# Quick Reference Guide

## PACS Radiologist

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ASSIGNING KEYBOARD SHORTCUTS

1. From the Study Browser click on Settings then Options.

2. Click on the second tab Keyboard Shortcuts.
3. Click on the plus sign next to Menu on the right-hand side. From here, keep expanding the list by clicking the plus signs. Find the feature you want to assign a hotkey to. Highlight the feature by clicking on it. Then click on the white bar at the bottom and push the key on your keyboard that you want associated with the feature. Make sure to click OK when you are finished to save the changes.

Note: If you assign a hotkey and you get a pop-up like this.

You can reassign the hot key by selecting Yes.
MOUSE SETTINGS

From the Study Browser select:

1. Settings.
2. Options.

1. Select the event from any of the three columns that you would like to assign a mouse wheel event to.
2. From the drop down list select the mouse function you would like to use for the event.
3. Select OK.
DICTIONARY INSTRUCTION

NOVAPACS DICTIONARY INSTRUCTION

1. Open the study that you would like to dictate from the NovaPACS Enterprise Viewer.
   Note: This feature can also be added as a toolbar item, hotkey or an item on the image context menu if it’s a feature you use often.

3. The Audio Player will open.

4. Select Save.
   When you have completed your dictation, save the dictation and mark the dictated study as Reviewed in the NovaPACS Viewer. **The dictation MUST be saved in order to properly transfer to the transcriptionist.**
If a patient does not have an order associated with RIS a notification will appear at the bottom of the dictation box.

To add order information to the study:
1. Dictate the report
2. Select Save.
3. Select Create Procedure.
4. (Optional) Select Continue.
5. (Optional) Select Cancel to save the dictation to a file or to the desktop.
DICTATION INSTRUCTION

DICTATION AND STANDARD REPORTS

To add a Standard Report while dictating in Dragon:
1. Launch Dragon dictation Box.
2. Select the Standard Report drop-down box.
3. Once you have selected the Standard Reports choose Save or Sign & Save.

Save will allow the transcriptionist to make adjustment to the dictation in RIS. Sign & Save will move the dictation to a finalized status in RIS.
If you are using the Philips SpeechMike, control the Audio Player by using the buttons displayed below.

Note: If a user does not have a Phillips SpeechMike they can manually control the speech controls with their mouse and use a USB Mic of their choice.
HANGING PROTOCOLS

From the Study browser, navigate to the Settings tab and then select Configure Default HPs (hanging protocols.)

DEFAULT HANGING PROTOCOLS EDITOR

1. Hanging protocols can be set for the entire modality or for the modality and specific anatomical areas. As you can see in the example below there is a CR study type and a CR chest study type.
2. Anatomical areas can be assigned to the hanging protocol. It is possible to add, edit and remove anatomical areas associated with the HP.
3. This is where the default HP is set. Click on the image icon to edit the layout of the default HP.
4. A separate layout can be set for comparison HPs. To set up a comparison HP select half the number of image boxes that are in the Default HP. The comparison will then take up half the space that the default HP takes up. New HP’s can be created or removed with this step.
EDIT DEFAULT HANGING PROTOCOLS

From within the default HP the user can set up how many series they want to display and how those series are organized within the HP.

1. This Series Layout button allows for a quick configuration of series via a grid.
2. This allows for manually splitting the screen in whatever fashion the user chooses. The grid depicted here is for Image Layout whereas the previous item discussed in step 3 is a Series Layout.
3. The active window will be highlighted in red; this will be the window in which the series filter in step 4 will be applied.
4. Series can be filtered by Series Description (as depicted in the picture) or by Series Number.
5. Additional features include Layout Type, where the user can change between tiled (normal), cine (auto loads in cine loop), and MPR (renders series in MPR, Multi-Planar Reformatting.)
HANGING PROTOCOLS

MANAGING HPS WITHIN THE IMAGE VIEWER

1. Save the current study settings as the default HP for modality and anatomical area type.
2. Save the current study settings as the default HP for modality.
3. Add the current layout to favorite HPs (located on study browser.)
4. Apply HP: Modality to current study.

CHOOSE SERIES LAYOUT

The user can quickly change the series layout in PACS version 7.1.

1. Select Series Layout. (Menu, Study, Series Layout)
2. Use the mouse to drag the highlighted image to increase or reduce the number of desired series.
FAVORITE HANGING PROTOCOLS

Any layout can be saved as a Favorite Hanging Protocol.

1. HPs will be available on the Study Browser and can be selected by clicking on the image icon for the HP or by pressing the corresponding number on the keyboard.

2. Favorite HP’s can be rearranged by dragging them to the desired slot or by right-clicking on them and editing or deleting them.

