabled in Auto Open Orders	Only Exa Trans opens when a study opens (but you can still manually open Exa Trans2).
Set Exa Trans or Exa Trans2 to open on a specified monitor	Manually opening Exa Trans or Exa Trans2 opens it in the specified monitor.
Exa Trans2 set to auto open in Auto Open Orders, but not Exa Trans	Exa Trans2 auto opens when the viewer is opened, in the specified monitor, if so configured.
User selects the Exa Trans or Exa Trans2 button on the worklist	Exa Trans or Exa Trans2 opens on the same monitor as the worklist.
Exa Trans Esign & Approve	Study is approved, viewer closes, Exa Trans minimized.
Exa Trans Approve & Next	Study is approved, viewer and Exa Trans open with next available study.
Exa Trans Not Approve	Study status changes to Not Approved, viewer closes, and Exa Trans minimizes.

Action/Condition	Effect
Exa Trans Skip	Study stays in Unread status, viewer and Exa Trans open with the next available study
Exa Trans Save	Study status changes to Draft, viewer and Exa Trans remain open with current study
Exa Trans Pre Approve	Study status changes to Pre-Approved, viewer closes, and Exa Trans minimizes
Exa Trans and Exa Trans2 Esign & Approve	Exa Trans closes, Exa Trans2 minimizes or closes
Exa Trans and Exa Trans2 Approve & Next	Study status changes to Approve, viewer, Exa Trans, and Exa Trans2 open with the next available study
Exa Trans and Exa Trans2 Not Approve	Study status changes to Not Approved, viewer, Exa Trans, and Exa Trans2 minimize or close.
Exa Trans and Exa Trans2 Skip	Study status remains Unread, the viewer, Exa Trans, and Exa Trans2 open the next available patient or study.
Exa Trans and Exa Trans2 Save	Viewer, Exa Trans, and Exa Trans2 remain open. If the user closes the viewer, Exa Trans and Exa Trans2 also close.
Exa Trans and Exa Trans2 Pre Approve	Study status changes to Pre-Approved, viewer and Exa Trans2 close.

QC operations

All DICOM studies from other AEs initially appear on the QC tab, and are automatically evaluated for conflicts with PACS studies, RIS orders, and other data based on user-defined receiver rules (see “About receiver rules”). The topics in this section describe how to resolve conflicts.

Sort studies by QC status

To find conflicts needing reconciliation more easily, you can sort studies in the QC tab of the worklist by their QC status.
Prerequisite: Show the QC tab. To view only conflicts in the QC tab, select **Settings** > **User Settings**, and then clear the **Show Completed in Pending List** check box.

1. In the worklist, select the **QC** tab.
2. On the search bar, select inside the **STATUS** box.
3. On the shortcut menu, select a status (such as “Conflicts”) and select **APPLY FILTER**.

Reconcile conflicts by matching to a RIS order

To reconcile conflicts, start by trying to match the conflicting study to a RIS order.
Prerequisite: Show the QC tab (see “Configure other user settings”).

1. In the worklist, select the **QC** tab.
2. Find a study whose status is **Conflicts**, and in its shortcut menu, select **Reconcile**.
3. In the **Reconcile** dialog box, under **Suggestions** or **RIS Orders**, find an order in the list that matches the details listed under **Current Study**, and then select its **SELECT** button.
   Note: If a matching order does not appear in the list, you can try using the search bar.
4. In the confirmation dialog box, select **OK**.
5. Confirm that the study no longer has a status of **Conflicts**.

Reconcile conflicts by manually editing demographics

If you can find a RIS order that should match the conflicting study but does not, it may be due to errors in the patient name, account number, or other information in the conflicting study. If you know this to be the case, you can edit the demographics of the conflicting study to match the RIS order.

Prerequisite: Show the QC tab (see “Configure other user settings”).

1. In the worklist, select the **QC** tab.
2. Find a study whose status is Conflicts, and select its edit button.
3. In the **Manual Edit** dialog box, edit demographics as necessary and then select **SAVE.**
4. Confirm that the study no longer has a status of Conflicts.

Reconcile conflicts by creating an order

If you cannot find a RIS order that matches or should match a conflicting study, you can reconcile by creating a new order that matches.

Prerequisite: Show the QC tab (see “Configure other user settings”).

1. In the worklist, select the **QC** tab, and then find a study whose status is **Conflicts**.
2. Create an order for the conflicting study by following the steps in "A typical scheduling workflow."
3. On the **QC** tab, in the conflicting study’s shortcut menu, select **Reconciliation**.
4. In the **Reconciliation** dialog box, under **RIS Orders**, find the order you just created and select its **SELECT** button.
5. Confirm that the study no longer has a status of Conflicts.

Move QC studies to the All Studies tab

You can move a study in the QC tab to the All Studies tab without reconciling.

Prerequisite: Show the QC tab (see “Configure other user settings”).

1. In the worklist, select the **QC** tab, and then find a study that you want to move.
2. In the study’s shortcut menu, select **Move to All Studies**.

Work with the Symmetry PACS viewer

Standard viewing tasks

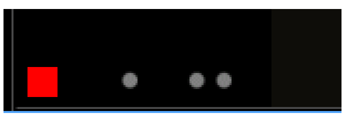
Open a study in a viewer

In this manual, *viewer* refers to the Symmetry PACS viewer unless otherwise specified. To open a study, on the worklist, do one of the following:

- To open in the viewer, select the  button of a study
- To open in the Opal viewer, select the  button of a study.
- To view a different image, on the left pane, double-select a thumbnail.

  Note: Additionally, you can configure Symmetry PACS to open studies in the viewer when you double-select them. Follow the steps in “Miscellaneous user settings” to configure the Double select behavior setting.

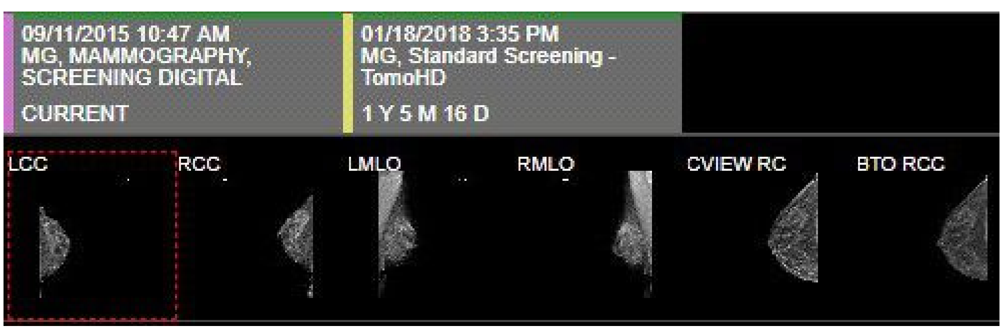
CAUTION: Check for the presence of the lossless indicator in the lower-left corner of the image frame before proceeding with a diagnosis. If you adjust the image, wait until the lossless indicator turns green before diagnosis.



The red lossless indicator means the image has not yet fully loaded.

View priors with the Prior bar

If priors are included in a study that you open, you can view them by using the Prior bar. To show the Prior bar in the viewer, configure the Use Modified Toolbar setting (see “Configure other interface settings”).



The Prior bar contains the current and prior studies on the top row, and their image thumbnails on the bottom row (see figure). The study boxes show the age of the study, and depending on configuration, let you do one or more of the following:

- Hover over or select a study to display its thumbnails.
- Double-select the study to open it (for example, the right box in the top row of the figure).
- Double-select a thumbnail to open the image or series.
- If a report is included, select its symbol to view.

Send an image from the viewer

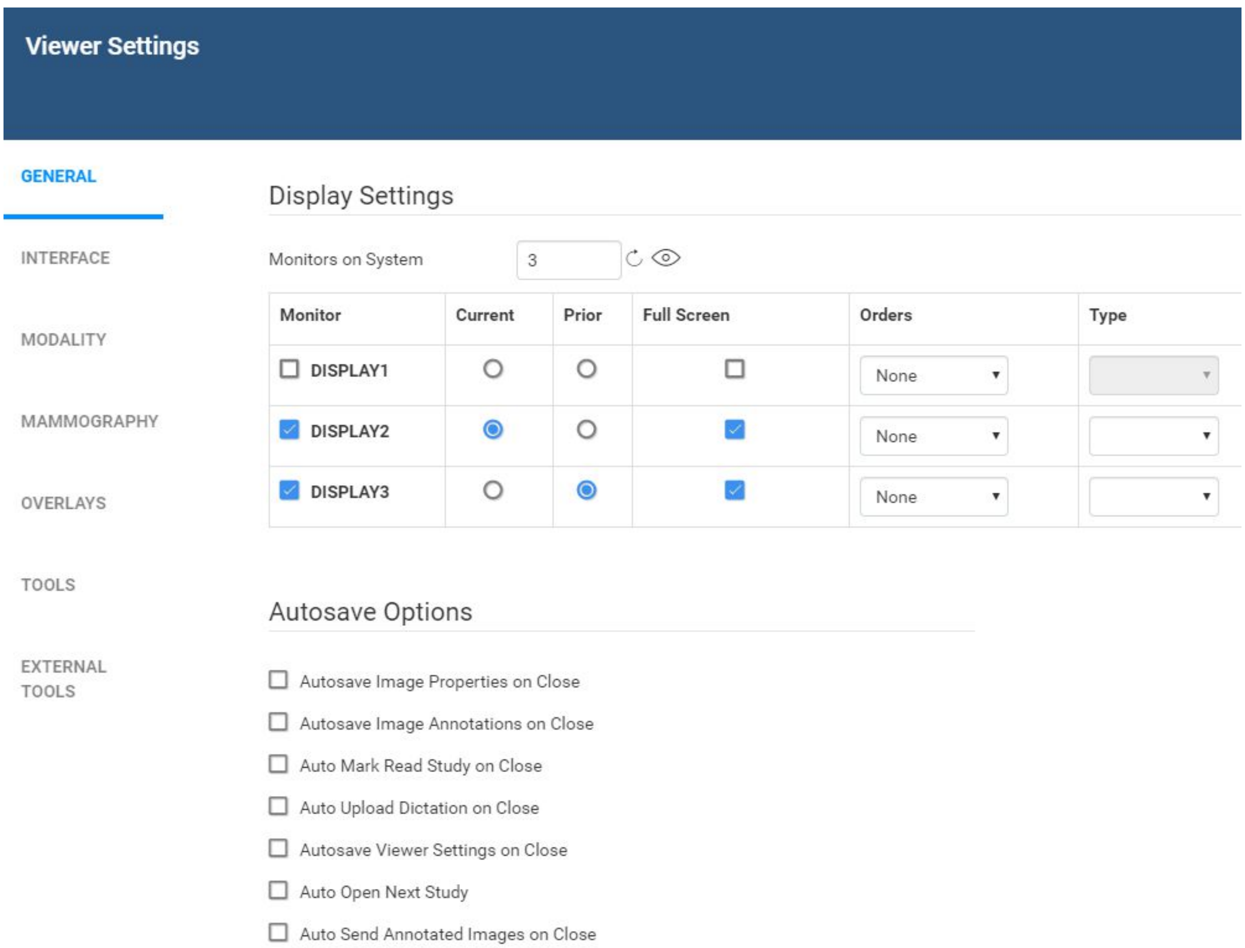
You can send the current image in the viewer to an application entity. If the image includes annotations, those annotations are included with the image according to the method you specify in the **Send Annotations as** setting (see “Configure application entities”).

