***Don't propagate WL/WW between series***

This will enable you to turn on or off the use of the same settings for image contrast and intensity (window level and window width) for all series displayed on the screen.

***Propagate settings in current series***

This option will turn on and off the propagation of image adjustments to all the images in the current series. This option enables you to either adjust individual images of the series using different settings or make the settings apply to the entire series.

***Propagate Zoom Level Only if Planes are Parallel***

This option lets you propagate zoom levels if you are viewing parallel planes.

***Sync Series (same study)***

Selecting this option will display the submenu shown below:

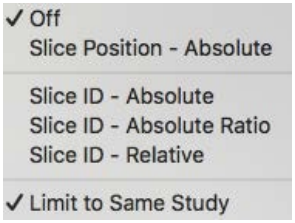


Figure 3.29

You can use this option to enable the synchronization of images from multiple series simultaneously by the slice's position or ID.

***Sync Series (different studies) at current position***

This allows you to synchronize among two series from different studies using the starting position of the image displayed on each series window.

***Key Image***

Use this option to mark an image as a key image. When marked, the image will display a yellow frame.

***Mark All Images as Key Images***

If you want to mark all images of a series as key images, use this option.

#### *Unmark All Images as Key Images*

This option unmarks all of the key images that have been marked in this series.

#### *Mark All ROIs Images as Key Images*

This option marks quickly identifies every image containing an annotation of a graphic ROI as a key image.

#### *Find Next Key Image*

***This option jumps you from the current key image to the next key image in the series.***

#### *Find Previous Key Image*

Use this option to jump back to the previous key image in the series.

#### *Subtraction*

This menu selection will display the sub-menu below.

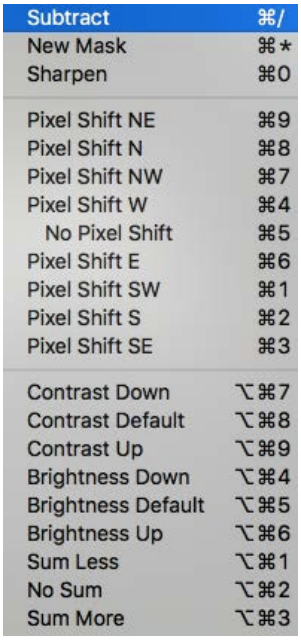


Figure 3.30

From this submenu you can select the option of your choice to subtract an image from the other images in the series in different ways. Specifically, the first three options from the submenu do the following:

*Subtract*

Turns on or off the subtraction operation.

*New Mask*

Enables you to use the current image as a new mask.

*Sharpen*

This makes an edge enhancement by using a sharpen filter applied to the results of the image subtraction.

The remainder of the selections from this submenu operate as follows:

*Pixel Shift*

This option from the submenu shifts the mask image by one pixel in the identified direction.

*Contrast Down*

This option from the submenu reduces the contrast of the mask image used to be subtracted from all images in the series.

*Contrast Default*

This option resets the default contrast of the mask image that is being subtracted from all of the other images in the series.

*Contrast Up*

This option increases the contrast of the mask image being subtracted from the other images in the series.

*Brightness Down*

This option reduces the brightness of the mask image being subtracted from the other images in the series.

*Brightness Default*

This option resets the brightness of the mask image being subtracted from the other images in the series.

*Brightness Up*

This option increases the brightness of the mask image being subtracted from the other images in the series.

*Sum Less*

This option reduces the sum of multiple contiguous images used as a mask for subtraction.

*No Sum*

This option cancels the use of the sum of multiple contiguous images used as a mask for subtraction.

*Sum More*

This option increases the sum of multiple contiguous images used as a mask for subtraction.

#### *Annotations*

Using this set of options enables you to turn on and off parts of the displayed annotations. You can use the "tab" key to switch between these different modes: none → graphic only → full → basic → none. Annotation options appear on the submenu shown below.

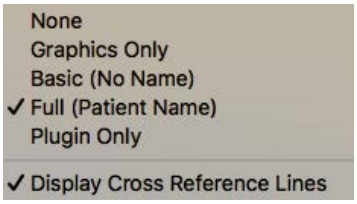


Figure 3.31

*None* - turns off all the annotations and overlays.

*Graphic Only* – turns off only the annotations and retains the graphic overlays.

*Basic (No Name)* – only turns off the patient name display. All other annotations will still display.

*Full (Patient Name)* – all annotations and overlays will appear.

*Plugin Only* – only graphics and annotations that were created using plugins will display.

*Display Cross Reference Lines* – turns on or off cross reference lines. Note that if the slice image of the front most window has cross lines they may still be displayed.

#### *Window Width & Level*

Selecting this option displays the following submenu, enabling you to select predefined WL and WW values. You can also add custom presets to this list by adding the "current WL/WW" as shown.

