The Modules: Knee General

This module deals with most knee procedures, except Arthroplasty (which is a separate module). It was the first module we made, (and for a long time the only one), so there are features in it such as the **Other/Lite screen**, that you probably won't use now that we have added other modules. (See the section later in this chapter for an explanation on the Other/Lite screen.) The procedures in this module are primarily performed arthroscopically, but those that aren't (HTO, ACI, for example) can also be recorded as open procedures by *selecting the approach used* on the top section of the **Knee General surgery screen**.

Don't be daunted by what you may consider as too much data to collect when you first look through the various screens. You can select from a lot of options, from the very brief to the very detailed.

It's hard to find a balance and provide a system that gives everyone what they want. Some of you will want to record detailed information about all of our procedures if your focus is collecting data for publication. Others of you will throw your arms up in horror at this level of detail, and will just want to use the program to track what you've done by diagnosis and procedure name, (and maybe any complications and a patient score to make sure that the patient was happy).

Also, since Socrates will be with you for your entire practice, what you use it for now will change over time: you may decide to follow different surgeries and patients in varying levels of detail.

Regulatory and reimbursement changes are ever-present, and it may become mandatory to follow some of the new procedures and implants in a different level of detail over time. Socrates will let you adapt your needs to cover all the possible scenarios. It's like a one-size-fits-all program, even if you do get a bit lighter or heavier over the years. There is quite a bit of *customisation* possible also, and we regularly add new fields and scores as they become necessary due to changes in technology and technique.

You can set up "Favourites" for some of the screens so that almost all the fields that you might routinely check for some procedures such as ACL. These would all then be populated with one tick for those surgeries. Some procedures such as trauma and chondral lesions aren't set up for these features, they are not as common and there's not a lot that's routine about them. For those that are, you would then just change the details in the cases that are different from the Favourite, add anything non-standard (such as the tear or lesion sizes), and Save. This takes less than a minute. Some surgeons have as many as 15 operations saved, one click, 30 seconds making any changes, and you have a huge amount of data captured. You can also generate an operation report from any of the fields that have been entered on the screens in Socrates. This report can be saved and exported in a word document, or as a pdf and then filed in your EMR.

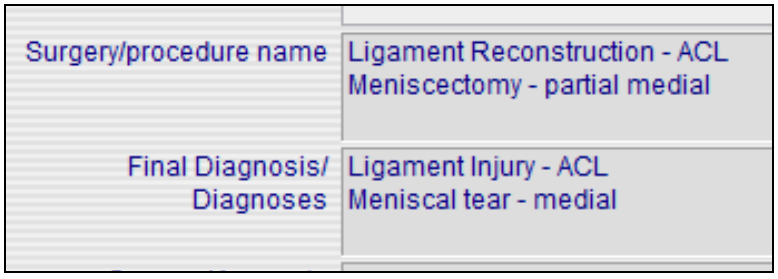
Take a bit of time to look around and decide what screens you are going to use for what procedures.

An Example

Before we go any further let us demonstrate the different levels of detail you could collect for an ACL Reconstruction and Medial Meniscectomy – a common operation.

"LITE" option

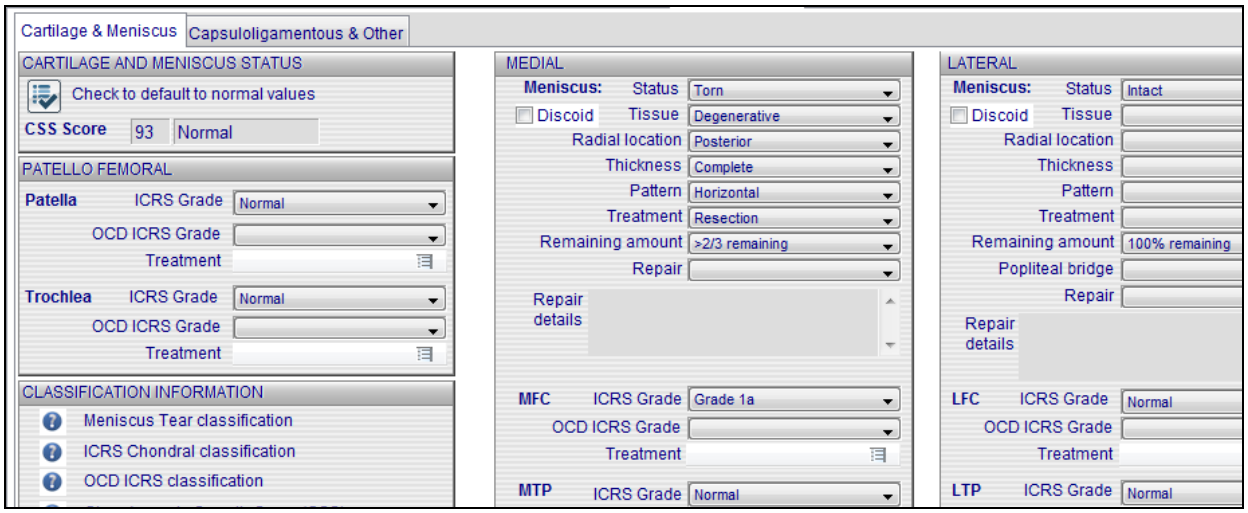
You can go really "lite" and just record the Diagnosis and Procedure Name. This minimal approach would still enable you to track what you did, and why, with the addition of patient scores and complications on the other screens if you choose. Note that there are 2 places you can record the Diagnosis and Procedure. The first is as below which has lists which are clinically descriptive, and can be modified by the users.



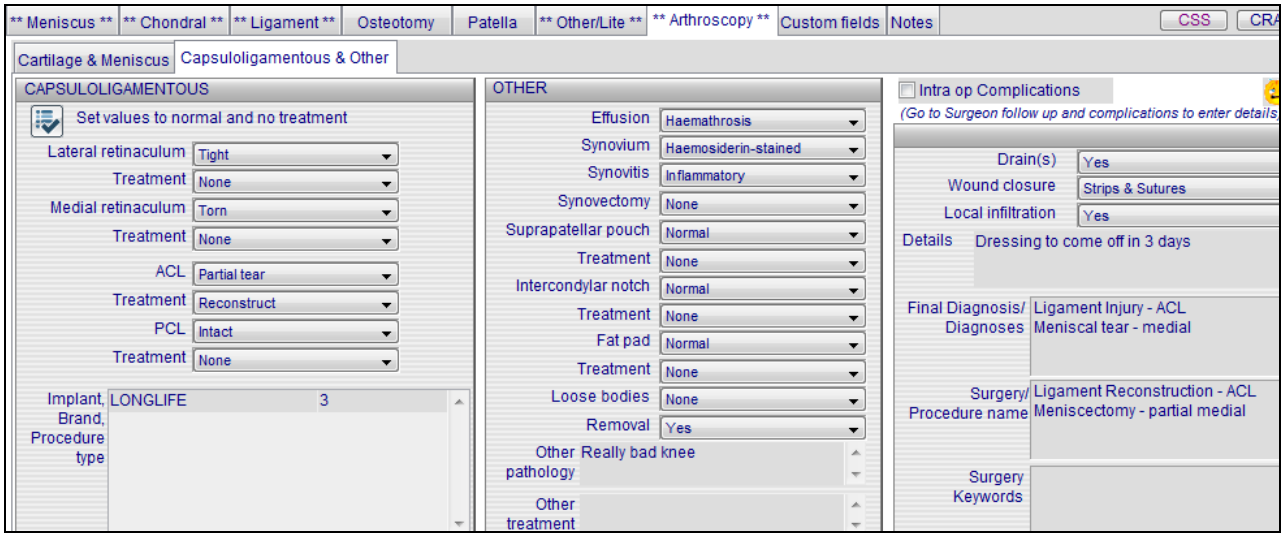
Or you can choose to use codes which are relevant for your country, as well or instead of these. You may be required to use the billing codes but they may not be descriptive enough for research, and in some cases they don't accurately describe what the procedure was. The choice is yours. But we recommend that you use at least one of them to facilitate easy recall of what procedures were done, and for what diagnoses. See the Set Up chapter for how to import the lists of codes, and how to modify and add to the other descriptive lists. Patient scores alone aren't much use without knowing what procedure or treatment was performed.