1. Open an image in the viewer.
2. Right-click the image and select **Send Image/Annotation**.
3. In the Send Study dialog box, in the bottom pane, select one or more AEs
4. Select **SEND TO SELECTED** or **SEND TO ALL**.

Configure the viewer

In the Viewer Settings dialog box, you can configure a wide variety of viewer options including display, interface, modality, toolbars, and shortcut menus. For details on operations in the Viewer Settings dialog box, see other topics in this section. There are two ways to open the Viewer Settings dialog box.

- In the worklist, on the upper toolbar, select the settings button, and then in the button shortcut menu, select **Viewer Settings**.
- In the Symmetry PACS viewer, in the upper toolbar, select the setting button.



Set up connected displays

Configure all connected monitors that you intend to use with Symmetry PACS. These settings act as default behavior for what study items open in which monitor. If DMs conflict with the settings you enter here, the DM takes precedence.

Prerequisite: Install the Multi-Screen Presentation extension in Google Chrome.

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **GENERAL**.
3. Under **Display Settings**, in the **Monitors on System** box, select the update button to update the monitor count (or enter manually), and then select the identify button.
4. In the table of monitors, enter the settings below.

   Note: At any time you can select the update button to preview your changes.

Setting	Description
Monitor	Select to make monitors available for *image* viewing. To display orders and studies on the monitor, clear this option.
Current	Select to make monitors available to display current studies.
Prior	Select to make monitors available to display prior studies, if available.
Full Screen	Select to default to full screen view.
Orders	Select a section of the patient chart to open in the corresponding monitor when manually opening that section with a viewer tool, or when configured to open automatically. **For example:** If you select **Document** in the **Orders** list for **DISPLAY2**, the Document section of the patient chart will appear in DISPLAY2 when you select the button in the viewer.
Type	The color or grayscale display type.
Calibration Width/mm	Type a manual calibration width (appears on horizontal calipers)
Calibration Height/mm	Type a manual calibration height (appears on vertical calipers)

5. Select **SAVE.**

Configure autosave options

You can configure how the viewer performs automatic saving and other functions.

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **GENERAL**.
3. Under **Autosave Options**, enter the settings in the table below.

Setting	Description
Autosave Image Properties on Close	Automatically saves image properties such as the W/L when the image is closed. Saved properties are restored the next time the image is opened.
Autosave Image Annotations on Close	Automatically saves image annotations when the image is closed. Saved annotations are restored the

Setting	Description
	next time the image is opened.
Auto Mark Read Study on Close	Automatically marks the study as “Read” when the study is closed.
Auto Upload Dictation on Close	Automatically uploads recorded dictations to add to the study when the study is closed.
Autosave Viewer Settings on Close	Automatically saves any changed viewer settings such as toolbar configuration when closing the viewer.
Auto Open Next Study	Automatically opens the next study in the worklist when the current study is closed.
Auto Send Annotated Images on Close	Automatically sends images if they include annotations when the current study is closed.

4. Select **SAVE.**

Configure the toolbar

You can configure the appearance and other properties of the viewer toolbar. For additional toolbar settings, see “Configure other interface settings.”

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.
3. Under **Toolbar**, enter the settings in the table below.
   Note: You may need to update the viewer for changes to take effect.

Setting	Description
Toolbar Button Scale	Adjusts the size of toolbar buttons.
Thumbnail Bar Scale	Adjusts the size of the thumbnail bar.
Magnifying Glass Size	Adjusts the size of the area affected by the magnifying glass.
W/L Acceleration	Sets the rate or sensitivity of W/L adjustments. Typical range is 100–600.
Span Sensitivity	Sets the rate or sensitivity of span adjustments.
Thumbnail Column/Rows	Sets the number of columns and rows for the thumbnail bar.
Thumbnail Bar Orientation	Sets the position and resultant orientation of the thumbnail bar.
Header Menu	Sets the position of the toolbar and other header items.
DM Toolbar	Sets the position of the DM toolbar.

4. Select **SAVE.**

Configure calipers

You can configure the number and placement of calipers.

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.

3. Under **Caliper Position**, select check boxes for each caliper that you want to display, and then select **SAVE.**

Configure other interface settings

You can configure miscellaneous viewer toolbar and other settings. For the main viewer toolbar settings, see "Configure the toolbar."

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.
3. Under **Other Toolbar**, enter the settings in the table below.

Setting	Description
Ask on Close	Prompts you to specify which items to save before closing the viewer.
Single Instance Mode	Limits the viewer to one display frame per browser.
Skip Frames in Cine to Maintain Playback Speed	Skips large images in a cine loop so that the cine plays a fixed speed.
Show Cutlines for First/Last Images	Shows any available cutlines only on the first and last images of a series.
Open Key Images as Single Images	Displays any available key images separately in the thumbnail area. When cleared, shows all series images in the key image thumbnail area.
Use Modified Toolbar	Temporarily hides the thumbnail bar, and adds a Prior bar at the top of the screen that displays patient priors in order. You can hover over a prior to display series/image thumbnails, and select the thumbnails to open the images. Works in conjunction with the Auto Show Priors Bar option.
Caliper Zoom	If selected, you can drag the calipers to zoom the current image.
Auto-Play Cine Loops	Automatically plays cine loops when opened.
Auto Play Cine Wait Time (ms)	Sets a pause time before auto-playing cine loops.
Default Frame Rate for MP4	Sets a default frame rate for MP4 files.
Default Cutline Thickness	Sets a default thickness for cutlines.
Auto Open Orders	Selects the options that appear in the Orders list in the **Viewer Settings** dialog box, General Info. screen, under Display Settings.
Auto Show Priors Bar	Shows all prior studies in a separate bar at the top of the viewer.
Focus-In on Zoom Point	When selected, the user can drag on an image to zoom in and out at the initial pointer position.
Fill Empty DM Cells	Fills undefined DM frames with images in the current study.

Setting	Description
High-Quality Interpolation	Select to use high-quality image interpolation. Frequently used to enhance X-ray quality. You can use this compression option to remove unwanted “gridlines” if switching between earlier and high-resolution monitors.
Enable RGB/YBR Swap	Makes the color settings supported by the user video settings available.
Enable Developer Mode	Shows development mode logs, and displays a vertical green line in the right side of each frame when the server performs a prefetch.
Show Calibrated Ultrasound Region	Server side setting.
Hide Partial Close Button	Hides the partial close button, an “X” that appears next to the logoff button. Partial closing closes the study, but leaves the viewer open for faster loading of future studies.
Hide All Monitor Layout Change Button	Hides the toolbar’s monitor layout change button that appears when two or more monitors are made available.
Show Label in DM Preview	Shows the previews of hanging protocols in the DM bar.
Show Middle Slice Thumbnail	Shows only the thumbnail of the middle slice in a series on the thumbnail list.
Enable Cardio Viewer	[Unused]
Disable Queuing	Forces synchronous communication; client message and server response occur one at a time. CAUTION: We do not recommend changing this setting. Consult with your Konica-Minolta representative.
Stretch Prior Bar	Extends the prior bar across multiple monitors. If the prior bar exceeds the total available screen width, a scroll bar appears.
Show Prior Index	Displays the Prior index number in the thumbnail and Prior bars.
Auto open STAT	When you open a study in the Symmetry PACS viewer, this option automatically opens any STAT images, if included.
Split W/L Region	[Unused]
Color Only as Last Monitor	Chooses the color monitor as the last monitor on which to display images.
Client-Side Window/Level for US	Processes the Window/Level for ultrasounds on the client side. May reduce lag by bypassing the server.

4. Select **SAVE.**

Configure annotation tool functionality

You can configure annotation tool functionality.

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.
3. Under **Annotation**, enter the settings in the table below.

Setting	Description
Show Annotation	Shows annotations by default. The user can still hide them manually in the viewer.
One-Select Annotations	Changes from the selected annotation tool to the default cursor after each use. If cleared, the user can reuse the tool repeatedly without re-selecting the tool.
Show One-Select Annotations Button	Shows a button for turning one-select annotation on and off.
Annotation Edit Mode	Selects the Edit command in the image shortcut menu by default.
Use Dot Cursor	Changes the standard pointer to a dot pointer.
Edit Annotations after Creating	Causes the viewer to enter Edit mode after initial placement of an annotation.
Allow Drag Create	Creates annotations by dragging instead of selecting.
Confirm Annotation Delete	Prompts the user for confirmation when deleting annotations.
Persistent Annotation Tool	Makes a selected annotation tool available until the user selects a different tool. If cleared, the pointer changes to the default operation after using the tool.
Show Measurements In	Sets the units for any length measurements taken.

4. Select **SAVE.**

Configure annotation colors

You can configure the color of annotations to indicate whether they are selected, in edit mode, or applied.

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.
3. Under **Colors**, to add an annotation color, select inside a color or grayscale box and then use the color picker to select a color.
4. Select **SAVE.**

Configure annotation size and scaling

You can configure the pixel or font size of annotations, and scale annotation points.

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.
3. Under **Miscellaneous**, enter the settings in the table below.

Setting	Description
Scale in Pixel Size	Determines the annotation font size by the pixel size.
Scale Annotation Font By	Sets the font size for annotations.
Scale Annotation Point By	Sets the line thickness for annotations.

4. Select **SAVE.**

Configure recording

You can configure audio recording options for Exa Dictation.

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE SETTINGS**.
3. Under **Record Control**, enter the settings in the table below.

Setting	Description
Hold for Record	Requires you to hold down the button for the duration of recording.
Beep on Record	Beeps when recording starts.
Blink on Record Pause	Causes the microphone light to blink when recording is paused.
Monkey Chatter on Rewind	Plays “monkey chatter” sound when rewinding.
FFWD/RWD Factor (200–500)	Changes the rate of fast forward and rewind.
Lag (0–5000)	Delays the response after selecting play or record by the specified amount of time.

4. Select **SAVE.**

Show or hide tool buttons

You can hide certain tool buttons.

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.
3. Under **Tool Buttons**, select the check boxes of the items that you want to hide.
4. Select **SAVE.**

Configure modality-specific viewing options

You can configure how studies appear in the viewer for all modalities, or for each specific modality.

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **MODALITY**.
3. In the modality list, select a modality to configure.
4. Enter the settings in the table below.

Section	Setting	Description
Layout	Screen Layout	Changes the layout of frames.
	Series Layout	Changes the layout of series frames within screen layout frames.
Mouse Buttons	Left/Right/Middle/Left+Right	Assigns functions to mouse buttons. This is frequently used by CAD users to assign functions to extra mouse buttons.
Compression		Sets the image quality, which inversely affects viewer performance.
Presets	Key	Assigns shortcut keys to W/L presets.
	Description	Type a name for the W/L preset.
	Window Width	Sets the window width of the W/L preset.
	Window Center	Sets the window center of the W/L preset.
	Set	Select when finished entering Preset settings.
Options	Auto Linking	Turns on the Auto Linking function.
	Assume Color Study	Forces studies of the selected modality to appear in the default color monitor set in the display settings regardless of color.
	Assure All Viewed	Displays a check mark in thumbnails of images that were opened.
	Auto CLAHE	Turns on the CLAHE function.
	Auto Hang DM	Enables the use of DMs. Makes the first instance on the DM preview available to hang on the viewer.
	Auto Hang Priors	Automatically loads the first prior when the viewer opens. Works in conjunction with Auto Open Priors.
	Auto Replace Priors	Automatically replaces prior images in the current layout.
	Auto-Invert SC Images	Inverts white and black of scanned documents such as reports. Reduces eye fatigue.
	Auto Next Series	When moving beyond the last image of the current series, automatically opens the next series.
	Auto Next Series Cine	Automatically starts cine play of the next series when the user opens it.

