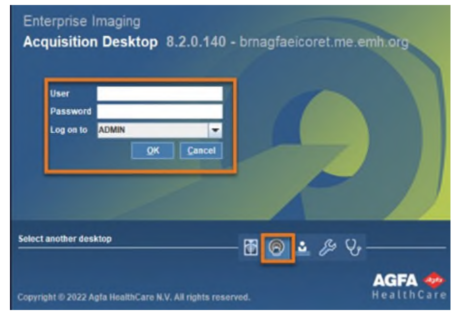
Enterprise Imaging (EI)
Technologist, Sonographer, and Imaging Staff Workbook
June 1, 2023

This self-guided workbook allows technologists, sonographers, and imaging 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.

Contents

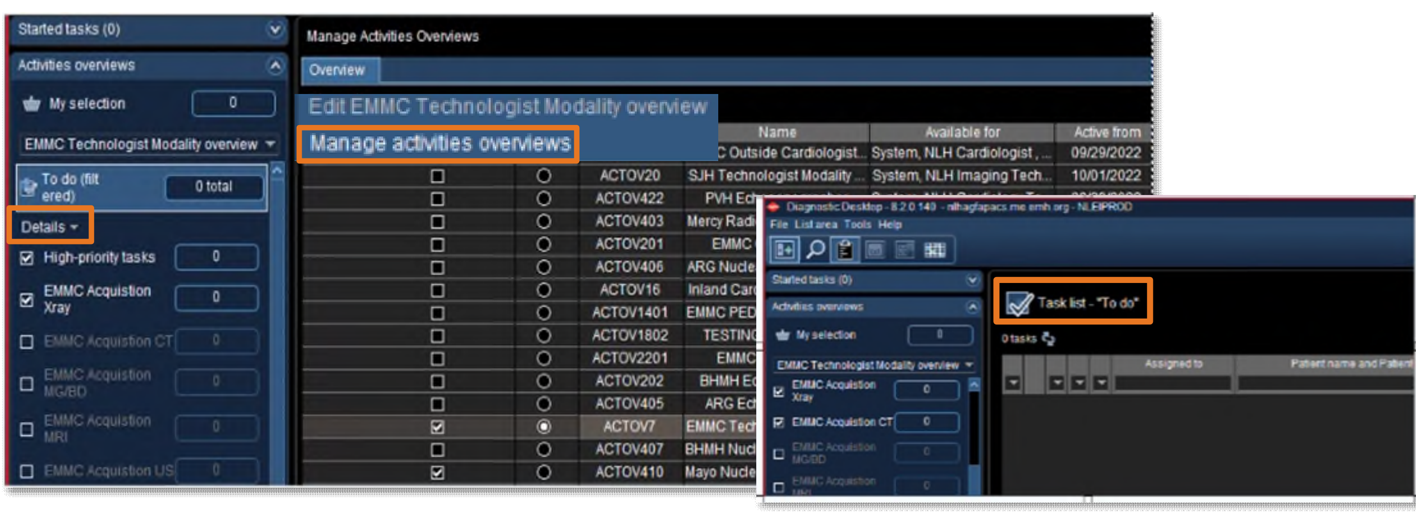
Signing into Enterprise Imaging (EI) – Acquisition Desktop

- Click the **Windows** icon in the bottom left corner of the computer screen.
- Click **Agfa Healthcare**.
- Click **Enterprise Imaging**.
- Click **Acquisition** icon.
- Type your **Username**, currently used in IMPAX.
- Type your **Password**, currently used in IMPAX.
- Click **OK**.

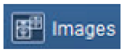


Manage Activities Overviews

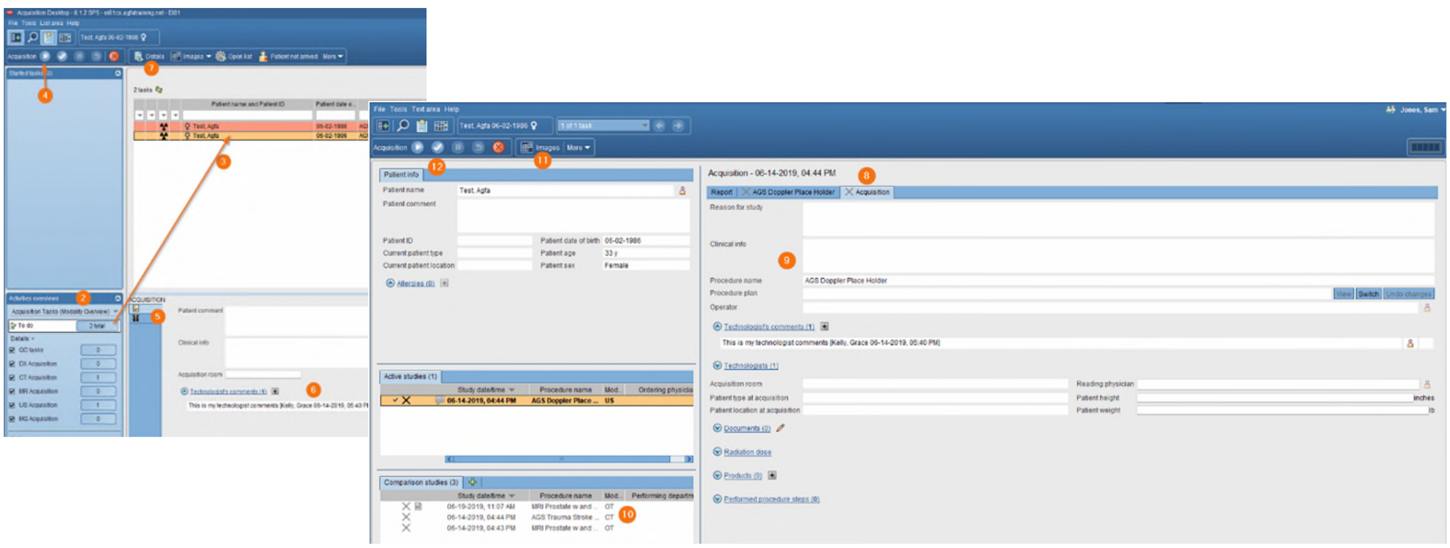
- Right-click below **Activities overview** in the dropdown box.
- Click **Manage Activities Overviews**.
- Select/deselect **Exam Tasklists** by checking the box in the Show in dropdown list column.
- Click the radio button in the Default column for the Exam Tasklist used most.
- Click **Close** in the bottom right corner of the screen to return to the Task List – "To do."
- Click the checkbox(es) to the left of the modality in the **Details** dropdown to open the Task List for the selected modalities.
- Workflow process for Activities Overview (AO).
- Select correct Activities Overview (AO), also called bucket list or Task List



- Locate Patient order via task list.
- Optional: Select **Start Acquisition** , the technologist then performs examination and sends in study into EI.
- View Details and Image thumbnails on List Area Page. 