- OR - USE THE ARTHROSCOPY SCREEN

You can enter more data using the Arthroscopy screen. Note that you can set up "Favourites" here, so that almost all the fields that you might routinely select are selected with one tick. Just change what's different in this procedure, add anything non-standard, and Save. It takes less than a minute. Plus there are "normal" check boxes so some fields will populate as normal with a single click and then you can just amend those that weren't.

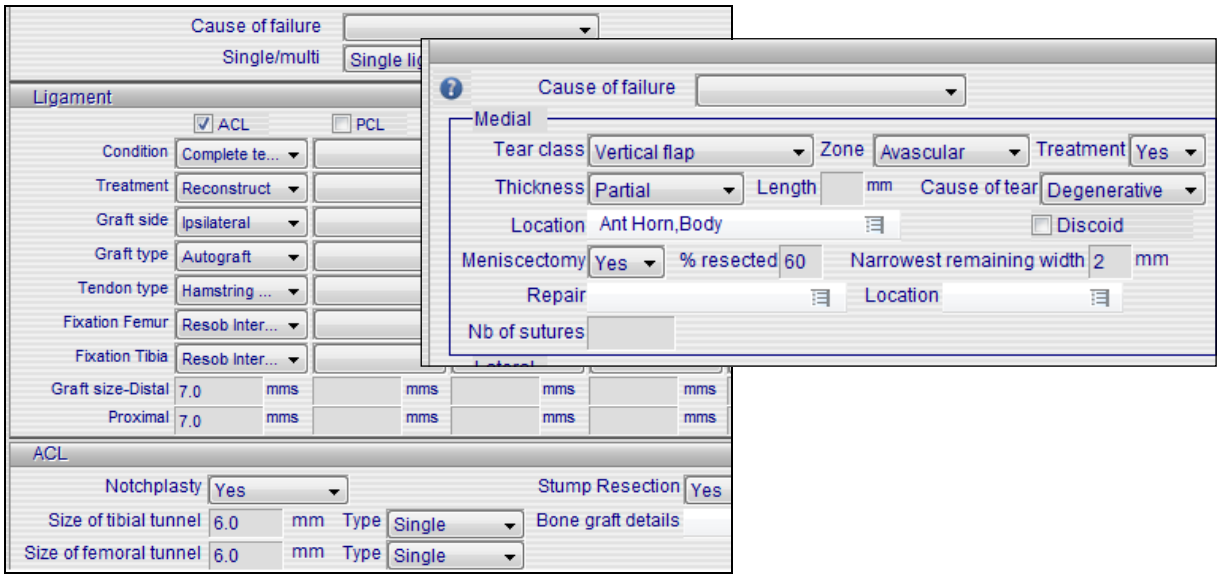


Here's the second tab on this screen including some basic ACL details and other details you might like to record.



- OR - FULL DETAILS ON SPECIFIC SCREENS

You can record a lot more detail here by going to the main screen for ligament and meniscus. You can set up the ACL as a Favourite again, so that the majority of the fields (sizes of tunnels and graft excepted) will automatically populate. The meniscus doesn't have this feature, since tears are not so homogenous.

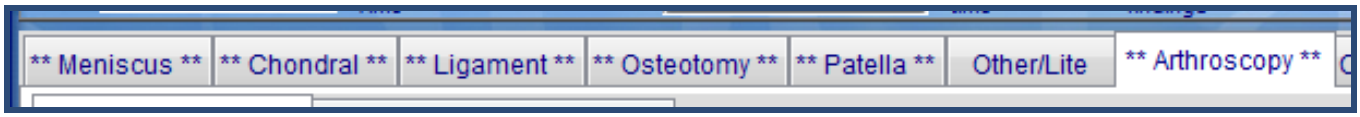


You can also mix and match: use the **Arthroscopy screen** but also the **Full Ligament screen** to record the additional details for the ACL. If you enter data into the full screens and the same fields exist on the arthroscopy screen it will automatically be populated into the arthroscopy screen in that same matching screen.

Hopefully, by the time you've got this far, you've realised that you have many options about the level of data that you choose to enter. It won't have to take you as long to enter the data as it did to do the operation!

Knee Procedures Covered

The tabs in this figure describe the procedures you can record in this module.

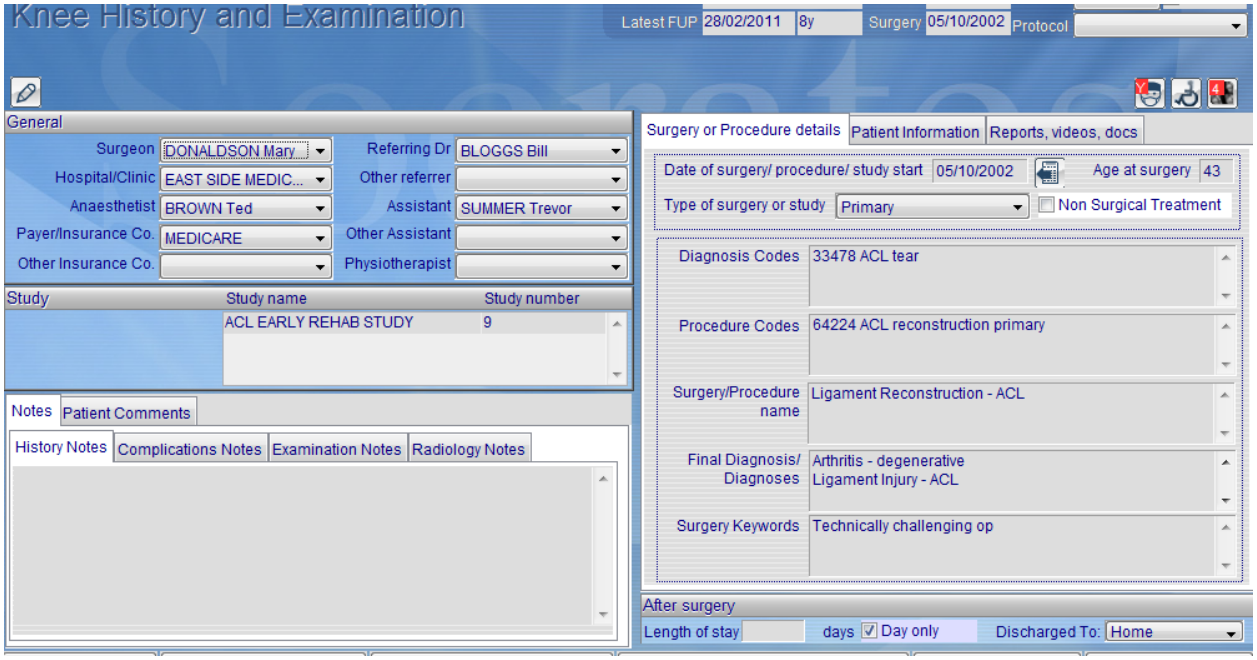


But we will start from the beginning, with some information about some of the other screens you will need to know about before you get to the surgery details. The full details about the surgery screen are later in this chapter.

