



This self-guided workbook allows Cath, Echo, EP, Nuc Card, and EMMC Vas Lab staff to practice navigating through Enterprise Imaging (EI) workflow. Please note, the following scenarios are designed to demonstrate functionality and may not be inclusive of all Northern Light Health policies and procedures.

Table of Contents

Signing into Enterprise Imaging (EI) – Diagnostic Desktop	2
Manage Activities Overviews	2
Image Visualization	4
Smart Regions	4
Side by Side Prior to Current Study Comparison	4
Exporting and Importing Measurements	5
Performing Measurements	5
Measurement Worksheet	5
Secondary Capture	6
Exporting Images	6
Rest Images	6
Structured Reporting	6
Toolbar Icons	8
Desktop Customizations	10
Locate Patient Order	10
F12 Options	12
Text Page Details	12
Technologist Comments	13
QC – Quality Control	13
Start a QC task	14
Print and Export	15
Import CD	15
Import file from Desktop	16
Burn or Transfer multiple studies	16
Patient Merge	17

Signing into Enterprise Imaging (EI) – Diagnostic Desktop

- Click the **Windows** icon at the bottom left of the computer screen.
- Click **Enterprise Imaging**.
- Type your network **Username** and **Password**.
- Click **OK**.



Manage Activities Overviews

STEP 1: Right-click below **Activities overview** in the dropdown box.

STEP 2: Click **Manage Activities overviews**.

STEP 3: Select/deselect **Exam Task Lists** by checking the box in the Show in dropdown list column.

STEP 4: Click the radio button in the Default column for the Exam Task List used most.

STEP 5: Click **Close** in the bottom right corner of the screen to return to the Task List – “To do.”

STEP 6: Click the checkbox(es) to the left of the modality in the **Details** dropdown to open the Task List for the selected modalities.

STEP 7: Workflow process for Activities Overview (AO).

STEP 8: Select correct Activities Overview (AO), also called bucket list or Task List.

The screenshot displays the 'Manage Activities Overviews' interface. On the left, there is a sidebar with 'Activities overviews' and a 'Details' dropdown menu. The main area shows a table of activities with columns for 'Name', 'Available for', and 'Active from'. A table with the following data is visible:

		Name	Available for	Active from	
<input type="checkbox"/>	<input type="radio"/>	ACTOV20	SJH Technologist Modality ...	System, NLH Imaging Tech...	10/01/2022
<input type="checkbox"/>	<input type="radio"/>	ACTOV422	PVH Ed		
<input type="checkbox"/>	<input type="radio"/>	ACTOV403	Mercy Radi		
<input type="checkbox"/>	<input type="radio"/>	ACTOV201	EMMC		
<input type="checkbox"/>	<input type="radio"/>	ACTOV406	ARG Nucle		
<input type="checkbox"/>	<input type="radio"/>	ACTOV16	Inland Car		
<input type="checkbox"/>	<input type="radio"/>	ACTOV1401	EMMC PED		
<input type="checkbox"/>	<input type="radio"/>	ACTOV1802	TESTINI		
<input type="checkbox"/>	<input type="radio"/>	ACTOV2201	EMMC		
<input type="checkbox"/>	<input type="radio"/>	ACTOV202	BHMH Ei		
<input type="checkbox"/>	<input type="radio"/>	ACTOV405	ARG Ec		
<input checked="" type="checkbox"/>	<input checked="" type="radio"/>	ACTOV7	EMMC Tec		
<input type="checkbox"/>	<input type="radio"/>	ACTOV407	BHMH Nuc		
<input checked="" type="checkbox"/>	<input type="radio"/>	ACTOV410	Mayo Nucle		

On the right side of the interface, a 'Task list - To do' window is open, showing a list of tasks and a 'Patient name and Patient' field.

Image Visualization

NOTE: TOMTEC Image Viewer, by default, ultrasound studies launch in a quad-screen view. The default can be changed in Settings. 

STEP 1: Hanging Protocols

STEP 2: Next presentation

STEP 3: Resume reading

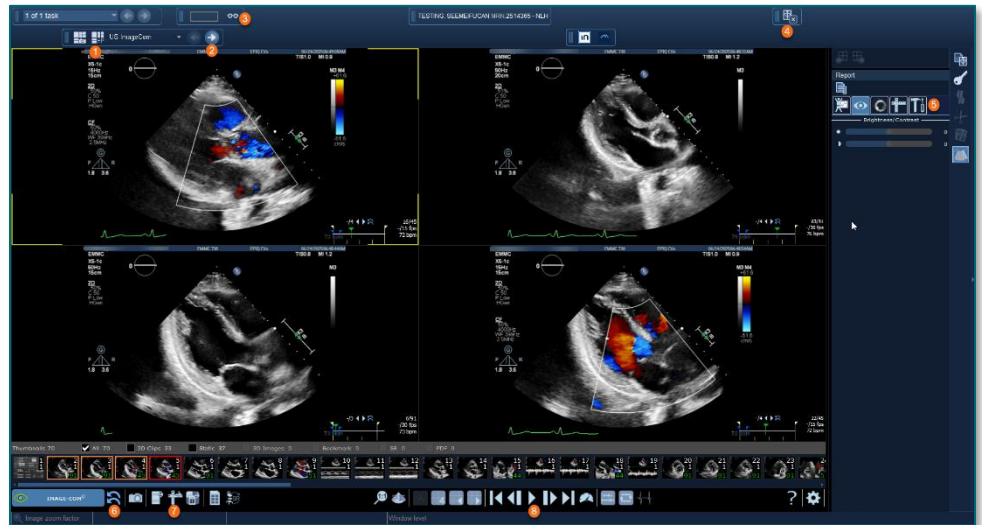
STEP 4: Clear image area

STEP 5: Tools

STEP 6: Reset

STEP 7: Export measurements to report from modality.

STEP 8: Play/Pause



NOTE: Click [here](#) for more information on Icon Tips and Tricks within TOMTEC Image Viewer.

To view an instructional video on using the icons within TOMTEC, click [here](#) to log into PromisePoint , and register for NOLH-3445 RAD Use EI Cardiology or NOLH-3450 RAD Use EI for Echocardiology.

