TID (unique)	KEYWORD(unique)	TAG(Separate with comma)	CATEGORY	PID(Separate with comma if more than one)	QUESTION	ANSWER	DOCUMENTATION LINK	YOUTUBE SOLUTION LINK			
Chapter 12	OPEN_IMAGE_WORKS		ACT imaging	ACT	What are the procedures to open image works?	Use this procedure to open ImageWorks from which you can access the browser program. 1. Click the ImageWorks icon to open the ImageWorks workspace 2. From the browser list, select the desired images. 3. From the browser list of applications, click Viewerto open the Viewer workspace. 4. Click the Display tab to open the Display control panel. You can also double click the series or thumbnail to start the viewer. If the number of images in a series is more than 20,000, then the viewer can not startthis series. Select an image subset from the patient schedule, then click Viewer to view these images. When finished viewing images, close Viewer and select the remaining images, then click Viewer. Further, you may also open two Viewers, every Viewer has one image subset.					
Chapter 12	ADD_ANNOTATIONS		ACT imaging	ACT	What are the steps to add annotations to images as a commentary?	Using the following steps can add Annotation to yourimages, allowing you to make commentary when landmarking, or draw attention to a certain area of interest. 1. OpenViewer. 2. Click the viewport for which you want to compose messages. 3. In the Display tab, click the Annotation icon. 4. In the Annotation text box, edit annotations as necessary. ☐ Click and drag the empty red box to specify the size of the text box. ☐ Move the cursor to a text box and enter a message. This tool automatically surrounds the text and expands textbox size as you type. ☐ Move the cursor to insert a string of text and enter information. ☐ Select existing text, you can also enter over it or press Delete. 5. If you must add or remove an arrow in the text box, click Select Object inthe Annotation screen orremove the selection Include Arrow. ☐ Click and drag the arrow tip to position the arrow. ☐ Clicking and dragging arrow lines will move arrows and boxes as a single unit. ☐ Click and drag the solid red box to move the text box. ☐ Click and drag the empty red box to change the size of the text box.					
Chapter 12	CHANGE_FONT_SIZE		ACT imaging	ACT	How to change the font size of the patient data?	Using the following steps can change the font size for the patient's name, identification number, registration number and scan date as displayed on the image or film,. When the view image format is larger than 1 X 1, these changes are most noticible. Figure 12-2 Model example of large fonts for patient name and scan date 1. OpenViewer. 2. From the Display tab or Film/Save tab, click the Tools icon. Select the appropriate tag in accordance with the fonts needed for changing film (Film/Save tab) or view (View tab). 3. In the menu, select Large Font. 4. Check the option box with the fields requiring the largerfont. 5. ClickApply. Clicking Save as Default can save annotation font size status after restarting.					
Chapter 12	MODIFY_ANNOTATION_LEVEL_DISPLAY_IMAGE		ACT imaging	ACT	How to modify annotation level of images displayed?	1. OpenViewer. 2. On the Display tab, click the Display Preference Settings icon. 3. On the Set Display Preference screen, from the menu select Screen Annotation Settings. 4. Selectthe desired annotation option. ☐ No Annotation deletes all annotations and graphics. It does not delete Window Width and WindowLevel.☐ Select Customize to display item lists of what can be selected for display. Select the necessary annotation option, then click OK. ☐ Viewthe Annotation screen to view the imageswith confirmed customized annotation area. 5. Click Save as Default to save annotation settings, in order to view the sessions in the future.					
Chapter 12	MODIFY_ANNOTATION_LEVEL_ON_FILM		ACT imaging	ACT	How to change annotation levels on the film?	1. OpenViewer. 2. From the Film/Save tab, click the Flim Annotation Settings icon. 3. Selectthe desired annotation option. ☐ No Annotation deletes all annotations and graphics. It does not delete Window Width and WindowLevel.4. Select Customize to display item lists of what can be selected for display. Select the necessary annotation option, then click OK. ☐ Viewthe Annotation screen to view the imageswith confirmedcustomized annotation area. 5. Click Save as Default to save annotation settings, in order to view the sessions in the future.					
Chapter 12	EXPAND_ANNOTATION		ACT imaging	ACT	How to expand or copy annotations?.	1. OpenViewer. Addannotations. 2. In the Display tab, click the Selected Object icon. 3. Enactthe necessary selection. ☐ Select All Images in series to apply annotation changes to all images in a series. ☐ SelectingThisImage Forwardonlyappliesannotationchanges to images inthe series following this serialnumber. ☐ Select Range to designate a layer plate range. 4. ClickApply.					
Chapter 12	REMOVE_ANNOTATION		ACT imaging	ACT	How to remove annotations from the messages?	Using the steps below you can remove Annotations from images. 1. OpenViewer. Addannotations. 2. Ensure annotations are active (yellow). If not, please click annotations to put them into an active state. 3. In Erase Hide Menu, click the Erase icon. To removeall annotationmessages from all images in the current series, click the EraseAll icon.					
Chapter 12	MATTE_TOOL		ACT imaging	ACT	How to remove unwanted images/artifacts/messages using matte tool?	Using the Matte tool will remove displayed images or images on film or unwanted messages or artifacts surroundingthem. 1. OpenViewer. 2. Click the viewport for which you want to use the matte on the images. 3. From the Display tab, click the arrow nextto theMatte icon and select Rectangular Matte icon or Elliptical Matte icon. 4. Click and drag the solid red box to move the matte. Figure 12-9 Move Matte 5. Click and move the empty red box to change matte size and shape.6. Click on the outside of images (on the matte) to display the red box allowing you to adjust their size or move them. Click on the image (inside the matte) to fix the matte.					
Chapter 12	EXPAND_MATTES		ACT imaging	ACT	How to expand or generate copied mattesfor all images in a series?	You can use the following steps to generate copied mattes for all images in a series. 1. OpenViewer. Activate a matte. 2. Click on the outside of images (on the matte) to display the red box, indicating the matte is activated. 3. In the Display tab, click the Selected Object icon. 4. Carry out expand selection. ☐ Select All Images in series for making changes to one image change all images in that series. ☐ Selecting ThisImage Forward only changes the images in a series following the current series number. ☐ Select Range to establish the layer plate range for matte copying. 5. ClickApply.					