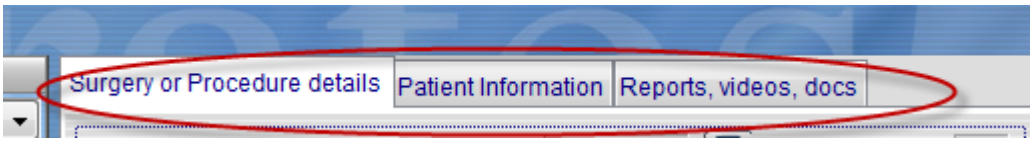
HISTORY SCREEN

The first section of this screen records **General Details**: Surgeon, Hospital, Assistants, Referring Dr, Insurance companies and physio's. Any **studies** the patient may be enrolled in are entered in the next window (these are created in the Set-Up screen).

Note: Any notes that may have been entered on the other screens are also displayed on the front screen.



On the right of this screen are 3 tabs.



Surgery or procedure details

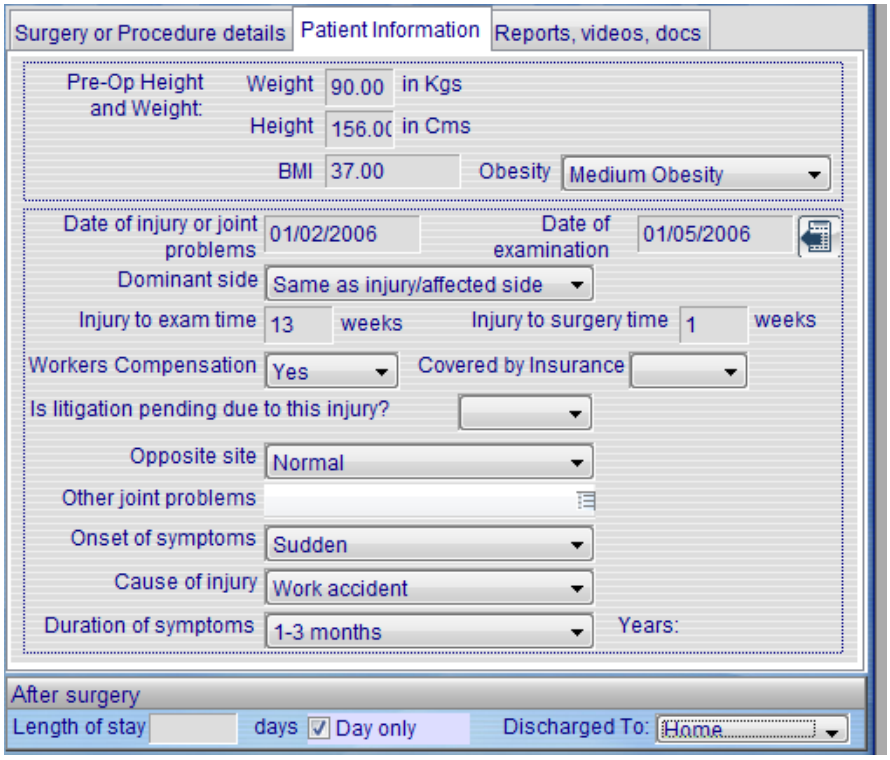
The first tab captures the date of the surgery or beginning of the treatment to be added. We usually refer to a surgery but Socrates can be used for any procedure or non-operative treatment as well. It just needs a date to be entered as a baseline so follow ups delays can be calculated, i.e. 3 month, 1 year, 5 year follow up.

The diagnosis and procedure name can be entered in one of two ways – using a clinically descriptive term and or the codes that you might use – CPT, ICD etc.

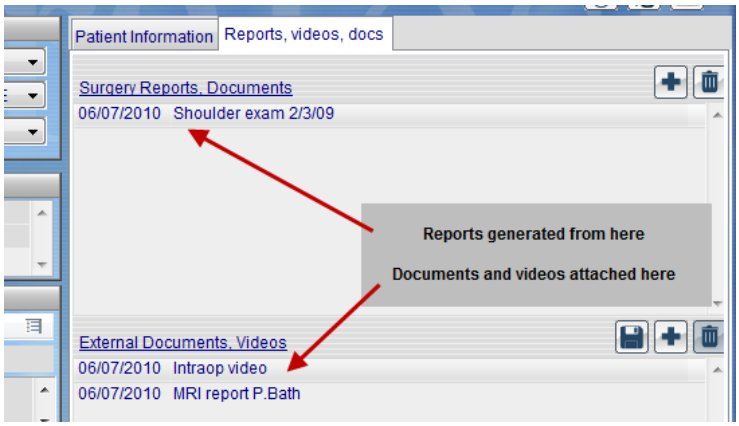
Why are there two? Codes used for billing might not be descriptive enough for research, nor are they always what's done since they often don't keep up with technology. Plus you might want to use your own descriptive terms for the different surgeries you do. You can add, remove or import your own lists of these at any time. So you have the option of choosing which you want to use, or both. You will need to import your own codes lists, there are too many in the world for us to import them all, and often surgeons only use a small number of the codes in their own practice. It's easy to import them in one list, or just add them in as you go - see the chapter on Set Up.

Patient information

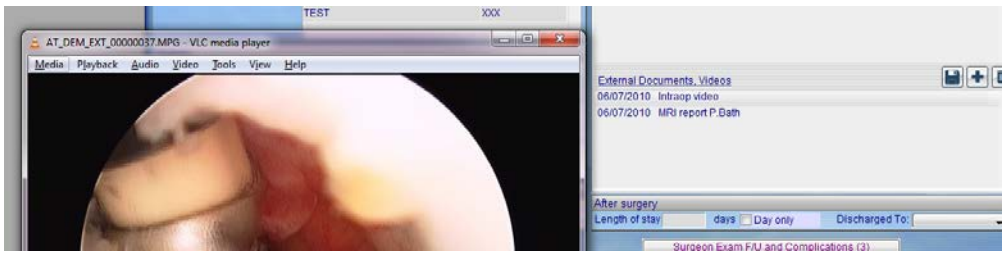
The next tab screen captures some information about the history of the patient's weight and height, BMI (calculated by the program) some details of their injury, workers comp, insurance status, litigation pending, how it occurred, the duration of symptoms, and length of stay. This is available as a scannable form, or a web survey if you are using the web scores.



Reports, Videos and Documents



Videos and any type of **electronic document** (PDF, Word, Excel, etc.) can be imported and stored with the surgery record for viewing. Simply click on the **Add icon** to attach a document or video relevant to this surgery. See the chapter on X-rays and videos for more information.



Reports

Reports, such as **Surgery Reports** and **Examination Reports** can be generated from the fields you entered into the program. They are generated and stored, exported or printed from this window. They work like a word processing document with a macro set up.

Here's an example of an ACL operation report. See the chapter on Reports for how to create the templates and generate the reports.