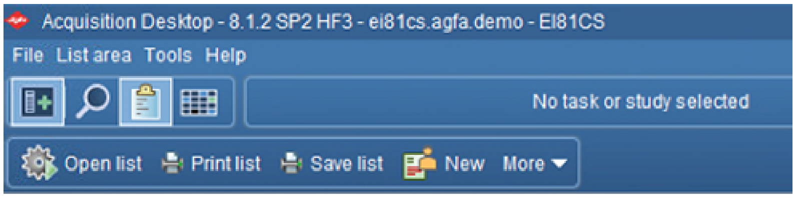
- Add technologist comments in EI unless workflow is to be done in the RIS.
- Open Study to view details and images if needed.
- Detail page will display acquisition tab (default).
- View any study information or other site-specific study comments.
- View additional comparisons – right-click to get viewing options.
- Select images to proceed to image page. 

- Complete acquisition task via RIS trigger auto complete EI task or manually complete in EI and complete in RIS. 



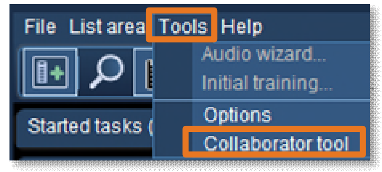
Toolbar Icons

➢ **Tools necessary to manipulate the system**

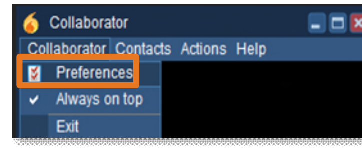


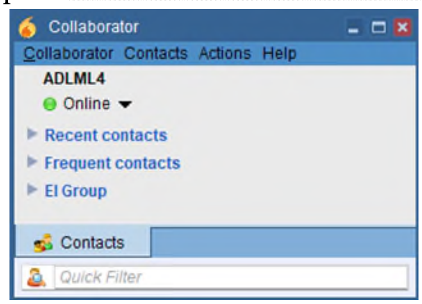
- **File** – Menu Option
  - Logoff
  - Exit
  - Add user
- **List Area** – Menu Option
  - Activities Overview
  - Customize columns

- **Tools** – Menu Option

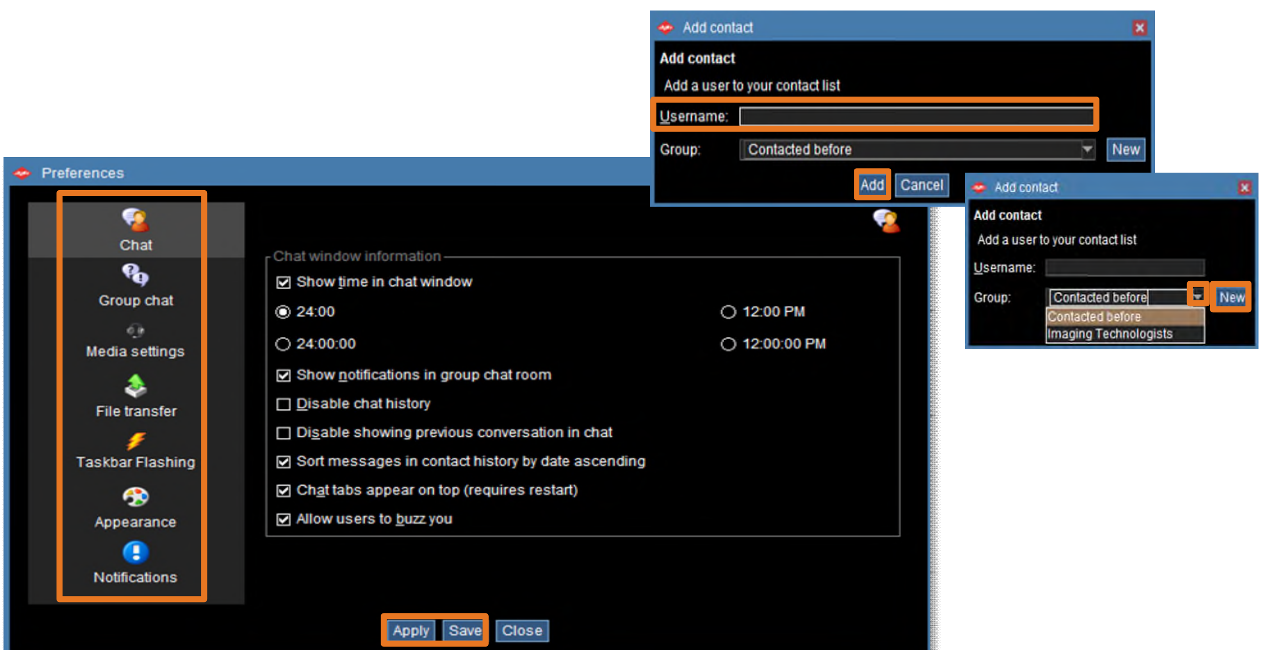


  - Options
  - **Collaborator tool**- is used to talk to staff like current IMPAX system
    - Select **Preferences** to customize the Collaborator.
    - Click **Preferences** for each feature.
    - Click **Apply**, then **Save** to keep new preferences.
    - Unselect **Always on top** if the Collaborator is not wanted on the top.
    - Click **Exit** to leave the Collaborator

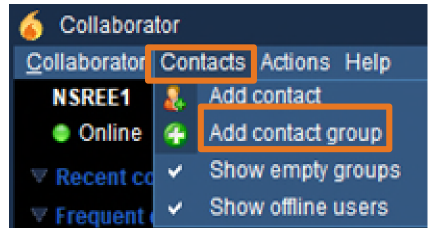


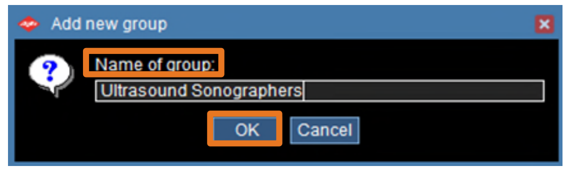


  - <u>Adding Contracts</u>
    - Click **Contacts.**
    - Click **Add Contacts.**
      - Enter the **Username.**
      - Select **Username** for the dropdown list that displays.
      - Select the **Group** the user should be added to using the Group dropdown.
      - Click **Add.**
      - The user will be added to Contracted before and the selected Group.

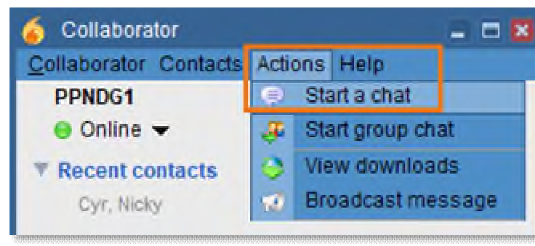


- Create a New Group
  - Click New to the right of Group
    - Enter **new group name**.
    - Click **OK**.
      OR
    - Click **Contacts** and select **ADD contact group**.
    - Enter **Name of the group**.
    - Click **OK**.