Chapter 12	REMOVE_MATTE		ACT imaging	ACT	How to remove matte from images?	Using the steps below can remove Matte from images. 1. OpenViewer. Activate a matte. 2. Click on the outside of images (on the matte) to display the red box, indicating the matte is activated. ☐ To remove an activated matte from a single image, execute one of the following operations. PressDelete. Click the Erase icon. ☐ If you want to remove an activated matte from all images in the current series, click the Erase All icon.					
Chapter 12	ACTIVATE_MEASURE_TOOL		ACT imaging	ACT	What are the steps to activate a measurement area/tool to obtain information, volum	You can use the following steps to activate a Measure tool, in orderto obtain information, volumes, areas and statistics of anatomy or pathology. 1. OpenViewer. 2. Click the viewport where you want to place a measurement. 3. In the Display tab, click the Measure arrow and select a Measure ROI icon. ☐ Measurement distance is shown in mm. ☐ Measurement is displayed on the bottom right corner. 4. Adjust the size and shape of Measure ROI and move the Measure ROI. ☐ For straight line and angle measurement: Figure 12-11 Adjust size, shape and move measurement Click and drag on empty to expand the box to adjust measurement shape. Click and drag the line segment to move the measurement. ☐ For a free draw image measurement, place the cursor in the viewport and click to place a startingpoint. Figure 12-12 Free drawing measurement Click and drag on solid to expand the box to create trace lines. Click the borders of trace lines to move the trace lines. Click anyplace on a cyan (unactivated) measurement border, making it turn yellow and activated.					

Chapter 12	EXPAND_MEASUREMENT	ACT imaging	ACT	What are the steps to expand/generate copied measurement ROIs for all images in	You can use the steps listed below to generate copied measurement ROIs for all images in a series. 1. OpenViewer. MeasurementArea. 2. Click anyplace on a cyan (unactivated) measurement border, making it turn yellow and activated. 3. In the Display tab, click the Selected Object icon. 4. Carry out expand selection. ☐ Select All Images in series for making changes to one image change all images in that series. ☐ Selecting ThisImage Forward only changes the images in a series following the current series number. ☐ Select Range to specify the range of slice forthe extended measurements. 5. ClickApply.
Chapter 12	REMOVE _MEASUREMENT	ACT imaging	ACT	What are the steps to remove measurement from images?	You can use the steps listed below to remove a measurement from images. 1. OpenViewer. MeasurementArea. 2. Click anyplace on a cyan (unactivated) measurement border, making it turn yellow and activated. ☐ To remove an activated measuerement from a single image, execute one of the following operations. PressDelete. Click the Erase icon. ☐ If you wantto remove multiple images from an active viewport, click the Erase All icon.
Chapter 12	ACTIVATE _ROI	ACT imaging	ACT	What are the steps to activate ROI?	The steps below can be used to activate a ROI, in order to obtain information related to the standard deviation, average value and area. 1. OpenViewer. 2. Click the viewport where you want to place a ROI. 3. In the Display tab, click the ROI arrow and select a ROI icon. 4. Adjust ROI size, shape and move ROI. ☐ For an oval or rectangular ROI: Figure 12-13 Oval and rectangular ROI Click and drag on empty to expand the box to adjust ROI size. Click and drag on the center cross or border to move the ROI. If the ROI box must be rotated, click a border having a cross hair cursor, place the cursor on a cross hair cursor, a white rotating symbol appears. Click and drag the rotation cursor to rotate the rotating frame pointer. ☐ For a polygonal ROI, place the cursor in the viewport and click to place every point. Figure 12-14 Polygon ROI ☐Click and drag a square box to adjust ROI shape. Right button click on a box to remove this box. Click and drag a center cross to move ROI. ☐Place the cursor on a line between two adjacent solid red boxes and right-click to place anotherbox. Click anyplace on a cyan (unactivated) ROI border, making it turn yellow and activated.
Chapter 12	EXPAND_ROI	ACT imaging	ACT	What are the steps to be followed to expand/generate copied measurement ROIs fc	You can use the steps listed below to generate copied measurement ROIs for all images in a series. 1. OpenViewer. ActivateROI. 2. Click anyplace on a cyan (unactivated) ROI border, making it turn yellow and activated. 3. In the Display tab, click the Selected Object icon. 4. Carry out expand selection. ☐ Select All Images in series for making changes to one image change all images in that series. ☐ Selecting ThisImage Forward only changes the images in a series following the current series number. ☐ Select Range to specify the range of slices to duplicate ROI. ☐ ClickApply
Chapter 12	REMOVE _ROI	ACT imaging	ACT	How to remove ROI from images?	Using the steps below can remove a ROI from images. 1. OpenViewer. ActivateROI. 2. Click anyplace on a cyan (unactivated) ROI border, making it turn yellow and activated. ☐ To remove an activated ROI from a single image, execute one of the following operations. PressDelete. Click the Erase icon. ☐ If you want to remove multiple ROIs from an active viewport, click the Erase All icon.