Fairyland Hospital
89 Getwell Drive
Utopia

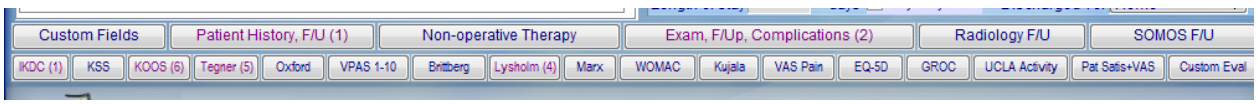
Phone 1800879456
www.fairyland.com

ACL OPERATION REPORT

Name: Mr Trevor ARKWRIGHT
DOB: 06/07/1959 **Age:** 43
Surgeon: DONALDSON Mary **Hospital:** EAST SIDE MEDICAL CENTER
Referring Dr: BLOGGS Bill **Insurance company:** MEDICARE
Anaesthetist: BROWN Ted **Assistant:** SUMMER Trevor
Date of Surgery: 05/10/2002
Approach: Open
Duration of surgery (mins) 80
Tourniquet method: Released after closure **Tourniquet time:** 50
Pathology found: Trauma, Degenerative
Intra operative findings: Synovitis, Effusion, Haemarthrosis
Portals used: Antero medial, Antero lateral, Supero medial
Diagnosis: Ligament Injury - ACL
Procedure: Ligament Reconstruction - ACL
Type of surgery: Primary **Number of ligaments** Single ligament repair
ACL condition: Complete tear **Treatment:** Reconstruct
Graft side: Ipsilateral **Graft type:** Autograft
Tendon type: Hamstring 4 strand

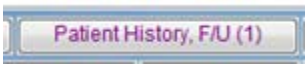
Scores and Follow Ups

At the bottom of the history screen are two rows of tabs. The bottom row are all the scores/surveys that have been selected to display – more about this later.



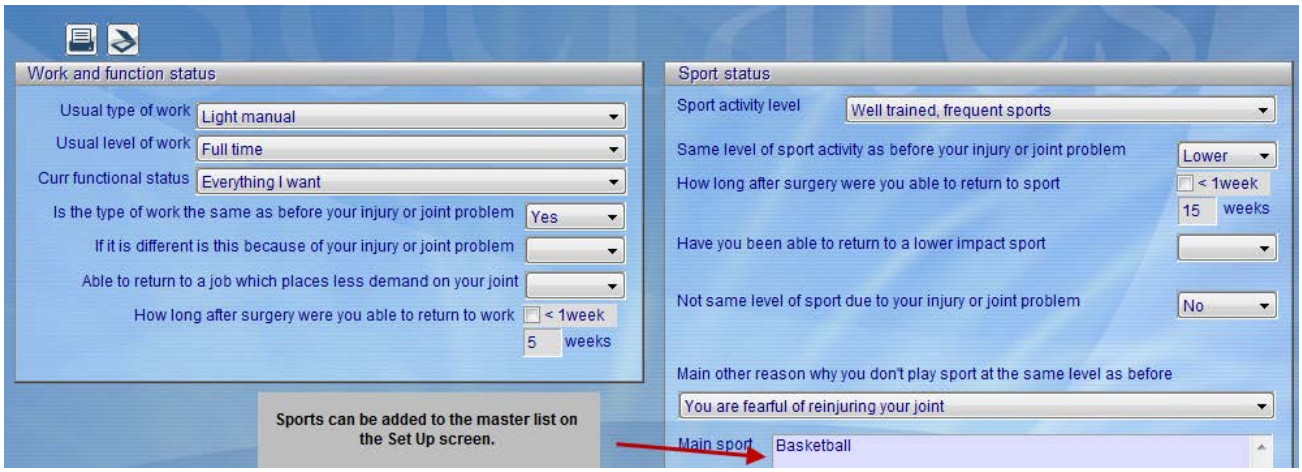
The top row has the following tabs:

Patient History and Follow-Up Screen



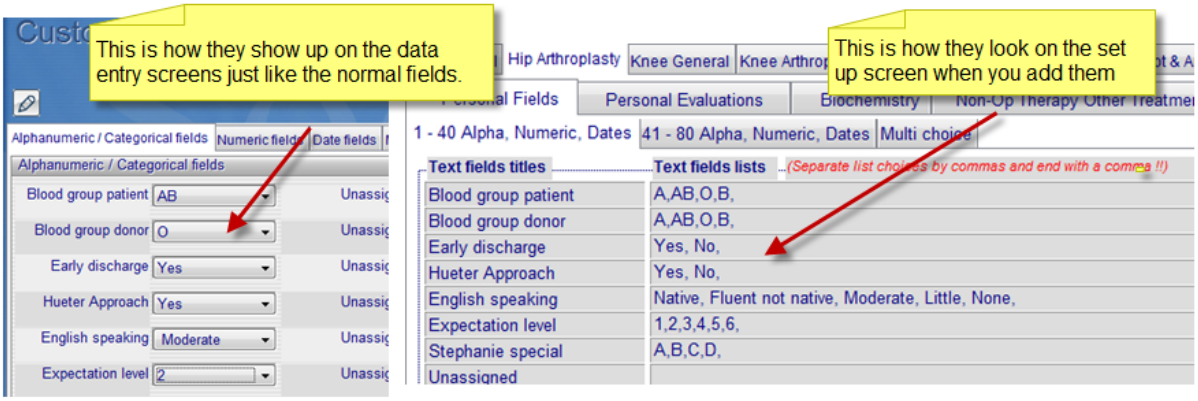
This screen is accessed by clicking on the **Patient History and Follow-Up tab** at the bottom of the **History screen**. You probably won't want to collect this information from everyone, but if you treat high-level sports people, or if an estimate of return to work is an important aspect of a surgery outcome, this can be useful data. The dreaded insurance companies sometimes want to know this information, so it's there if you need it.

This score tracks the patient's work, functional and sport history over the period of their follow-up, until they are discharged from follow-up *for this surgery.* Questions relating to the patient's work, sporting and general function are recorded **pre-operatively** and **at subsequent visits**. Some of the questions are only relevant post-operatively: return to work and sports questions, for example. The **Main Sport window** can be added, modified or deleted through the **Adaptable Fields option** (**Tools icon** to **Set-Up Screen** to **Adaptable Fields**.) This form is scannable for both pre and post-op follow-up for non-text fields only, the others have to be manually entered.

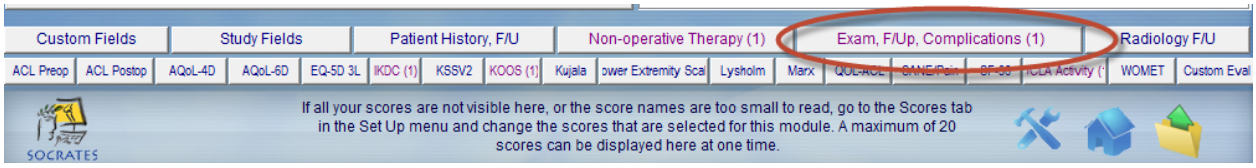


Custom fields

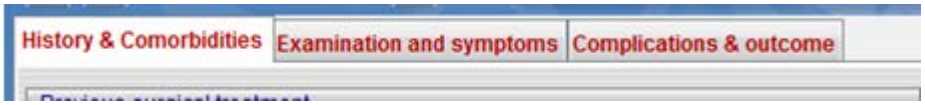
You can create your own Custom Fields and Evaluations (bottom row with the scores) to capture recurring Events. These can be new exclusive lists, multi boxes, numeric values, or dates. See the chapter on Set-Up and Customisation for details on how to add these fields. Once you have added them your new list will show up in these tabs just like the all the fields in the program. Below is an example of some custom fields set up to capture details that are not on the regular screens. What you can add is only limited by your imagination.