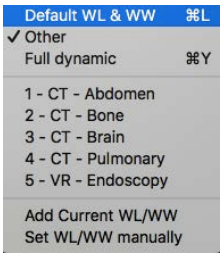


Figure 3.32

Figure 3.33

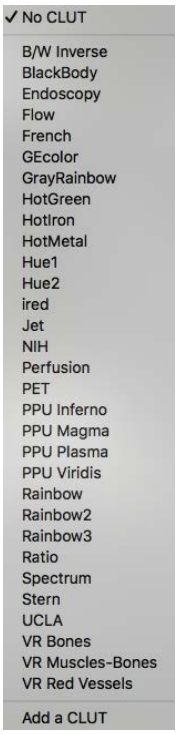


Figure 3.34

### *Color Look Up Table (CLUT)*

This applies preset color schemes to images. These schemes appear on the submenu to the right and can be selected from the list.

### *Color Look Up Table Bar*

By selecting this option, the following sub-menu will appear. Selections from this submenu enable you to show or hide the color lookup table scale.

Figure 3.35

### *Opacity*

Selecting this option displays the submenu shown below. From this submenu, you can select one of the options to adjust the blending of fused images. Custom opacity tables can be created as well.

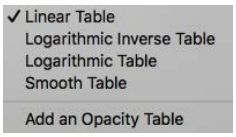


Figure 3.36

### *Convolution Filters*

Selecting this option displays the submenu shown below. From the submenu, you can select a convolution filter.

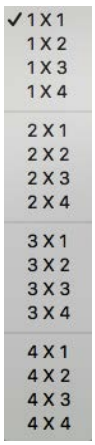
A convolution filter is a function that transforms the display of the image. It does not change the image itself. Depending upon the filter selected, a formula will run against each pixel of the source image one by one to compute the values of each pixel in the resulting image using the values of the surrounding pixels.

Custom filters can also be created. Filters are applied to the images in real-time on the display, but the original data remains unaltered. This item is also available as an icon in the 2D Viewer toolbar.

### *Apply Convolution Filters to raw data*

If you want to apply the convolution filter to the image data itself (not just the display) you can select this option. It will apply the selected convolution filter to alter the image data. This should be done with caution, since it cannot be undone.

### *Image Tiling*




You can select the grid display for your screen windows from this option. Selections of the display configurations shown on the submenu to the left will be displayed.

Alternatively, you can select the number of rows or columns (from 1 – 9) that you wish to display from the next two options on the 2D pull down menu:

*Windows Tiling - Rows ,*
*Windows Tiling Columns.*

Figure 3.37

***Save Workspace State (as DICOM SR)***

By selecting this option, you can save the current workspace display including the images being displayed as well as their layout on the screen. The "SR" option saves these as a structured report.

***Load Workspace State (as DICOM SR)***

This option enables you to restore a workspace screen configuration previously saved, including those saved as a structured report.

***Reset Workspace State***

This option resets the default workspace configuration that may have been previously changed.

## THE 3D VIEWER MENU

Figure 3.38

Certain studies that have sufficient resolution and are scanned with modalities capable of generating a 3D image or various other rich views can be reproduced in Horos as an MPR or 3D image.

### *3D MPR*

Selecting this option, displays an oblique multiplanar formatting of the series of images in a separate window as shown below.

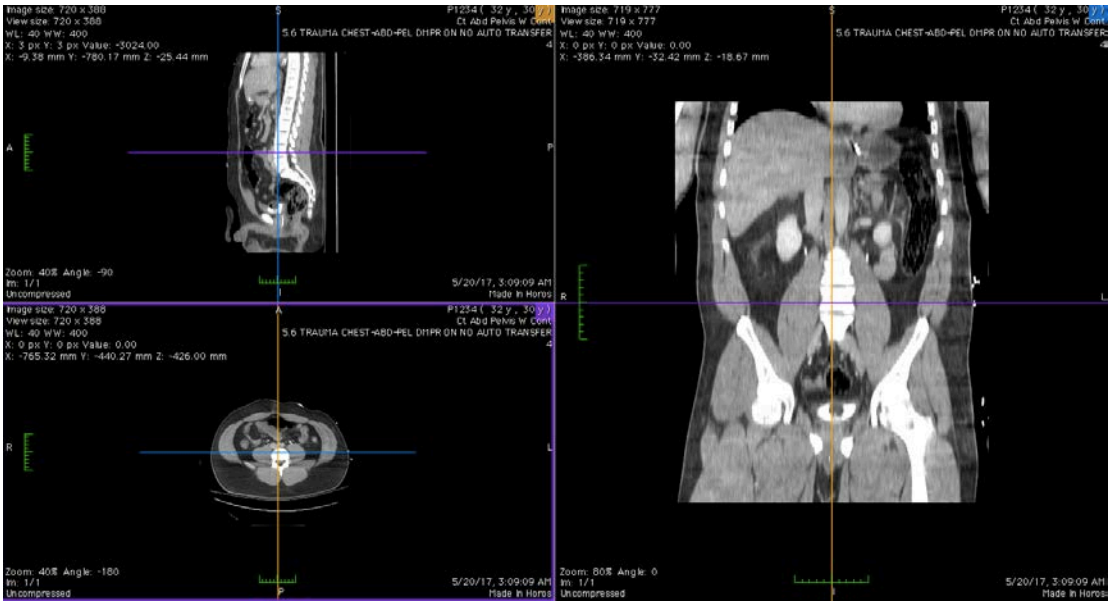


Figure 3.39

### *3D Curved MPR*

This option is an alternative to the plain MPR. It displays a 3D Curved MPR Viewer format also in a separate window.