Smart Regions

NOTE: Each view port contains Smart Regions of special functions. The icons of the correspondent functions are visible by positioning the mouse cursor over a view port for a short time. The number of functions provided within the view port depends on the data being displayed.

STEP 1: Click **Smart Region**.

STEP 2: Left-click

STEP 3: **Move** mouse horizontally.

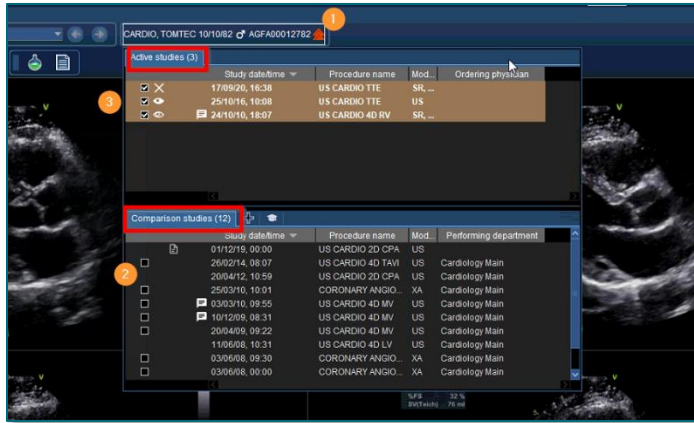
STEP 4: Click **icon** to activate and deactivate.

Side by Side Prior to Current Study Comparison

STEP 1: Select the **active patient study** window

STEP 2: Select the **appropriate Comparison studies**.

STEP 3: Newly selected comparison studies are listed in the **Active studies** box.



STEP 4: Select the **Patient History** icon to toggle between the comparison studies.



STEP 5: Select the desired prior comparison study in the Patient History tab.



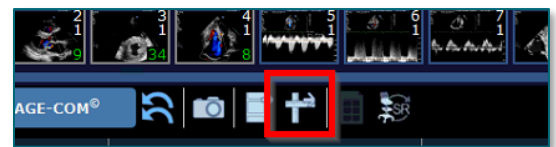
STEP 6: The prior study loads in the thumbnail section of the viewer.

STEP 7: **Drag and drop** thumbnails into the **active workspace** to compare images of the prior study with the current study.

NOTE: Prior study images will have a light blue frame outlining the image and includes the study date and time.

Exporting and Importing Measurements

To import measurements from the image viewer into the structured report, select measurement icon and the report will update with newly imported measurements.



Performing Measurements

STEP 1: Select **Measurement** tab.

STEP 2: Select **exam type**.

STEP 3: Select **measurement group**.

STEP 4: Select **desired measurement**.

STEP 5: Perform **measurement on desired image**.

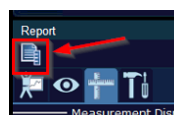
STEP 6: Press **Esc**, **double-click** or **right-click** to end measurement task.

STEP 7: Results can be viewed by moving the mouse off the image view port.



Measurement Worksheet

STEP 1: Select the **Launch Worksheet** icon.



STEP 2: If a measurement has been performed multiple times, select value that should be exported into the structured report. Example:

- Average
- First
- Last
- Min
- Max



NOTE: The default selected value is Average.

STEP 3: Delete measurements choosing the desired Delete criteria marked with a red X.

- Selected Value
- Entire Column
- Entire Row



Secondary Capture

Store your measurement results on the images and cine loops using the **Save Secondary Capture** icon. The complete image region will be captured. The new object becomes visible in the thumbnail preview at the end of the study.



Exporting Images

Export a desired still image or cine image by selecting the **Save AVI** or **BPM** icon. If at least one loop is playing, the complete screen will be exported as AVI, otherwise the image will be saved as a BMP, PNG, or JPG.



Rest Images

Restore the dataset to the original acquired layout by selecting the **Reset** icon.



Structured Reporting

STEP 1: Select **Patient**.

STEP 2: Select **Start Reading**, **RMC**, or double-click patient.

STEP 3: Upon launch reporting opens and images appear in image viewer.

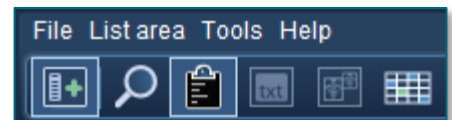
- NOLH-3478 RAD Use the Ascend Nuclear KB
- NOLH-3482 RAD Use the Ascend Vascular KB

Toolbar Icons

Tools necessary to manipulate the system

➤ **File** – Menu Option

- Logoff
- Exit

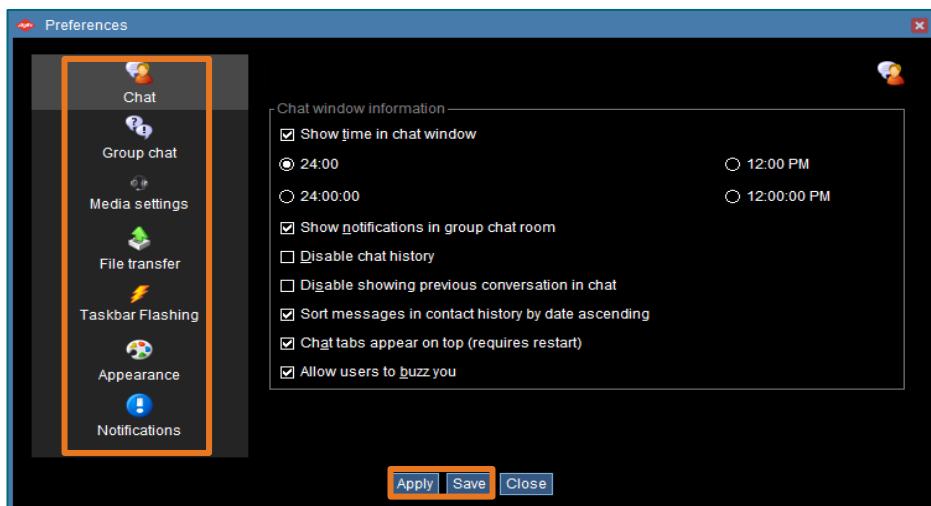
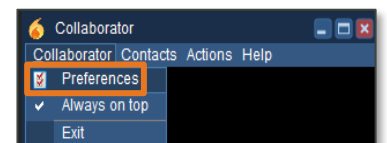
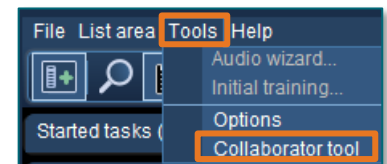