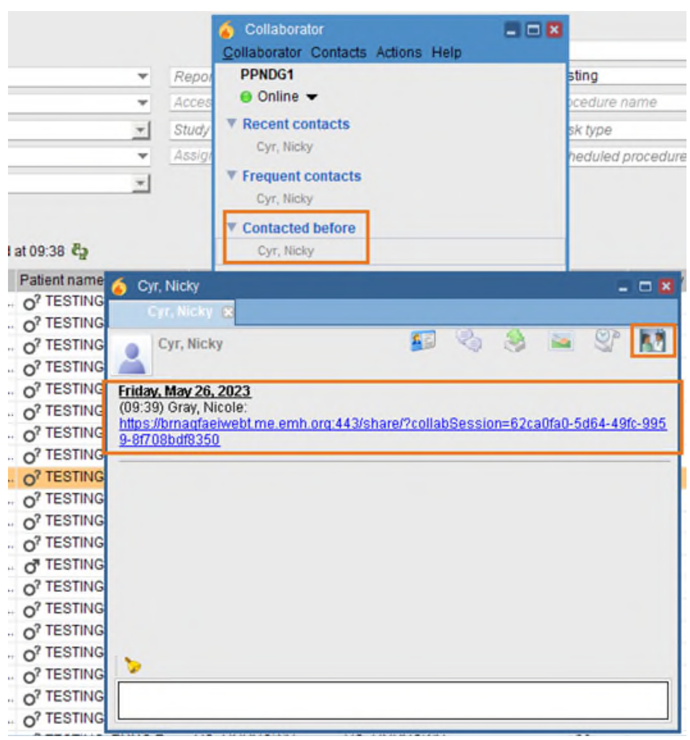




- Starting a Chat
  - Locate the user in the appropriate group.
  - Double-click the **user's name in a Group**.
  - The **Chat** window opens.
  - Type the **message**.
  - Hit **Enter** on the keyboard.



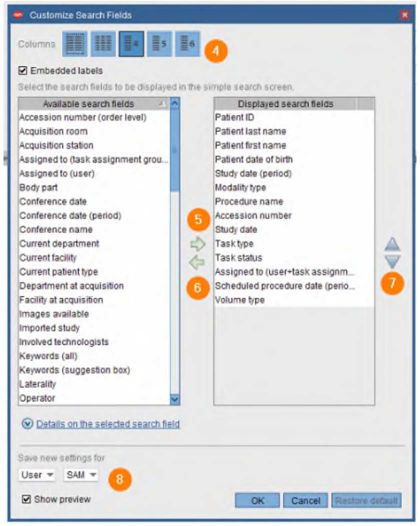
- Share a study
  - Locate the user in the appropriate group.
  - Double -click the **user's name in a Group.**
  - The Chat window opens.
  - **Highlight** the study.
  - Click **Agfa HealthCare Enterprise Imaging XERO Xtend.**
  - The image will open in XERO Workflow.
  - A **link** will appear in the cha.t
  - Recipient will **click the link** to view the image.



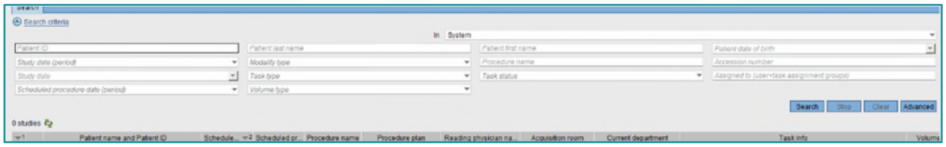
- Help – Menu Option is available to find answers needed.
- Hide Navigation 
- Search 
- Patient List 
- Calendar 

Desktop Customizations

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



1. Select white area in search field or columns.
2. Right-click.
3. Select customize fields or customize columns.
4. To specify the number of search columns, click the **Perspective Column** button.
5. To display additional search fields, select and move items from **Available** search fields to **Displayed** search fields.
6. To remove currently displayed fields, reverse the above step.
7. To change the displayed order, select up/down arrows to right of displayed field.
8. The setting saves for the login user.

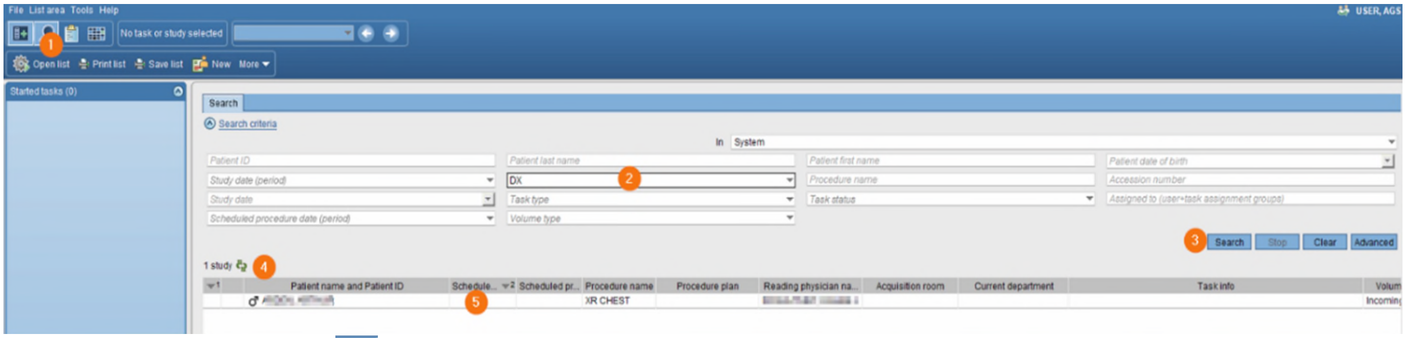


NOTE: **Helpful search criteria that should be added:**

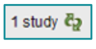
1. **Images available**
2. **Report available**
3. **Study verification status**

Locate Patient order

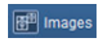
➢ **Via task list or ad hoc search** 

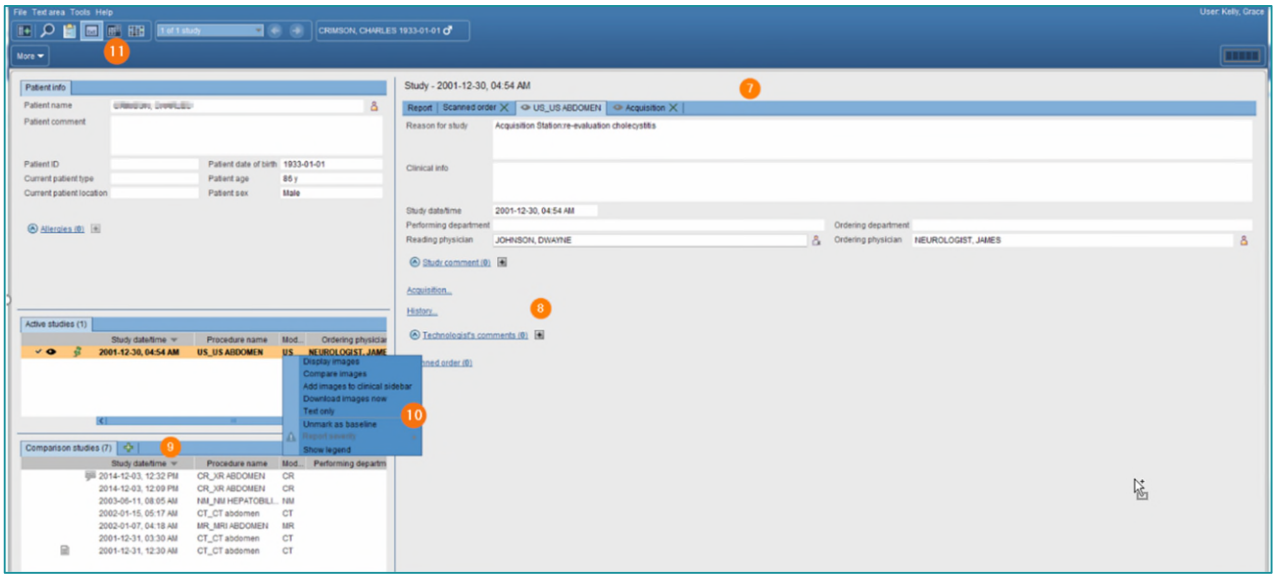


1. Select **Search** icon  in the tool to begin an ad-hoc search.
2. Input search criteria **(i.e., Patient ID, patient last name, accession number).**
3. Select 