Chapter 12	ADJUST_W/L_VALUES	ACT imaging	ACT	What are the methods to change window width and window length values therefore	Use one of the fourfollowing methods to adjust Window Width/Window Level, in orderto control image brightnessandcontrast. Requirements OpenViewer. Method 1: Middle mouse button By using the steps below you can make use of the middle mouse button to adjust Window Width/Window Level. 1. Placethe cursoronanyimage,click themiddlemousebuttonanddragupordowntochangewindow level. 2. Placethe cursoron anyimage, click the middle mousebuttonanddrag leftorrightto changewindow width. Method2: Left mouse button Youcanuse thesteps listedbelowtomakeuseoftheleft mousebuttonforadjustingWindowWidth/Window Level. 1. Click the W/L (Window Width/Window Level) icon on the Image Controls Panel, change the left mouse button into the Window Width/Window Level control keys. Figure 12-15 Image controls panel 2. Placethecursoronanyimage,clickthe leftmousebuttonanddraguapordowntochangewindowlevel. 3. Placethecursoronanyimage,clicktheleftmousebuttonanddragleftorrighttochangewindowwidth. Method 3: Presets You can use the steps listed below to make use of the presets for adjusting Window Width/Window Level. 1. Place the cursor in the lower right corner of the viewport's orange window width and window level position. 2. Click the right button and select a preset window width and window level.Method 4: Control panel By using the steps below you can make use of the Keyboard to adjust Window Width/Window Level. 1. Click the W/L (Window Width/Window Level) icon on the Viewer Control Panel. 2. Enter a specific value in the window width and window level text box. Method 5:Keyboard By using the steps below you can make use of the Keyboard to adjust Window Width/Window Level. 1. Place the cursor on any viewport. 2. Press and hold or quickly press and release the up/down arrow keys to change Window Level. 3. Press and hold or quickly press and release the left/right arrow keys to change Window Width. Figure 12-17 Arrow keys 4. Press the shift key and one of the following keys to edit preset W/L: F6, F7, F8, F9, F10, F11. 5. Press one of the following keys to activate the preset window: F6, F7, F8, F9, F10, F11.
Chapter 12	PREDEFINE_W/L_VALUES	ACT imaging	ACT	How to self define or predefine preset settings like for window width /WindowLevel?	You can use the steps below to self-define W/L (Window Width/Window Level) preset settings. 1. OpenViewer. 2. In the Display tab, click the W/L (Window Width/Window Level) icon. 3. In the Windowing area, select a preset value. 4. Click Edit. 5. In the Apply Windowing area, complete the following operations: a. Select the preset from the Presets menu. b. If required, in the Name field, enterthe preset W/L name. c. Please enter a value in the Width field. d. Please enter a value in the Level field. e. Click Save and give a response to any prompts.
Chapter 12	ADD_LAYER	ACT imaging	ACT	How to add a layer / cross reference line in an image?	You can use the steps below to add a Cross Reference line to an image already displaying having a cross reference. 1. OpenViewer. 2. Click the viewport where you want to add additional cross reference scan lines. 3. In the Command Line, enter xra, then enter the series number you want to add and the layer plates orlayer plate range, for example if you want to add layers 10-16 from series 3, enter xra 3 10-16. Press the Enter key.
Chapter 12	ADD_ALL_LAYER	ACT imaging	ACT	How to add a cross reference line in all layers in a series?	You can use the steps below to place a Cross Reference line on all layers in a series. 1. OpenViewer. 2. Click the viewport where you want to paste up cross reference scan lines. 3. In the Command Line, enter the xr command, follow by adding the series number, for example: xr 2. Press the Enter key.
Chapter 12	ADD_FIRST_OR_LAST_LAYER	ACT imaging	ACT	How to add cross reference line to first or last layer images?	You can use the steps below to apply a first or last layer Cross Reference line to images. 1. OpenViewer. 2. Click the viewport where you want to paste up cross reference scan lines. 3. In the Command Line, enter the xr command, follow by adding the series number and extrema, for example: xr 2 extrema. Press the Enter key.

Chapter 12			ACT imaging	ACT	How to add cross reference line to an interval of layers like even/add?	You can use the steps below to place a Cross Reference line on the intervals of a series or even/odd layer positions. 1. OpenViewer. 2. Click the viewport where you want to paste up cross reference scan lines. 3. In the Command Line, enter the xr command, follow by adding the series number, the colon symbol (:) and interval. For example, if you want to display every third layer in series 2, please enter xr 2:3. Press the Enter key.			
Chapter 12			ACT imaging	ACT	How to add cross reference line to a range of layers?	You can use the steps below to display the cross reference line series of images in a common series. 1. OpenViewer. 2. Click the viewport where you want to paste up cross reference scan lines. 3. In the Command Line, enter the xr command, follow by entering the first image-last image, for example: xr 2 1-6. Press the Enter key. □ If necessary, use the % symbol to mark the last image in a series.			
Chapter 12			ACT imaging	ACT	How to remove cross reference line from any layer?	You can use the steps below to remove a Cross Reference line placed on an image. 1. OpenViewer. 2. Cross reference lines displayed on an image. 3. In the Command Line, enter noxr. Press the Enter key. All reference lines have been removed.			
Chapter 12			ACT imaging	ACT	How to turn pages of an image like watching video using cine tool/cine play program	Use the Cine tool to turn pages in an image, like you're currently watching a video. 1. OpenViewer. 2. Select the series you want to view in Cine mode. 3. In the Display tab, click the Movie icon. 4. In the Cine area, click the Play icon,this will use all default settings. Additionally, you can conduct selections from the Cine area. □ The system will automatically change the format to 1-on-1. □ Define layerrange Click Play All to place all images in a series into the Cine. Click Play Range and enter a From and To image number in the text. □ Define Image Interval. This is usually maintained at the default value 1. When displaying a cine from a multi-phase series, within the image range enter a number representing the number of phases. □ Select an image interval, this interval will allow you to skip some images in the series when the images are being displayed in cine mode. For example, if your series is a 4 phase acquisition, you may want to view one phase one time, therefore you will enter a 4 interval. □ Select a view mode. When displaying a Cine, the Loop icon will go from start to end, then again from start to end. For example, if there are 20 images in a Cine, the image display method is 1-20, 1-20, 1-20, etc. When displaying a Cine, the Rock icon will go from start to end, then again from end to start. For example, if there are 20 images in a Cine, the image display method is 1-20, 20-1, 1-20, 20-1 etc. □ Select a Frame Rate, it indicates the number of images displayed in a second. □ Click the Play icon to play backwards or forwards. From the cine stop or pause point start playing the cine. □ Click the Pause icon to stop the movie from playing. □ Clicking the End icon can take the last image in a cine and place it in the active viewport. □ ClickingtheBeginning iconcantake thefirstimage in a cineandplaceitintheactiveviewport. □ Clicking the Step Forward icon can increase a step from forwards to backwards to an image. Using this icon can increase a step from the image to a certain start point of the first image not within the cine layer range. □ Clicking the Step Back icon can increase a step from backwards to forwards to an image. Using this icon can increase a step from the image to a certain start point of the first image not within the cine layer range.			