### *2D Orthogonal MPR*

Selecting this option displays a 2D Orthogonal MPR Viewer format of a series also in a separate window.

### *3D MIP*

Selecting this option displays a Maximum Intensity Projection (MIP) image in a separate window.

### *3D Volume Rendering*

Assuming there is sufficient information included with a scan, this option enables the display of a 3D rendered image using the embedded Volume Rendering capability. The 3D image will be displayed in a separate window where it can be manipulated, turned and processed.

### *3D Surface Rendering*

This generates a 3D rendered image using the Surface Rendering capability. When this option is selected, the following box displays requesting information to customize the view.

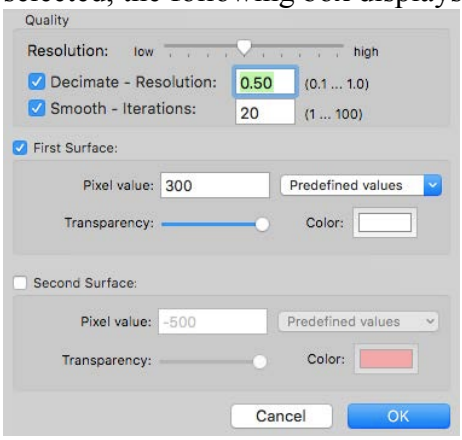



Figure 3.40

Once selected the screen displays appear similar to that shown below.

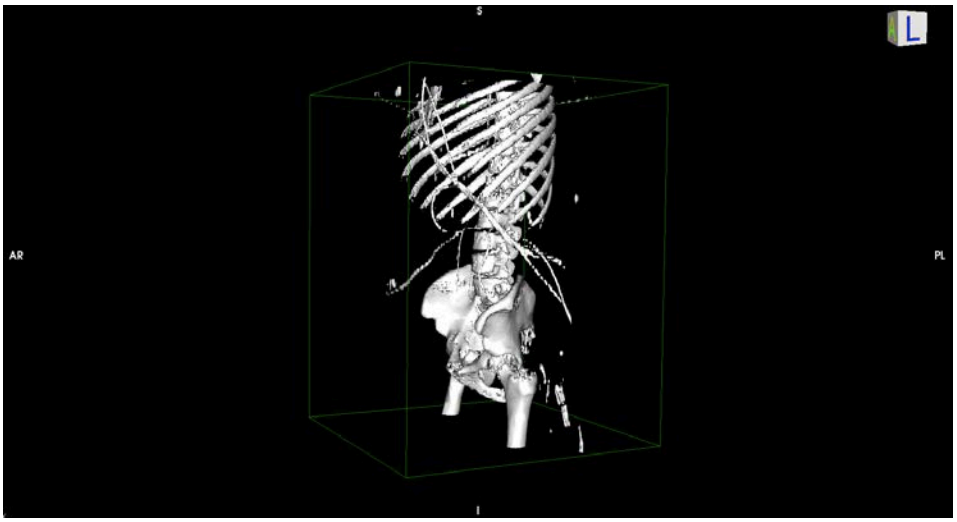



Figure 3.41

### *3D Endoscopy*

Assuming you have an appropriate scan from an endoscopic CT modality, this features enables the display of a navigation window with an endoscopic view.

### *Reset to initial view*

If you wish to restore the display to the system's original settings including orientation and zoon, use this option.

***Revert series***

This is a hard reset that returns the view to the original file's settings, unless pixel values were changed.

***Changing Views***

*Coronal View* - This changes the display to a coronal view of the images in the current 3D window.

*Left Sagittal View* - This changes the display to left sagittal view in the current 3D window.

*Right Sagittal View* - This changes the display to right sagittal view in the current 3D window.

*Axial View* - This changes the display to an axial view in the current 3D window.

***Add FlyThru Point/Remove Fly/Thru Point***

If you wish to add the current image as a point on the fly through sequence or remove an existing point on the sequence, select the appropriate option amongst these two.

***Reset FlyThru Path***

In order to entirely reset the fly through sequence, select this option.

***3D Curved Path***

You can choose either to load and existing 3D curved path or save a 3D curved path from this menu. The file will be saved with a .curvedPath extension that is unique to Horos and can only be read with this software.

***Scissor Editing***

This menu option will enable you to Save, Load or Delete the volume editing generated with the scissors tool function. Scissors tool is used for removing portions of a 3D volume.

***Select/Save 3D Preset***

While using 3D volume rendering, you can either select a preset from a list of presets by using that selection or you can save the current view as a preset.