Surgeon Examination and Follow-Up Screen

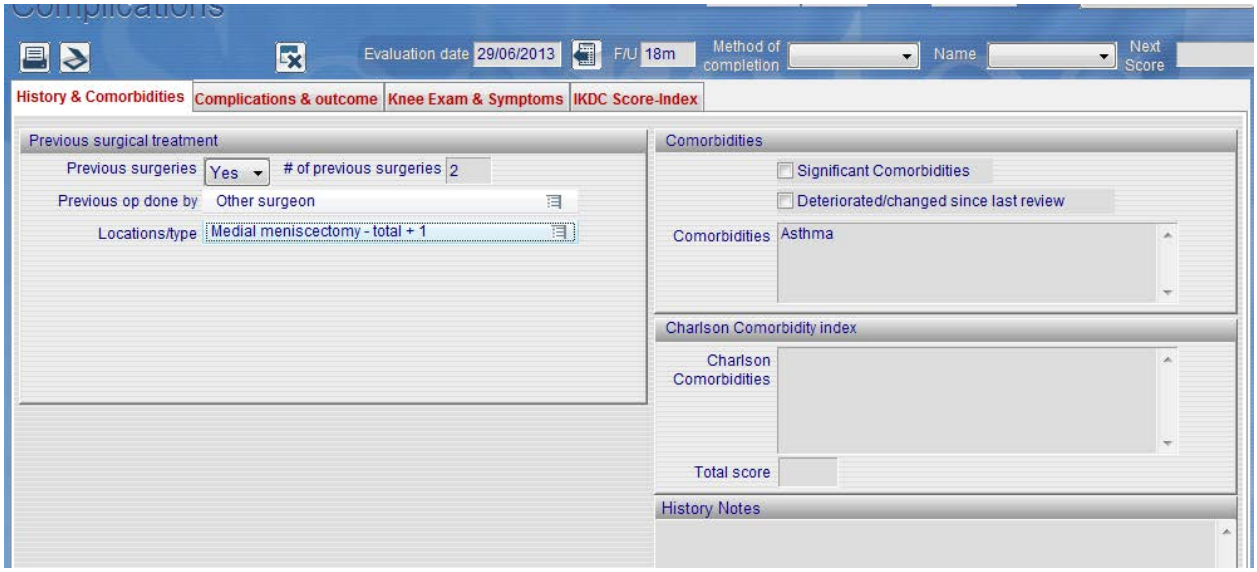


This screen has 3 sections.



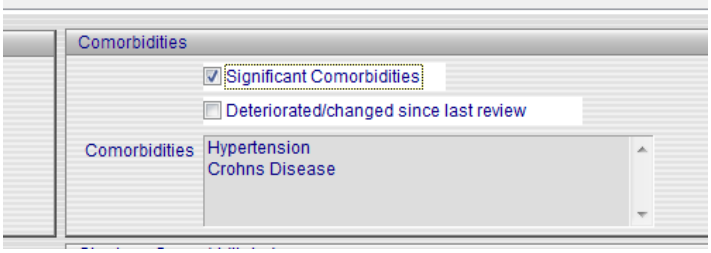
Previous Surgical Treatment

Previous Surgeries field allows you to record if there have been previous surgeries, the number and what they were. If you want more detail, record these in the Notes.



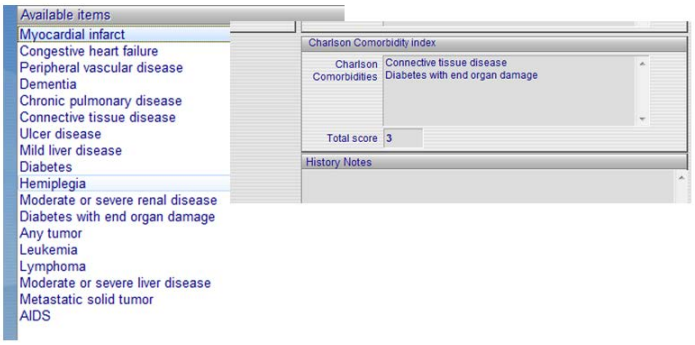
Comorbidities

It's up to you about how much detail you want to collect here but it's obviously a good idea to at least record if the patient had significant comorbidities. It's becoming more important for you to record this sort of information, patients can now go on-line and score themselves using a number of patient-related outcome scores and compare themselves to others. But we all know that all patients are not the same, if you collect some data to demonstrate this it helps to explain results that may differ between patients, and between surgeons. The list can be added to at any time, and more than one can be added to the record, and over time this may change. There is a check box to record this also.



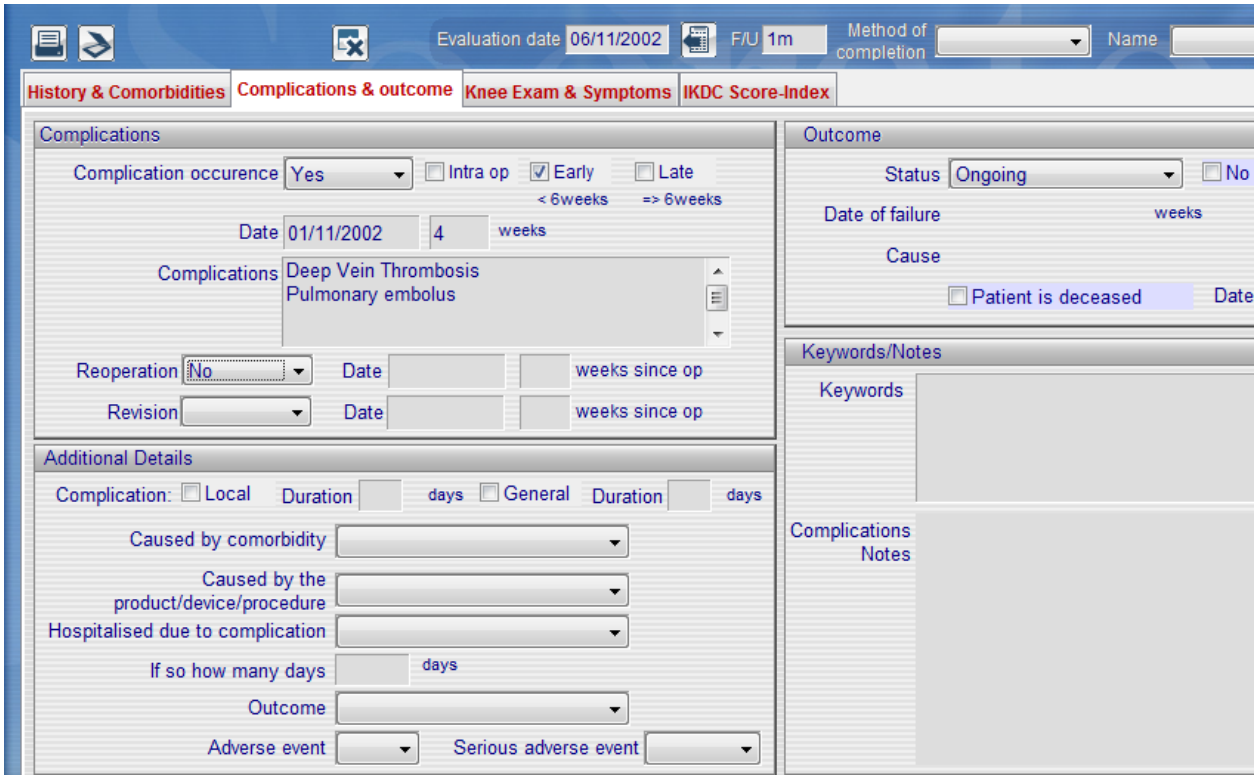
Charlson Comorbidity Index

This is a validated list of comorbidities which when selected and totalled will give a score which can be used to classify patients according to risk, and subsequent cost to care for. This is generally used for sicker patients than you will probably be treating in this module.