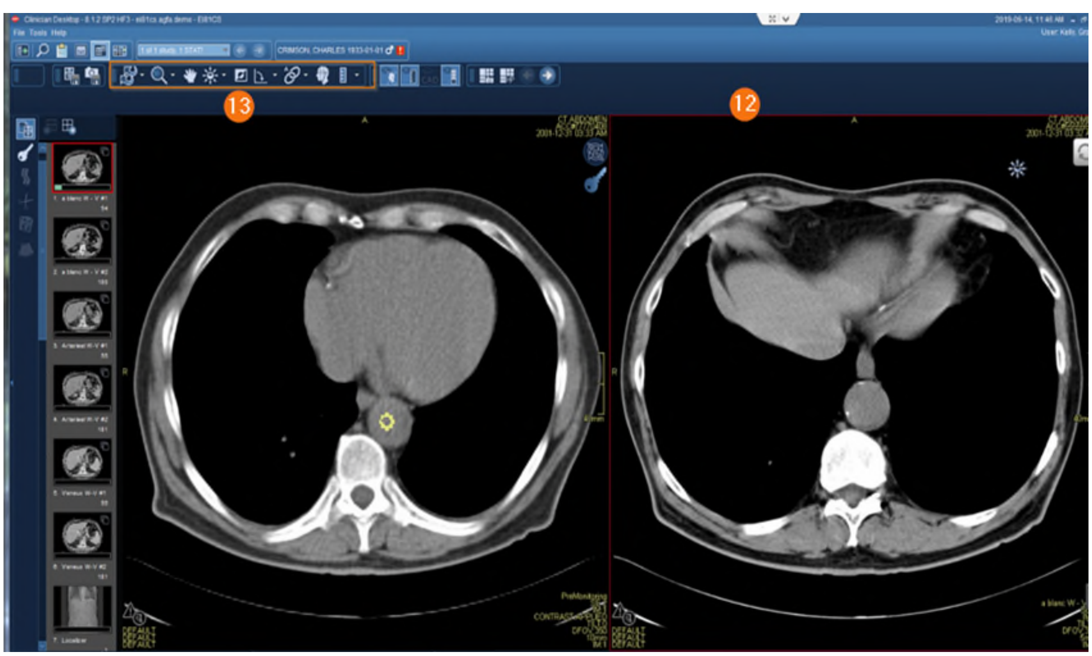
icon.
4. Search results display with the number of results that meet your search criteria. 

5. Select the study you want to review.
6. Double-click or right-click the line of the study you wish to display and open.

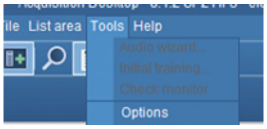
7. Text area displays.
8. Study information tab displays if report has not been created. If report is created, the report tab displays here by default. View study information and technical comments by users either entered in EI manually or in the RIS via HL7 message.
9. Comparison studies are available for this patient.
10. To display comparisons, right-click for display options.
11. On a one monitor setup, click the **image** icon to go to image display. 



12. Image page displays.
13. Available tools.

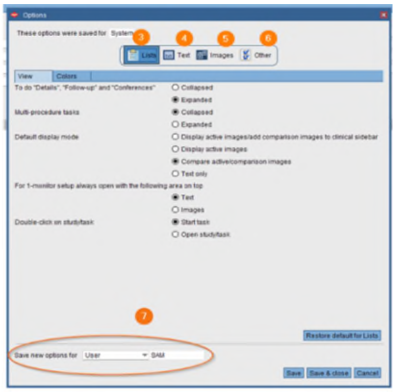


F12 Options



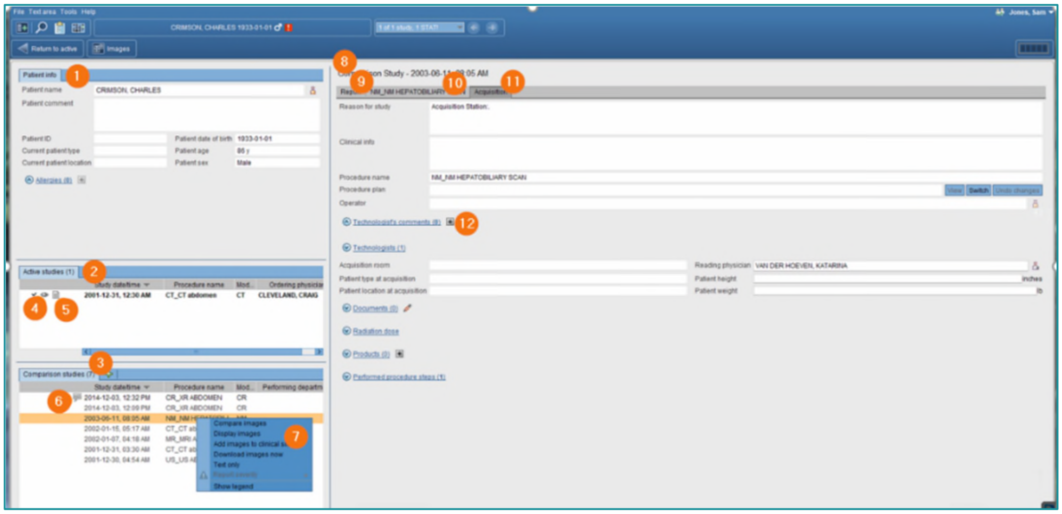
➢ **Defines the settings that change the look and feel of the desktops.**

1. Select **Tools** > **Options** or F12.
2. Options window displays.
3. Selecting **Lists** allows customization of items related to List area.
4. Selecting **Text** allows customization of items relate to Reporting and Text area.
5. Selecting **Images** allows customization of items related to Image area including image display options, keyboard shortcuts, and saving of mark-ups.
6. Selecting **Others** allows you to turn on or off the collaborator tool for default login setting.
7. This setting saves for the login user.