Section	Setting	Description
	Auto Next Series Wrap	Automatically opens the first series after viewing the last image of the last series in a study.
	Auto Next Study	Automatically opens the next study in the worklist after closing the current study.
	Auto Swap Red/Blue	Inverts colors that may not be displayed from the modality properly (such as with non-DICOM ultrasounds).
	Auto Show DICOM Overlays	Automatically displays DICOM overlays, if present.
	Auto Show SR Overlays	Automatically displays SR overlays, if present.
	Auto Show Cutlines	Automatically displays cutlines, if present. Note, this setting also applies to synthesized mammogram views, in which the cutlines indicate the position of the currently viewed image on the corresponding BTO view.
	Auto Show Cine	Shows the media control bar when a series is opened.
	Auto Show W/L Bar	Shows the window/level bar when the viewer opens.
	Detect Pixel Padding	Turns detection of pixel padding ON/OFF.
	DM Allow Missing Cell	Shows a blank cell in the DM if the assigned image is not available.
	DM Save W/L	Saves the window/level with the DM.
	Save Study DM on Close	Creates a new DM for each study when it closed, or when the next study auto-opens. The DM is named with the accession number, and contains the last displayed stack and monitor position.
	Show PDF in Last Stack	Moves PDF files to the last place in the stack: in the viewer, they are loaded last, if an empty cell is available.
	Instance Window/Level	Shows each image with its own W/L, rather than using the W/L of the first instance.
	Do Not Skip Images	Prevents scrolling forward if subsequent images are not yet loaded.
	Ignore Frame of Reference	Disables referencing of the study's DICOM

Section	Setting	Description
	within Study	frame of reference UID when performing linking and cutline functionality.
	Ignore LUT	If LUT values are corrupted, Symmetry PACS ignores the LUT values, and attempts to render the best image possible.
	Ignore Presentation LUT	Same as Ignore LUT, but select for certain vendors that use a "Presentation LUT."
	Keep Rotate	Applies the current rotation to all images in the series.
	Keep W/L	Applies the current W/L to all images in the series.
	Keep Zoom	Applies the current zoom level to all images in the series.
	Extend Image Display (if Stretch)	When Stretch Across Monitors is selected, extends a single image across multiple monitors.
	Pixel Padding as Background	Interpolates missing pixel data to fill in "dead" spots in an image. **Note**: When using this feature, reading physicians should be aware that some pixels may be synthesized.
	Pre-generate Bitmaps	Pre-generates bitmaps automatically if imported into PACS.
	Reset W/L for Individual Images	Resets the W/L for each image. Frequently used to optimize MRI images. Clear to use the first W/L sent by the modality for all images.
	Select Last Contrast Entry	When DICOM tags include multiple W/L values, uses the last value for all images in the series. Clear to use the first value.
	Show 3D Spine Labels	Shows the 3D spine label tool on the toolbar.
	Show 'Bone Enhance' on Toolbar	Shows the Bone Enhance tool on the toolbar.
	Show DM Toolbar	Shows/hides the DM toolbar on initial load.
	Show Spine Labels	Shows the spine labels tool on the toolbar.

Section	Setting	Description
	Sort Thumbnails by Date/Time	Sorts thumbnails by date/time.
	Stop Thumbnail from Updating	Prevents W/L changes to the current image from affecting its thumbnail.
	Stretch Across Monitors	Turns on extending of items across multiple monitors.
	Cine Direction	Sets the cine playback to forward or backward.
	Default FPS	Causes cine play to occur at the default frames per second, depending on modality.
	Enable 4DM	Opens the 4DM viewer for post-processing. (Requires configuration to integrate with the 4DM viewer.)
	Disable CINE Scrolling	Disables cine play of series.
	Active Frame Based Cineplay	Playing a cine loop on one series automatically plays all linked series.
	Disable Caliper	Hides calipers for the modality.
Auto-Split Rules	Always	Splits US series into individual images.
	Differing Echo Time	Splits by echo time.
	Differing Series Number	Splits by series number.
	Differing Series Time	Splits by series time.
	Isolate MPEG	Splits by MPEG file.
	Isolate Multiframe	Splits cine loops into multiple images.
Premium View	Bone Enhance	Displays the contrast enhance menu.
Auto Bone Enhance		Highlights the bone portions of images.
Auto WL Type		Selects the default W/L to use for the selected modality.
Auto Reorder Images		Automatically changes the order of images in a series to the selected order.
Prior Options	Auto Open Prior	Automatically opens prior studies.
	Relevant Priors	When automatically opening priors, also opens relevant priors from other modalities. See “Advanced options for displaying relevant priors.”
	Auto Open Prior Count	When automatically opening priors, opens the selected number of studies.

Section	Setting	Description
	Force Relevant Only	Opens only relevant priors based on modality, body part, and description.
	Prioritize Current Modality First	When opening relevant priors, display same-modality priors first.

5. Select **SAVE.**
6. Optional. If you selected Relevant Priors, see the next section, “Advanced options for displaying relevant priors.”

Advanced options for displaying relevant priors

When you select the Relevant Priors check box in the Modality area of the Viewer Settings dialog box, a table appears for entering criteria that determine which relevant priors to open. To use this table, refer to the following examples.

- To open only priors of a specific modality, body part, or description, type the criteria in the corresponding columns of the table. For example, to only open images of the head, in the **Body Part** cell, type HEAD.
- To open priors for more than one item, you can type each item on its own row of the table. Also, you can specify multiple items on one line by delimiting with a bar. For example to open mammograms and ultrasounds, in the **Modality** cell, type MG|US.
- Use wildcards and regular expressions. For example, to specify CTs of the right and left knee having specific laterality, you can type the following.

Modality	Bodypart	Description	Main Study Bodypart	Main Study Description		
CT		KNEE *(RIGHT|RT|BI)		KNEE *(RIGHT|RT|BI)		
CT		KNEE *(LEFT|LT|BI)		KNEE *(LEFT|LT|BI)		

Note: The regular expression KNEE *(LEFT|LT|BI) means: The word KNEE, followed by either LEFT, LT, or BI.

Configure overlays

You can configure the appearance and contents of overlays.

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting  button.
2. In the **Viewer Settings** dialog box, in the left pane, select **OVERLAYS**.
3. Enter the settings in the table below.

Section	Setting	Description
	Font Family	Select the font used for overlays.
	Size	Select the font size used for overlays.
	Modality	Select to which modality the overlay settings apply. You can enter modality-specific settings or select all modalities.
Left/Right Overlay	Field	To display a DICOM field in the overlay, select in the box and then select a field from the list.
	Prefix	Type a prefix to the field name.
	Mask	Type text to appear in the mask.

Section	Setting	Description
	Add	Fill in the Left/Right Overlay fields and then select **Add** to add the overlay to the list.
Bottom Overlay	FOV/MAG/W/L	Displays the field of view, magnification, and W/L for each series in the bottom corner.

4. Select **SAVE.**

Add or remove toolbar tools

You can add or remove tools from various viewer toolbars in the program, and customize your choices by modality. For information about tools, see “Viewer toolbar tools” in the appendix.
Note: Not all toolbar tools can be removed.

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **TOOLS**.
3. Under **Toolbar**, select the modality whose toolbar you want to customize.
4. In the list, select one of the following toolbars to customize.
   MAIN – The toolbar at the top of the viewer.
   TOP/BOTTOM/LEFT – The toolbar accessible by pointing to the top, bottom, or left edge of an image.
5. Under **Tools**, select or clear the check boxes of the tools that you want to add or remove.
6. Select **SAVE.**

Add or remove tools from the image shortcut menu

You can add or remove tools from the shortcut menu that appears when you right-click an image, and customize your choices by modality.

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **TOOLS**.
3. Under **Toolbar**, select the modality whose shortcut menu you want to customize.
4. In the list, select **CONTEXT MENU**.
5. Under **Tools**, select or clear the check boxes for tools that you want to add or remove.
6. Select **SAVE.**

Assign toolbar keyboard shortcuts

You can assign keyboard shortcuts to tools, and customize shortcuts by modality.

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **TOOLS**.
3. Under **Toolbar**, select the modality for which you want to assign shortcuts.
4. In the list, select **KEYBOARD SHORTCUTS**.
5. Under **Tools**, select the check boxes of the tools to which you want to assign shortcuts.
6. In the **Shortcut** box, type the shortcut character.
   Note: You can type a single letter, or `Ctrl` + a single letter.
7. Select **SAVE.**

Configure opening of a third-party program

You can configure Symmetry PACS to open third-party programs such as Ikonopedia, PowerScribe 360, and MModal. See also “Configure opening of PenRad” and “Opening of OrthoView.”
Prerequisite: Perform the steps in "Install Exa Launch" and "Add a trusted IP or URL" in the appendix.

1. In the Symmetry PACS viewer, in the upper toolbar, select the setting button.
2. In the **Viewer Settings** dialog box, in the left pane, select **GENERAL**.

3. Under **Display Settings**, in the table of monitors, on the row corresponding to the monitor on which to open the third-party application, select the row's **DISPLAY** check box.
4. In the row's **Orders** list, select the application (such as PS360 or MModal).
5. In the left pane, select **INTERFACE**.
6. Under **Other Toolbar**, in the **Auto Open Orders** group, select the application (such as **PS360** or **MModal**).
7. In the left pane, select **TOOLS**.
8. Under **Toolbar**, select **MAIN**, and then in the right pane, select the **External Tools** check box.
9. In the left pane, select **EXTERNAL TOOLS**.
10. Enter the settings in the table below, and then select **ADD**.

Setting	Description
Title	Type a title for the program.
Description	Type a description of the program.
Command	Type the command to run when you select the toolbar button (such as the path to the executable, or a URL).
Arguments	Type arguments to pass to the command at runtime. Note that Symmetry PACS supports the {{username}} and {{user_id}} variables.
Initial Directory	Type the path to the root folder.
Keyboard Shortcut	Optional: Type a keyboard key sequence to use as a shortcut for opening the program.
Toolbar Button	Optional: Select to add a dedicated button for the application on the viewer toolbar.
Do not Base-64 Encode URL Arguments	
Use Facility ID for Subdirectory	Do no select (reserved for PenRad).

Lines, curves, shapes, and text

You can draw linear shapes and add text to images.

Draw lines and shapes

You can draw rectangles and ellipses on images.

1. On the viewer toolbar, select one of the following tools.
   - Rectangle 
   - Ellipse 
   - Straight line 
   - Arrow 
2. Drag on the image to create the shape.
   Optional:
   - To move a shape, drag any part of its outline.
   - To resize a shape, drag any of its handles.

Draw freehand lines

You can draw freehand lines on images.

1. On the viewer toolbar, select the pencil tool.
2. Drag on the image to draw a freehand line.
3. Optional. You can drag any points along the line to modify it.

Draw a curved shape

You can draw curved shapes on images.

1. On the viewer toolbar, select the curve tool.
2. Select at least three times on the image to specify a start point, a vertex, and a second vertex.
3. Double-select to close the shape.

Add text

You can add a text annotation to an image.

1. On the viewer toolbar, select the text tool.
2. In the box, type text and then select **Enter**.
   Note: There is no character limit, but carriage returns are not supported, and long text may extend beyond the visible image boundary.

Markers

You can add markers to images, such as for left and right.

Add a dot

You can add a dot marker to an image.

1. On the viewer toolbar, select the dot tool.
2. Select on the image to place the dot.

Add a vertical or horizontal line

You can add a vertical or horizontal line to an image.

