X-Rays, Videos and Document Filing

In addition to being a powerful, flexible tool to collect your patients' outcomes, Socrates is also a cataloguing system for your X-rays, videos and other documents. There is no limit to the number of images or documents you can file with your patient records – you are only limited by the amount of storage available on the drive holding your images folder.

X-RAYS AND OTHER IMAGES

X-rays can be stored in JPEG, TIP, or Bitmap formats. We're currently having some issues with the Dicom format, but we are working on it and it should be functioning soon. Some images on CDs cant be imported directly from the CD, they will need to be transferred to a folder on your computer before they can be imported.

The Main Image File

The images for the whole database can be viewed from **"Images"** on the **Home Screen**. On the **Main Image screen**, you can:

- view the images,
- export,
- search,
- or view in slide show format,

but you *cannot import or delete images from this screen*. Importing or deleting is done from within the individual patient surgery record that the X-ray or image belongs to.
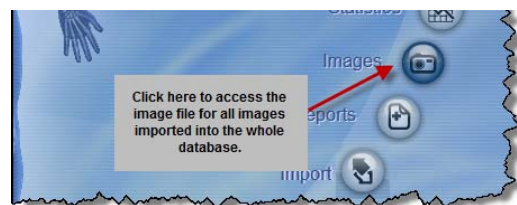
Images displayed below are all the images in the entire database in the **Main Images File** found on the **Home screen**.

LOCATION OF IMAGES

When you first set up your data file, you will be asked to either choose the default location for the image folder, or select one yourself. This location can be on the drive where the program and data file are, or on an external drive. As long as you "tell" the data file *where the image folder is located,* it can be stored anywhere. The X-rays, videos and any of the external documents (spreadsheets etc) are all stored in this file even though they are imported from 2 different places in the program. Note that this doesn't just create just a link to the images, they are actually transferred to this folder. So, theoretically you don't have to keep them in the original location anymore BUT, make sure that the folder is properly backed up. One of our sites lost more than 2000 X-rays when their server went down and the hospital back up had failed.

You may want to have the images and the data files on a server, due to space limitations or for better back up. If so, you will need to be *connected to the server* to import or export, and to view the full images. **If the path to the Image Folder is not open, you will only be able to see the Thumbnail Image.** If you try to open the thumbnails, and they won't expand to full size, this means that the file can't find the location of the images: it has either been moved, (and thus can't find the path), or isn't able to connect to the server (or external location of the image folder). If this is the case, you will see a message *that the file can't find the image.*

Thumb Nails views of images

You will see a small thumb nail image for each image on all of the screens. As long as the original image is in the folder, and the correct path chosen these will open up to full view. If you have a laptop which is normally connected to a server only the thumbnails will be visible when you are not connected to the server. If you lose the images from the original file for any reason the thumb nail will still remain.

Importing and storing MRI's

We don't have the software to open and view a full MRI. You can store the jpeg images of a single sheet but not the whole MRI.