Chapter 12			ACT imaging	ACT	How to perform command line programming?	1. OpenViewer. 2. At the bottom of the Control Panel, in the Command Line enter ? and press the Enter key. □ The Command Line screen opens, listing all hotkey commands. 3. In the Command Line window, select the desired command. 4. ClickAccept. 5. Place the cursor at the end of the command character string in the Command Line, and press the Enter key. □ This command is then applied to all displayed viewports. □ As next and priorimages are selected,the command will be applied to allof these images as well.			
Chapter 12			ACT imaging	ACT	How to use color mapping tool to change color of all viewports?	Use the Color Map tool for scheduled acquisitions, DWI ADC images, histograms and dynamic enhanced viewing, in order to change the color of all viewports. 1. OpenViewer. 2. In the Display tab, click the Color Map icon and select an option from the menu. To remove a color map, from the Color Map menu, select none or gray.			
Chapter 12			ACT imaging	ACT	How to open multiple images for comparisom using image compare program?	By using the steps below, you can open multiple grouped images in the Viewer for comparison. Comparison mode can be started through the three following kinds of workflows: From the Data Apps list start and compare 1. Navigate to the ImageWorks desktop. 2. Press and hold the Ctrl key, and at the same time in the Series List click 2, 3 or 4 series. □ The selected series will be highlighted and displayed in the Series List. 3. In the Data App list, click the Viewer, in order to display the selected series in a single viewport. View Compared Images 1. Pressing Page Up and Page Down can at the same time go up the page or down the page in these series. 2. The Window Width/Window Level of every viewport can be controlled separately. 3. The Maximize button in View Controller can not be used in the comparison mode. 4. All available options in the Viewer Control Panel can be controlled in every viewport. 5. Page turning can only be used in two series. Undo Link/Re-link viewport 1. Click the viewport to be viewed alone. 2. In the View Controller, click the Ports icon to undo a series link. Figure 12-22 View Controller linking □ Pressing the Page Up button and Page Down button can scroll through the browser series. 3. If you need to re-link a viewport, please click on the Ports icon.			
Chapter 12			ACT imaging	ACT	How to restore an image to its original size using display normal procedure?	You can use the steps below to restore an image to its original state. 1. OpenViewer. 2. In the Viewer Display tab, clicking the Display Normal icon can return the image to its original image state and erase the display functions below: □ Flip/rotate □ Zoom in or zoom out □ Imageenhancement(filter) □ Scroll or pan □ Color DisplayNormal has no effect on the Rectangular Matte, Annotation or Graphic operations. Using the Erase All button can remove these elements from images.			
Chapter 12			ACT imaging	ACT	How to erase/hide extra object programs in viewports?	Using this program when one or more graphical objects are placed in any or all viewports, can Erase/Hide theobjects. 1. OpenViewer. 2. Display an image object,for example an Annotation information, Measurements, Mask, ROI string, etc. 3. Click the arrow next to the Erase/Hide icon to select the icon that matches the desired operation. □ Clicking the Hide All icon can temporarily hide annotations orimage objects. □ Clicking the Show All icon can restore annotations orimage objects, making them visible. □ ClickingtheErase Single iconcanerase thecurrently selectedimage object.Usingthiserase option can erase one graphics element once. □ Clicking the Erase All icon can remove all graphical objects from all viewports. Clicking Ctrl and X at the same time can erase the selected graphical objects.			
Chapter 12			ACT imaging	ACT	How to smooth images using filter image program?	Usingthe steps belowcan use one ofthe Filters in the Viewerinorderto enhance margin orpulmonary area orrenderimages smooth. 1. OpenViewer. 2. Click the viewports where you want to change the filter. 3. In the Display tab, click the Filter icon. 4. Select a filterfrom the menu.			
Chapter 12			ACT imaging	ACT	How to change direction of displayed images using flip/rotate image program?	Use the Flip/Rotate tool to change the direction of the displayed images. 1. OpenViewer. 2. In the Display tab, click the Flip/Rotate icon. 3. In the Flip and Rotate Images areas, click the icon matching the desired operation.			

Chapter 12				ACT imaging	ACT	How to change viewport display format?	Using the steps below can change the viewport display format. 1. OpenViewer. 2. In the Display tab, click the Format icon. 3. On the Format display, scroll the cursorto view the available formats. 4. Click to select the desired format.				
Chapter 12				ACT imaging	ACT	How to enhance contrast of an image by giving it a black and white appearance usi	Use the Gray Scale tool to enhance the contrast of an image in order to give the image more of a black and whiteappearance. 1. OpenViewer. 2. Click the viewports where you want to change the gray scale. 3. In the Display tab, click the Gray Scale icon. 4. In the Filters area, select a Gray Scale filter.				
Chapter 12				ACT imaging	ACT	How to place a grid on the main image using grid display procedures?	Usingthe stepsbelowcanplaceagrid(matrix)onthemainimage, inordertomeasuretheanatomicalpoints or pathological area on an image. 1. OpenViewer. 2. Click the viewport in which you want to display the grid. 3. In the Display tab, click the Grid icon to open the grid, and then click again to close it. Figure 12-24 Grid on Remove grid Using the steps below can move the grid in the viewport. 1. Click a grid, making it active status (blue). 2. Place the cursor on a grid cross reference point and drag it to a new position.				
Chapter 12				ACT imaging	ACT	How to adjust grid preferences?	Using the steps below can set grid preferences. 1. In the Display tab, click the Tools icon. 2. From the pull=down menu, select Grid Preferences. 3. From the Grid Preferences screen area, select the options you need. ▫ Matrix Lines: Open or close the lines for the four-corner grid pattern formed by the central horizontaland vertical lines. ▫ Line Style: Turn gird lines into solid lines or virtual lines. ▫ Grid Spacing: In units of millimeters, changes the spacing between grid lines. ▫ Tick Spacing: In units of millimeters, changes the spacing between tick lines. ▫ Tick length: In units of millimeters, changes the length of tick lines. 4. Clicking Save as defaults can permanently save the content of the selections. ▫ You can also click Apply to apply the selected options. This is a temporary selection, only applicable to the currently displayed image.				