3. Add current HP to favorites on the right side of the screen will add the HP that you are currently viewing on the Image Viewer.
GEAR ICON ON IMAGE VIEWER

The small gear icon in the top right hand corner of each series can be used to quickly edit the HP for the study.
1. Select the gear icon.

2. Edit the layout by using the Series Layout, Image Layout, Series Filter, and Settings.
3. Series descriptions are auto loaded and can be selected by clicking in the equivalent boxes. Other series descriptors can still be added or edited.
W/L PRESETS

SETTING W/L PRESETS

1. Select Settings.
2. Select W/L Presets.
3. Select a modality from the modality drop-down list.
4. Select a preset value from the W/L Preset drop-down list.
5. Change the Menu/Toolbar name by entering a new name in the field. The new name will appear on the W/L toolbar.
6. Apply Current Window/Level.
7. Select OK.
SETTING WINDOW/LEVEL

1. (Optional) Click the up or down arrow buttons in the Window (Width) and /or Level (Center) fields to customize the width and center values.
2. (Optional) Manually enter the values in both fields.
3. (Optional) Click Apply Current Window/Level to save the W/L preset from the highlighted image on your screen.
4. Select OK.

CUSTOMIZING TOOLBARS

1. Right-click the toolbar highlighted in yellow to customize the toolbar on the Study Browser and Image Viewer.
2. Select Customize.
3. Select the item you would like to add to your tool bar by clicking on the + sign next to the folder.
4. Add or remove the item that you would like to display on the toolbar.
5. Items that are currently displayed on the toolbar will be in the Current toolbar items column.

6. Items on the toolbar can be arranged however you would like. Simply select Move Up/Move Down to change the order of items on the toolbar.

Note: If you have moved an entire folder (File, Worklist etc...) Move In/Move Out will place specific items that you have chosen into the folder. Place the item you would like in the folder directly above it then select Move In or Move Out.

Note: Separator will visually divide the items you have selected on the toolbar.
1. Select Settings.
2. Select Options.

1. Select Auto-checkout studies when they are open. This option automatically marks every study that you open as Checked Out.

2. (Optional) Auto-review studies when they are closed. When this option is enabled, the studies you check out are automatically marked as Reviewed when you close them. You can also have the program prompt you before marking a study as Reviewed.

3. (Optional) Prompt before marking a study reviewed.
Note: View what status the study is in on the Study Browser.

**LABEL OPTIONS**

1. Select Settings.
2. Select Options.
3. Select the Labels tab - When you open the Labels option page, it will always display the Default settings.

4. Select a modality from the modality drop-down list to display the label settings specific to that modality.

5. To add a new label, select a label from the DICOM Fields list on the right. Click and drag to the desired quadrant.

6. To remove a label, double-click on the label name.

Note: The default setting will only be used if modality-specific labels are completely empty.

To change the size and font of a label:

1. Select the Size/Color link in the Labels tab.

2. (Optional) Select the label that you would like to edit from Select label level to edit drop-down menu.

3. (Optional) Select the Size of the label you would like to edit.

4. (Optional) Select the Color of the label you would like to edit.

5. Select OK.
LABEL OPTIONS

To add a DICOM field to a label, select the field from the fields list and drag it onto the label. Labels can be customized on a modality basis. Select the modality to edit from the drop down box. Double click a field to remove it from the label.

Image Labels:
- Patient Name
- Study Date
- Study Time
- Study Description
- Patient Age
- Referring Physician
- Series Description
- Series Number
- Study Date
- Study Description
- Study Time
- Technology
- Window/Level

DICOM Fields:
- Name
- Size/Color

Edit Default Label Properties:
- Select label level to edit: PATIENT
- Text Display Properties:
  - Size: Normal
  - Color: #
AUTO SYNC/SET SYNC

AUTO SYNC

This feature keeps co-planer images synchronized at the same frame of reference while viewing them. Images in multiple windows will display in synchronized unison as you scroll through the images. Once activated, this feature will remain on for all subsequent studies.

1. Select Menu.
2. Select Study.
3. Select Auto Sync.
AUTO SYNC/SET SYNC

SET SYNC

1. Select Menu.
2. Select Study.
3. Select Set Sync.

Note: Auto Sync will need to be activated prior to using this tool to utilize all of the functionality.

The image's slice locations will be synchronized as you scroll. The auto sync within each study will remain the same. Scrolling images will now be synchronized according to the new Auto Sync offset you created.

1. Open the comparative studies so that both are displayed.
2. Scroll through the images in each series until the images you want to be synchronized are both visible and highlighted.
When you select Collaboration from the Study Menu, a sub-menu will appear.

**Checkout** – Prevents multiple users from reviewing the same study at the same time. You can view a study that another user has checked out, but you cannot check it out or mark it reviewed.