IMPORTING X-RAYS AND OTHER IMAGES

Images are imported into and filed in the individual surgery record they are relevant to, so you must first navigate to the **History screen** by double-clicking on that surgery from the right side of the **Demographics screen**. Click on the **Image icon** on the far right corner of the **History screen**, and the patient's individual image catalogue *for that surgery* will open.
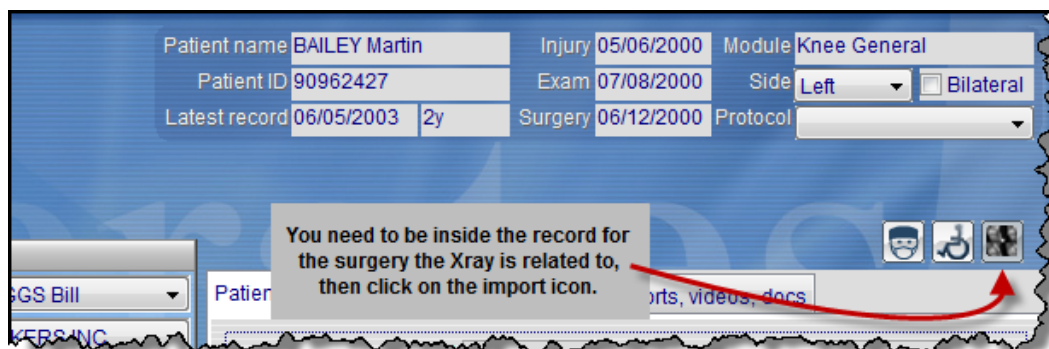
Importing an image - click on the **Camera icon** at the top of the screen, and a navigation screen will appear. Double-click on the camera icon to import an image.
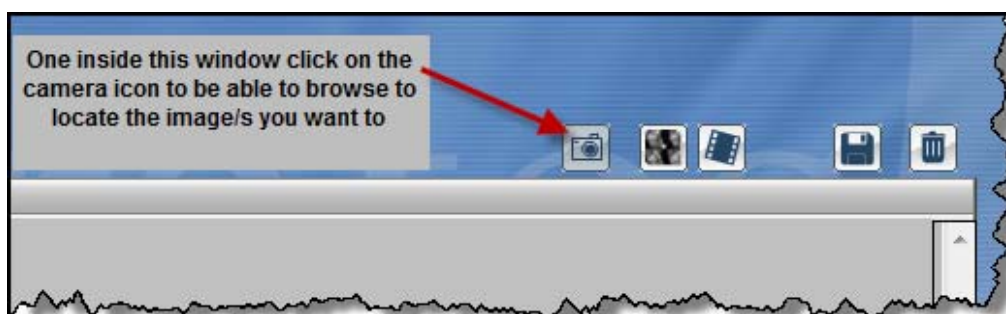

The screen shown below will then appear, prompting you to "Look in" (browse to) the place where you have filed the image/s that you want to import.
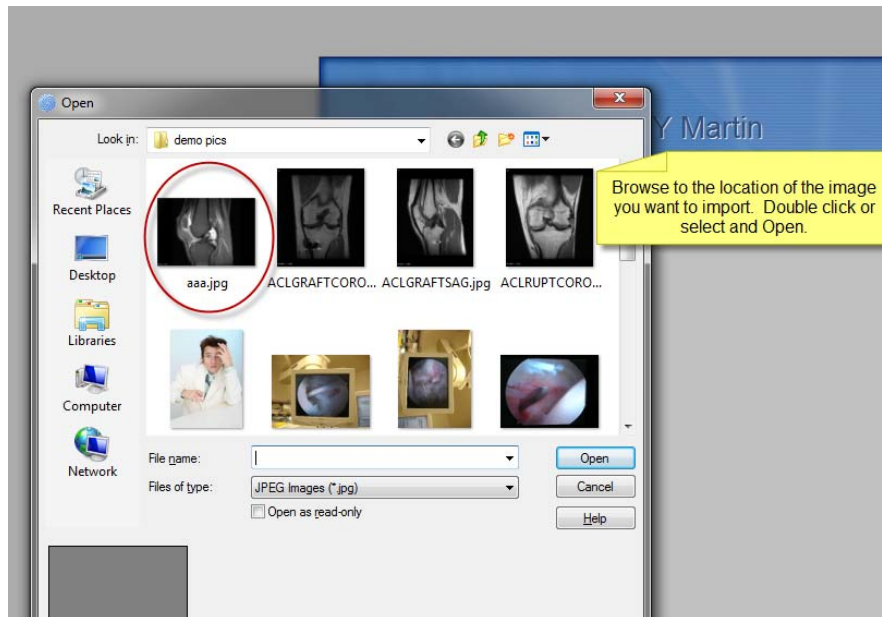
The image/s you select will be highlighted, and a thumbnail will appear at the bottom of the window.

Select **Open**, or double-click on the image itself, and the image/s will be imported into the record. By holding the **shift** or **control key,** you can import more than one image at a time.