1. On the viewer toolbar, select the vertical or horizontal line tool.
2. To add the line, select on the image.
3. Drag the line to position it.
   Note: To reveal the endpoints, you can drag a vertical line up or down, or a horizontal line left or right.

Add a left or right marker

You can add a left or right marker to an image.

1. On the viewer toolbar, select the left or right marker tool.
2. To add the marker, select on the image.
3. Drag the marker to reposition it.

Measurements

You can take various linear and angular measurements of images. Completed measurements remain as annotations. To adjust measurements easily, we recommend turning on Edit mode before taking measurements (see “Edit annotations”).

Measure an angle

You can measure an angle on an image.

1. On the viewer toolbar, select the angle tool.
2. Select on the image three times to place a vertex and two endpoints.
3. Move the pointer to position the angle measurement, and then select to finish.

Measure a Cobb angle

You can measure a Cobb angle on an image.

1. On the viewer toolbar, select the Cobb angle tool.
2. Drag on the image to place the first angle line.
3. Drag again to place the second line.
4. Move the pointer to position the angle measurement, and then select to finish the angle.

Measure an HO angle

You can measure an HO angle on an image. An HO angle measures the degrees of the angle drawn relative to true vertical and horizontal.

1. On the viewer toolbar, select the HO angle tool.
2. Select on the image to place a starting point.
3. Select to place the end point.

Measure a radial angle or length

You can measure a radial angle or length on an image.

1. On the viewer toolbar, select the radial angle or radial length tool.
2. Select on the image to place the axes.
3. Drag the axes or their endpoints to take measurements.

Measure an elliptical or freehand ROI

You can measure properties of an ROI by drawing an ellipse or a freehand shape. The viewer displays the ROI’s length (mm), area (mm^2), and the minimum, maximum, mean, and standard deviation in Hounsfield units.

1. On the viewer toolbar, select the ROI or free ROI tool.
2. Drag on the image to place the ellipse or the freehand shape.
3. Drag the outline or handles of the shape to adjust the ROI.

Measure a length

You can measure a length (mm) on an image.

1. On the viewer toolbar, select the measure tool.
2. Drag on the image to place the measurement line.
3. Drag the outline or endpoints of the line to adjust the measurement.

Measure and compare two lengths

You can measure the lengths (mm) from two starting points to an endpoint for comparison.

1. On the viewer toolbar, select the M compare tool.
2. Select three times on the image to place a starting point, endpoint, and second starting point.
3. Drag any of the three points to adjust the measurement.

Take a freehand measurement

A freehand measurement is similar to freehand ROI, but it measures different values: angle; radius (mm); area (mm^2); and length (circumference in mm).

1. On the image shortcut menu, select **Annotations** > **Measures** > **FH Measure**.
2. Select three times on the image to place a vertex and two endpoints.
3. Move the pointer to position the circle measurements, and then select to finish.

Find a center point

You can find the center between two reference points.

1. On the image shortcut menu, select **Annotations** > **Measures** > **Center Point**.
2. Select twice on the image to place the first and second reference points.
   Note: The center point is indicated by an x.
3. Drag either of the reference points to adjust the measurement.

Draw a circle and measure its radius

You can draw a circle and measure its radius (mm).

1. On the viewer toolbar, select the circle tool.
2. Select twice on the image to place two loci.
3. Move the pointer to adjust the circle, and then select to add a third locus.
4. Drag any locus to resize or reposition the circle.

Spine labels

You can add preset labels for spinal vertebrae and discs to MR images. Labels are grouped by region (cervical, thoracic, lumbar, and sacral), plus another group for all discs. *Basic* labels do not include height and width measurements, whereas non-basic labels do. *3D* labels appear in all frames and planes, whereas non-3D labels appear only in the individual frames to which you add them.

Add basic spine labels

You can add basic spine labels to vertebra in ascending or descending order.

1. On the viewer toolbar, select the basic spine label tool.
2. In the button shortcut menu, select a region and starting vertebra.
   Note: Choose “Up” to apply labels in ascending order, or “Down” for descending.
3. Select on the first vertebra to add the first label, and then select on the second vertebra, and so on.

Add basic 3D spine labels

You can add basic 3D spine labels to vertebrae in ascending or descending order.

1. On the viewer toolbar, select the quick 3D spine label tool.
2. In the button shortcut menu, select a region and starting vertebra.
   Note: Choose “Up” to add labels in ascending order, or “Down” for descending.
3. Select on the first vertebra to add the first label, and then select on the second vertebra, and so on.

Add 3D spine labels

You can add 3D spine labels in ascending or descending order.

1. On the viewer toolbar, select the 3D spine label shortcut tool.
2. In the button shortcut menu, select a region and starting vertebra.
   Note: Choose “Up” to add labels in ascending order, or “Down” for descending.

3. Select twice on a vertebra to place a starting point and endpoint.
4. Repeat the previous step to label additional vertebrae.

Use a spine label shortcut

You can use a spine label shortcut to quickly start labeling from a common starting vertebra.

1. On the viewer toolbar, select the spine label shortcut , 3D spine label shorcut , or 3D quick spine label shortcut tool.
2. In the button shortcut menu, select a starting vertebra.
3. Add labels.

3D

3D labels appear in the image where you add them, and the same slice in other series.

Use the 3D cursor

When you place the 3D cursor on one series, the cursor also appears in the corresponding location in any cell of the same study that is open in the viewer.

1. Open two or more series of the same study (for example, an axial, sagittal, and coronal view).
2. On the viewer toolbar, select the 3D cursor tool.
3. Hover over an image in one cell.
4. The cursor appears in the same location in the other cells.

Add a 3D point

You can mark a 3D point on an image. The point you place in the current image appears in the corresponding position in all frames and planes.

1. On the image shortcut menu, select **Annotations** > **3D Point**.
2. Select on the image to place the point.

Add a 3D ray

You can mark a 3D ray on an image. The vertex you place in one frame extends as a ray through the stack and is visible in other planes.

1. On the image shortcut menu, select **Annotations** > **3D Ray**.
2. Select on the image to place the vertex of the ray.

Add a 3D ROI

You can mark a circular ROI in one image, and the program adds the ROI to the same image in other series in the viewer. The viewer displays the ROI's length (circumference in mm), area (mm^2), and the maximum, minimum, mean, and standard deviation in Hounsfield units.

1. On the image shortcut menu, select **Annotations** > **3D ROI**.
2. Select twice on the image to place the center point and a tangent point.

Add a 3D length measurement

You can take a linear measurement (mm) in one image, and the program adds the measurement to the same image in other series in the viewer.

1. On the image shortcut menu, select **Annotations** > **3D Measure**.
2. Select twice on the image to place the first and second endpoints of the measurement line.

Add a 3D angle measurement

You can take a 3D angle measurement in one image, and the program adds the measurement to the same image in other series in the viewer.

1. On the image shortcut menu, select **Annotations** > **3D Angle**.

2. Select three times on the image to place the vertex and the first and second endpoints of the angle.

Shutters

You can add rectangular, elliptical, or freehand shutters.

Add a rectangular or elliptical shutter

You can add a rectangular or elliptical shutter to “crop” unwanted areas of an image.

1. On the image shortcut menu, select **Annotations** > **Shutters** > **Shutter Box** or **Shutter Ellipse**.

2. Select twice on the image to place a starting point and endpoint for the shutter.

Add a freehand shutter

You can add a freehand-drawn shutter to "crop" unwanted areas of an image.

1. On the image shortcut menu, select **Annotations** > **Shutters** > **Freehand Shutter**.
2. Drag on the image to draw the shutter.

Other annotation tasks

Add an AR annotation

You can plot points to represent angular rotation.

1. On the viewer toolbar, select the AR tool.
2. Select six times on the image to place guide points.

Edit annotations

After you finish an annotation, it is fixed in place to prevent accidental alteration. To move, edit, or delete an annotation, either select the tool that created it, or select the edit tool to enter Edit mode. You can select the edit tool again to exit Edit mode.

Saving and deleting annotations

You can save or delete annotations as follows.

- To save the current annotations, on the toolbar, select the save annotations button.
- To delete all annotations, on the toolbar, select the delete all annotations button.
- To delete all annotations for the current series, on the image shortcut menu, select **Delete Series Anno**.
- To delete all annotations for the current study, on the image shortcut menu, select **Delete Study Anno**.

Reset an image in the viewer

When making non-permanent modifications to images in the viewer (zoom, rotation, Window/Level etc.), you can reset the image to its original state.

- On the viewer toolbar, select the reset viewer button.

Change elements in the viewer

Show or hide overlays

You can turn overlays on or off.

- On the viewer toolbar, select the overlay button to turn overlays on or off.
- To show a preset DICOM overlay, in the image shortcut menu, select DICOM overlay, and then select an overlay.

Show or hide annotations

You can turn annotations on or off.

1. In the upper-right corner of a frame, right-click the menu icon .
2. In the shortcut menu, select **Show Annotations**.

Show series and stacks

If the viewer is showing only a single frame of a series or stack, you can change it to display all series and stacks.

- On the viewer toolbar, select the reset series and stacks button.

Show or hide cutlines

Cutlines show the intersection between two open series. The cutlines update dynamically as the user moves through a series. A dashed cutline indicates where the first image starts and the last image ends. A solid cutline indicates the intersection of the currently displayed locations in the series. If a series includes intersecting images, you can show or hide cutlines.

- On the viewer toolbar, select the cutlines button.

Split series by image thickness

You can use slab tools to split series by image thickness.

1. In the upper-right corner of a frame, right-click the menu icon .
2. In the shortcut menu, select **Slab Tools**, and then select a slab thickness.

Recalibrate the scale

You can manually recalibrate the scale measurement, which is shown on the caliper of the current series.

1. In the upper-right corner of a frame, right-click the menu icon .
2. In the shortcut menu, select **Recalibrate**.
3. In the dialog box, type a new value (mm) for the scale, and then select **OK**.

Change the series layout

You can change the number of series panels displayed in the viewer.

1. In the upper-right corner of a frame, right-click the menu icon .
2. In the shortcut menu, select **Series Layout**, and then select a layout.

Reorder a series

You can change the order of images in a series.

1. In the upper-right corner of a frame, right-click the menu icon .
2. In the shortcut menu, select **Reorder**, and then select one of the following options.
   Image Number – Arranges the images by number in ascending order.
   Image Number Inverse – Arranges the images by number in descending order.
   Slice Location – Arranges the images by relative location (in mm) in the plane in ascending order.
   Slice Location Inverse – Arranges the images by relative location in the plane in descending order.
   Image Time – Arranges the images by the time they were taken.

Change the appearance of images

How the viewer chooses the initial window/level

There are many sources of window/level settings. When the viewer displays an image, it chooses the window/level settings from the first available of the following sources, in order.

- Last display state, if "Auto saved image properties on close" is turned on
- LUT (from prefetch), unless "Ignore LUT" or "Ignore Presentation LUT" is turned on
- DICOM tags – the window center and window width tags
- VOI LUT DICOM tags – value of interest LUT tags
- Manual W/L settings, if adjusted by the user

Turn on auto window/level

The viewer can automatically adjust the window/level so that images are, to the extent possible, neither too dim nor too bright.

- On the viewer toolbar, select the auto window/level button.

Adjust the window/level

You can manually adjust the window/level.

- On the viewer toolbar, select the window/level button.
- Drag horizontally over the image to adjust the window.
- Drag vertically over the image to adjust the level.

Apply a window/level preset

You can apply a window/level preset to the current study.

- On the image shortcut menu, select **Presets**, and then select a preset.

Apply CLAHE enhancement

You can apply CLAHE to enhance local contrast.