➤ **List Area** – Menu Option

- Activities Overview
- Customize columns

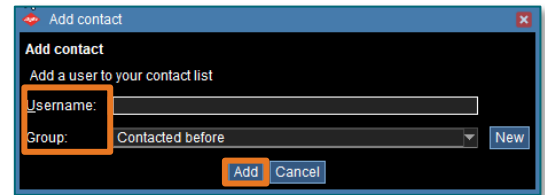
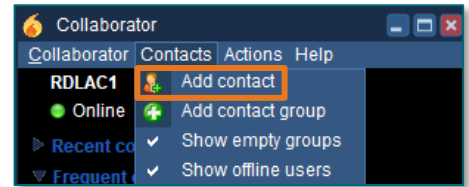
➤ **Tools** – Menu Option

- Options
 - Also accessible using the F12 button.
- **Collaborator tool** is a text messaging tool used to talk to staff and physicians.
 - Select **Preferences** to customize the Collaborator.
 - Click **Preferences** for each feature.
 - Click **Apply**, then **Save** to keep new preferences.
 - Unselect **Always on top** if the Collaborator is not wanted on the top.
 - Click **Exit** to leave the Collaborator.



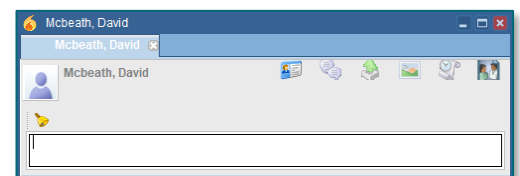
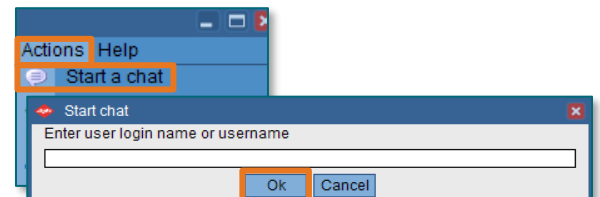
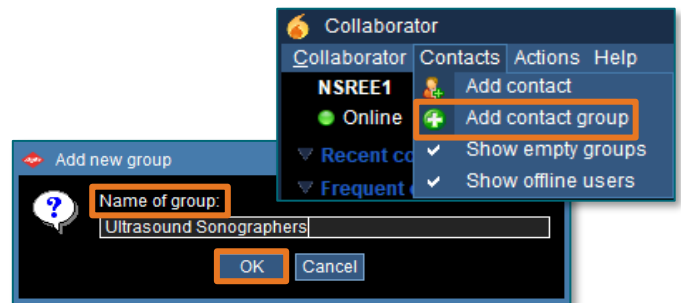
- **Collaborator tool – Adding Contacts**

- Click **Contacts**.
- Click **Add Contacts**.
 - Enter the **Username**.
 - Select **Username** for the dropdown list that displays.
 - Select the **Group** the user should be added to using the Group dropdown.
 - Click **Add**.
 - The user will be added to Contacted before and the selected Group.



- **Collaborator tool – Create a New Group**

- Click **Contacts**
 - Select **Add contact group**.
 - Enter **Name of the group**.
 - Click **OK**.
- **Starting a Chat**
 - Click **Actions**.
 - Select **Start a chat**, enter the **username**, and click **OK**.
 - The Chat window opens.
 - Type the message.
 - Select **Enter** on the keyboard.



NOTE: Click [here](#) for more information on how to use the Collaborator Tool within Enterprise Imaging.

➤ **Help** – Menu Option is available to find answers needed.

➤ **Hide Navigation** 

➤ **Search** 

➤ **Patient List** 

➤ **Text Page** 

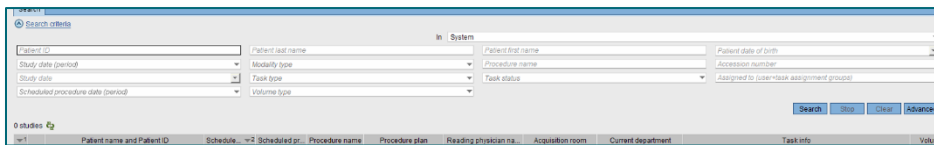
➤ **Open Images** 



Desktop Customizations

Right-click in the white area to provide options for customization.

STEP 1: Select white area in search field or columns.



STEP 2: Right-click.

STEP 3: Select **customize fields** or **customize columns**.

STEP 4: To specify the number of search columns, click the **Perspective Column** button.

STEP 5: To display additional search fields, select and move items from **Available** search fields to **Displayed** search fields.

STEP 6: To remove currently displayed fields, reverse the above step.

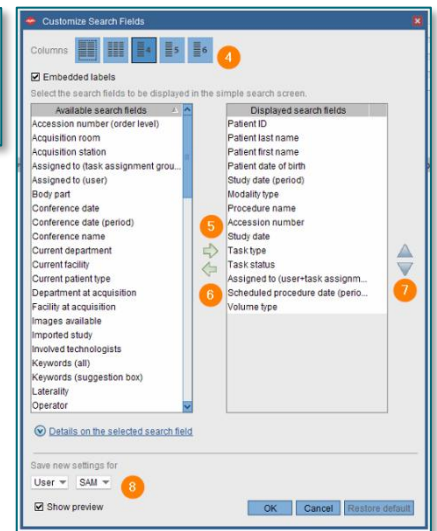
STEP 7: To change the displayed order, select up/down arrows to right of displayed field.

STEP 8: The setting saves for the login user.

STEP 9: Select **OK**.