Once you have selected the images/s you want, the following message will appear. If you import a group of images at once, they will all be allocated the date that you imported them. If you don't want this date, you need to import them one at a time and assign a date to each one separately. Note that the date will default to the current date. If the x-ray wasn't taken on the date it was imported, alter the date to enable the calculation of the delay or follow-up period of the x-ray (pre-op, 3 years, 4 weeks, etc.) to be made. The date of surgery and injury will be automatically displayed if they have been entered into the surgery record.
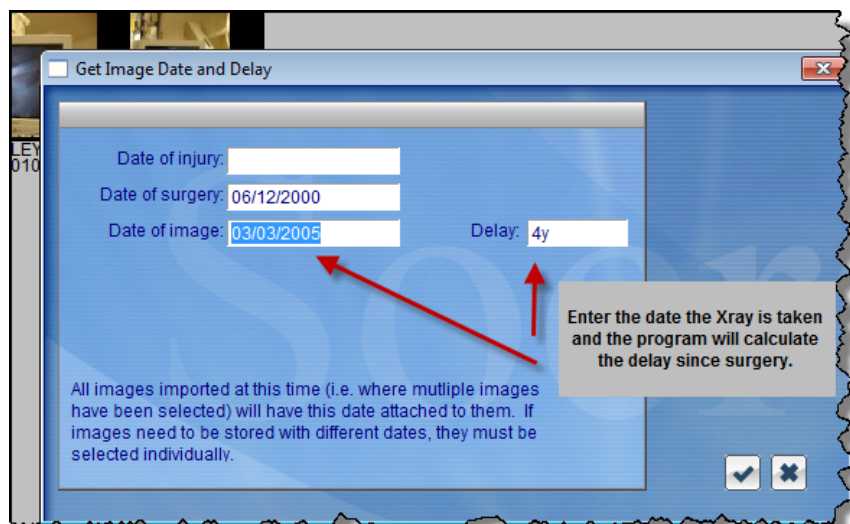
If the date attached to the image is the same as the date of surgery, you will see the message below – choose the correct time point.

Once the image has been imported, double-click on the thumbnail of the image to open the window and see an enlarged view.
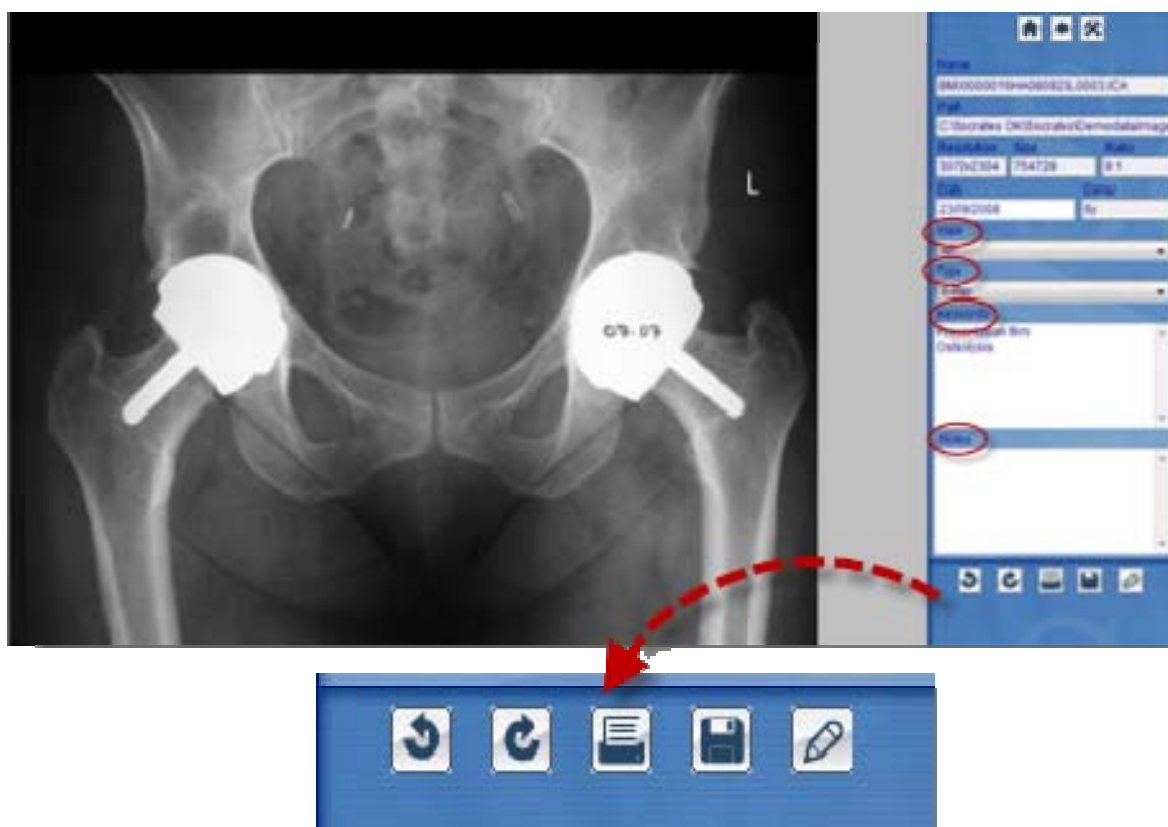