Chapter 12				ACT imaging	ACT	How to change control of left mouse buttpn using image control program?	Using the steps below you can change the control of the left mouse button. 1. OpenViewer. 2. Select the Image Controls icon on the Control Panel. Figure 12-26 Image Controls ▫ Clicking the Slice number control icon can use the left mouse button to scroll through the images in the current series. Click and drag up/down or left/right in order to advance to higher or lower series numbers. ▫ Clicking the Magnifying Glass icon can use the left mouse button as a magnifying function. Click and drag up to increase the magnification factor, click and drag down to decrease the magnificationfactor. Magnification factoris annotated on the upperright area of an image. Zoom is applied to the images in the active viewport and the viewport forward. ▫ Clicking the Scroll icon can use the left mouse button to scroll images. Click and drag images in the active viewport to a new location. ▫ Clicking the Selection icon can use the left mouse button for a selection function and disable all other image controls. ▫ Clicking the W/L (Window Width/Window Level) icon can use the left mouse button for Window Width and Window Level imgaes. Click and drag the cursor in the directions below to changeWindowWidth/Window Level: Move up to make image brighter(reduce Window Level value) Move down to make image darker(increase Window Level value) Move right to make Window Width wider Move left to make Window Level more narrow. ▫ ClickingtheMinimize/Maximize iconcan change the viewport area to a 1-on-1 display, then resetformat, for example, change to a 4-on-1 display.				
Chapter 12				ACT imaging	ACT	How to select images displayed in the viewer using image select program?	Use one of the programs below to select the images displayed in the Viewer. Method1:Active image annotations 1. OpenViewer. 2. Place the cursor on an orange Image Number annotations on the upper left of a viewport. Figure 12-29 Orange image number annotations 3. Click to progressively add current images. 4. Right button singel click, decrease current images. Method 2: Command Line 1. Open Viewer. 2. Place the cursor on the Command Line. 3. EnterI XX and press Enter, here XX is the desired image number. This image number will appear in the left side of an active viewport. Method 3:Keyboard 1. OpenViewer. 2. Press Page Up to add the current image. 3. Press PageDown to decrease the current image. 4. Press Home to display the first image. 5. Press End to display the last image. Method 4:Image controls panel 1. OpenViewer. 2. Clicking the Image Page icon (located in the Image Controls Panel) to change the left mouse button into the layer number control. 3. Place the cursor in the viewport, then drag up orright/down or right/left, to advance to a higher or lowerimage serial number.				
Chapter 12				ACT imaging	ACT	How to invert image display using image invert program?	You can use the steps below to invert image display. Method 1: Window Width and Window Level icon 1. OpenViewer. 2. On the Display tab, click the Window Width and Level icon. 3. In the Windowing area, click the Invert icon. ▫ The Invert icon is a toggle icon; click it again to reset it. Method 2: Command Line 1. OpenViewer. 2. In the Command Line, enterinvert. ▫ Clicking invert again can reset the icon and return it to its normal state.				
Chapter 12				ACT imaging	ACT	How to change display format to 1 on 1 and return format to previously selected forn	UsingtheMinimize/Maximize tool canchange the formatto 1-on-1display (Maximize),the returnthe format to the previously selected value. 1. OpenViewer. 2. In the Display tab, click the Minimize/Maximize icon to change the viewport area to a 1-on-1 display. Figure 12-30 1-on-1 display 3. Click the Minimize/Maximize icon again, restore format. In this example,restore a 4-on-1 display.				
Chapter 12				ACT imaging	ACT	How to copy/expand objects from viewports using copy object program?	Mask,Measurements, ROIs andAnnotation program functions all have copying functions. Using the following steps can use the Command Line to expand objects in all or selected viewports. 1. OpenViewer. 2. Generate a graphic:Annotation,Mask,Measurements, ROI,Grid. 3. Click thegraphic youwantto copy (annotationbox, matte, measurement, ROIs, grid) and make itinto an active state (yellow). 4. In the Display tab, click the Selected objects icon and select the propagation option. ▫ Select All Images in series to apply annotation changes to all images in a series. ▫ SelectingThisImage Forwardonlyappliesannotationchanges to images inthe series following this serialnumber. ▫ Select Range to designate a layer plate range. 5. ClickApply.				
Chapter 12				ACT imaging	ACT	How to backup command lines?	1. Place cursor in the Command Line. 2. Enter one of the following commands: ▫ Enter prop a and press Enter, copying graphics in all viewports. To erase copied objects, in the Erase Hide Menu, click the Erase All icon.				

Chapter									
Chapter 12			ACT imaging	ACT	How to display,define an image in a small viewport according to image using refere	Use the Reference Image tool to display an image, define the original image within the small viewport according to the image. 1. OpenViewer. Select the image that you want to view. 2. Clicking Ref Image > All On to display reference images on all images in a series. □ Select Selected On to only display a reference image on the primary viewport. □ Reference images must be on a different level from the main image. □ These two images (main image and reference images) must come from the same exam, and must have the same horizontal boundary line, the same patient location and the same patient entry method. □ Viewportimages and reference images cannot be Screen Save, 3D rendered images or members of an image group. □ All Reference Image viewports display the same image. You can not place a different image in a single or different viewing areas. If an image in a Reference Image viewport is changed, all other Reference Image viewports will update to the same image. □ Inverse Video at the same time effects the main image and reference images. □ Click the Reference image to change focal point and adjust window width/window level, magnification, panning, flip/rotate and display normal. When you initiate these changes on a reference image viewport, all reference images will update. □ Series Binding cannot be applied to reference images. If you want to erase reference images from a series, please click Ref Image > All Off.			
Chapter 12			ACT imaging	ACT	What are the steps to display acursor,reportinganatomicalposition and CT valueon t corner of an image using report cursor procedure?	Youcan use the steps belowto display acursor,reportinganatomicalposition and CT valueon the upperleft corner of an image. Figure 12-32 Cursor Annotations 1. OpenViewer. 2. In the Display tab, click the Tools icon. 3. From the menu, select Guides Settings. 4. SelectReport Cursor. 5. Click and drag the cursor to view updated location and CT values. Clicking Save as Default can save the report cursor status during the restart process.			