- On the viewer toolbar, select the CLAHE button to turn CLAHE on or off.

Apply bone enhancement

You can use different levels of bone enhancement to optimize the contrast between bone and other tissues. You can also apply color inversion to further highlight fractures and other features of bone.

1. On the viewer toolbar, select the bone enhance button.
2. In the button shortcut menu, select a percentage.

Invert colors

You can invert black and white values to make certain images easier to read.

- On the viewer toolbar, select the invert colors button.

Add color to images

You can add color to images.

1. Right-click the overlay in the lower-right of the image, and then in the shortcut menu, select **Palettes**.
2. Select a color in a palette.

Apply sigmoid processing

You can apply sigmoid processing to enhance low-contrast images.

- Right-click the overlay in the lower-right of the image, and then in the shortcut menu, select **Sigmoid**.

Reset and Reset study object

You can access the Reset and Reset study object commands in the image shortcut menu. *Reset* undoes all unsaved changes (such as W/L and annotations) made to the current series. *Reset study object* updates the viewer after new images are added to a study that is currently open.

Add to new UNQ study

A *UNQ* (unique) study is a teaching study. When you select this command in the image shortcut menu, a button appears on the toolbar to open the teaching study screen. See, “Create a teaching study.”

Scaling images

Zoom images

You can zoom in on (enlarge) or out of (reduce) images for optimum viewing. There are several ways to zoom:

- On the viewer toolbar, select the zoom tool and then drag on the image.
- Select the zoom tool in the image shortcut menu: Tools > Zoom.
- Drag the pointer across a caliper (if Caliper Zoom is selected, see “Configure other interface settings”).
- Right-click the lower-right overlay, select Enter Zoom, and then type a value from .05 to 7.5.
- “Quad zoom”: Use the left or right angle bracket keys (< >).

Display one to one

If you zoomed an image you can restore it to its original DICOM size. This is essentially “life size.”

- On the viewer toolbar, select the one to one button.

Display images in their actual size

You can display images in their original size.

- On the viewer toolbar, select the actual image size button.

Fit images to window

You can automatically zoom an image so that its longest dimension fits in the visible frame.

- On the viewer toolbar, select the fit to window button.

Use the magnifying glass

You can use the magnifying glass tool to zoom an area of the current image.

- On the viewer toolbar, select the magnifying glass tool, and then select and hold over the area to magnify.

Linking images

When two series are open side-by-side in the viewer, *linking* them causes moving through images in a second series when you move through images in the first series.

Auto link images

Auto linking means that linking turns on automatically when two or more series of the same plane (such as axial) are open. With auto-linking, the system uses the image numbers to automatically match up the frames in each series so that the frame in the second series is as near in stack order to the image in the first series as possible.

- To auto link images, on the viewer toolbar, select the auto link button.

Manually link images

Manual linking means that you turn linking on and off manually when two or more series are open. This is frequently used to scroll through a recent image and a corresponding prior, side-by-side.

- To manually link images, on the viewer toolbar, select the manual link button.
  Note: For mammogram images, you can only link LCC and RCC with each other; similarly you can only link LMLO and RMLO with each other.

Use the context tool

You can automatically jump to an image in a linked series that most closely matches the angle (X, Y, and Z position) of the image in the current series.

- On the viewer toolbar, select the context tool .

Reset linked series

You can reset (undo) image linking by selecting the reset linked series button. This may take time depending on the size of the series.

Moving and jumping to images

Pan images

You can pan an image to view any portions that extend beyond the visible frame.

1. On the viewer toolbar, select the pan tool.
2. Drag the image in any direction.

Scroll or span through images

You can scroll or span through images in a series. *Spanning* means to scroll rapidly with minimal hand motion.

- To scroll: Hover over the image and rotate the mouse wheel.
- To span: On the image shortcut menu, select **Tools** > **Span Images**, and then drag on the image.

Flip or rotate images

You can flip images 180 degrees, or rotate them 90 degrees. From the image shortcut menu:

- Select **Transformation** > **Flip Horizontal** or **Flip Vertical**.
- Select **Transformation** > **Rotate Right** or **Rotate Left**.

Play cine loops

When viewing a series, you can play cine loops and shuttle between frames.

1. On the viewer toolbar, select the cine button.
2. Cine play starts, and the media control bar appears.
3. Use the media control bar to pause, move to the first or last frame, and move to the previous or next frame.

Specify key images

You can specify key images in a series that you can jump to at any time. You can add key images thumbnails on reports.

1. Display the image that you want to be a key image.
2. On the image shortcut menu, select **Set Key Image**.

Jump to a key image

If you specified a key image in the current series, you can jump to it (display it in a frame in the viewer).

1. At the top of the thumbnail pane on the left side, select **Keyimage**.
   The thumbnail pane shows thumbnails of your key images.
2. Double-select a key image thumbnail.

Use MPR tools

Multiplanar reformation (MPR) creates images in orthogonal planes (axial, coronal, sagittal or MIP) relative to a base image. The MPR tool is hidden until you open a series.

Perform simple MPR

You can perform simple MPR to generate a single alternate planar view from the base view.

1. Open a series, and then double-select an image to view it full screen.
2. Select the arrow on the right side of the MPR MPR button.
3. In the button shortcut menu, select a plane.
4. The viewer performs MPR and displays the new plane.

Perform standard MPR

You can perform standard MPR to generate three additional planar views of the base image.

- Open a series, and then select the MPR MPR button.
  Note: The plane of the base image determines the default MPR plane.

Manipulate MPR images

You can manipulate MPR images in the following ways by using controls in the base image.

- To move through MPR images, drag the blue region bars. You can also drag the endpoints to adjust the viewing angle.
- To move both region bars at the same time, on the toolbar, select the context tool, and then drag on the base image.
- To change the slice thickness, double-select the thickness value, and then type a new value (or drag the thickness value).
- To change the slab width, select Region, double-select the slab width value, and then enter a new value (or drag the slab width value).
- To display an MPR image full screen with a large thumbnail of the base image, double-select an MPR image.

Work with Display Management

With the viewer’s display management functions you can create and manage highly customized “DMs.” The term *DM* refers to *display management* in general, or to an implementation of a hanging protocol. By using DMs you can precisely customize how images “hang” in the viewer.

Configure viewer settings for DMs

Before working with DMs, configure the settings described in the following sections in this manual.

- Configure modality-specific viewing options
- Configure mammography
- Set up connected displays

Next, configure viewer settings as follows.

1. On the worklist, select settings, select **Viewer Settings**, and then in the **Viewer Settings** dialog box, on the left pane, select **MODALITY**.
2. In the list of modalities, select a modality that you work with (such as CT or MG).
3. To turn on DMs, in the settings area under **Options**, select the following check boxes.
    - Auto Hang DM
    - DM Allow Missing Cell
    - Auto Hang Priors
4. To view priors, under **Prior Options**, configure the following.
    a. Select the **Auto Open Prior** check box.
    b. In the **Auto Open Prior Count** list, select the maximum number of priors to open at once.
5. Select **SAVE.**
6. Repeat for each modality that you work with.

Show the DM toolbar

The DM toolbar gives you quick access to DM related functions. You can manually display the DM toolbar in the viewer, or configure the viewer to display the DM toolbar automatically for selected modalities. See also “Use the DM toolbar.”

- *Manually*: In the viewer, select the display manager button, and then in the button shortcut menu, select **Show DM Toolbar**.
- *Automatically*: On the viewer toolbar, select the settings button. Select **MODALITY**, select modalities, select the **Show DM Toolbar** check box, and then select **SAVE**.

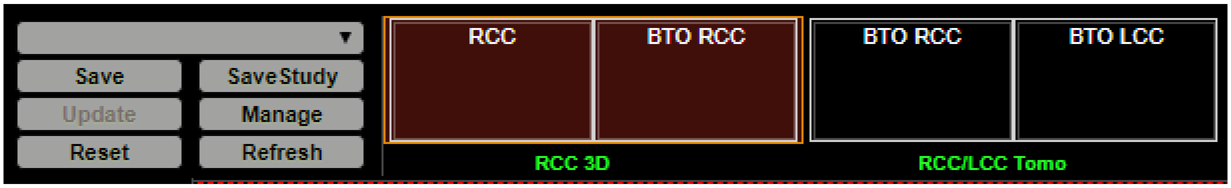
Display images with a DM

You can select from a list of previously configured DMs to hang the current study. If you show the DM toolbar in the viewer, you can select a DM on the toolbar. If you did not show the DM toolbar:

1. Open a study in the viewer.
2. On the toolbar, select the DM button.
3. On the button shortcut menu, select one of the DMs in the list.
   Note: DMs are listed between the first item in the menu, “None,” and “DM Manager.”
4. Optional. You can change the view as follows.
    - Rotate the wheel to page through any additional images in the study that the DM can hang.
    - Drag a thumbnail onto a cell to display it there.
    - Use the left or right bracket keys ([or]) to page through any other available DMs.

Use the DM toolbar

As in the figure below, the toolbar contains tools on the left, and DMs (RCC 3D and RCC/LCC Tomo) on the right side of the tools. Use the toolbar as follows.



- Save: Saves a new DM based on the current layout.
- Save Study: Saves the current configuration for the current study only.
- Update: Overwrites the current DM with properties taken from currently displayed images.
  CAUTION: Selecting this button deletes all settings of the current DM.
- Manage: Opens the DM manager.
- Reset: Select to apply any newly created or edited DMs.
- Refresh: You can also *refresh* DMs to update the list of applicable DMs.
- [DM]: Select any DM on the DM toolbar to apply it in the viewer.

Find and open a DM for editing

If you have a large number of DMs you can find a specific one, and then open it for editing.

1. On the viewer toolbar, select the display manager button.
2. In the button shortcut menu, select **DM Manager**.
3. In the **DM Manager** dialog box, enter one or more of the following search criteria.
   User Groups – Select the group to which the DM user belongs.
   Users – Select the DM user.
   Filters – Select whether the DM is private (user-specific) or public.
   Modality – Select the modality associated with the DM.
   Name – Type all or part of the name of the DM.
4. Select **SEARCH**.
   DMs matching your search criteria appear in the list at the bottom of the dialog box.
5. To open the DM for editing, double-select it, or select its edit button.

Edit, delete, duplicate, or copy a DM

Each DM has four buttons on the right side of the list:
These buttons do the following.

Edit – Opens the DM for editing (for configuration, see “New DMs”).
Delete – Deletes the DM from the list.
Duplicate – Duplicates the DM and prompts you to name the duplicate.
Copy – Sends a copy of the DM to a user group or user.

Export and import DMs

You can export DMs for use in other Konica Minolta systems.

1. Find and select one or more DMs to export.
2. Select **EXPORT SELECTED** or **EXPORT ALL**.
   The DMs are added to a single JSON file and downloaded to your PC.
3. Copy the file to the destination system, display the **DM Manager** dialog box, select **IMPORT**, and then open the exported JSON file.

Add a new DM

To add a DM:

1. On the viewer toolbar, select the display manager button.
2. In the button shortcut menu, select **DM Manager**.
3. In the **DM Manager** dialog box, select **ADD NEW DM**.
4. In the second **DM Manager** dialog box, enter the following settings.
   Name – Type a name for the DM.
   Inactive – Select to disable the DM until ready for use.
   Private – Select to make the DM available only to you.
   Modalities – Select one or more modalities to which the DM applies.
   Body Part – Prevents all but the selected body part to display.
   To display any body part, leave blank.
   Page Count – The number of monitors that the DM uses to display images.
5. Under **Preview**, in the upper-left corner of the frame, select **1*1** and select a cell layout for the study-level series/images within the monitor.
6. Optional. Select **1*1** in of the cells, and select a series layout for the series-level images within a cell.
7. Optional. To allow missing cells, in the upper-right corner of a page or cell, select the check box. See “About missing cells.”