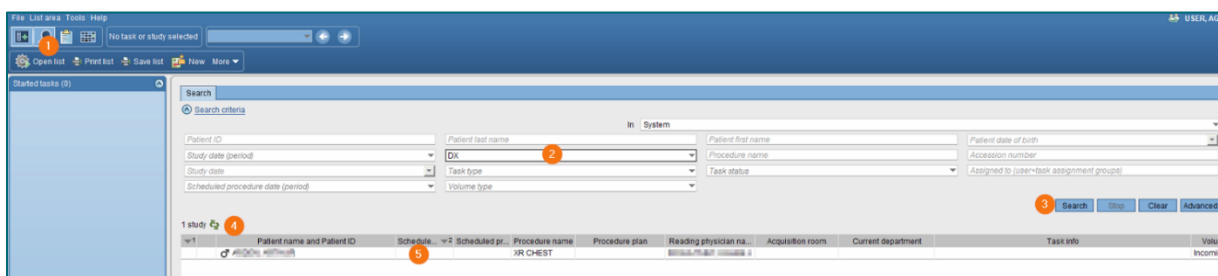
NOTE: Helpful search criteria that should be added:


- Images available
- Report available
- Study verification status



Locate Patient Order

➤ **Via task list or adhoc search**



STEP 1: Select **Search** icon  in the tool to begin an ad-hoc search.

STEP 2: Input search criteria (**i.e., Patient ID, patient last name, accession number**).

STEP 3: Select 

STEP 4: Search results display with the number of results that meet your search criteria. 


STEP 5: Select the study you want to review.

STEP 6: Double-click or right-click the line of the study you wish to display and open.

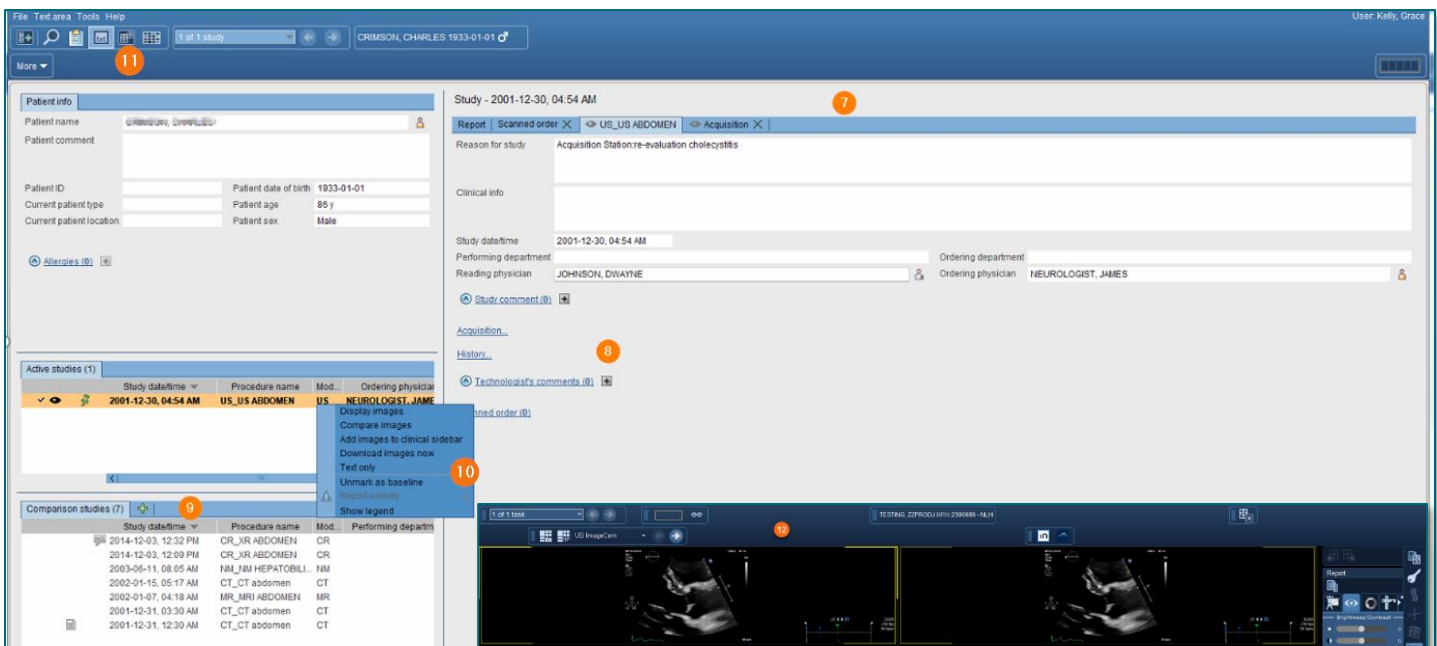
STEP 7: Text area displays.

STEP 8: Study information tab displays if report has not been created. If report is created, the report tab displays here by default. View study information and technical comments by users either entered in EI manually or in the RIS via HL7 message.

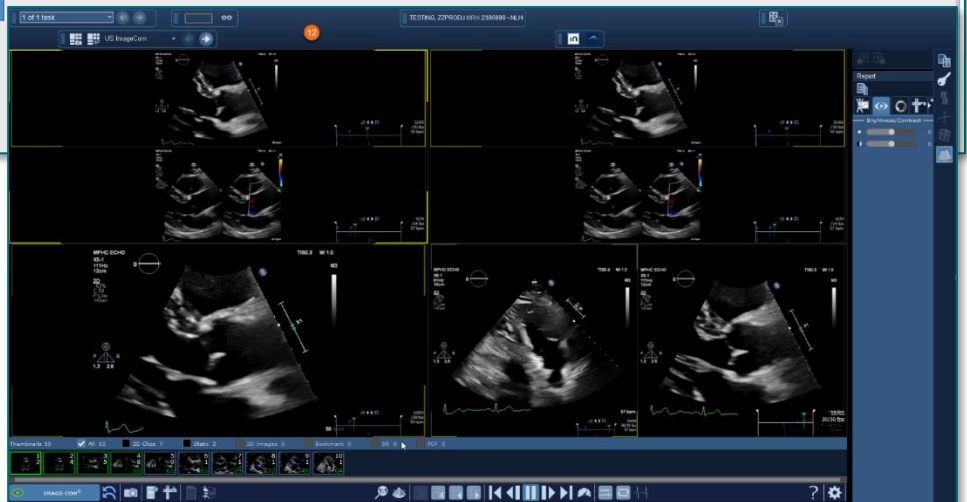
STEP 9: Comparison studies are available for this patient.