Text Page Details

1. Patient information
2. Active studies
3. Comparison studies
4. Eyeball icon  show images are in display
5. Report icon  shows the study has a report attached
6. Study comment communication between provider and radiologist 
7. If an image is not in display, right-click for display options.
8. Study information for study that is in display
9. Report Tab
10. Order Tab
11. Acquisition Tab
12. Comments



Technologist Comments

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

1. Select **Technologist comments.**
2. Enter comments.
3. Select **OK.**
4. Select **Public.**

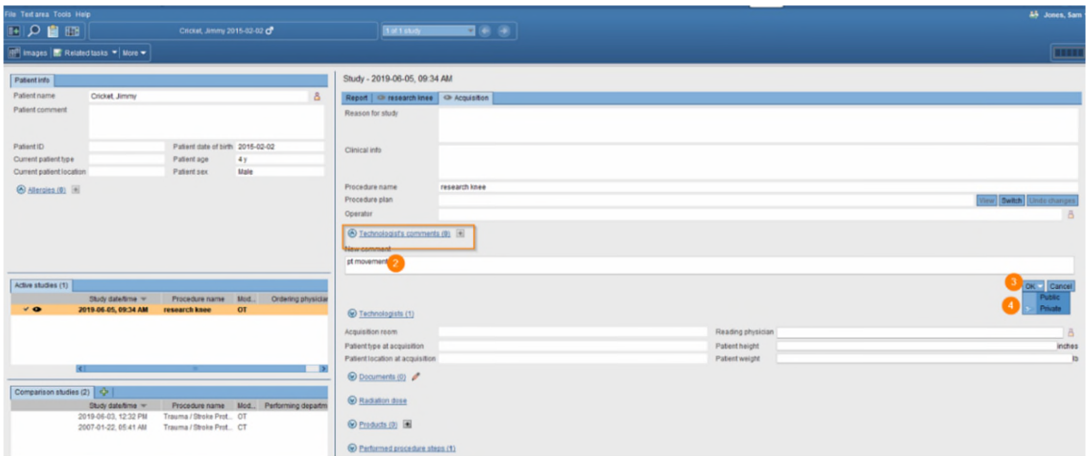


Image Visualization

- **The image area combines all image display, manipulation, and enhancement tools for reading in EI.**

1. Patient banner
2. Tools
3. Clinical sidebar
4. Save Presentation State and Create Snapshot
5. Active vs. Comparison

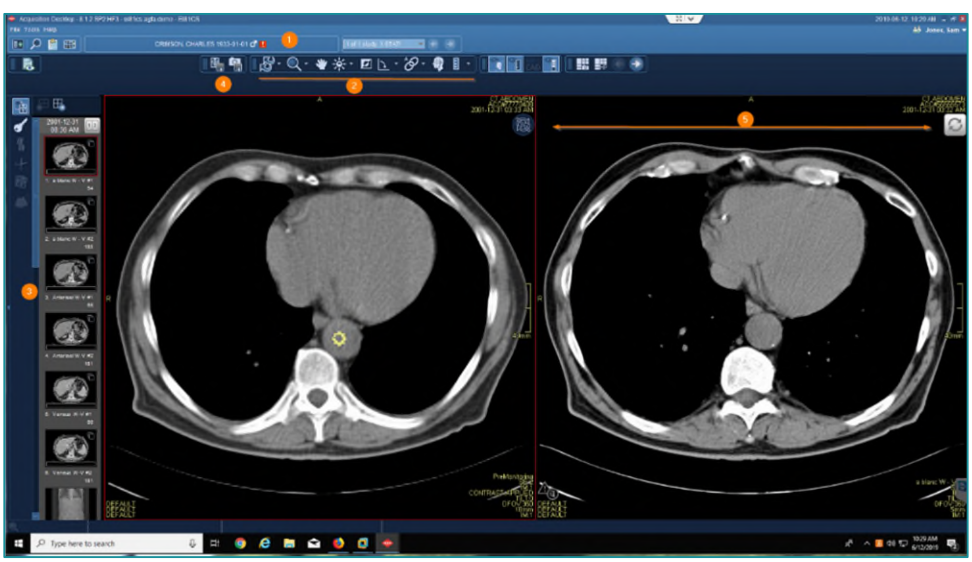


Image area markup tools

- **Calibrate images, take measurements, highlight, and annotate areas with arrows or text. Also have the ability to hide, modify, or delete markups.**

1. Activate tool with left-click and see tool attach to arrow.
2. Utilize tool with by left-clicking.
3. Deactivate tool with right-click, tool no longer is attached to arrow.

NOTE: **If there is a dropdown arrow to the right of tool, this indicates more options are available**

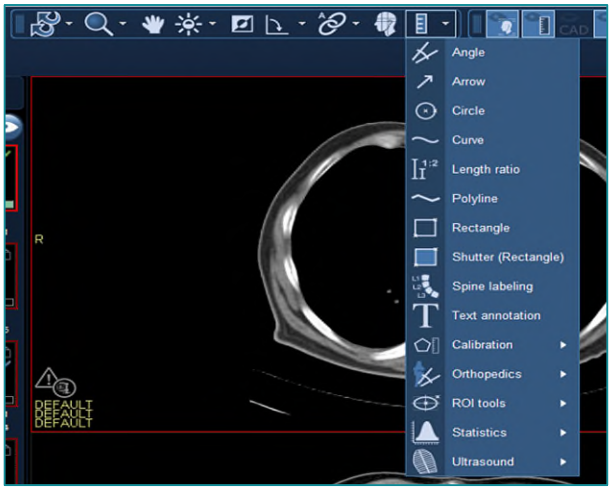
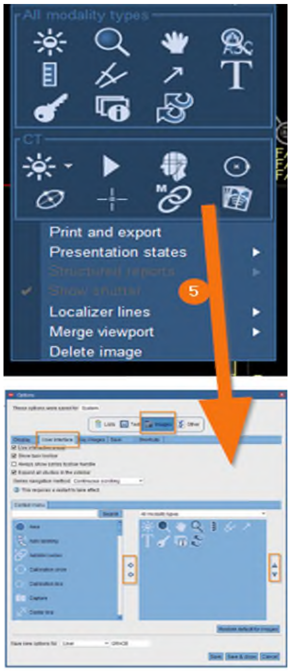


Image Area Context Menu

- **Access a selection of relevant tools without leaving the current image with the pointer**

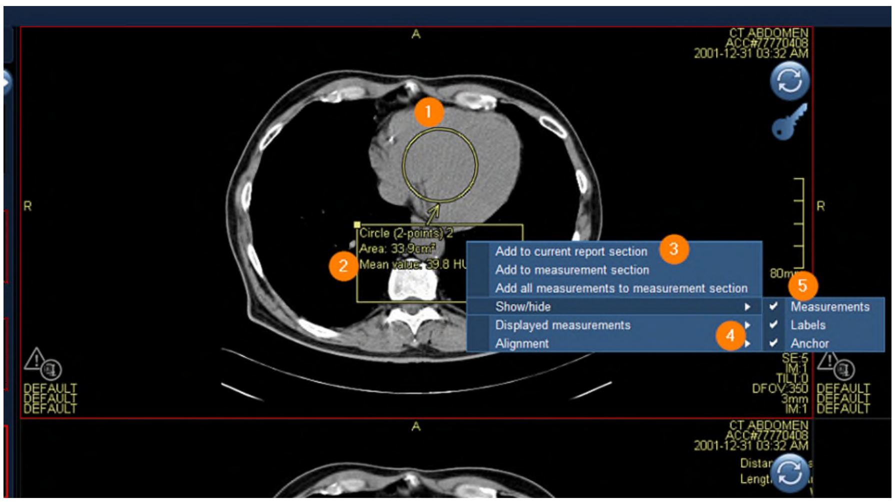
1. Right-click to open context menu.
2. Left-click **desired tool**.
3. Left-click to **utilize tool**.
4. Right-click to **deactivate**.
5. Customization for the **Image context menu** can be obtained from F12.