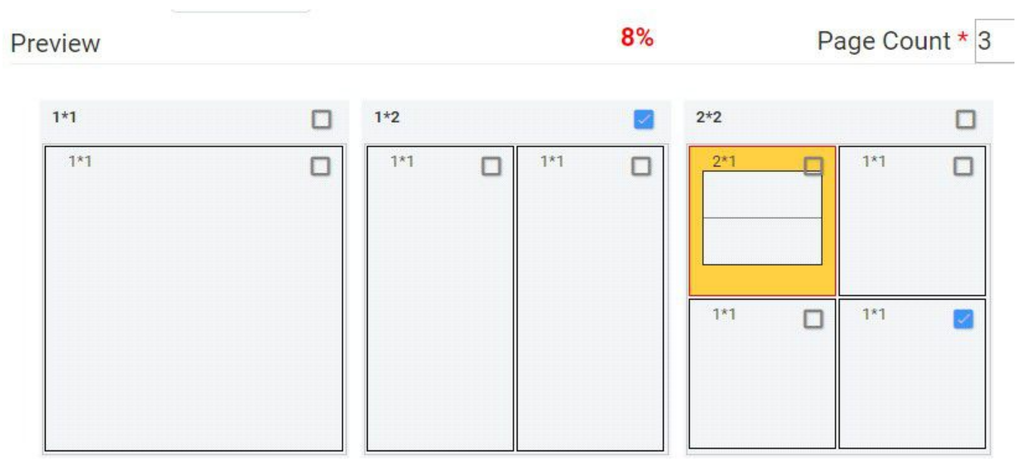


Figure. In this example, 3 pages (monitors) are configured, with 1, 2, and 4 cells added to each page, respectively. On the second page, Allow Missing Cells is selected at the page level, which means that either the left, right, or both cells can be blank. On the third page, the study will hang if images for the lower-right cell are missing, but not if they are missing in any other cells. The upper left cell is selected for adding a matching rule group and/or matching rule. Because the validation percentage is not yet 100%, matching rules must be added.

8. Note the validation percentage, and then select **SAVE**.
9. If the validation percentage was not 100%, you must add a matching rule that yields 100%. Continue to “Add a matching rule group.”

About the order of DMs in the DM manager

When you open a study in the viewer, Symmetry PACS finds all DMs that match the study, and then hangs the study using the one that was highest in the list in the DM manager. It also makes all matching DMs available to you in the DM toolbar and in the DM button shortcut menu. You can change the default order of DMs in the DM manager by dragging them in the list.

About missing cells

By default, DM pages and cells do not allow *missing cells*. This means that if no image exists in the study that can hang in one of the cells on a page, no images hang at all on the page. For example, if you configured a DM to display a current image in the left cell and a prior in the right cell, but no prior is found, then the current image does not hang.

Sometimes it is preferable to allow missing cells. For example, if you configured your DM to display up to three priors, but only two priors are found, you still want to display the current image and the two priors.

Add a matching rule group

You can group matching rules and apply AND/OR logic to them. If set to AND, all rules in the group must be true to hang images, and if set to OR, at least one rule must be true. Adding a matching rule group is optional, but we recommend doing so for most applications.

1. In the DM Manager, in the list of DMs, double-select to open the DM to which you want to add a matching rule group.
2. Under **Preview**, select a cell.
3. At the bottom of the window, on the **MATCHING RULES** tab, select **ADD GROUP**.
   The new group initially appears as a row of buttons under the ADD GROUP button.

The matching rule group is the row of buttons on the bottom. No rules have been added to the group.

4. Add one or more rules to the group (see “Add a general matching rule,” or “Add a mammo matching rule.”)
5. In the list on the right side of the dialog box, select a relationship of AND or OR.
6. At the top of the dialog box, select **SAVE.**

Add a general matching rule to a DM

When you add a DM, the modality, body part, and allow missing cell settings you enter *roughly* determine which images hang where in the DM. You can also *finely* determine this by using general matching rules. In most cases you should use a general matching rule, but for mammography, see “Add a mammo matching rule to a DM.”

General matching rules consist of an argument, logical operator, and matching value. For example: Study Date (arg.) is Less/Equal (operator) to 01/02/2003 (matching value).

1. Open the DM to which you want to add matching rules.
2. Under **Preview**, select the cell to which to apply the rule.
3. At the bottom of the window, on the **MATCHING RULES** tab, select **ADD GENERAL RULE**.
   Note: If you created a group and you want the rule to be included in the group, select the button that is inside the group.
4. In the **Matching Tag** dialog box, enter the following settings.
   DICOM Tag/Field – Select a tag or field to use as the argument.
   Operator – Select an operator.
   Matching Value – Type a matching value, and then select the plus sign.
5. Modify the rule until the validation percentage is 100%, or add another rule.
6. Select **SAVE**.
7. In **DM Manager**, select **SAVE**.

Add a mammo matching rule to a DM

If you assigned the MG modality to a DM, you can add mammography matching rules to it. Mammo rules take the form of mammography-specific properties; if an image matches all properties the DM is applied.

1. Open the DM to which you want to add mammo rules.
2. Under **Preview**, select a cell.
3. At the bottom of the window, on the **MATCHING RULES** tab, select **ADD MAMMO. RULE**.
   Note: If you created a group and you want the rule to be included in the group, select the button that is inside the group.
4. In the **Mammo Rule** dialog box, enter the following settings.

Setting	Options	Description
Side	Left Right ?	Left breast Right breast Either
View	[Various]	Select the primary breast view.
DON'T CARE	[Various]	Select the secondary breast view. Selecting DON'T CARE allows any of the secondary views to display *except* ID.
Processing Type	Unprocessed Tomosynthesis CView Processed ?	Raw images 3D images 2D images taken from a tomosynthesis study Standard 2D images Images without the “0008,0068” Presentation Intent Type DICOM tag.
Image Index	ANY 1–20	Images of any index can hang Only an image of the selected index can hang.

5. Modify the rule until the validation percentage is 100%, or add another rule.
6. Select **SAVE**.
7. In **DM Manager**, select **SAVE**.

Add a prior matching rule to a DM

To hang priors, add a prior matching rule to the destination DM cell.

1. Open the DM to which you want to add prior rules.
2. Under **Preview**, select a cell.
3. At the bottom of the window, on the **MATCHING RULES** tab, select **ADD PRIOR RULE**.
   Note: If you created a group and you want the rule to be applied to the group, select the button that is inside the group.
4. In the **Prior Rule** dialog box, select the index of the prior that you want to hang in the cell.
   Note: Selecting ANY allows you to scroll through all available priors when viewing a single DM.
5. Select **SAVE**.
6. In **DM Manager**, select **SAVE**.

Add a mammo rule for breast implant displacement

You can create a DM for breast views that allows you to displace (effectively hide) the implant.

1. Add a mammo rule to a DM cell, and in the **DON'T CARE** list, select **ID**.
2. When viewing implant images, rotate the wheel to switch between displaced and non-displaced views.

About the DM validation percentage

The DM validation percentage helps you by indicating, roughly, the percentage of cells in a DM you are configuring that would not display any images under the current settings. To achieve 100 percent, apply a valid condition or rule to each cell in the DM. If the percentage is not 100, Symmetry PACS prevents you from using the DM at all. You can view the percentage by opening a DM for editing; the percentage appears on the right side of the Preview area title.

Use the Display Management tab

To automatically apply additional processing to all images that hang in a DM, you can use the Display Management tab in the DM manager.

1. In **DM Manager**, open a DM, and then select a cell.
2. On the **DISPLAY MANAGEMENT** tab, enter the following settings.

Setting	Description
Auto-Orient	[Unused]
Rotation	Select a degree of clockwise rotation.
Mirror	Select to switch the left and right breast view.
View	Select a zoom type.
Invert Sigmoid Linear CLAHE Fusion	Select one or more processing functions to apply.
LUT	Select an LUT to apply.
Bone Enhance	Select a percentage of bone enhancement.
Window/Level	Select Default or Custom. If Custom, type the values to apply.
Reprocess	Select to generate an additional view from the base view.

3. Select **UPDATE**, and then **SAVE**.

Create a DM from an existing layout

To create a DM more quickly, you can arrange a layout in the viewer, and then save it as a DM.

The rules that are created with this method include as many parameters from the source studies as possible, and may be overly restrictive for general use, or apply unexpected image processing. Therefore to ensure proper hanging and rendering, review the resultant rules in both the MATCHING RULES and DISPLAY MANAGEMENT tabs and modify if necessary.

1. In the viewer, open a study and configure the display to your liking.
2. On the toolbar, select the **DM** button, and then in the button shortcut menu, select **DM Save**.
3. In the **DM Information** dialog box, type a name for the DM and select or clear the **Private** check box.
4. Select **SAVE**.

Example DM with a general matching rule

In this example we add a DM for viewing chest X-rays with an AP view on the left and a lateral view on the right. Continuing after step 3 of "DM examples:"

Add the DM

1. In **Name** box, type `CHEST TEST`.
2. the **Modality** list, select **CR**, and then select **DX**.
3. In the **Page Count** box, type or select **1**.
4. Under **Preview**, on the page header, select **1*1** and select a 1 x 2 cell layout.

Add a rule group and general rules for the left cell

1. Select the left cell, and on the **MATCHING RULES** tab, select **ADD GROUP**.
2. In the new group, select **ADD GENERAL RULE**.
3. In the **Matching Tag** dialog box:
    - In the **DICOM Field/Tag** list, select **Modality**.
    - In the **Operator** list, select **Equal**.
    - In the Matching Value box, type **CR**, select the plus (+) button, and then select **SAVE.**

   Note: In practice you may also want to add the DX modality.
4. Following the previous step, add another general rule:
    - **DICOM Field/Tag** = SeriesDescription
    - **Operator** = Contains
    - **Matching Value** = ap
5. On the right side of the matching rule group, in the list, select **AND**.
   This means that the image must satisfy both rules to hang in the cell.

Add general rules for the right cell

1. Select the right cell, and select **ADD GENERAL RULE**.
2. In the **Matching Tag** dialog box, add the following rule:
    - **DICOM Field/Tag** = SeriesDescription
    - **Operator** = Contains
    - **Matching Value** = lat
3. Next to **Preview**, confirm that the validation percentage is 100%.
4. Select **SAVE**, and then close the DM manager.
5. Select **F5** to update the viewer with your new DM.

Example DM for ultrasound

In this example we add a DM that hangs a 3 x 2 series layout (3 rows, 2 columns) of only ultrasound images. Continuing after step 3 of "DM examples:"

Add the DM

1. In **Name** box, type `US TEST`.
2. the **Modality** list, select **US**.
3. In the **Page Count** box, type or select **1**.
4. Under **Preview**, select the 1*1 cell (not the page header), and select a 3 x 2 series layout.

Add a general rule for all images

1. Select inside of the page's 1*1 cell to highlight everything around the 3 x 2 series-level cells.
2. Add the following general rule.
    - **DICOM Field/Tag** = Modality
    - **Operator** = Equal
    - **Matching Value** = US

3. Confirm that the validation percentage is 100%, and then save the DM.

Example DM for mammography

In this example we add a DM that hangs a 2 x 2 layout of mammography images. Only MG images can hang, current study images appear in the top 2 cells, and any of the first available priors hang in the bottom 2 cells. Continuing after step 3 of "DM examples:"

Add the DM

1. In **Name** box, type `MG TEST`.
2. the **Modality** list, select **MG**.
3. In the **Page Count** box, type or select **1**.
4. Under **Preview**, select **1*1** (at the top of the page), and select a 2 x 2 cell layout.

