Basics

General

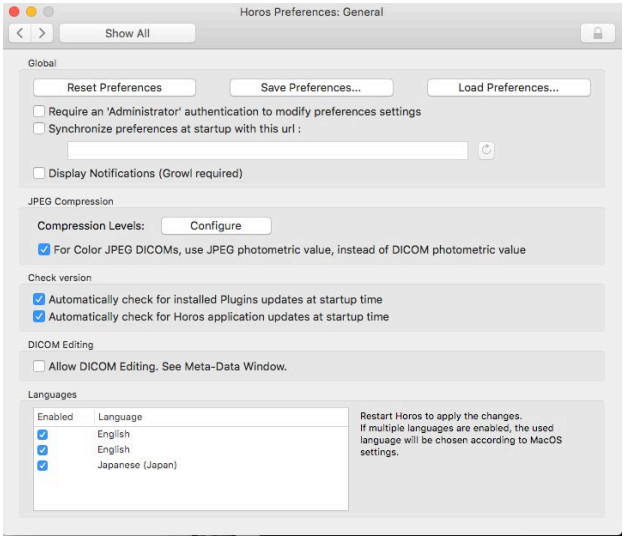

Figure 2.2

Global

This option restricts the ability to change Preference setting to only an administrator. It will prevent other users from changing any of these parameters that may affect Horos's operation. The default is unchecked or "off."

You also have the option of synchronizing preferences when Horos starts with that designation in a specific url shown. The default is that this box is not selected.

Compression

These options enable you to change the level and type of image compression for DICOM images depending upon the user's priorities – creating smaller file sizes. Horos always recommends using compression that is NOT LOSSY – meaning that upon later expansion no image fidelity is sacrificed. Settings can be changed for each modality. Compression is helpful when selecting from the file menu, when burning a CD or when using Horos in the listener function. Please be sure to check with your local regulatory and compliance agency to ensure that selecting compression does not cause you to be out of compliance.

Check Version

This check box allows the user to select whether the program should automatically check for updates of both Plug-Ins and newer versions of Horos. You can turn this off; the default is "on" for both.

DICOM Editing

If this box is checked, the user can modify a DICOM header using Horos. While this is a powerful function that allows you to anonymize a file, change parameters and fix errors introduced at the time the scan was performed, we recommend the user be quite careful when using this function lest he or she corrupt a file or change the context of medical procedure.

Languages

Horos is currently only available in the English language. However, this option will change from time to time as new language submissions are validated.

Database

This is a very detailed set of preferences that allows the user to organize his or her images database location and other parameters, including the choice of native reporting software (See Cloud Reporting Options elsewhere.) The screen below illustrates all of these options. We recommend the novice user accept the default values and only change items if they are completely familiar with them.