How to configure a default tool

1. Select tool, create measurement, and deactivate.
2. Hover over measurements with left-click until enhanced measurements are viewable.
3. Right-click to see an additional box with options.
4. Select side arrow to see additional options.
5. Select or deselect desired options.

NOTE: These measurement setting is set as the user's default.



MPR Features

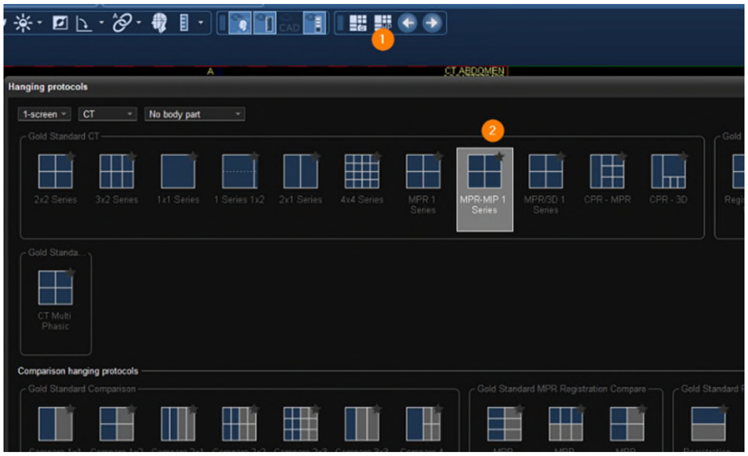
➢ **Method for reconstructing axial, coronal, sagittal, or oblique views from slices in any of these planes.**

Changing the view in an MPR viewport:

1. Place **cursor** over the **bottom center** of the view port.
2. To open **view sub options**, point to **2D to change viewport** to an MPR or other options.
3. To change the view to axial, sagittal, or coronal, click the **respective** button.
4. To get a **Secondary Capture**, select the **camera** icon.
5. If you want to keep the **tool bar active** in the viewport select the push pin. 

MPR features within Hanging Protocol

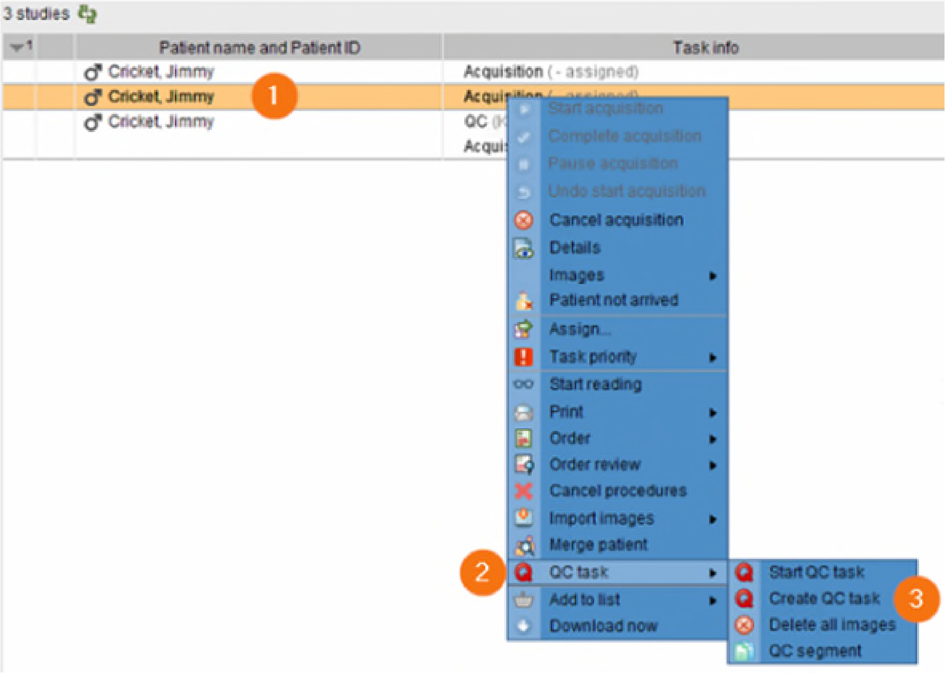
1. To activate **MPR display**, open the **hanging protocol gallery**.
2. Select a **predesigned MPR hanging protocol**.



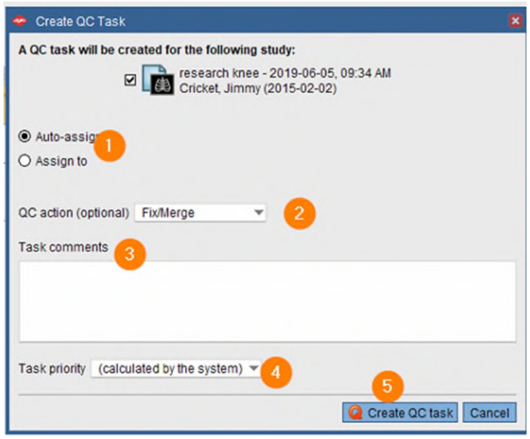
QC-Quality Control

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

1. Select a **study** for QC.
2. **Right** click and then choose **QC task**.
3. Create **QC task**.

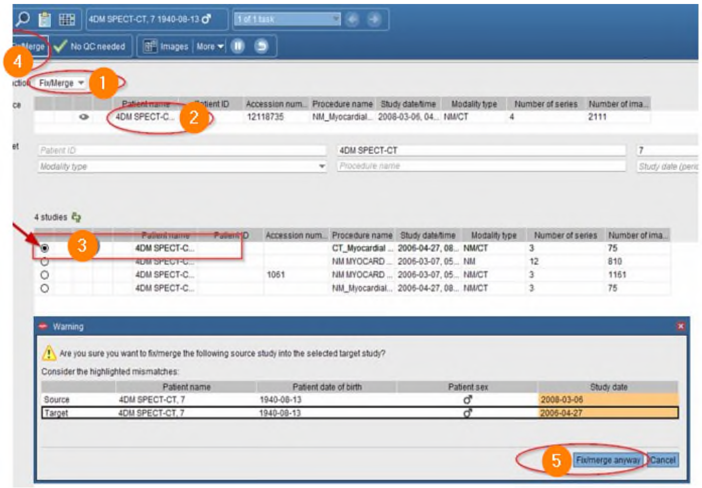


1. Select **Auto-assign** or **Assign to**.
2. Select QC action-fix/merge, split, segment, delete.
3. Include Task comments if necessary.
4. Select Task Priority from dropdown.
5. Select **Create QC Task.**



Start a QC task

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

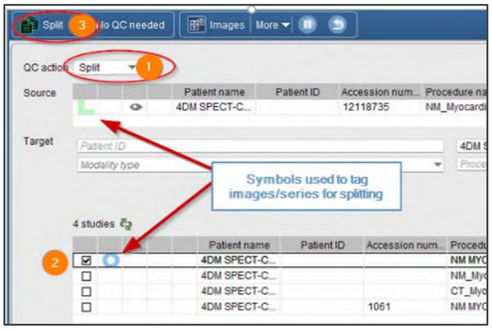


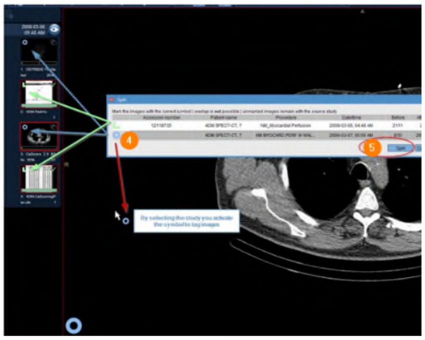
<u>Fix/Merge</u> –_Manually fixing studies aligns patient and order information with unverified images. Merging images assembles multiple studies that belong to one patient.