**Undo Checkout** – Useful if you inadvertently checked-out the wrong study, or were unable to complete your review of a study after checking it out.

**Verified** – Gives users the ability to mark the studies as verified.

**Reviewed** – Once you have completed a review of an assigned study, you can mark it as reviewed.

**Resetting a Status to New** – This feature allows you to restore the status of a reviewed study back to New so it can be reviewed again, or by another person.

Note: There are other means for accessing these functions. You can create a hot key, add a button to the browser bar, or add the function to the Image Context menu.
COMPARISON STUDIES

To automatically display older studies that are related to a study to be opened, select this option.

1. Select Settings.

2. Select Options.

3. Select the General tab.

4. Select Display older related studies when opening a study.

Note: This information keys off the anatomical area field.
CO MPA R I S O N S T U D I E S

STUDY BROWSER

1. Select the study you would like to view.
2. Select Open + Old.

Open + Old - opens the selected study and the most recent.

1. Use Ctrl + Left-click to select the exams that you would like to compare.
2. Select Open.

Open - opens the selected study in the Image Window.
The Key Images Series can be toggled as a floating window or imbedded as an image box in the Image Viewer. Go to Settings then options. Check the box next to “Display Separate Window when creating a Key Images Series”. Checking this box tells the PACS to open a separate, floating window. Leaving the box unchecked will open a Key Image Series window inside the viewer.
To add a Key Image:

1. Click on the key in the top, center of the page.

Adding or removing images from the Key Images Series will auto-up¬date the layout of all images (up to 16) in the floating window Series only. The imbedded Key Images Series layout will display according to the users layout setting for that image box control.

The Key Images Series is identified with a gold key icon to the left of the Series title in the Caption Bar.
To Add or Remove Key Images:
1. Select the Menu drop-down.
2. Select Image.
3. Select Key Images Series.
4. (Optional) Key Images, Add to Key Images, or Remove from Key Images.

Key Image functions can be added as a Hot Key, Toolbar, or Image Context menu.
NovaRAD allows you to handle Critical Values. Critical Vales are serious life-threatening diagnoses or illnesses that need to be brought to the immediate attention of the referring physician.

To create a Critical Finding:

1. Click on the yield icon at the top of the image.

2. Select a Critical Finding.

3. Select Record Findings.

To create a new critical finding select Add a new Critical Finding value.
4. Select Add.

1. Select the magnifying glass to search for a physician.
2. Enter in the Physicians First or Last Name then select Search.
3. Select OK once you have selected the Physician.
5. Check the box next to the attempted method of notification.

You must check Personal contact or Unable to contact in order to add a Critical Finding.

6. The Critical Finding is now a permanent part of the patient’s record. The yield icon will stay yellow as a notification that the image has a Critical Finding.
SPINE LABELING

Manual Mapping

The Image Viewer supports two methods of mapping vertebral bodies and discs.

To launch the Spine Labeling tool:
1. Select Menu.
2. Select Image.
3. Select Annotate.

Spine Labeling can be added as a Hot Key, Toolbar, or Image Context menu.
1. Select the Vertebral Body or Disc that you would like to begin labeling.

2. Select the Direction you would like to label.

3. Right-click on the location that you would like to label.

Right-drag will allow you to draw a line on the border of the area and a second right-drag draws a second line. The ends of those lines are automatically connected to form a four sided polygon and the label text is automatically centered in the polygon.

Cross labelization (spine label cross reference):
Display spine label cross reference needs to be checked in the Options menu. With this option turned on spine labels will be displayed at the top of intersecting images.
An intersecting image is any orthogonal in the study (with same patient position) that intersects a spine label. If it is a simple label, it must intersect the label text. If it is a polygon label, it must intersect any part of the polygon. For example, if a sagittal image of the spine is labeled, any axial images that intersect a spine label will display the label at the top of the axial image for reference.
PET/CT FUSION

To view a PET/CT Fusion study:
1. Select the patient study you would like to view.
2. Select Menu.
3. Select Series.
4. Select View.
5. Select Image Fusion.

PET/CT Fusion can be added as a Hot Key, Toolbar, or Image Context menu.

The user will be prompted to select two image sets. Once the user has selected the two image sets, they are loaded and then displayed.
PET/CT FUSION

The user will see 3 rows of images. The first two rows display each of the image sets and the third row displays the image sets fused (or overlayed).

Left mouse drag will scroll through the series, right mouse drag will modify the window level on the first 2 rows, on the 3rd row it will change opacity of the images.

Hold the right and left mouse buttons down and drag to zoom the image.

Press the mouse wheel down to pan the image.

Right-click will display a menu of commands.