Add a mammo rule group and mammo rule for the upper-left cell

1. Select the upper-left cell, and then select **ADD GROUP**.
2. In the new group, select **ADD MAMMO RULE**.
3. In the **Mammo Rule** dialog box, add the following rule.
   - **Side** = Right
   - **View** = CC Family
   - **DON'T CARE**
   - **Processing Type** = Processed
   - **Image Index** = ANY
4. Select **SAVE.**
5. On the right side of the matching rule group, in the list, select **OR**.
   This means that the image must satisfy at least one rule to hang in the cell.

Add a mammo rule group and rule for the upper-right cell

1. Select the upper-right cell, create a new group, and then add the following mammo rule to the new group.
   Side = Left
   All other settings = Same as previous for upper-left cell

Add a mammo rule group, mammo rule, and prior rule for the lower-left cell

1. Select the lower-left cell, add a group, and add the same mammo rule that you added for the upper-left cell, (Side = Right).
2. In the current mammo rule group, select **ADD PRIOR RULE**.
3. In the **Prior Rule** dialog box, in the **Study Index** list, select **ANY**, and then select **SAVE.**

Add a mammo rule group, mammo rule, and prior rule for the lower-right cell

1. Select the lower-right cell, add a group, and then add the same mammo rule that you added for the upper-right cell (Side = Left).
2. Add the same prior rule that you added for the lower-left cell.
3. Confirm that the validation percentage is 100%, and select **SAV**E, and **SAVE** to save the DM.
4. Close the DM manager. In the viewer, select **F5** to update and view your DM.

Gather information from images

View pixel values in Hounsfield units

You can view the value of a selected pixel in Hounsfield units.

- On the viewer toolbar, select the Hounsfield units Hu tool, and then select and hold the mouse button on the pixel of interest.

Display DICOM values

You can display the DICOM tag values associated with the current image by doing one of the following.

- On the viewer toolbar, select the DICOM values button.
- On an image shortcut menu, select **View** > **DICOM Values**.

Export DICOM values

When you view DICOM values in the viewer you can export them to a CSV. This CSV file can **only** be displayed correctly in **Notepad**, **Notepad++**, or **Wordpad**.

1. On an image shortcut menu, select **View** > **DICOM Values**.
2. In the title bar of the screen that appears, select the download button.
   Result: The file is downloaded to your Windows Downloads folder.

Print images to a standard printer

You can print the current image, series, or study to a TWAIN (non-DICOM) printer. It is a convenient, less-expensive alternative to DICOM printing, but is not suitable for diagnostic purposes.

1. On the viewer toolbar, select the print button.
2. In the **Print Image** dialog box, enter the following settings.
   Layout – Select the number and arrangement of frames per page.
   Page Size – Select the paper size and print orientation.
   Compress large images – Select to compress large images (for lower quality but faster printing).
   Selected Image – Select to print the current image.
   Selected Series – Select to print all images in the current series.
   Current Page – Select to print the current image in all displayed frames.
   All Images – Select to print all images in the current study.
3. Select **Print**.
4. In the Windows print dialog box, configure options and select **Print**.

Start a third-party application or function

If you configured a third-party application or function, you can open it from the toolbar.

- On the viewer toolbar, select the external tool button corresponding to the item to open.

Download images

You can download images and series from studies to your desktop in various formats.

- To download the current image as a PNG, on the image shortcut menu, select **Download Image**.
- To download the current series as a video, on the image shortcut menu, select **Download Series as MP4**.
- To download each image in the current series as a separate file, on the image shortcut menu, select **Download Series Image**, and then select the file format.

Work with the patient chart

Symmetry PACS gives you full viewing access to patient demographics, and lets you add, edit, and import a *patient chart* (or an *electronic medical record* or *EMR*). The edit study screen contains much of the same information as the patient chart.

Find and open a patient chart

Find a patient chart by entering search criteria

You can find an existing patient chart by searching on various patient demographics.

1. On the burger menu, select **PATIENT**.
2. On the **Patient** screen, select the **SEARCH** tab.

   Note: If the tab bar is hidden, select the arrow next to Patient to display it.
3. In the **Starts With** list, select a target for your search criteria.
   This target applies to all boxes in the search bar.
4. In the **All** list, type or select a search filter (these are typically facilities).
5. In the search bar, in one or more of the boxes, type one or more characters.
   The results appear in the **PATIENT SEARCH RESULTS** list.

Example

To find “John Smith:”

1. Select **Starts With**.
2. Select **All**.
3. In the **Last Name** box, type `Smi`, and in the **First Name** box, type `Jo`.

Find a patient chart by scanning a driver’s license

You can find an existing patient chart by scanning a driver’s license.

1. On the burger menu, select **PATIENT**.
2. On the **Patient** screen, select the **SEARCH** tab.

   Note: If the tab bar is hidden, select the arrow next to Patient to display it.
3. Select **SCAN LICENSE**.
4. Use your barcode reader to scan the driver’s license.
   The results appear in the **PATIENT SEARCH RESULTS** list.

Open and view the patient chart

After finding a patient chart (see “Find a patient chart by entering search criteria” or “Find a patient chart by scanning a driver’s license”), you can open it to view patient demographics and other information. For more information about each of the tabs within the patient chart, see the corresponding topic under “Edit study screen.”

1. Find a patient chart, and then double-select it.
   The patient chart opens with the PATIENT INFORMATION tab.
2. To view more information, next to the **Patient** page title, select , and then select a tab (such as PATIENT GUARANTOR, or INSURANCE PROFILES).

Create and modify a patient chart

About the patient ID, MRN, and account number

The patient ID (PID) is usually the same as the MRN or account number. When they differ, often it is because the PID comes from DICOM sources and the account number comes from RIS sources. This can happen when an incoming DICOM study with an existing PID conflicts with a receiver rule, and Exa RIS compensates by creating a unique account number. Also, staff often enter account numbers manually when creating pre-orders for new patients, because no PID would exist yet.

Edit basic patient information

You can edit or add new information to a patient chart.

1. Find and open a patient chart.
2. On the **PATIENT INFORMATION** tab, type or select information in the available fields. Most fields are self-explanatory, but note the following.

Setting	Description
Market	Select the market that serves the patient. All facilities in the selected market become selected in the Facilities field below.
Facilities	Set by default depending on the default location of the user who created the patient record. If the patient is created at the time of scheduling, it is set by default to the facility where the exam is being scheduled.
DICOM Patient ID	Set by default to the DICOM study tag patient ID or MRN, if any exists. See “About the patient ID, MRN, and account number.”
Account No./Alt	The account number and optional alternate account number associated with the default AE. See “About the patient ID, MRN, and account number.”
Racial/Ethnic	Select all that apply.
Ordering Facility	Select a facility in the list, and then select the plus button to add it to the patient record. You can select multiple facilities.
Home Address	The patient’s home address.
Language	The patient’s preferred language.
[Driver’s license information]	Enter manually. You can also select SCAN LICENSE and use your barcode reader to capture the license number and state.
Users Assigned	Select a user in the list, and then select the plus button to add it to the patient record. You can select multiple users.

3. Select **SAVE**.

You can enter information in the other tabs in the patient chart. Search this manual for the name of the tab for details.

Assign a guarantor for a patient

If the patient requires a guarantor for legal or insurance purposes, you can add one to the patient’s chart.

1. Find an open the patient’s chart.
2. On the **PATIENT GUARANTOR** tab, select **ADD**.
3. Enter the information for the guarantor, and then select **SAVE**.

About alternate account numbers

Patients receive a different MRN, PID, or account number when they undergo exams at different facilities. When Symmetry PACS receives such external studies, you can merge them into the master patient record by linking the external MRNs, PIDs, or account numbers as *alternate account numbers* of the Symmetry PACS account number. The benefits of this are:

- The viewer opens images from all records at once
- Any subsequently incoming studies having one of the account numbers are automatically linked to the other account numbers
- Helps prevent duplicate patient records
- Reduces the need to merge patient records

Configure alternate account number functionality

To be able to use alternate account numbers, perform the following procedures.

Configure an issuer of a PID

The *issuer of a PID* is an alias for the facility that issued the incoming PID (or MRN, or account number). You must configure an issuer of a PID in advance for each facility whose PIDs you want to use as alternate account numbers.

Some issuers require a standardized format for account numbers. You can prevent users from entering invalid account numbers by typing a regular expression against which the account number must match. Symmetry PACS will validate all future account number entries against your regular expression.

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **DICOM**.
3. On the **ISSUERS** tab, select **ADD**, and type a name for the issuing entity.
4. In the **Pattern** box, type a regular expression for validating PID/account numbers for the specified issuer.
5. Select **SAVE**.

Configure an AE for use with alternate account numbers

For each application entity that receives studies whose MRNs, PIDs, or account numbers you want to use as alternate account numbers:

1. On the burger menu, select **SETUP.**
2. Next to the burger button, select the word in all caps, and then select **DICOM**.
3. On the **AE TITLE** tab, double-select an AE in the list to open it.
4. In the **Issuer** list, select the PID issuer type, and if static, the exact issuer.
5. Select **SAVE.**

Configure a receiver rule for use with alternate account numbers

For each relevant receiver rule:

1. On the burger menu, select **SETUP**.
2. Next to the burger button, select the word in all caps, and then select **DICOM**.
3. On the **RECEIVER RULES** tab, double-select a receiver rule in the list to open it.
4. Under **Rule Information and Filter**, select the **Issuer of Alternate Account Number** check box.
5. Select **SAVE**.

Use alternate account numbers

To use alternate account numbers to link multiple patient records, complete the following steps. See also “About alternate account numbers” and “Link patients.”
Prerequisite: Perform the procedures under “Configure alternate account number functionality.”

1. On the burger menu, select **PATIENT**.
2. On the **Patient** screen, find the patient and open the patient chart.
3. On the **PATIENT INFORMATION** tab, select **MANAGE ALTERNATE ACCOUNT**

NUM/IDENTIFIERS.

4. In the **Alternate Account Num/Identifiers** dialog box, select **ADD**.
5. In the **Issuer Name and Type** list, select an option, and then type the alternate account number or identifier.
6. Select **SAVE**.
   You can repeat this procedure to add multiple alternate account numbers.

Create a new patient chart

You can create a new patient chart.

1. On the burger menu, select **PATIENT**.
2. On the **Patient** screen, select the **SEARCH** tab.
   Note: If the tab bar is hidden, select the arrow next to Patient to display it.
3. Select **CREATE NEW**.
4. Type, select, or scan information in the available fields.
   For more information, see "Edit basic patient information."
5. Select **CREATE PATIENT**.

Import a patient

You can import a patient record (.CSV) into Symmetry PACS. If the patient already exists in Symmetry PACS, you can update the existing record with the imported information, or create a new record.

Note: To view which fields must be present for the update to be successful, select the help ? button on the right side of the PATIENT IMPORT button.

1. On the burger menu, select **PATIENT**.
2. On the **Patient** screen, select the **SEARCH** tab.
   Note: If the tab bar is hidden, select the arrow next to Patient to display it.
3. Select **IMPORT PATIENT**.
4. In the **Import Patient** dialog box, select **Choose File**, and then browse for and select the file containing the patient record.
5. Optional. To update an existing patient record, select the **Update Existing** check box.
6. Select **IMPORT**.