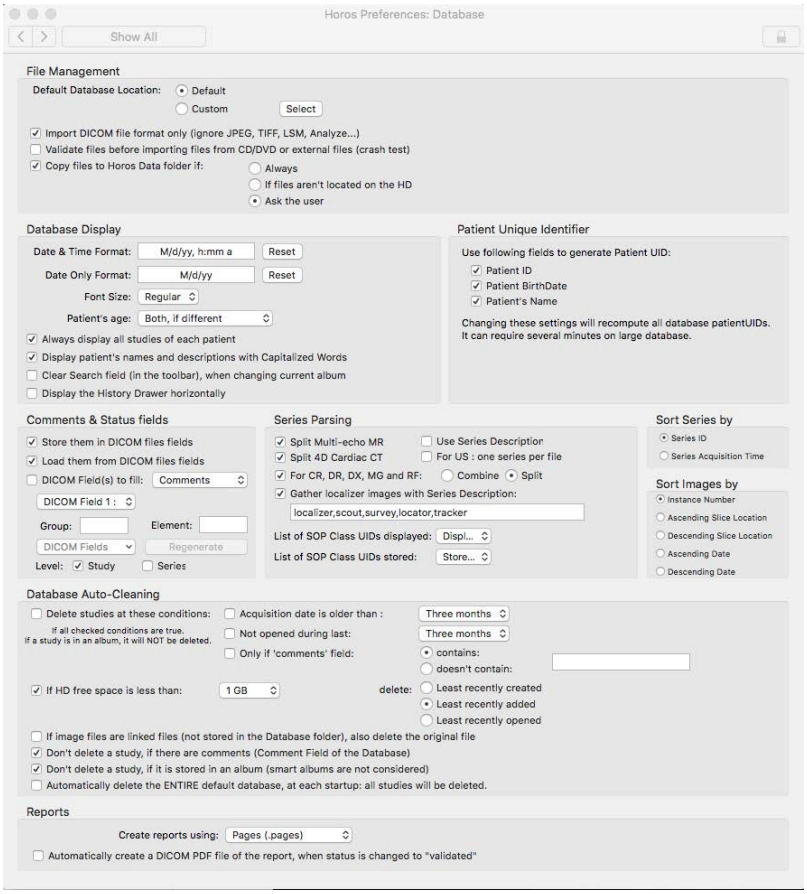

Figure 2.3

File Management

Default Destination for Horos Files

By default, Horos is set to create Horos a folder called Horos Data in your Documents folder. This folder is where Horos will locate the images database and other files used for your settings, preferences, etc. Alternatively, you select another location for thee files by selecting Other and specifying a different location.

Import File Formats

You can set Horos to only import DICOM files, or you can allow it to import other formats. The default is DICOM If set in this manner, Horos will ignore other files that are not DICOM format.

Validate files before importing

If you activate this option, Horos will validate files prior to beginning an import. With this option, you avoid this risk of a system crash that might be caused by a corrupted DICOM file. Normally

Horos can detect corrupted files and will not try to read or open them. However, with this option, Horos will specifically test each DICOM file in advance. Typically, you would use this option if you were importing files from other than a trusted source. When you turn on this option, the time required for an import increases.

Copy files to Horos Data folder

You can specify whether you want to copy DICOM images into Horos's local database. Alternatively, Horos can link to the current location of the images, which avoids using extra storage space on your local disk. Most users prefer to copy studies into the local database folder ensuring they always know where your files are located.

When accessing files from a CD or DVD, choosing to not copying the files to a local database will automatically delete the link when you eject the disk.

Database Display

You can set the way certain DICOM tags are displayed in your list of studies with these options.

Date and Time, Font Size, Patient Age

You can select the formats displayed by specifying the parameters and separators for how you would prefer to view dates. Once set this format will be used globally. In addition, you can choose the font size as well as whether you wish to see the patient's age at time of scan or current age.

Display All Studies for Patient

If selected, all studies for the selected patient will display. Selected studies will be in bold font and related studies are displayed in normal font.

Capitalized Display, Clear Search Field, and Horizontal History

These setting enable changes to the default view that are apparent. The default is that all patient names and descriptions will display in uppercase font.

Comments and Status Fields

You can select this option to store comments as a field directly in the DICOM files. Only comments made in the default comment field (Comments) will be saved.

Comments already found in the Study Comments field can be used to populate the Comments field.

Alternatively, you can specify another DICOM field to automatically fill the Comments field, using the comments field as more of a custom DICOM field. This field will be filled only when the file is received or imported in Horos. This enables you to modify this comments field later. The user can 'regenerate' this field for the entire Horos database by clicking the Regenerate button. When this is selected, all the comments fields will be deleted the files will be parsed to read the corresponding DICOM field. This may take some time if there is a lot of data.

Series Parsing

These options modify the way Horos "parses" studies, when adding and indexing new files. By default, each image belongs to a unique series according to its SeriesInstanceUID field.