If you click on the **Modify icon**, you can enter information about the **View of the image** (AP, Lat, AP/Lat, Pelvis, Montage, Zoom, Other), **Type of image** (X-Ray,Tomography, Echography, Intra-surgery, Histology/pathology, General, Other), and any **Keywords** that relate specifically to that image (Osteolysis, Graft Delamination, etc.).

The order of import.

Even if you don't import the images in the correct order they will automatically be sorted so that preop will be first followed by the next post op time point/s.

You can also rotate, print and export the image, as shown below.

Where can you import the images from

You can import images from anywhere that you can browse to. However if you are accessing Socrates file a terminal server or the image folder is on a terminal server you may have two store your images on the local computer that you are accessing Socrates from . That means if you have them on a CD or flash drive you may need to copy them to a folder locally first. If the computer where Socrates is installed has a direct link to your PACS systems you may be able to import them directly without having to first locate them somewhere else. However, often the original images are a very high resolution and thus huge files. If you do this, make sure that you have a big enough drive to store them. The same applies to intra op videos, they can be really big files and will soon fill up a normal hard drive. If you are importing images from a remote location be aware this might be slow if the images are large since you are doing this over the internet.

IMAGE KEYWORDS

If there is something about the image that you might want to flag, you can set up a **Keyword** to facilitate recall. To access the available keywords, click on the **Modify icon**, then click anywhere inside the Keyword window. A Keyword list will appear, as shown below. Select the one you want to attach to the image. If the keyword you want is *not* there, click on the **Tools icon**. This will return you to the **Set-Up screen,** where you can add new keywords. (See Chapter 5 on Set-Up and Customisation for how to add Keywords.)
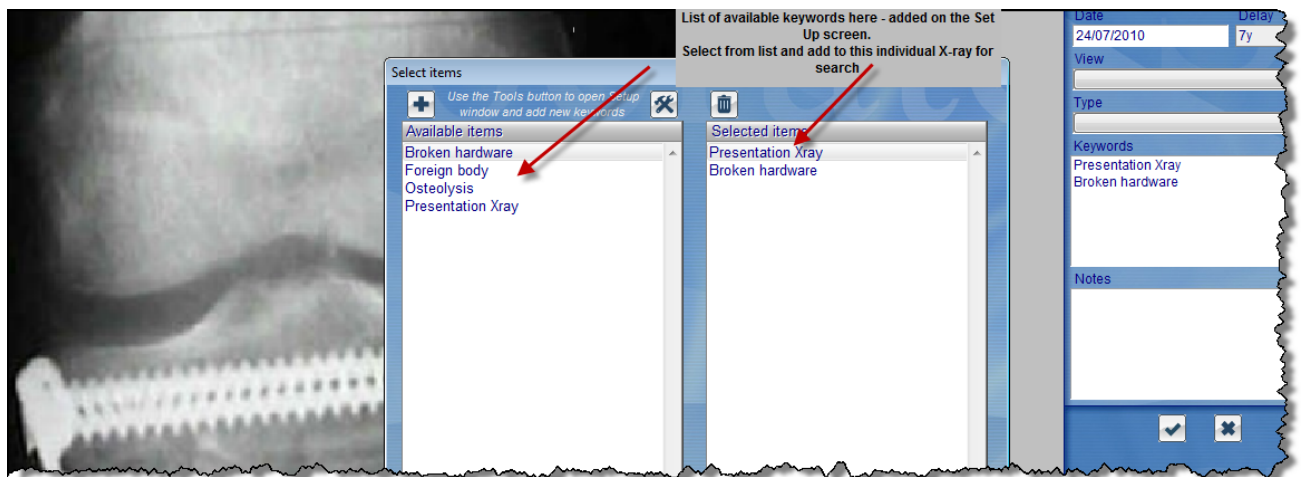
The tool bar on the top right hand corner of the screen gives you the following options:

- Viewing a slide show of images,
- Exporting images,
- Deleting images,
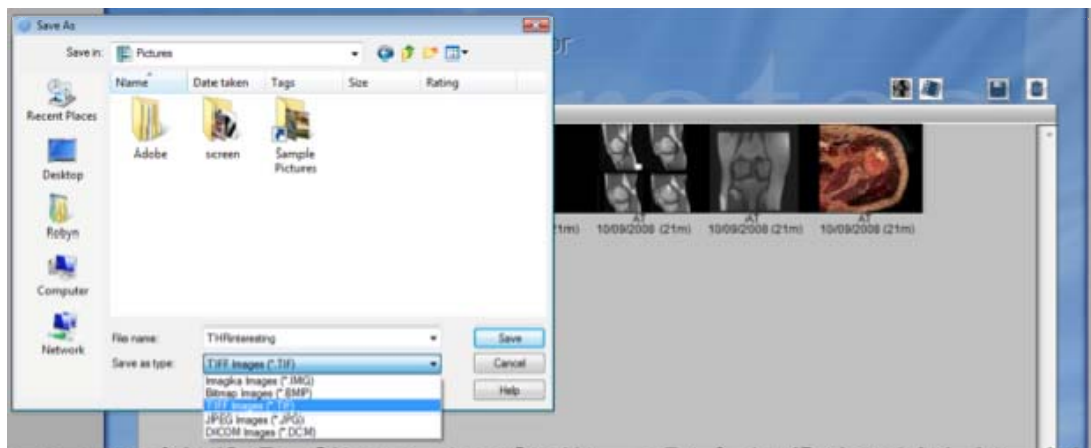- Searching for images.

Viewing a Slide show of images

Once you are in the patient's image file, you can click on the **film-strip icon** to view a full screen display of the X-ray; we have called this a slide show. The arrows in the top right corner will allow you to advance, go back or go to the beginning or end of the images in that record.

Exporting Images

You may want to export an image for a presentation, say, or another reason. Highlight the image you want to export, then click the **Export/Save icon** on the top right of the screen and the following window will appear. You will be asked to name the file – it defaults to *"untitled.tif"* – then choose a location to save into. You also have to choose the file format, i.e. JPEG, TIF, Dicom, etc., as displayed below.

Deleting Images

Highlight the image you want to delete, then click on the **Delete icon** at the top the screen. As a safety measure, it isn't possible to delete an image from the **Main Image File** on the **Home screen.**

Searching for Images

All images in the database can be accessed from the **Home screen** by clicking on **"Images"**. This allows you to scroll through the **Image catalogue** and search for images using the **Search window**, in the same way as you perform a search for a patient's data. See Chapter 15 on **Searching**. The search function will take you the surgery record where the image was filed.