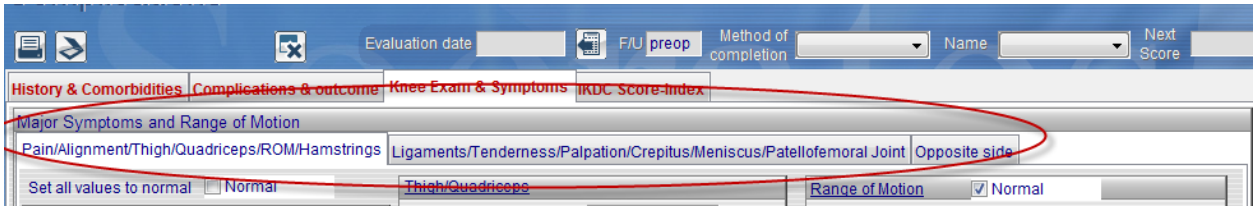


Complications and Outcome Status tab

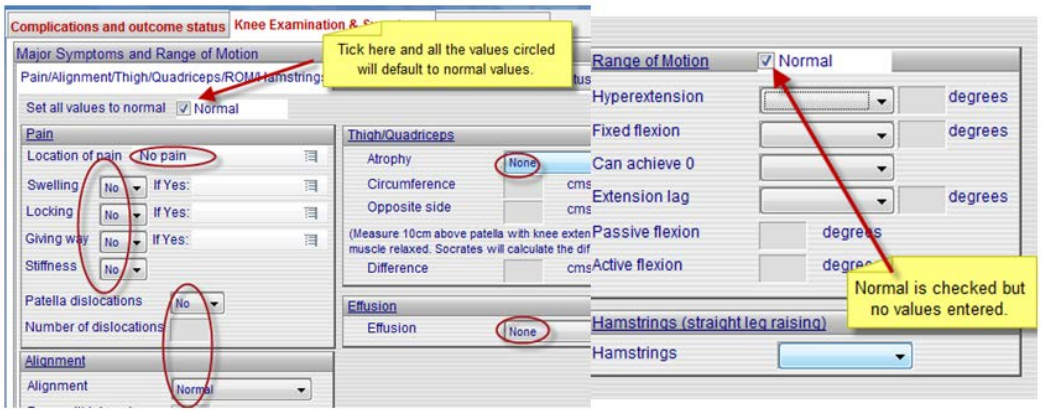
Choose the **Complications and Outcome Status tab** to document these details. See the Complications section in the chapter on Adding a Surgery for more details about this screen. You can record as much or as little as you want here; it's often enough to just record a "Yes" here, and what it was. If you do enter the dates in their respective fields the program will calculate the time since the procedure.