Chapter 12			ACT imaging	ACT	What are the steps to change the left mouse button into the scrolling or panning co move images in a viewport using scroll images program?	Using the steps below can change the left mouse button into the scrolling or panning control in order to move images in a viewport. 1. OpenViewer. 2. From the Image Controls Panel, click the Scroll icon. 3. Click and drag images in the active viewport to a new location. Clicking the Display Normal icon can cancel scrolling on the images.			
Chapter 12			ACT imaging	ACT	What are the steps to define the layout of a viewport, and from which every main vi	Using the steps below can define the layout of a viewport, and from which every main viewport can define a format. 1. OpenViewer. 2. In the Display tab, click the Screen Layout icon. 3. In the Screen Layout area, select one of the available main screen layouts. □ 1-on-1 2-on-1verticalsegmentation □ 2-on-1horizontalsegmentation □ 4-on-1 4. In the Display tab, click the Format icon and select the desired format. □ This image format will be applied to the selected main viewport. 5. Select the main viewport where you want to place the screen layout image. This operation will activate the viewport. 6. In Data Selector, select the desired series and click View in the current viewport. □ Images in the selected series appear in the selected format in the current viewport. 7. Since each main viewport can use a single series and format, please repeat steps 4-6 for every main viewport. Like the example below selected a 4-on-1 screen layout and every main viewport adopts a single format.			
Chapter 12			ACT imaging	ACT	How to reset viewports?	1. Select Format icon and select 1-on-1 format display. 2. Select the Screen Layout icon and select 1-on-1 viewportformat.			
Chapter 12			ACT imaging	ACT	How to save an image in a series using screen save image program/tool?	Use the Screen Save tool to save a image in a series. Saved images can be viewed from the ImageWorks workspace. Figure 12-34 SSAVE Series 1. OpenViewer. 2. Click the image to be screen saved to make it active. 3. Click the Film/Save tab. 4. Click the Screen Save icon. □ On the Screen Save image you can still adjust W/L (Window Width/Window Level) and magnificationvalues. □ Once a screen is saved, all random annotations to an image can not be erased, because it is a "snapshot" of the screen and cannot be changed. □ Screensavedimageshavepost-processinglimits,forexamplefilteringcannotbeperformedon them. □ Screen save images saved in a SSAVE screeen save series, they can perform archiving and networktransferring.			
Chapter 12			ACT imaging	ACT	How to activate/deactivate series binding?	Using the steps below can turn Series Binding on or off. 1. OpenViewer. 2. In the Display tab, click the Tools icon. 3. From the tools pull-down menu select Series Binding. 4. Select ON or OFF. □ When Series binding is open, after the last layer in a series, click Image +(next image) or press Page Down to display the first layer of the next series. □ When Series binding is off, after the last layer in a series, click Image + or press Page Down to display the lastlayer of the same series. And it will not automatically advance to the next series. 5. Click Save as defaults to permanently save selected content.			
Chapter 12			ACT imaging	ACT	How to open the viewer from image works?	Using the steps below can view sessions and open the Viewer. 1. Navigate to the ImageWorks desktop. 2. Select the desired exam, series or image. 3. ClickViewer.			
Chapter 12			ACT imaging	ACT	How to use Text Page tool to displaya specific patient exam's Exam TextPageor Se page using text page display program?	Usingthe Text Page tool can displaya specific patient exam's Exam TextPageor Series TextPage or ROItext page. 1. OpenViewer. 2. Click the Film/Save tab. 3. Click the Text Page icon. 4. Click the desired Text Page. Exam Text page, Series Text page, ROI text page. 5. Select one option from among those at the bottom of the page. □ Clicking the Film iconcanplace the page in the nextavailable film frame in the film designer. □ Clicking the Screen Save icon can add the SSAVE image type to the patient exam. □ Use theNext/Prior arrow to navigate the text page. □ Click the Quit icon to close the window.			
Chapter 12			ACT imaging	ACT	What are the steps to use small ruler vertical or horizontal Tick Marks on your imag	Using the steps below can use small ruler vertical or horizontal Tick Marks on your image. 1. OpenViewer. 2. In the Display tab, click the Tools icon. 3. In the Set Display Preferences area, from the menu selectGuides Settings. 4. Select Vertical Tick Marks and/or Horizontal Tick Marks to open them. Figure 12-35 Tick marks on 5. Clicking Save as Default can save restarted tick mark status. Tick marks is a toggle option. Once they are opened, they will always maintain an On status, until you select this option again and turn it off.			

Chapter			ACT imaging	ACT	Question	Content			
Chapter 12			ACT imaging	ACT	How to Zoom the image, in order to best display the targeted area. If the selected view is set as the main view, and axillary views using zoom image program	Chose one of the following program to Zoom the image, in order to best display the targeted area. If the selected view is set as the main view, and axillary views follow after, then zoom will be applied to all images in the series. If the selection of other views is canceled, then zoom is only applied to the main view. Method 1: Display Tab 1. OpenViewer. 2. Click the viewport for which you want to zoom the images. 3. In the Viewer Display tab, click the Zoom icon. 4. In the Zoom area, enter a factor in the text box or use the slider to determine the zoom factor. Click the DisplayNormal icon to cancel the zoom on the image. Method 2:Image controls panel 1. OpenViewer. 2. Click the viewport for which you want to zoom the images. 3. From the Image Controls Panel, click the Zoom icon. 4. Place the cursor in an active viewport, click and drag to change the zoom factor. Click the Display Normal icon to cancel the zoom on the image. Method3: ScreenAnnotations 1. OpenViewer. 2. In the image viewport, place the cursor on orange Mag and click the right mouse button to display the Zoom slider in the image viewport. 3. Clicking and dragging the slider can change the zoom factor. 4. Click anywhere in the viewport except the slider to close the slider.Method 4:Magnifying Glass 1. OpenViewer. 2. Click the viewport for which you want to use the Magnifying Glass. 3. In the Image Controls Panel, click the Magnifying Glass icon. 4. Place the cursor in an active viewport, click and drag to view the magnified area.			