This search was for all images which contained the key word Osteolysis.
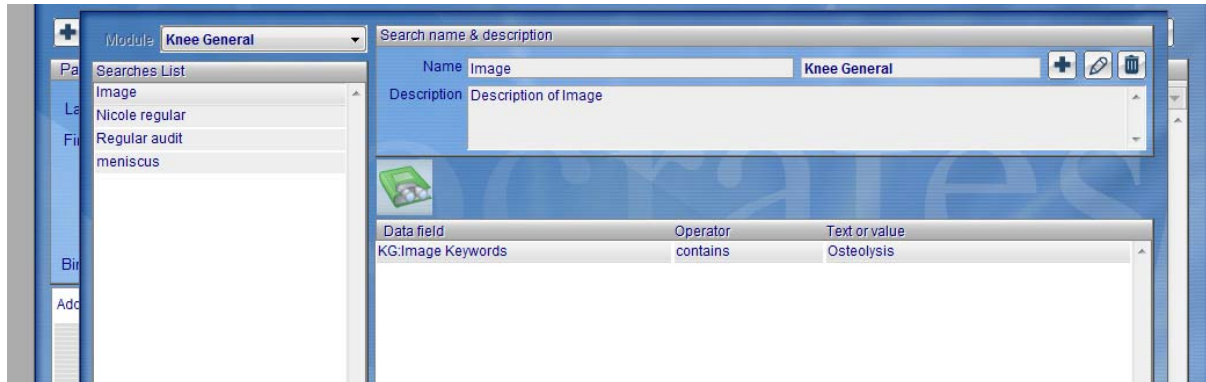
The search highlighted 2 records.
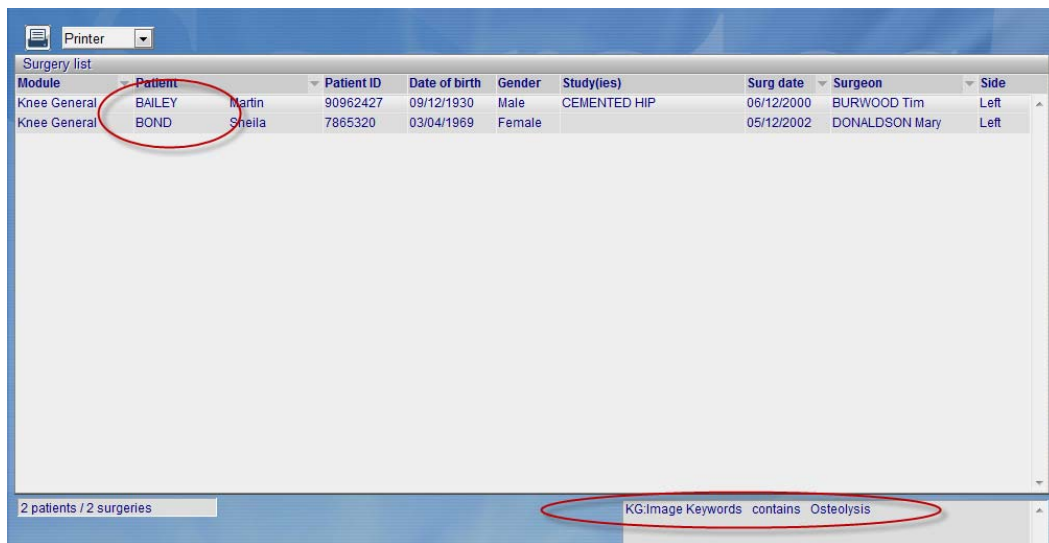
Double click on one record and you will see the surgery highlighted which contains this image. You can then scroll to the next record by using the scroll arrows at the bottom of the screen.

Go to the image folder and scroll through to locate the image. At this stage the search function doesn't take you to the actual image, just the surgery where t is located. We hope to add this feature in future versions.

Viewing Images

The image is imported into the record for a particular surgery, and it is stored in the image folder that you have selected, but it can be viewed and opened from *three different locations* in the database.

- The first place you can find and view an image is in the **patient's surgery record**, where it was imported. This is accessed on the **History screen** of each surgery, from the icon at the top right.
- Because a patient may have had several surgeries over time, with images taken
- and stored for each surgery, all the images belonging to *all those surgeries* can be viewed together by clicking on the **Images icon** on the **Demographics screen**.
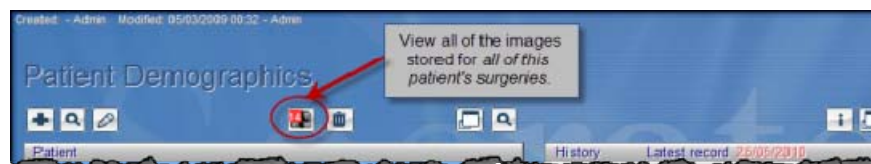

- And finally, on the **Home screen**, under **Images,** you can view all images for *all of the patients in the entire database*. The images can be viewed, searched for, and exported from this collection.