You can alter that as follows:

> ***Split Multi-echo MR*** *Multiple echo time (TE) acquisitions will be separated in multiple series, one for each echo time. The echo time is is found in the field EchoTime.*
>
> ***Split 4D Cardiac CT*** *Each cardiac phase percentage will be a separate series as read from the field ScanOptions.*
>
> ***For CR, DR, DX and RF*** *Combine or Split If any of these modalities is the source of the study, the images of each separate modality will either be combined in a unique series or split into multiple series, with only one image. The modality is found in the field modality.*
>
> ***Gather localizer images with Series Description*** *Any image type field containing one of the words entered in the box (separate them by commas) will be combined with any other using the same word in a single series.*
>
> ***Use Series Description*** *A separate series will be created for each series description found in the field SeriesDescription.*
>
> ***For US*** *one series per file For ultrasounds (US), each series will contain images belonging to a single file - US studies often contain multiple frames in a file.*
>
> *The final two Series parsing drop-down menus available at the end of this group display the list of SOP Class UIDs that are used by Horos. If you have a file with a class not in this list, it will be rejected.*

Sort Series By

You can either sort and order each series in the Database window and the 2D thumbnails by their Series ID field SeriesNumber or by their Acquisition Time fields: SeriesTime, AcquisitionTime or ContentTime. Series ID and Series Time fields often correlate in order anyway.

Sort Images By

Images within a series can be viewed in the 2D Viewer Window in the order specified:

> ***Instance Number*** *- field InstanceNumber*
> ***Slice Location*** *– field SliceLocation : either ascending or descending; or*
> ***Acquisition Date*** *- field AcquisitionDate either ascending or descending*

Database Auto-Cleaning

This option, when selected, enables databases to be automatically cleansed of specified studies, based upon acquisition date, when they were last opened, or if certain comments are found (specified). It also allows auto cleansing if there is no longer sufficient local disk space. And, will even enable purging of the entire default database at startup.

There are also specific parameters that can be set to ensure studies are not deleted: if there are comments in the Comment field or if it is stored in an Album or otherwise Locked.

Of course, studies can always be manually deleted.

Reports

There are two types of reporting in Horos. The traditional method enables the use of a word processor and was historically the way that most people use Horos for reporting. The newer option enables the user to select cloud-based reporting. That requires a subscription to the cloud that is described later and is not part of this preference.

For traditional reporting, this option selects the particular brand of word processing program that will automatically be launched once the user has begun to report on a study.

You can also choose to automatically generate a PDF copy of the report when the study status is changed to validated.

CD/DVD

In this section of Preferences, you can designate Horos's behavior upon inserting a CD or DVD into a connected drive for reading or writing to/from the disc. When a disc is inserted you can select whether to automatically add the images to your database. If you would prefer to do this manually, then do not select this option.

Discs with images usually contain a DICOMDIR file. Horos will use this file, if it is present, to identify the images on the CD. This is a relatively faster solution than scanning the disc for all DICOM images. The slower method is a bit more trustworthy.

For writing to discs, you can override the standard JPEG2000 compression that is normally used. JPEG2000 is more modern than this JPEG selection. Only use this option if you need to remain compatible with older DICOM viewers. The level of compression Is defined in the General Preferences Window.

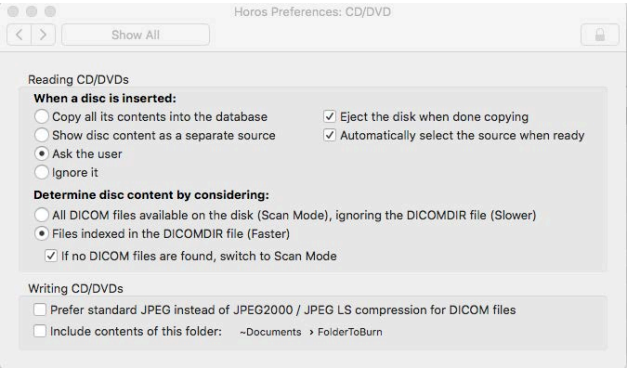

Figure 2.4

If you wish to add the contents of the directory to the CD, you can select the bottom option.

Protocols

You can preset protocols in this preference selection. This can be done based upon both the modality and the study description. The modality pull down is shown in the top left corner of the screen. Here you can select among the various modality types. Upon selecting a particular modality, you can then enter a description tag in the database field studyName, DICOM field StudyDescription and the associated desired protocols. Doing so will enable the default protocol configuration to automatically be the presented view.