STEP 10: To display comparisons, right-click for display options. 

STEP 11: On a one monitor setup, click the **image** icon to go to image display.



STEP 12: Image page displays.



F12 Options

Defines the settings that change the look and feel of the desktops.

STEP 1: Select **Tools > Options** or **F12**.

STEP 2: Options window displays.

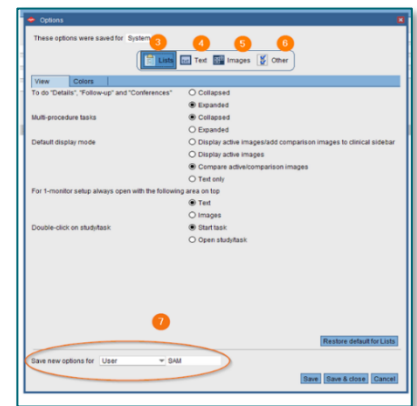
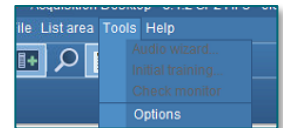
STEP 3: Selecting **Lists** allows customization of items related to List area.

STEP 4: Selecting **Text** allows customization of items related to Reporting and Text area.

STEP 5: Selecting **Images** allows customization of items related to Image area including image display options, keyboard shortcuts, and saving of mark-ups.

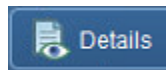
STEP 6: Selecting **Others** allows you to turn on or off the collaborator tool for default login setting.

STEP 7: This setting saves for the login user.




Text Page Details


STEP 1: Patient information



STEP 2: Active studies

STEP 3: Comparison studies

STEP 4: Eyeball icon  show images are in display.

STEP 5: Report icon  shows the study has a report attached.

STEP 6: Study comment communication between provider and radiologist.

STEP 7: If an image is not in display, right-click for display options.

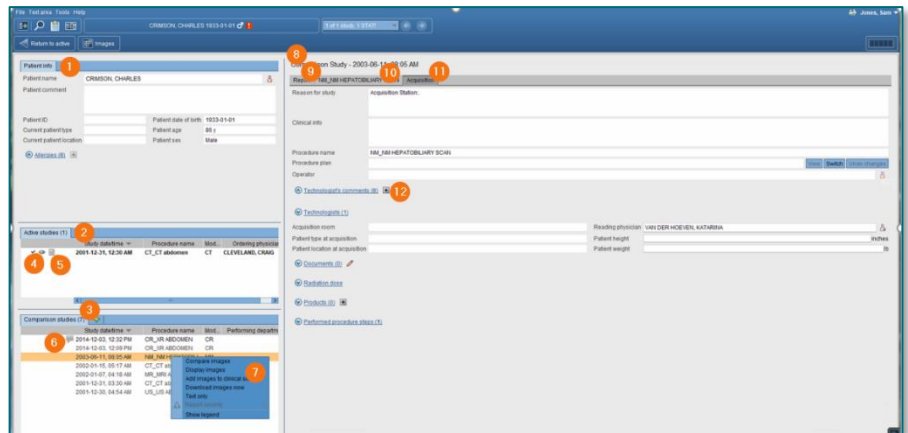
STEP 8: Study information for study that is in display.

STEP 9: Report Tab

STEP 10: Order Tab

STEP 11: Acquisition Tab

STEP 12: Comments



Technologist Comments

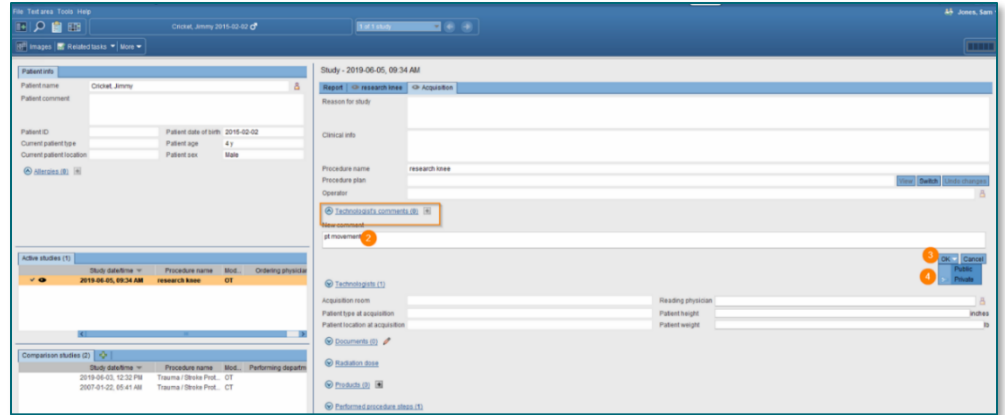
Allows the staff to place a descriptive message regarding the patient/exam that is visible within EI

STEP 1: Select **Technologist comments.**

STEP 2: Enter comments.

STEP 3: Select **OK.**

STEP 4: Select **Public.**



QC – Quality Control

Create QC- to assign a quality control task for the selected study or studies to yourself or another person.

STEP 1: Select a **study** for QC.