## Relocating and Re-Linking the Image Folder

If you want to move the images to another location on your computer, or are having problems opening them, navigate to the **Set-Up screen** and click on **"Image and X-ray storage".** The images are just stored in a folder, so you can copy and paste this folder just as you would a normal folder.
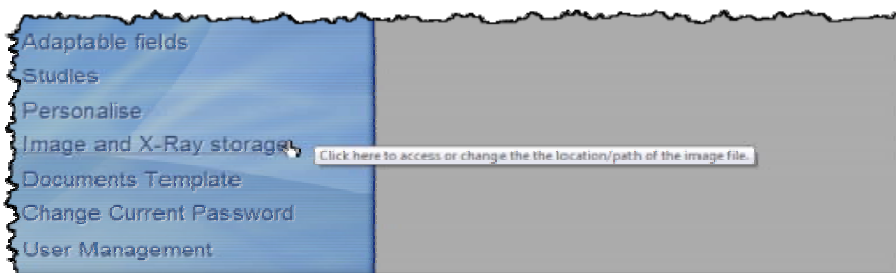
The **path** displayed below tells you where the images are currently located.
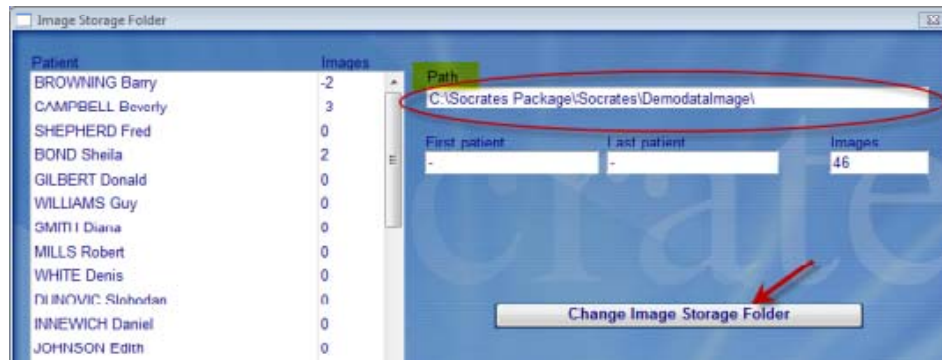
To **change the location of the images**, click on *"Change Image storage folder"*. You will be asked to browse to where the images are stored, or to the new place you want to locate the images.
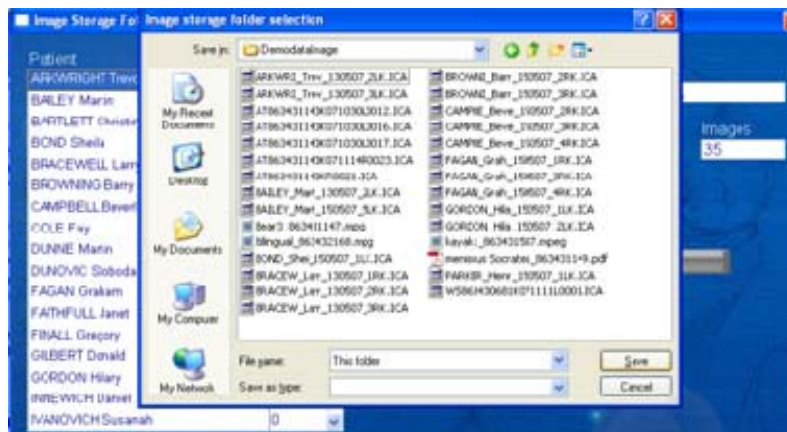

NOTE: If you move the **Data file** to a new location, you will have to go to **Set-Up** and *redirect* the new file to the location of the **Image folder**. If you don't do this, you won't be able to open your images and the error message below will be displayed.

Follow the instructions above to re-link the data file and image file together.

Image extensions

Once the X-rays are imported, they are stored in a proprietary format (.ICA) inside the **main image folder** with the videos and other electronic documents. *They can't be opened from within this folder*. To open, save, or export, they must be opened from the Socrates program.
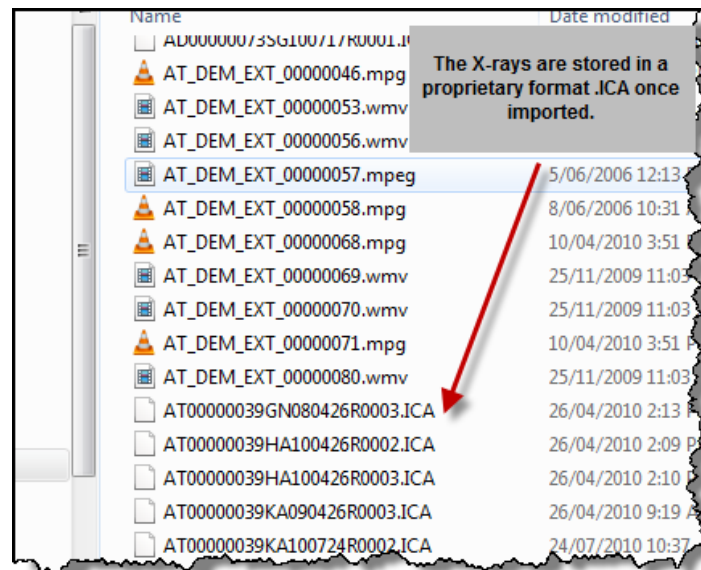
IMPORTING VIDEOS, DOCUMENTS, SPREAD SHEETS