Chapter 12			ACT imaging	ACT	How to use Save State tool to save the current window width and window level, ima annotations and graphics to a GSPS in the Patient List using save state program?	Use the Save State tool to save the current window width and window level, image controls and all image annotations and graphics to a GSPS in the Patient List. MethodOne 1. OpenViewer. Select the image that you want to view. 2. Display images as per the necessary state. ☐ Places annotation text far away from the viewport margin. If the edge of the text box is near the edge of the viewport, then the displayed image on another viewer (for example, a PACS viewer) may not display the text box. 3. Place the cursor in the command line and enter ss, press the Enter key to save image state. ☐ PROSP series and GSPS series can perform network transfers and archiving, so that when they are displayed on remote systems, they can display saved image controls and images. These two types of series must be simultaneously sent to the terminal destination. If only the original image is sent, then the image controls will not be sent, because the image controls are located in the GSPS series. ☐ Archiving and network transfers of original series and GSPS series can be performed both manually and automatically. If you want to perform automatic archiving or network transfer of GSPS series, you must open Auto Archive or Auto Transfer by Exam, then create a GSPS series before the exam is completed. You must manually perform archiving or network transfer on any GSPS series acquired after an exam has been completed. MethodTwo 1. On the Film/Save tab, click the Save State icon. 2. Entertext as necessary in the Presentation Label text box. 3. Selectimage range. 4. Click Save State. View Save State image (GSPS) 1. Openthe ImageWorks desktop. 2. Select a GSPS series. Figure 12-36 Example of single GSPS series during the exam 3. ClickViewer.			
Chapter 13			ACT imaging	ACT	What are the steps to open add/subtract screen?	Ontheright sideofthebrowser, clickAdd/SubstracttoopentheAdd/Substract(ImageCombination) screen. Figure 13-1 Add/Substract screen Figure 13-2 Image Combination area Select Set 1 Defines the first image set. Select Set 2 Defines the second image set. Equal(=) Performs the selected operation and generate the new images. Ratio slider Increases pixelweightingof the left(first) image when moced to the left and increases pixel weighting of the right(second) image when moved to the right. The slider is only available during addition and subtraction when both Select Set buttons are selected. Save Series Displays the current series andstartingimage numberofthesavedseries.By default, images resultingfrom subsequent operations are added onto the end of the same series unless you click New Save Series.Figure 13-3 Save Series area New Save Series Places images resulting from subsequent operations into a new series in the Patient List. If you do not select this option, the images are saved in the current saved series. Mode Figure 13-4 Mode buttons Max creats a new series that finds the highest corresponding signal intensity values in the selected set or sets of images. Plus (+) creates a new series that adds the image intensity values of the selected image sets. Minus(-) creates a new series that subtracts the image intensity values of the selected image sets. Mincreatesanewseries thatfinds thelowestcorrespondingsignal intensity values inthe selectedsetorsets ofimages. Bind creats a new series that consists of copies of the selected images from one or more existing series. Accept Negative Pixels Allows negative pixel values in the resulting images. If this function is not enabled, all negative pixel values are set to zero. This operation is useful on pre-and post- contrast studies of the same slice location. Clear Selection Erases the selections so that both Select Set buttons have no prior values associated with them.			
Chapter 13			ACT imaging	ACT	What are the procedures to create a new image set using add/subtract?	Use this procedure to create a new image set, for example add thin slices together or subtract pre/post contrast series. The resulting images are annotated with the day on which the addition/subtraction was performed. OpenImageWorks. 1. From the browser list of applications, click Add/Sub. 2. Selectthe desired images. ☐ If only one set is selected, each operation performed produces one resulting image. ☐ If two sets are selected, images in the two sets are paired according to physical location in the patient's body. Unpaired images in either set are ignored. 3. On the Image Combination screen, click Select Set on the left. 4. If you are adding/subtracting two sets of images, select the second set of images, and click Select Set on the right. ☐ By default, equal weighting is applied to the two pixels in each pair, but you can change the weighting via the Ratio slider. ☐ Drag the slider to the left to increase the pixel weighting of the images on the left Select Set button.Dragthe sliderto the rightto increase thepixelweightingofthe imageson the right Select Setbutton. 5. Click+(addition) or-(subtraction). 6. For subtraction, click Accept Negative Pixels unless youwantthe negative pixel values setto 0 in the resultingimage. 7. Typically, use the system provided series number. 8. Click = (equal) to generate the images in the exam defined by the left Select Set button. 9. Optional:ClickNewSave Series to repeattheadd/subtract procedurewithanewseries numberand description.			
Chapter 13			ACT imaging	ACT	How to combine /bind a series of images?	Use this procedure to combine images from different series to create a new series. The resulting images are annotated with the day on which the addition/subtraction was performed. OpenImageWorks. 1. From the browser list of applications, click Add/Sub. 2. Selectthe desired images. 3. On the Image Combination menu, click Select Set on the left side of the menu. 4. Click Select Set on the right side of the menu. 5. ClickBind. 6. Typically,use the system provided series number, ortype a newseries description and numberin the Save Series textfield. 7. Click = (equal) to generate the images in the exam defined by the left Select Set button. 8. Optional:ClickNew Save Series to repeatthe add/subtract procedure with a new series number and description.			

Chapter		ID	Section	Sub	Question	Answer			
Chapter 13			ACT imaging	ACT	How to create an image with min/max CT values?	Use this procedure to create a new image using only the minimum or maximum CT numbers. The resulting images are annotated with the day on which the addition/subtraction was performed. OpenImageWorks. 1. From the browser list of applications, click Add/Sub. 2. Selectthe desired images. 3. On the Image Combination menu, click Select Set on the left side of the menu. 4. Click Min (minimum) or Max (maximum). 5. Typically, use the system provided series number. 6. Click =(equal). 7. Optional:ClickNewSave Series to repeatthead/subtract procedurewithanewseries numberand description.			