1. Select the correct action **Fix/Merge**.
2. Verify source.
3. Select the **target** for Merge.
4. Initiate the merge by clicking **Fix/Merge**.
5. Confirm and **select Fix/Merge anyway**.

<u>Split</u> – Manually split a study with images belonging to multiple patients, orders, or procedures.

1. Select the **QC action** to split.
2. Select your **target.**
3. Click the **Split** action.
4. Select the **study** you want to tag; symbol will activate on your cursor. You now can **select an image(s)** or the **thumbnail** to select the series.
5. Confirm and select **Split.**

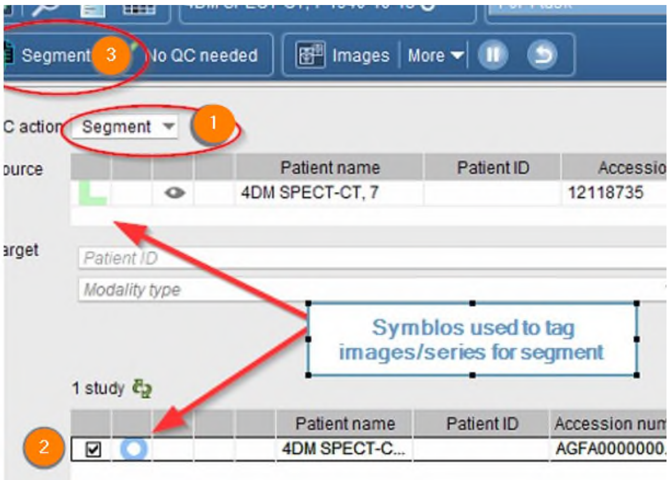


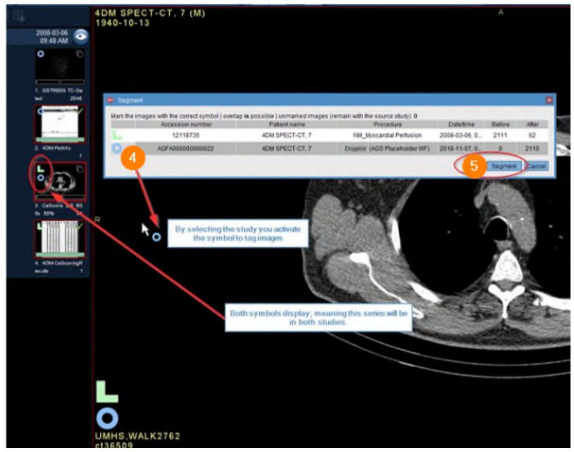


__Segment__ – Manually segment one patient into multiple procedures for the same patient.

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

NOTE: Delete – This is done by logging a ticket with #IS Enterprise Imaging.

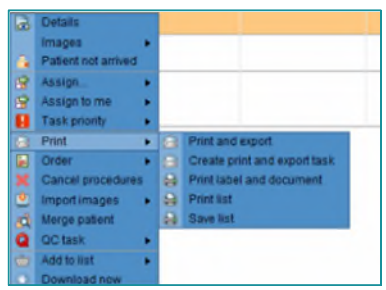


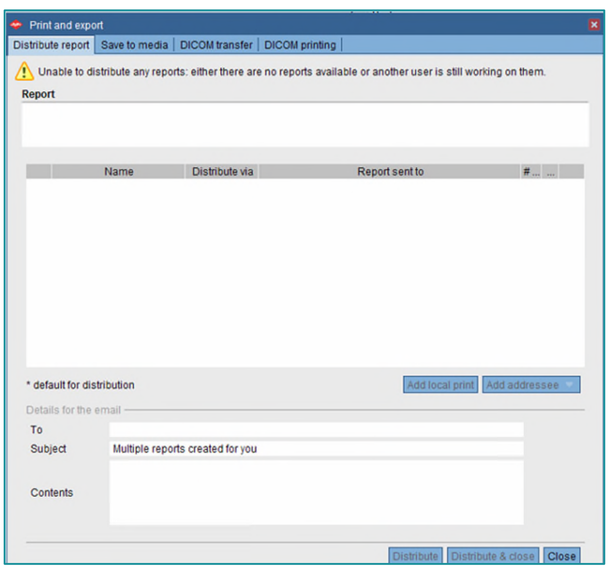


Print and Export

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

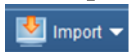
1. Select **Patient**.
2. Select **More**, top toolbar or right-click.
3. Select **Print**.
4. Select **Print and Export**.
5. Select **Distribute report**, **Save to Media**, **Dicom Transfer**, or **Dicom Print**.

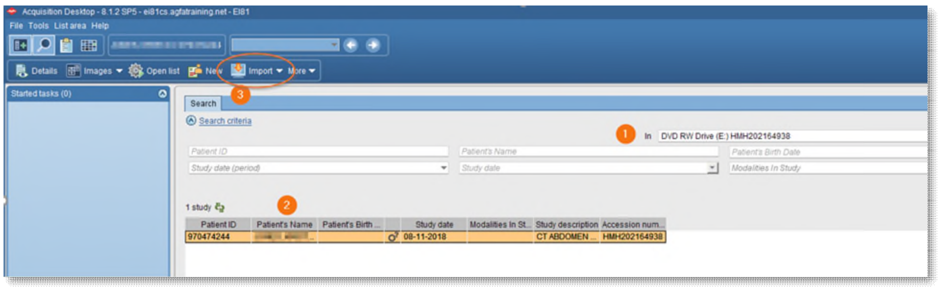




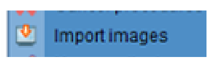
Import CD

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

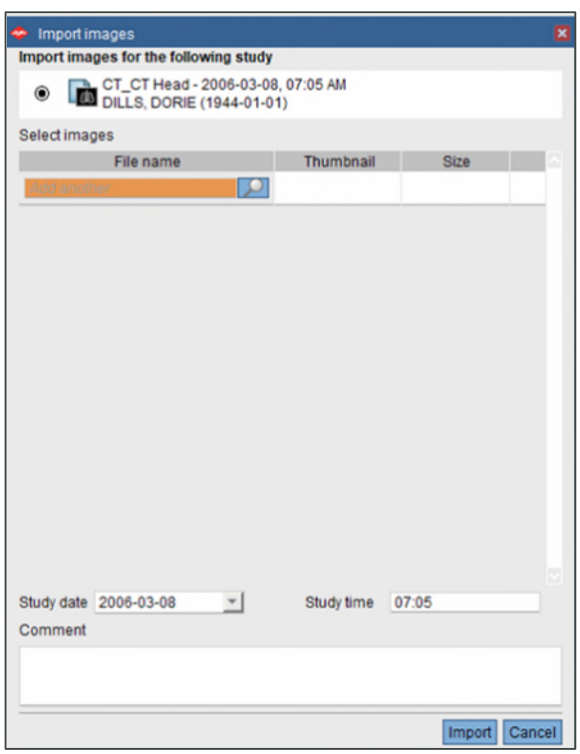
1. Select the local drive in the search area.
2. Select **study** or studies to import.
3. Click **Import** images. 