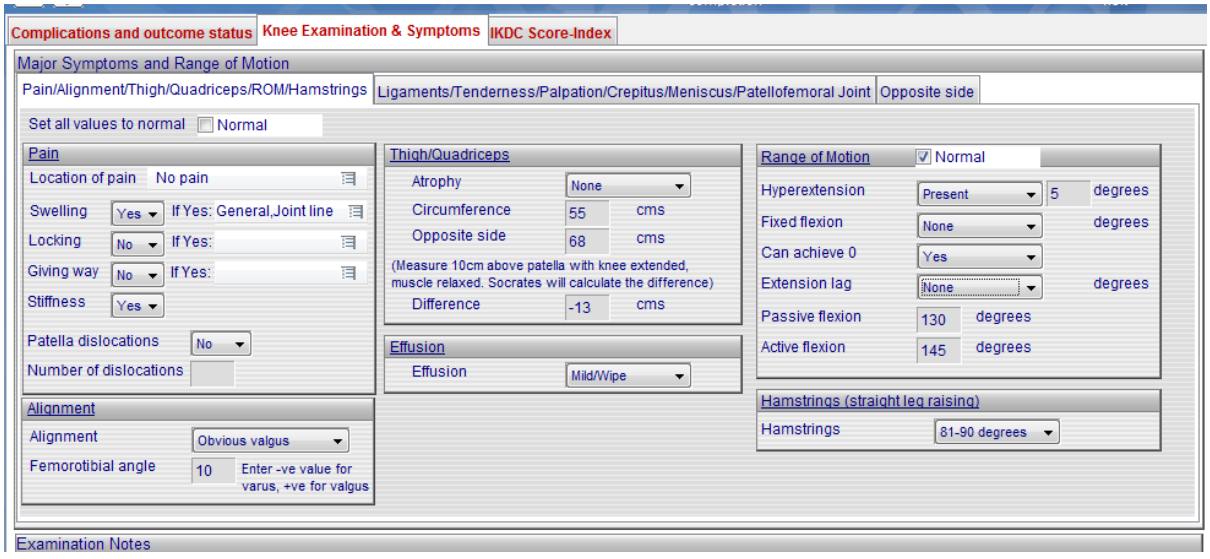


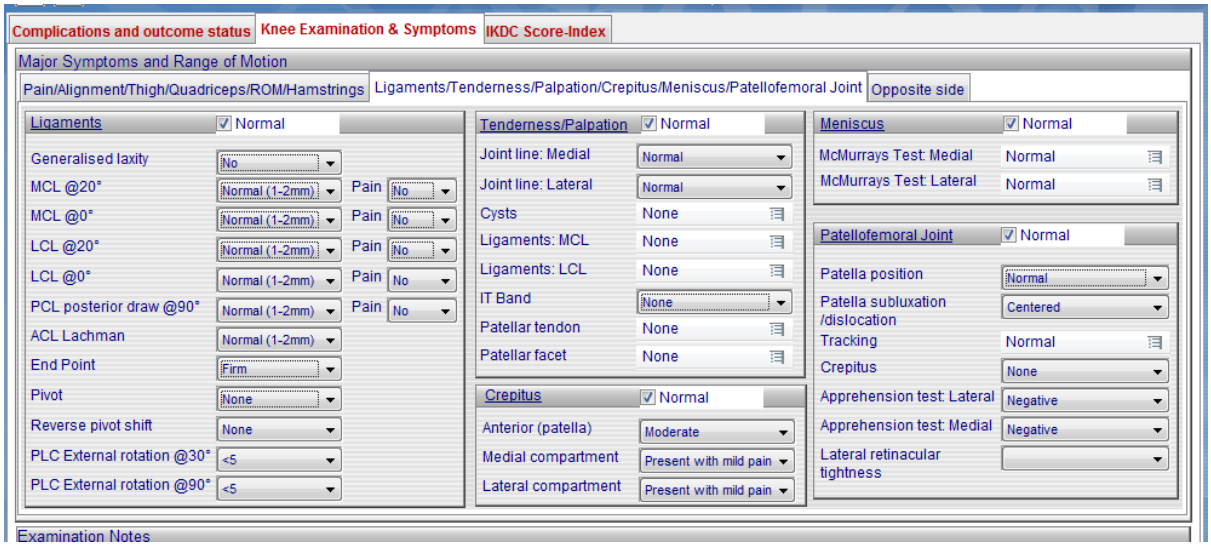
Knee Examination and Symptoms Screen



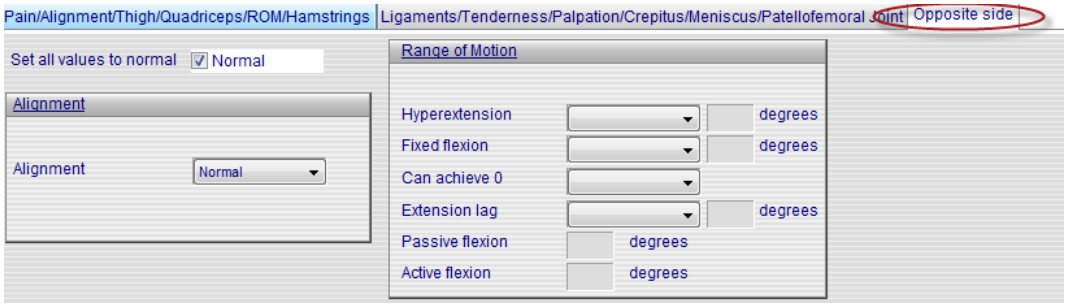
There are 3 screens which make up the knee examination and symptoms tab. There are Normal check boxes for most of the sections which will populate all the relevant fields; if something is then changed from normal the normal check box for that section will be unchecked. We didn't populate any of the actual measurements, flexion, extension etc for the range of motion when normal is selected as these can vary so these would need to be entered by the user to be able to recall the actual ROM.



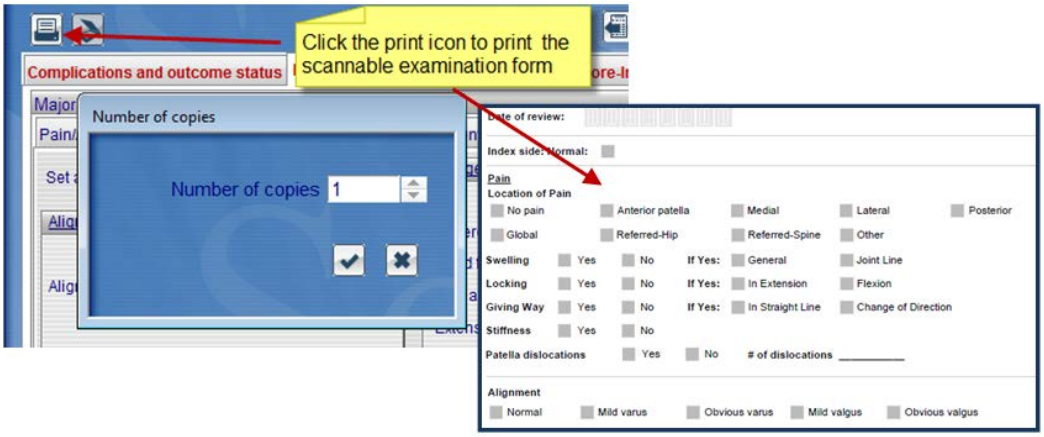




You can also record some details about the opposite side.

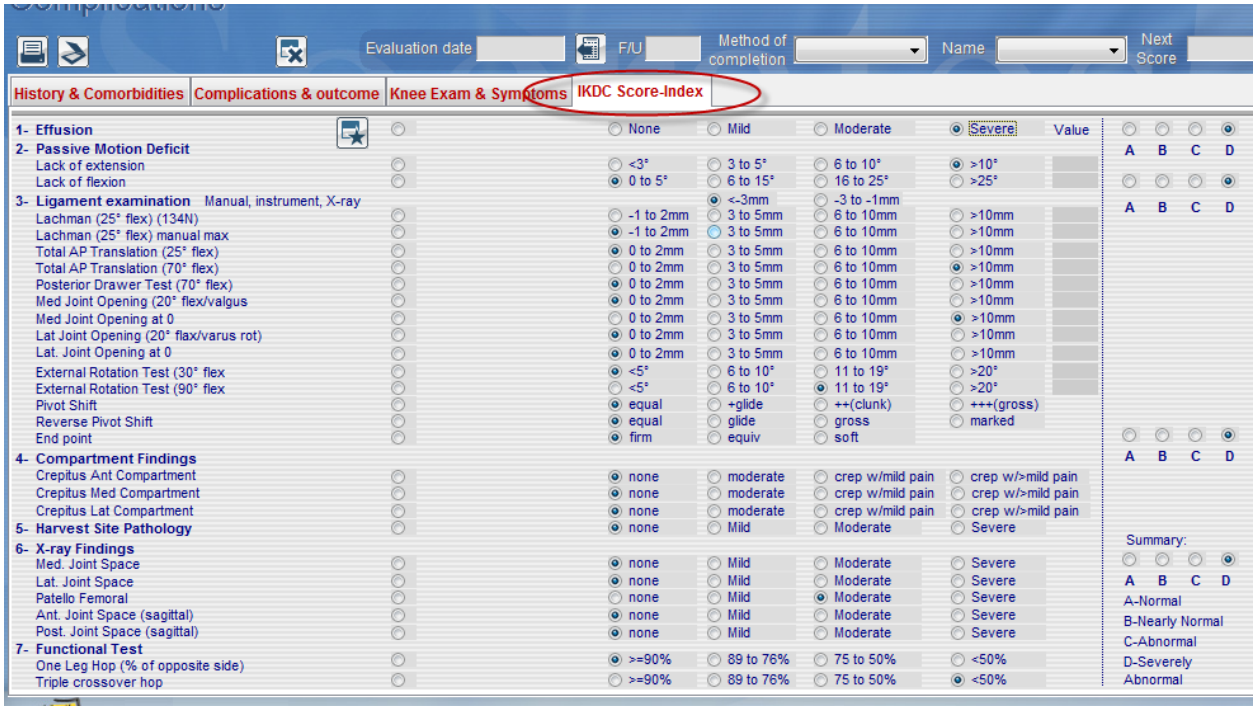


This screen is also available in a scannable form, the surgeon can mark the appropriate check boxes and the form can be scanned in and the fields populated into the screen in about 30 seconds. Note that free text and numbers need to be entered manually, Socrates isn't clever enough to read everyone's handwriting.