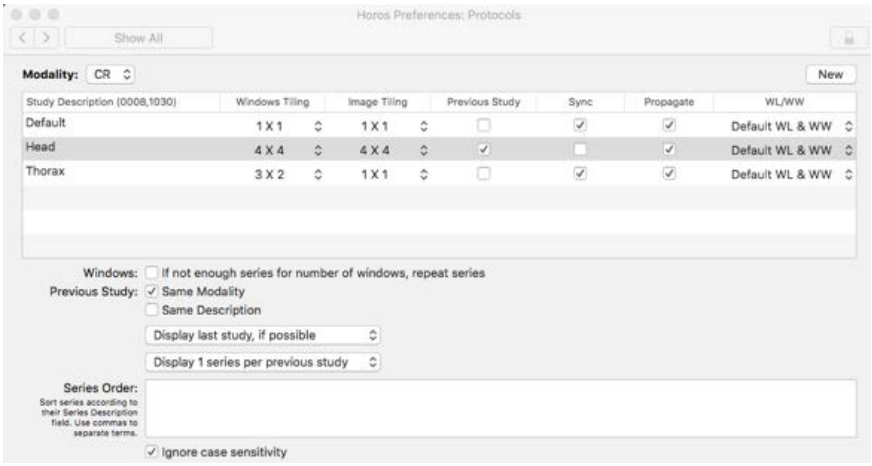

Figure 2.5

If you would prefer all studies from a particular modality type to utilize the same protocol, you can enter Default as the Study Description and the will share the same default protocol.

You can also decide if you wish previous studies of this patient scanned on the same type of modality or with the same description (or both) to appear when you summon a particular study for viewing.

Hot Keys

You can change the shortcut keys using this preference. To change the key, select the line of the tool and press the desired key. This preferences pane allows the user to modify some of the default shortcut keys in order to access certain tools, such as the 2D Viewer mouse tools or the WL/HOROS presets. To modify the key associated with a tool/function, select the line corresponding to the tool and hit the desired key. The default will change to show the key you selected.

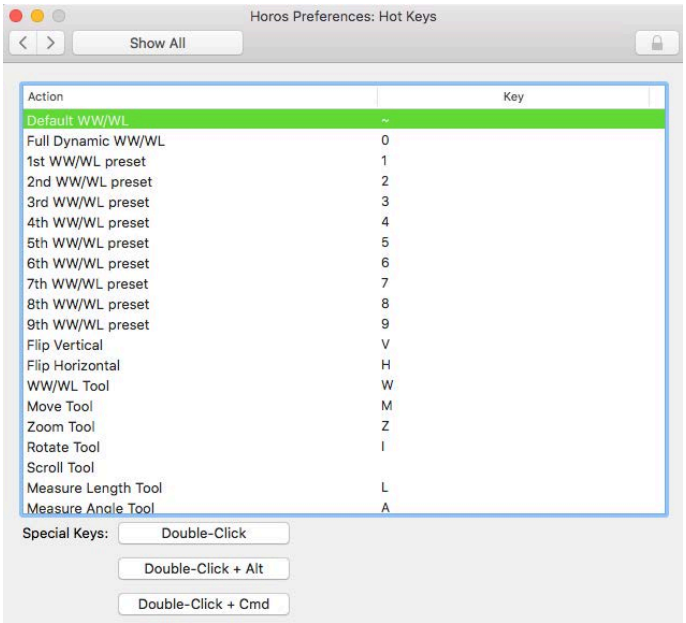

Figure 2.6

The default hot keys may be found in Appendix A

DISPLAY

Viewers

Here you can customize the behavior of your 2D viewers.