STEP 2: **Right-click** and then choose **QC task.**

STEP 3: Create **QC task.**

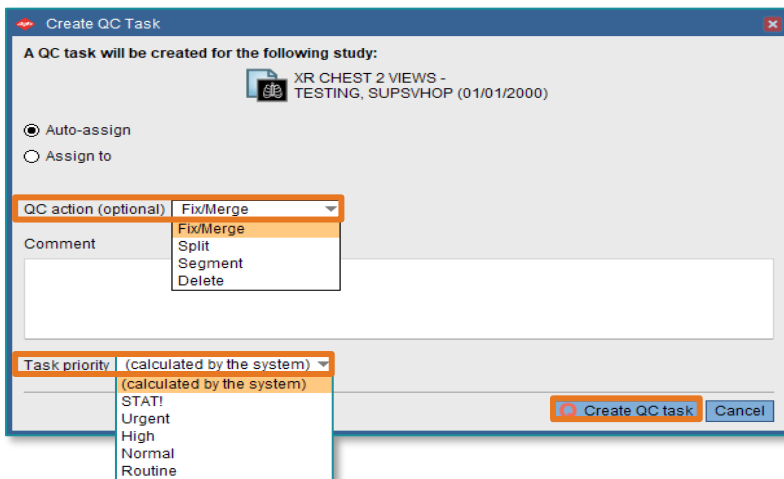
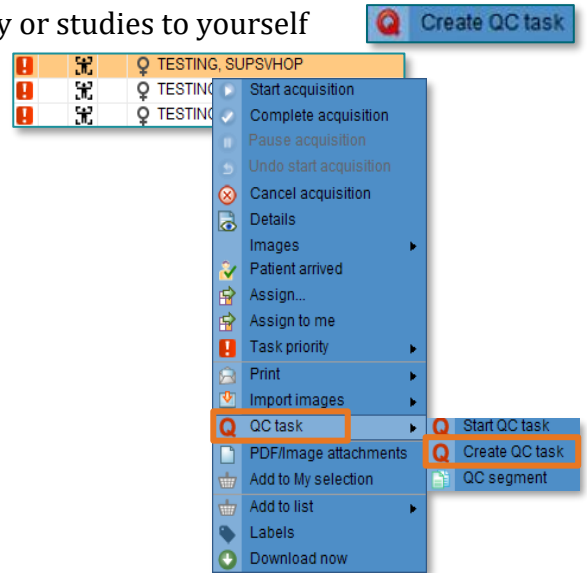
STEP 4: Select **Auto-assign** or **Assign to.**

STEP 5: Select QC action-fix/merge, split, segment, delete.

STEP 6: Include Task comments if necessary.

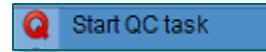
STEP 7: Select Task Priority from dropdown.

STEP 8: Select **Create QC Task.**



Start a QC task

Start a QC task from a task list to resolve the quality control issue.



- **Fix/Merge** – Manually fixing studies aligns patient and order information with unverified images. Merging images assembles multiple studies that belong to one patient.

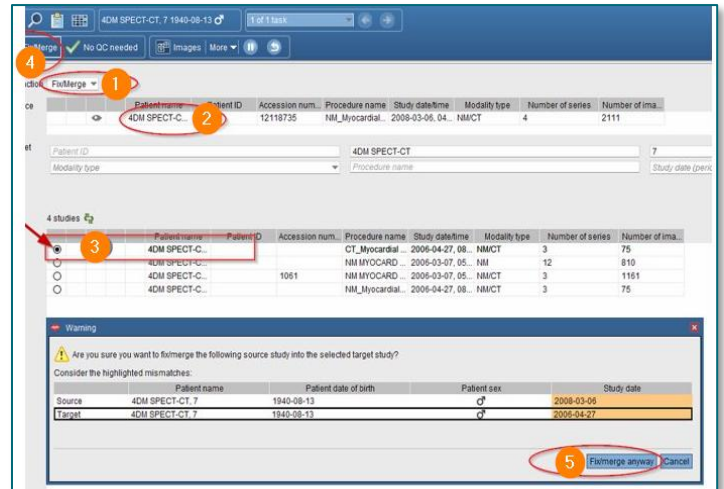
STEP 1: Select the correct action **Fix/Merge**.

STEP 2: Verify source.

STEP 3: Select the **target** for Merge.

STEP 4: Initiate the merge by clicking **Fix/Merge**.

STEP 5: Confirm and select **Fix/Merge anyway**.



- **Split** – Manually split a study with images belonging to multiple patients, orders, or procedures.

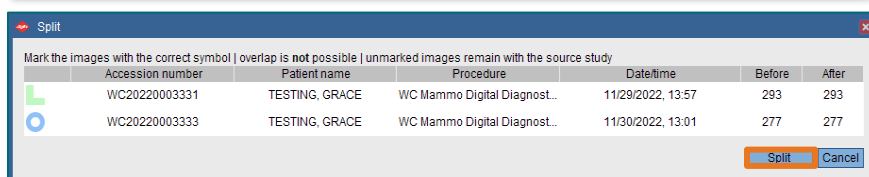
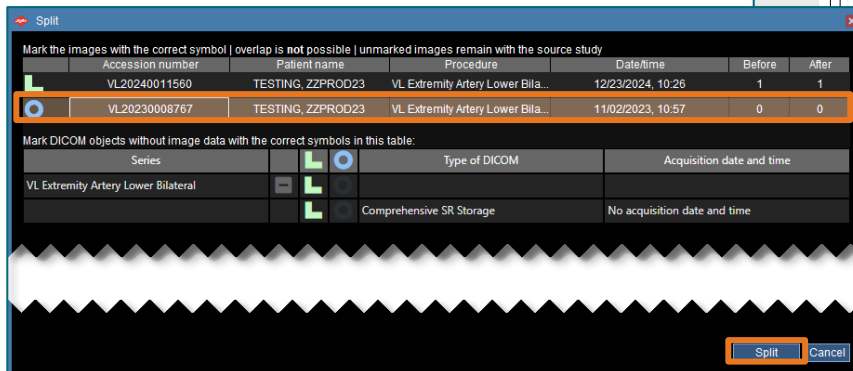
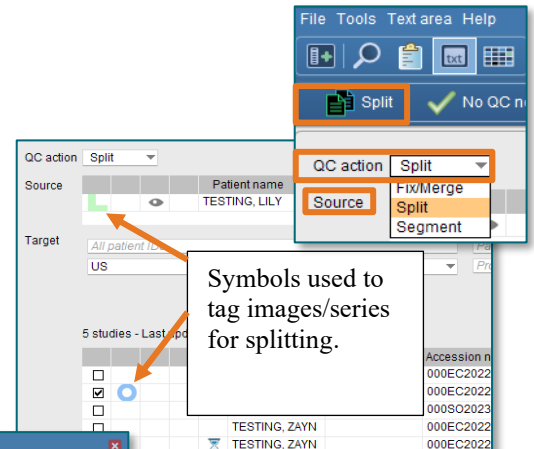
STEP 1: Select the **QC action** to split.

STEP 2: Select your **target**.

STEP 3: Click the **Split** action.