Merge patient records

If the DOB, gender, first name, and last name of a new patient record are the same as an existing patient record, Symmetry PACS prepends "FIX_" to the account number of the record in the worklist. You can fix these records by merging them with the existing record. This can occur in such cases as a name change due to marriage or divorce, an updated account number, or an error in patient entry. You can use the following tasks to merge patient records.

Find a "FIX_" study

1. On the search bar of the worklist, in the **ACCOUNT NO**. box, type fix and then select **Enter**.
2. In the list of results, copy the account number (without the "FIX_" prefix) of a study.
3. Paste the account number in the **ACCOUNT NO.** box, and then select **Enter**.
4. In the list of results, compare the "FIX_" record with the other record to determine whether they are for the same patient.

Merge records

If you determine that two records are for the same patient, you can merge them.

1. On the burger menu, select **PATIENT**.
2. On the **SEARCH** tab, in the **MRN** box, enter the account number of the records to merge.
3. In the list of results, select the row containing the patient record that you *do not* want to keep.

4. On the right side of the row, select the settings button, and then select **Merge**.
5. Repeat the previous two steps for the row containing the patient record that you *do* want to keep.
6. In the **Patient Merge** screen, confirm that the selected records are correct, select **MERGE**, and then select **OK**.

Appendix

Reference

Enter topic text here.

User reference

Search syntax

Various lists in Symmetry PACS have a search bar with column headers that accept search criteria. The following general rules apply when entering search criteria.

In most numeric fields, you can search for any part of the number. For example:

In the account number field, type: 20
Symmetry PACS finds: 203, 1203, and 01203.

In a name field (such as patient name or payer name), you can type the full name in the format:

lastname, firstname
…but not…
firstname lastname.

In a name field, you can type the first or last name only. For example:

Type: Anderson

Symmetry PACS finds: Cooper, Anderson
…and…
Anderson, John.

In a name field you can type all or part of the first or last name, but using as many letters as possible improves accuracy. For example:

Type: Oswa

Symmetry PACS finds: Oswald, Trevor
…and…
Davis, Oswald

However, if you type: Os
Symmetry PACS finds only: Oswald, Trevor.

Keyboard shortcuts for Exa Trans

When creating or editing claims, the following keyboard shortcuts are available.

Command	Command Text	Shortcut
Remove last dictated piece	undo that delete that scratch that	-
Next variable placeholder	next variable	Alt +]
Previous variable placeholder	previous variable	Alt + [
Capitalize previous word	capitalize that	-

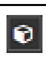
	cap that	
Remove word left of the cursor	remove left	Ctrl + Alt + Back
Start recording		Ctrl + F1
Toggle recording		Ctrl + F3
Stop recording	stop recording	Ctrl + F2

Measurement accuracy limits

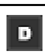
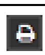
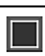
Measurement	Tools	Unit	Accuracy
Length	Ruler	mm	±2 mm
Angle	Protractor	°	±2°
Area	Calculated	cm^2	±5%
Ratio	Calculated		±2%

Viewer toolbar tools

The following table lists all toolbar tools that are available in the viewer. See corresponding topics for the functions of the tools.

Tool	Name	Function
	2D volume	Calculates the area, length and volume of the selected area.
	3D ray	Draws a 3D ray on an image. Select to place a vertex on one plane, and the ray extends through the image on all planes.
	3D cursor	Displays a cursor in other open planes that follows the motion of the cursor in the active plane.
	AR	Plots points to represent angular rotation.
	Actual image size	Displays images in their real-life anatomical dimensions.
	Angle marker	Measures and annotates an angle.
	Arrow	Draws an arrow.
	Auto W/L	Automatically optimizes the W/L.
	Bone enhance	Controls contrast between bone and other tissues.
	Change slice thickness	Sets the slice thickness.
	Circle	Draws a circle.

Tool	Name	Function
	CLAHE	Contrast limited adaptive histogram equalization. Turns CLAHE mode on/off. Improves image contrast.
	Cobb angle	Measures a Cobb angle.
	Context menu	Displays the view shortcut.
	Context tool	Displays a linked image at the same X, Y, Z angle as the current image.
	Cutlines	Shows/hides cutlines, if present.
	Default	Selects the standard pointer tool.
	Delete all image annotations	Deletes all annotations.
	DICOM values	Display a list of DICOM values associated with the current image.
	DM settings	Display management.
	Dot	Draws a dot.
	Edit	Turns Edit mode on/off. Edit mode allows editing of previously set annotations.
	Ellipse	Draws an ellipse.
	External tools	Reserved for opening an external application.
	Fit to window	Restores original zoom level.
	Flip horizontal	Flips the image across its vertical axis.
	Frames	Selects the number and arrangement of frames to display in the viewing area.
	Free ROI	Freehand-draws an ROI.
	HO angle	Draws a HO angle.
	Horizontal line	Draws a horizontal line.
	HU	Displays the pixel value in Hounsfield Units.
	Invert color	Inverts black/white values.

Tool	Name	Function
	L symbol	Adds an L (left) marker.
	Line	Draws a straight line.
	Link auto	Links two or more series that are open.
	Link manual	Links user-specified frames between panels.
	M compare	Measurement compare. Displays the distances from one hover over one or more other points.
	Magnifying glass	Displays a movable zoomed area.
	Measure	Measures between two specified points.
	MPR	Multiplanar reformation. Select to generate and display coronal, sagittal, and MIP (maximum intensity projection) stacks from an axial image.
	One to one	Displays the image in its original DICOM size.
	Overlay	Turns overlays on/off.
	Pan	Drags the image any direction.
	Patient documents	Opens an independent window for viewing, scanning in, and attaching patient documents. Turns blue when documents are available.
	Pencil	Freehand-draws a line.
	Play frames	Starts cine looping.
	Print images	Sends images to a non-DICOM printer.
	Prior reports	View reports. Turns blue when reports are available.
	R symbol	Adds an R (right) marker.
	Radial angle	Draws a radial angle, which is the angle of the distal radial surface with respect to a line perpendicular to the shaft.
	Radial length	Draws a radial length.
	Rectangle	Draws a rectangle.

Tool	Name	Function
	Reset frame	Undoes all unsaved changes to the image within the active viewing cell.
	Reset linked series	Removes any linkages.
	Reset stack	Restore images in a stack to their last-saved ordering.
	Reset viewer	Reverts non-permanent modifications to images in the viewer (zoom, rotation, Window/Level etc.) to their original state.
	ROI	Draws an ellipse to specify an ROI.
	Rotate right	Rotates the image 90 degrees clockwise. Hover over the rotate button to reveal the rotate left button.
	Rotate left	Rotates the image 90 degrees counterclockwise. Hover over the rotate button to reveal the rotate left button.
	Save annotations	Saves the current state of annotations.
	Scroll/span images	Switches between scrolling and spanning.
	Settings	Displays the settings dialog box.
	Show prior list	Opens a dialog box with a list of priors that you can select to display in the prior bar.
	Shutter	Adds an image shutter.
	Span Images	Scrolls at an accelerated rate.
	Spine label	Adds vertebrae labels to spinal images.
	Spine label short	Adds vertebrae labels from common starting points.
	Spine label 3D short	Adds 3D vertebrae labels from common starting points.
	Spine label quick 3D	
	Spine label 3D	Adds 3D vertebrae labels.
	Study notes	Displays a dialog box for reading/writing notes.
	Text	Draws text.

Tool	Name	Function
	Transcription	Opens an independent dictation and transcription window.
	Vertical line	Draws a vertical line.
	Window/level	Adjusts the window/level.
	Zoom	Zooms the image in/out.

Install and configure tools

Add the Chrome extension

You can add an extension that enables your Chrome browser to work with multiple monitors. After adding the extension, you can configure display settings for the monitors you will use.

1. On the burger menu, on the **TOOLS** submenu, select **CHROME EXTENSION**.
2. On the **Chrome_MultiMonitor** page, select **Add to Chrome**.
   Note: If the **'Add Chrome_Multimonitor?** message appears, select **Add extension**.
3. On the worklist, on the upper toolbar, select the settings button, and then in the button shortcut menu, select **Viewer Settings**.

4. On the **GENERAL** tab, under **Display Settings:**
5. Select inside of the **Monitors on System** box
6. Select the refresh button
7. Select the identify button.
8. In the table of monitors:
   a. In the **Monitor** column, select all monitors that you want to use.
   b. In the **Current** column, select the monitor to hang current images and thumbnails.
   c. In the **Prior** column, select the monitor to hang prior images and thumbnails.
   Note: When using a hanging protocol, the Current and Prior settings in the table only control where the thumbnails hang.
9. Optional. In the **Orders** column, select an item to auto-open in the monitor.
10. Select **SAVE**.

Install Exa Trans

Radiologists who use Dragon for transcription must install Exa Trans.

1. On the burger menu, on the **TOOLS** submenu, select **EXA TRANS**.
   Note: Chrome downloads ExaTransSetup.msi in the lower left corner of the browser. Wait until the download is finished before continuing.
2. Select **ExaTransSetup.msi**. Windows installs Exa Trans.
   Note: If the Windows protected your PC dialog box appears, select **More info**, and then select **Run anyway**.

Install Exa Dictation

Radiologists who use Dragon for dictation must install Exa Dictation.

1. On the burger menu, on the **TOOLS** submenu, select **EXA DICTATION**.
   Note: Chrome downloads exa_dictation_setup.msi in the lower left corner of the browser. Wait until the download is finished before continuing.
2. Select **exa_dictation_setup.msi**.
3. Windows installs Exa Dictation.
   Note: If the Windows protected your PC dialog box appears, select **More info**, and then select **Run anyway**.

Install OPAL tools

Many functions in Symmetry PACS require that you first install OPAL tools, such as CD import and CD burning.

1. On the burger menu, on the **TOOLS** submenu, select **OPAL TOOLS**.
   Note: Chrome downloads OpalToolsSETUP.exe in the lower left corner of the browser. Wait until the download is finished before continuing.
2. Select **OpalToolsSETUP.exe**. Windows installs Opal tools.
   Note: If the **User Account Control** dialog box appears, select **Yes**.

Install OPAL Viewer

Symmetry PACS uses a server-side viewer, but you can also install the client-side Opal viewer.

1. On the burger menu, on the **TOOLS** submenu, select **OPAL VIEWER**.
   Note: Chrome downloads ExaClientViewerSETUP.exe in the lower left corner of the browser. Wait until the download is finished before continuing.
2. Select **ExaClientViewerSETUP.exe**. Windows installs the Opal viewer.
   Note: If the **Windows protected your PC** dialog box appears, select **More info**, and then select **Run anyway**.

Install Exa Scans

Exa Scans enables you to scan paper and other media and attach the scans to studies as DICOM data.
Prerequisites: You must uninstall any existing version of Exa Scans before installing a new one.

1. On the burger menu, on the **TOOLS** submenu, select **EXA SCANS**.
   Chrome downloads exa_docscan_setup.msi in the lower left corner of the browser. Wait until the download is complete before continuing.
2. Select **exa_docscan_setup.msi**.
   Note: If the Windows protected your PC dialog box appears, select **More info**, and then select **Run anyway**.
3. In the **Welcome to the EXA Document Scan Setup Wizard**, select **Next**.
4. On the **End User License Agreement** page, select **I accept the terms in the License Agreement** check box, and then select **Next**.
5. On the **Destination Folder** page, select **Next**.
6. On the **Ready to Install EXA Document Scan** page, select **Install**.
7. If the **User Account Control** dialog box appears, select **Yes**.
8. On the **Completed the EXA Document Scan Setup Wizard** page, select **Finish**.