It is possible to import and file any kind of document (Excel, Word, PDF, etc.) or video (MPG, PEG, WMV) into the patient file. Examples of items you might want to file are consent forms, pathology reports, letters from referring doctors, etc. The content of these attached files are *not analysable,* but are simply filed with the patient record for later reference. Of course, they can also be re-exported.
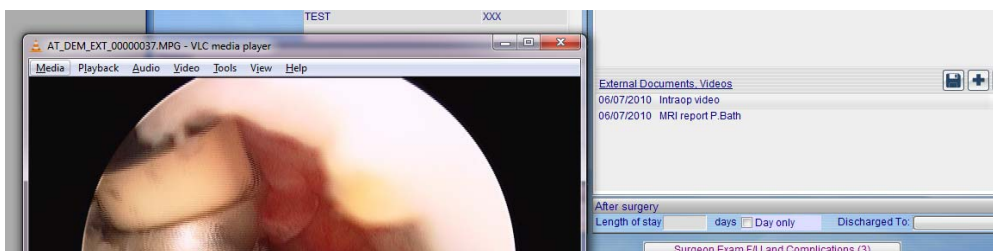

IMPORTING AND ATTACHING VIDEOS AND DOCUMENTS

On the History screen, select the **Reports, videos, docs tab**.
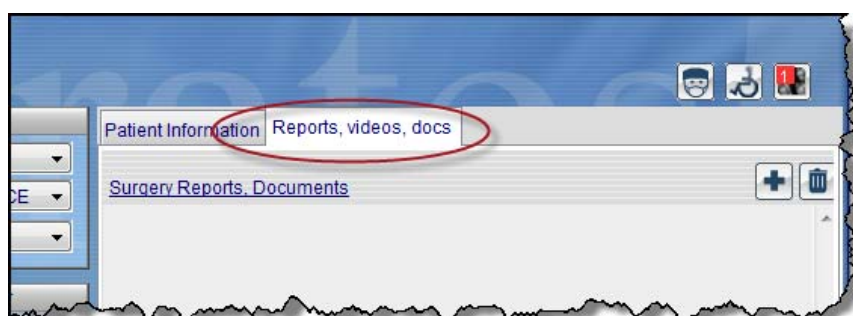
To import, go to the bottom part of the screen, labelled **"External Documents, Videos,"** and click on the blue **Add icon**.   You be will be prompted to browse to the file you wish to attach. Double-click or save the file (after naming it), and the document or video will then be *attached to the patient record and filed in the same **Image folder** as the X-rays.*
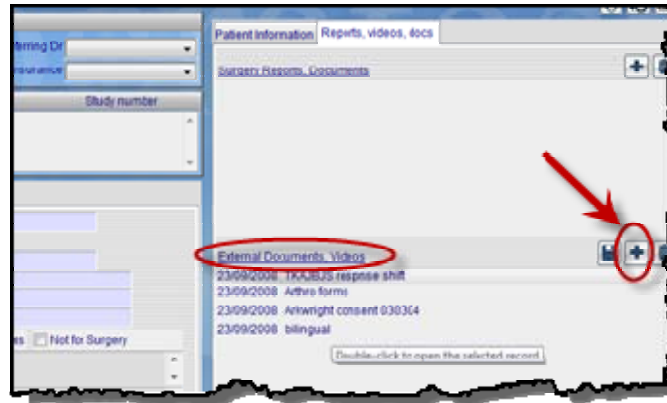
Opening External Documents and Videos

Once you have filed the item, double-click on it to open it.

The file will open in the default software set up on your computer for the appropriate document, word, windows media layer etc.

Exporting Videos and Documents

Click on the **Export icon** next to the **Add icon,** and save the file to the location you want.

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