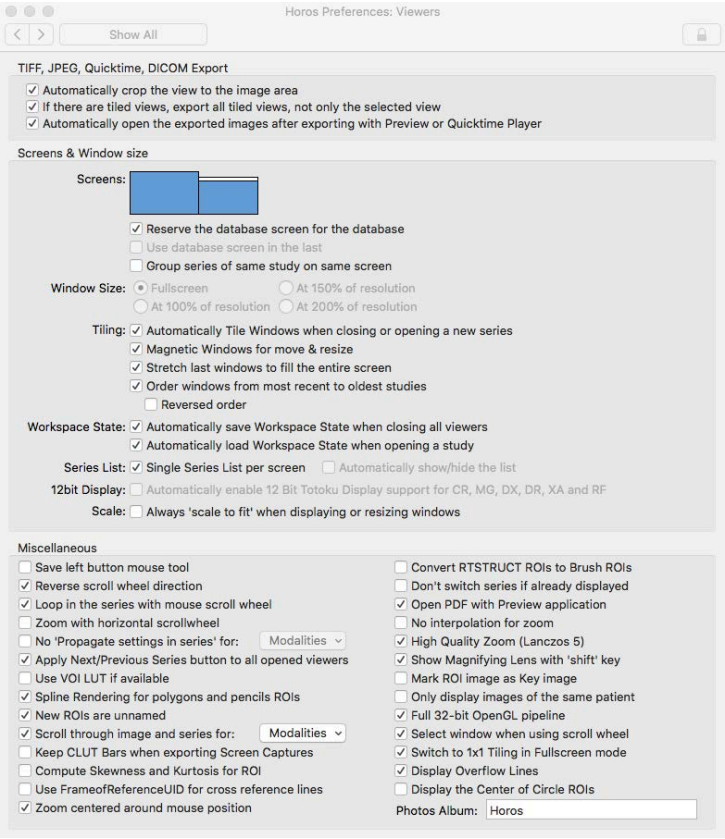

Figure 2.7

TIFF, JPEG, QuickTime, DICOM Export

Setting these options will affect the way these types of images will be displayed.

Automatically crop the view to the image area

This will remove any black area surrounding an image.

If there are tiled views, export all tiled views

If this option is selected and you are using image tiling, all visible tiled images will be exported.

Automatically open the exported images

If this option is selected, exported images will automatically open with Preview or Quick Time video player.

Screens & Window size

This set of preferences is useful when you are using multiple screens to view Horos. Each option is described below:

> *You can set Horos to open 2D Viewers on one or both of your screens. To select a screen simply click on the selected screen and choose to Use this screen for viewers.*
>
> *Below the screens diagram, you can select either to Reserve the database screen for the database which means that this screen will not be used for a viewer or alternatively to Use database screen in the last if other screens are already used as a viewer.*
>
> *Another option also allows you to always reserve the screen where the database window is located for the database: no 2D Viewers windows are displayed on this screen. Or you can select the database window screen in the last, only if all others screens are already used for 2D Viewers. Lastly, you can select grouping of a series of the same study on the same screen.*

As long as you have not selected Automatically Tile Windows when closing or opening a new series, the Window Size option allows you to force Horos to open series in windows that fit the selected size or to fill the whole screen.

When using more than one screen for your 2D Viewer, the toolbar will display as a floating panel. Even with just one screen you can select this same behavior.

By selecting the Automatic Tiling option, Horos will resize and rearrange windows to fill the available screen. Selecting the Magnetic Windows option will cause windows to appear at the edges of the screen as well as the edges of other open windows. Tiling and Magnetic Windows are described in more detail in section 2.

You can select that upon closing viewers you wish to save your workspace and upon opening a study you wish the workspace to open automatically.

The scale to fit option makes the whole image is visible even when resizing the window.

Miscellaneous

The last group of options contains settings for various aspects of the 2D Viewers. These options are described below:

> *Save left button mouse tool - The default is unchecked. Checking this box will cause Horos to remember the last tool used with the left mouse button. Leaving this button unchecked will mean the left mouse button will be set to WL/HOROS when the 2D Viewer is opened.*
>
> *Reverse scroll wheel direction - Reverses scrolling direction through a series.*