STEP 4: Select the **study** to tag and click split; symbol will activate on your cursor. You now can **select an image(s)** or the **thumbnail** to select the series.

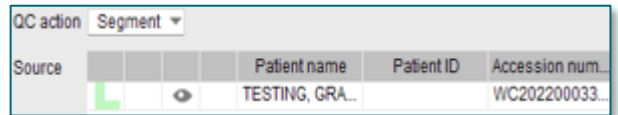
STEP 5: **Confirm** and select **Split**.



➤ **Segment** – Manually segment one patient into multiple procedures for the same patient.

- STEP 1:** Select the **QC action** to Segment.
- STEP 2:** Select your **target**.
- STEP 3:** Click the **Segment** action.
- STEP 4:** Select the **study** you want to tag; symbol will activate on your cursor.
- STEP 5:** **Confirm** and select **Segment**.

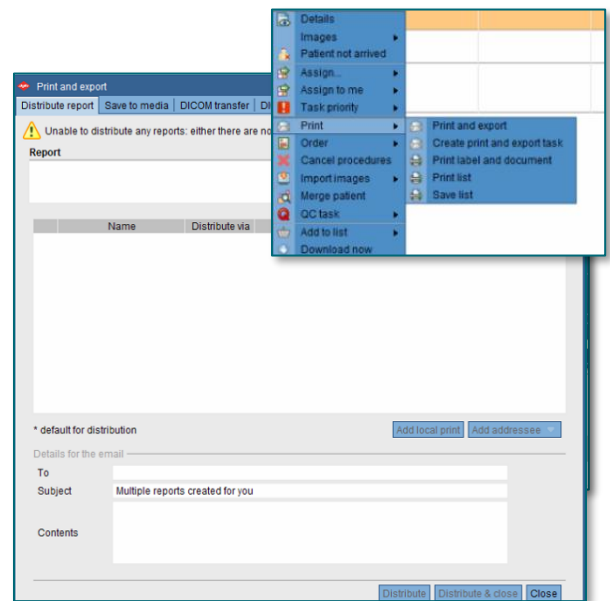
NOTE: Delete image(s) – This is done by logging a ticket with Enterprise Imaging IS Team.



Print and Export

Print, fax, email, save to media, and transfer DICOM data.

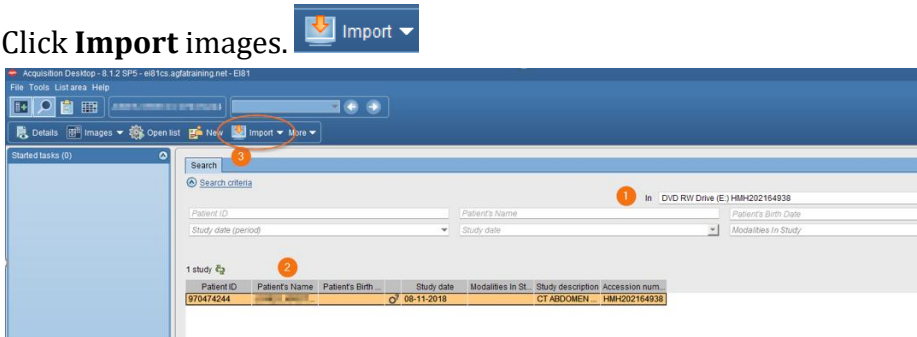
- STEP 1:** Select **Patient**.
- STEP 2:** Select **More**, top toolbar or right-click.
- STEP 3:** Select **Print**.
- STEP 4:** Select **Print and Export**.
- STEP 5:** Select **Distribute report, Save to Media, Dicom Transfer, or Discom Print**.



Import CD

Add images from a local source by importing them to the currently selected study to a new order.

- STEP 1:** Select the local drive in the search area.
- STEP 2:** Select **study** or studies to import.
- STEP 3:** Click **Import** images.



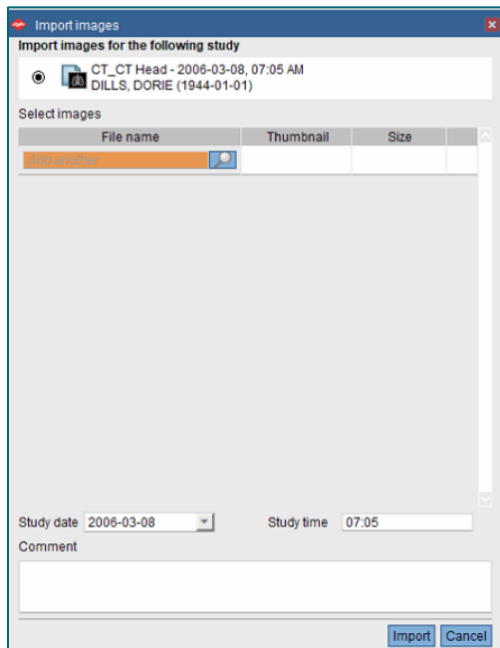
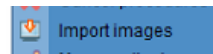
Import file from Desktop

STEP 1: Select **Patient**.

STEP 2: Select **More**.

STEP 3: Select **Import**.

STEP 4: Select **Import images** for selected study. or **Import** images for new order.



Burn or Transfer multiple studies

STEP 1: Highlight one or more exams.

STEP 2: Right-click and select **Print**.

STEP 3: Click **Print and export**.

All patient IDs	Patient date o...	Task info	Patient name and Patien...	Scheduled pr...	Acquisition station	Study date ▲ ²	Numb...
0760557 - NLH	11/28/2023		♀ TESTING, ZZ	03/20/2024	NL EMMC VL 4	03/20/2024, 15:...	3
0760557 - NLH	11/28/2023		♀ TESTING, ZZ		L EMMC VL 4	03/21/2024, 16:...	10
0760557 - NLH	11/28/2023		♀ TESTING, ZZ		L EMMC VL 4	03/22/2024, 08:...	8
0760557 - NLH	11/28/2023		♀ TESTING, ZZ		L EMMC VL 4	03/22/2024, 10:...	12
RER - AGEI_N...	01/01/1990		♂ TESTING, ZZ			03/22/2024, 10:...	1
0760557 - NLH	11/28/2023		♀ TESTING, ZZ			03/22/2024, 10:13	
0760557 - NLH	11/28/2023	Reading (NLH Vascular	♀ TESTING, ZZ			03/22/2024, 14:...	1

STEP 4: Select **Save to media** or **DICOM transfer**.