Chapter 13			ACT imaging	ACT	How to display exam split screen?	Click the ImageWorks icon . From the browser list of appliations, click Exam Split to display the Exam Split screen. Figure 13-5 Exam Split screen Screen format Lists the Exam Split display options. Produre/Split/Exam Displays a list of Trquested Procedure IDs or Accession Numbers for the same patient.W/L presets Allows selection from a Preset menu and to Reset the W/L to the last selected values. Comments An area in which you can add a comment that is attached to the file you hace selected to solit. Delete All/Delete/Add After a range of images has been selected, click an option to define how you want your primary port displayed. Procedure A list lfst Requested Procedure ID or Accession numbers. Send Saves your selections sends the files to the selected host. Browser Cancels your selection, ends theSpilt Exam sessiomm and returns you to the browse			
Chapter 13			ACT imaging	ACT	How to split exams when scan is completed?	Use this procedures to split a series into separate groups that canthen be used for multiple reads and billing. Exam Split is only available if your system has ConnectPro. 1. Complete an exam where multiple Requested Procedure ID or Accession Numbers have been selected. □ All Patient records that you wish to split, must be selected from the Patient Schedule when you selectedNew Patient. You cannot add procedures afterthe exam is ended. 2. Click the ImageWorks icon. 3. From the browser, click the exam you wish to split. 4. Select the series to split. 5. From the browser list of applications, click Exam Split. □ The Exam Split menu appears with the selected images displayed in the upper viewports. The system may display every image or skip some images depending on the total number of images selected. □ Iftheexamyouselecteddoes nothaveMultipleProcedures, adialogmessage ispostedandExam Split exits. 6. Fromthe Exam Split screen, click firstimage, press Shift, andclick the lastimage to select the desired range of images to be grouped together per procedure code.7. From the Procedures list area, selectthe desired procedure from the available list,which reflects the procedures selectedfrom Patient Schedule. 8. From the Exam Split control panel, click Add. . Add desired images to the procedure. 9. Adjust the W/L as needed in the exam area of the display. □ To adjust the W/L use either the W/L Presets on the Exam Split control panel or use the mouse. 10. From the Exam Split control panel, click Host Selection. 11. Select the receiving host and click Save12. Fromthe list of procedureson the Exam Split control panel, selectthe procedures youwish to send to the host and click Send. □ To select multiple procedures, simultaneously press Shift and click each procedure. □ For systems configured for VES, send exams prior to splitting and it sends GSPS objects. □ For systems configured as HES, images are sent after splitting and sends a new series. 13. Click Browser to exit from Exam Split.			
Chapter 13			ACT imaging	ACT	How to create neuro 3D images using neuro 3D filter?	Use this procedure to create images with a Neuro 3D Filter, which removes noise from an image while preserving image resolution. Neuro 3D Filter is optimized for thin slice data that is intended for post processing in Reformat to create Average and MIP1 images, Volume Rendering and 3D models for Neurological studies such as Circle of Willis, carotids, sinuses, orbits, mandible, and helical brain. 1. Click the ImageWorks icon. 2. Selectthe desired exam/series/images. The selected series: □ must have at least three non-duplicate location images □ must be less than 500 images □ must be a single group or multiple groups if the following parameters are the same : slice thickness, interval, tilt, SFOV, DFOV, scan type,rotation, speed, image center, and algorithm. The groups must be contiguous. 3. From the browser list of applications, click Neuro 3D Filter. 4. Click Low, Med, or High. 5. Series are numbered in the browser as follows: □ Low filter = series number plus 30 (for example, series 427 becomes 457). □ Medium filter = series number plus 40 (for example, series 427 becomes 467). □ High filter = series number plus 50 (for example, series 427 becomes 477). □ The series description is "3DFiltered". 6. ClickGo. 7. Click the Close icon to close the screen when filtering is complete.			
chapter 15					What are the steps necessary to use the AW Server client application on the CT console successfully?	□ Start the AW Server client on the CT console □ Exit the AW Server client on the CT console Loadingimageswith theResultsViewerapplication within theAWServer client on the CT console may slow down the console processing because the images are transferred to the memory of the CT console. Avoid launching the Results Viewer while other processing steps are executed, such as scanning or image reconstruction. When the console becomes slow, exit the AW Server client and login again. When you are viewing images with the Results Viewer within the AW Server client on the CT console, do not choose the Save to my PC option from the right-click menu. The images may be saved into an unknowndirectory. Use this procedure to start the AW Server client on the CT console. 1. SelectImageWorksdesktop. 2. From the exam list browser, select the exam and series of interest for post processing. 3. Click Applications in the Data Apps list.4. The AW Server client main window is opened and the same exam selected in the browseris selected automatically in the AW Server exam list. If the exam and series selected in the console exam list browser doesn't exist in the AW Server exam list, a pop-up warning is displayed.			
chapter 15					What is the procedure to exit the AW Server client on the CT console?	1. Exit the applications that are running. 2. Click the Close button to log out of the AW Server client.			
		MANUAL_FUNC_STEPS_1	ACT filming		What are the steps to obtain functions supported by manual film compressor?	The manual film composer supports following functions: Step 1:Select the images from image browser by exam, series or image level. Step 2:Organize the multiple patients' filming jobs at the film interface. Step 3:Setup the film layout easily.Step 4:Copy/cut/paste/insert/delete the images on the composer. Step 5:Review the film job from the film history. Step 6:Edit the image annotation.			
		PRINT_PARAMETERS_1	ACT filming		How to set the print series parameters ?	Step 1: On the display monitor, click in one of the lower viewports. Step 2: Click List Select. Step 3: Select an exam, series, and image. Step 4: Click the Manual Film Composericon. Step 5: Place the cursor in the image/series to be used for Print Series. Step 6: Press F4. Step 7: Set the Print Series parameters. Step 8: Click Print Series.			
		MAN_IMG_FLM	ACT filming		How to manually film images?	Step 1:From the Manual Film Composer screen, complete the following: Set Print setting. a. Selectlayout. Step 2: Place the cursor over the image you want to film and use one of the following film methods: Film single image: press F1 and the currently active image is placed in the next available film frame.Film Screen: Set the image display format to the number of views you want displayed according to the layout you have opened, then press F2.Film MID: set the image display format to the number of views you want displayed within each film frame, then press			