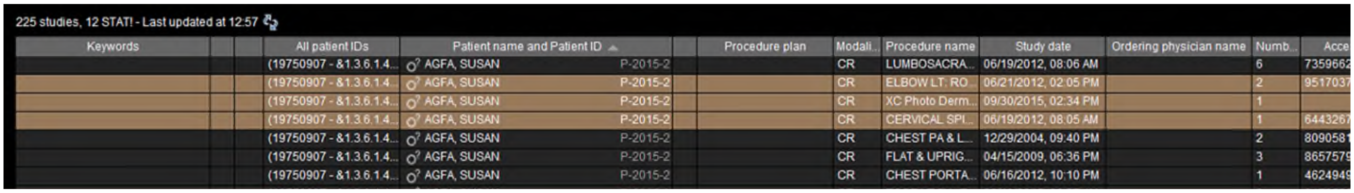
Import file from Desktop

1. Select **Patient**.
2. Select **More**.
3. Select **Import**.
4. Select **Import images** for selected study. 

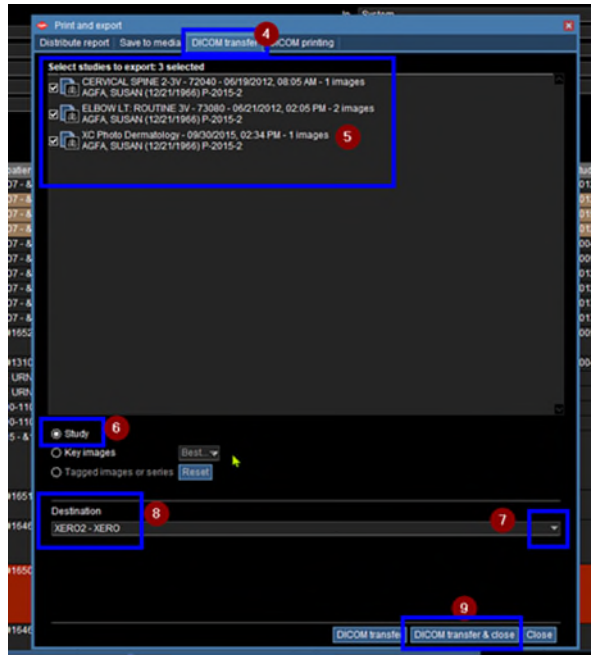
   or **Import** images for new order

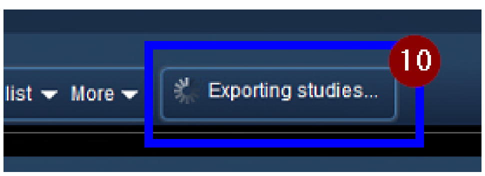


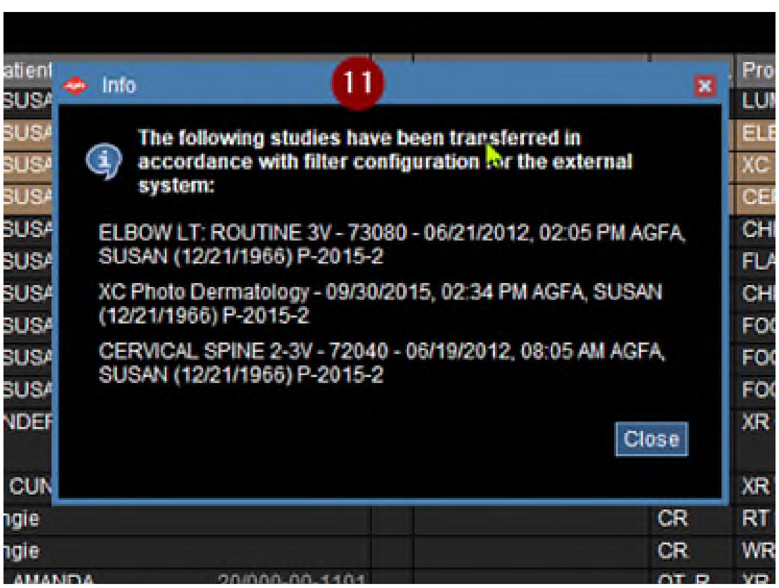
Burn or Transfer multiple studies



1. Highlight 1 or more exams.
2. Right-click and select **Print**.
3. Click **Print and export**.
4. Select **Save to media** or **DICOM transfer.**
5. Make sure the exams you want to burn or transmit have checkmarks beside them.
6. Click **Study**.
7. Use dropdown on **Destination**.
8. Select your designation.
9. Click **DICOM transfer & close** or **burn to**.
10. Box appears at top of list Exporting Studies
11. Info box will display transferred or failed

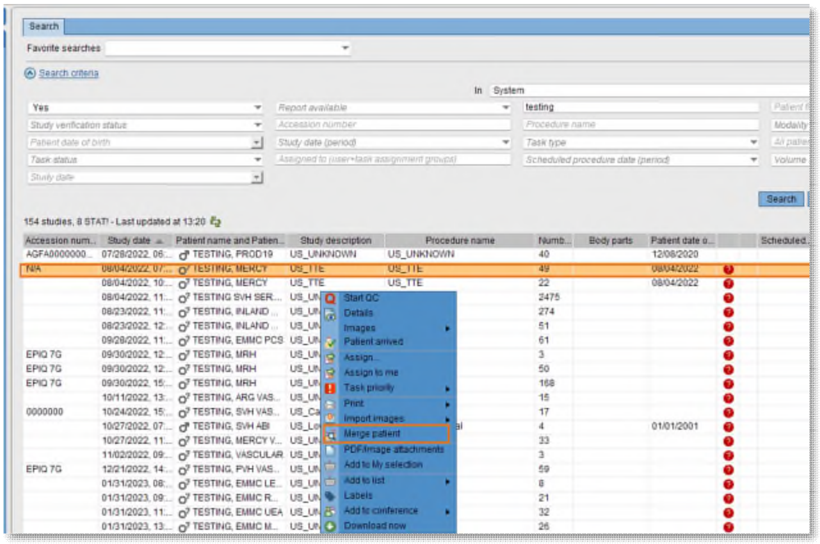






Patient Merge

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



1. Select **Patient**.
2. Right click and **Merge**.
3. Select **Merge patient.** 

4. Select **OK.**
5. Select the **patient you want to merge to.**
6. Click **OK.**