STEP 5: Make sure the exams you want to burn or transmit have checkmarks beside them.

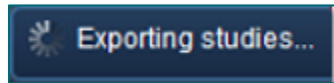
STEP 6: Click **Study**.

STEP 7: Use dropdown on **Destination**.

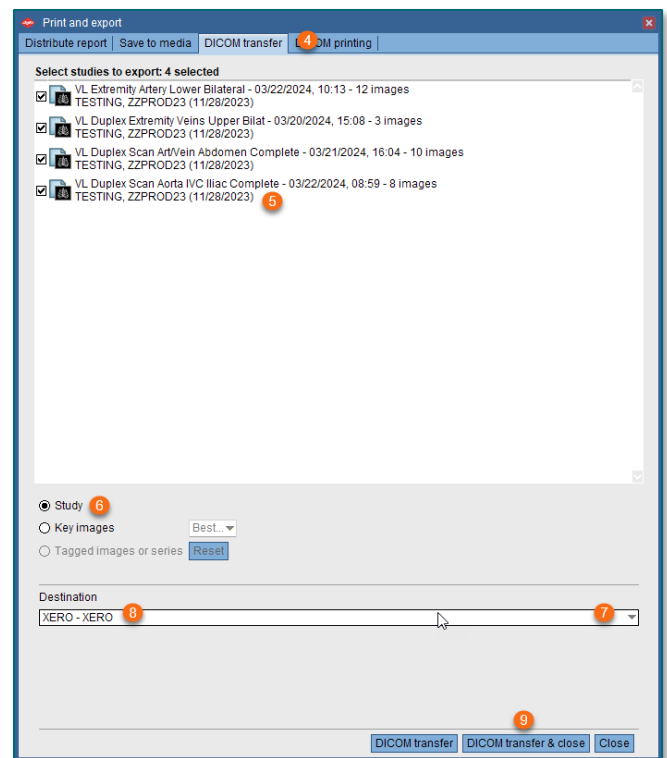
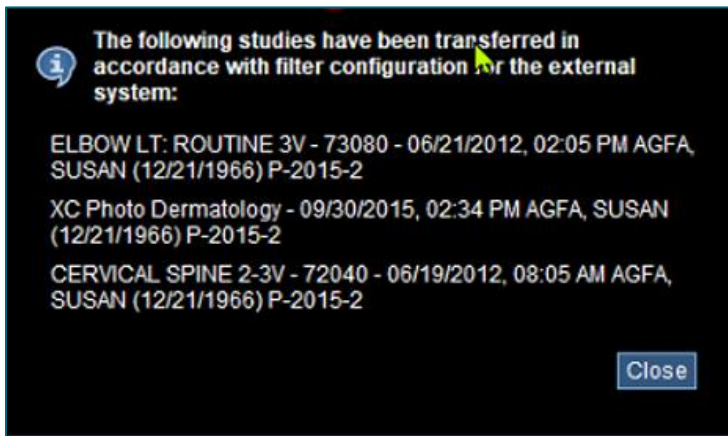
STEP 8: Select your designation.

STEP 9: Click **DICOM transfer & close** or **burn to**.

STEP 10: Box appears at top of list Exporting Studies.



STEP 11: Info box will display transferred or failed.



Patient Merge

Manually fixing studies aligns patient and order information with unverified images. Merging images assembles multiple studies that belong to one patient.

STEP 1: Select **Patient**.

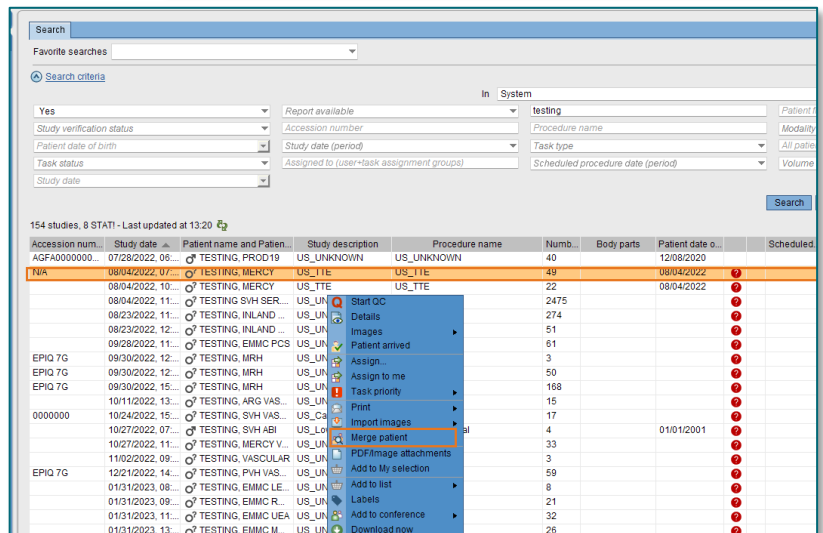
STEP 2: Right click and **Merge**.

STEP 3: Select **Merge patient**.



STEP 4: Select **OK**.

STEP 5: Select the **patient you want to merge to**.



STEP 6: Click **OK**.

Merge patients

Merge this unknown patient with a patient in the system:

TESTING, MERCY (08/04/2022 (9 m))

Select best patient match in the system

	Last name	First name	Sex	Date of birth
<input checked="" type="radio"/>	TESTING	MERCY	Unknown	08/04/2022
<input type="radio"/>	TESTING	MERCY VASCULAR	Unknown	

Search for another patient

testing First name Sex Date of birth All patient IDs

Search Clear

493 results - Last updated at 13:29

	Last name	First name	Sex	Date of birth
<input checked="" type="radio"/>	TESTING	MAIS6	Female	02/16/1930
<input type="radio"/>	TESTING	CARDIACED	Male	10/20/1955
<input type="radio"/>	TESTING	PROD A	Male	03/02/1956
<input type="radio"/>	TESTING	CCE EMMC4	Female	08/10/1995

Register new patient based on DICOM information

OK Cancel