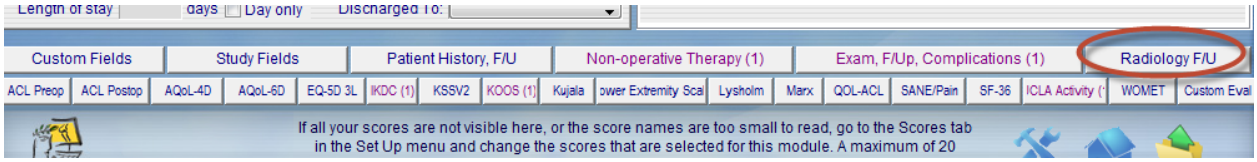
Surgeon IKDC score

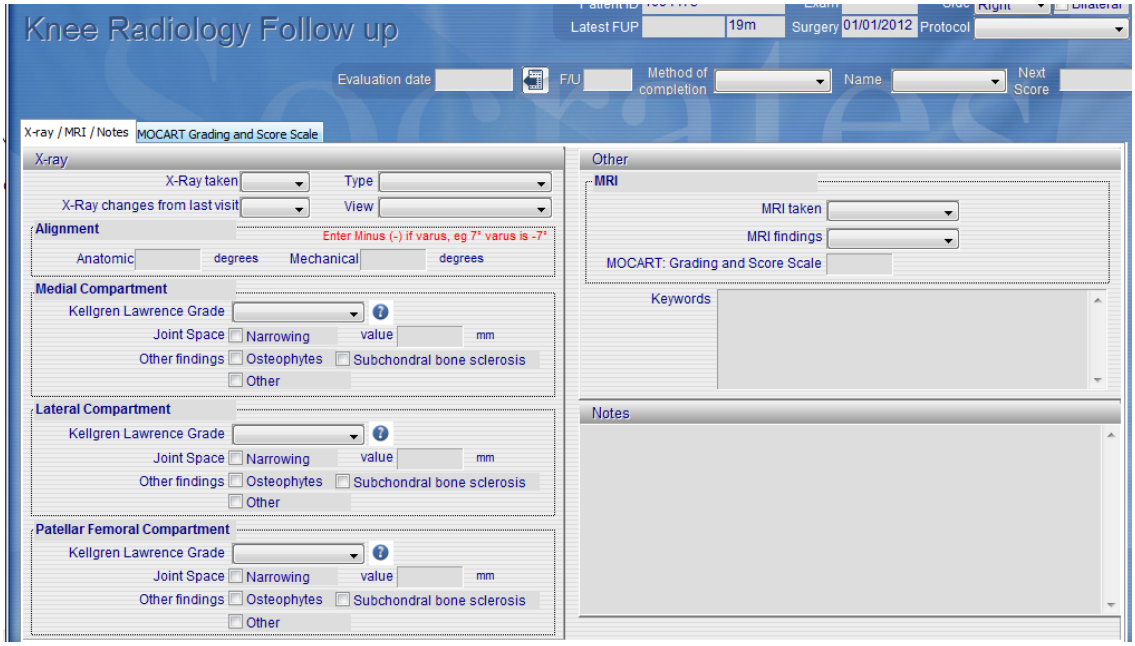
This can be completed pre operatively intra-operatively and at any post-operative time points. The patient part of this score is located with all the other patient completed scores.



Radiology Assessment and Follow-Up Screen

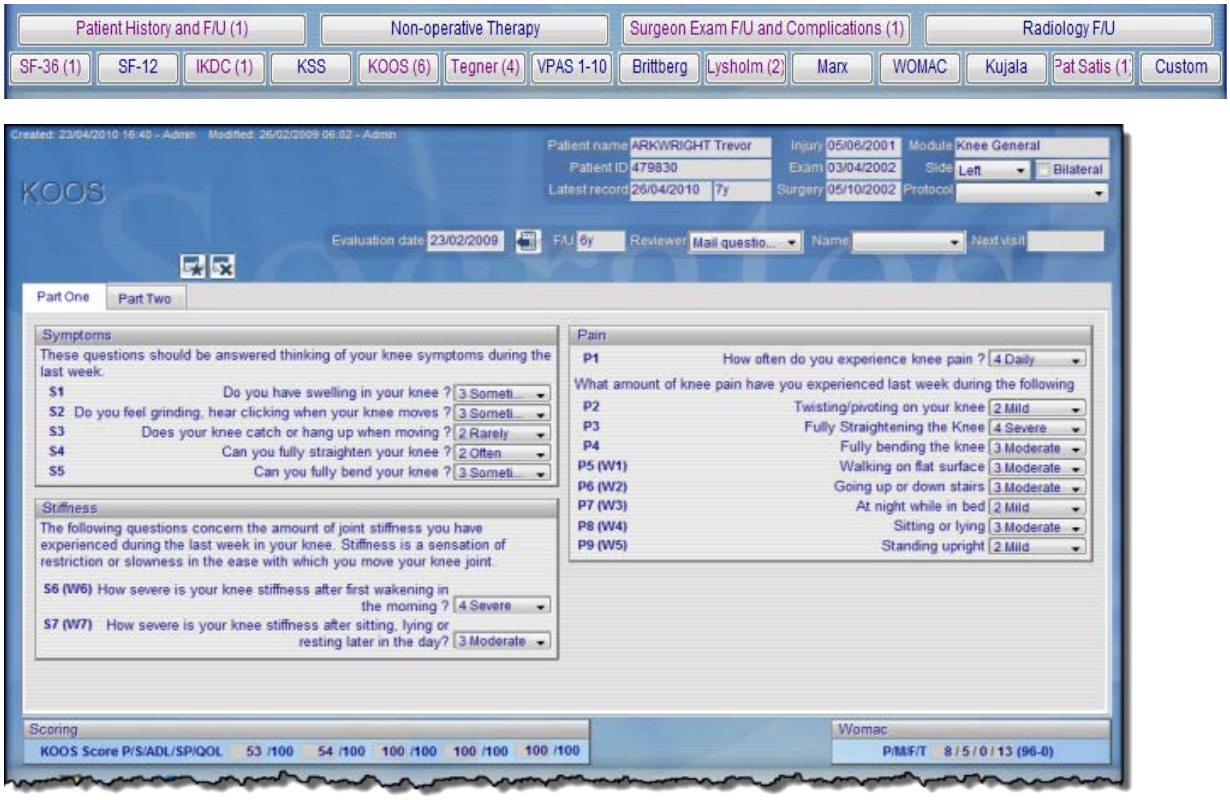
This screen is accessed by clicking on the **Radiology and Follow-Up tab** bottom right of the **History screen.** It allows you to record radiological findings from X-ray, CT scan and MRI.





Scores and Evaluations

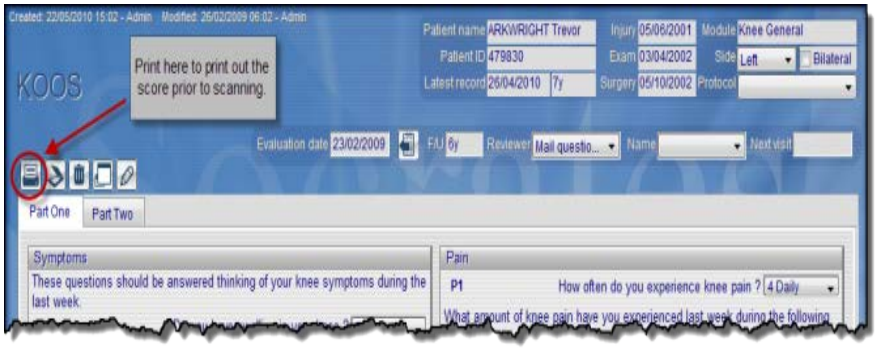
The **scores** and **evaluations** for this module are displayed at the bottom of the **History screen**. (See the Data Entry chapter for how to enter scores.) You can choose to have only those scores you actually use displayed here, in this horizontal line, by choosing them from the list of all possible scores in the **Set-Up screen.** A **magenta tab** and accompanying number indicates how many scores of that type have already been recorded.



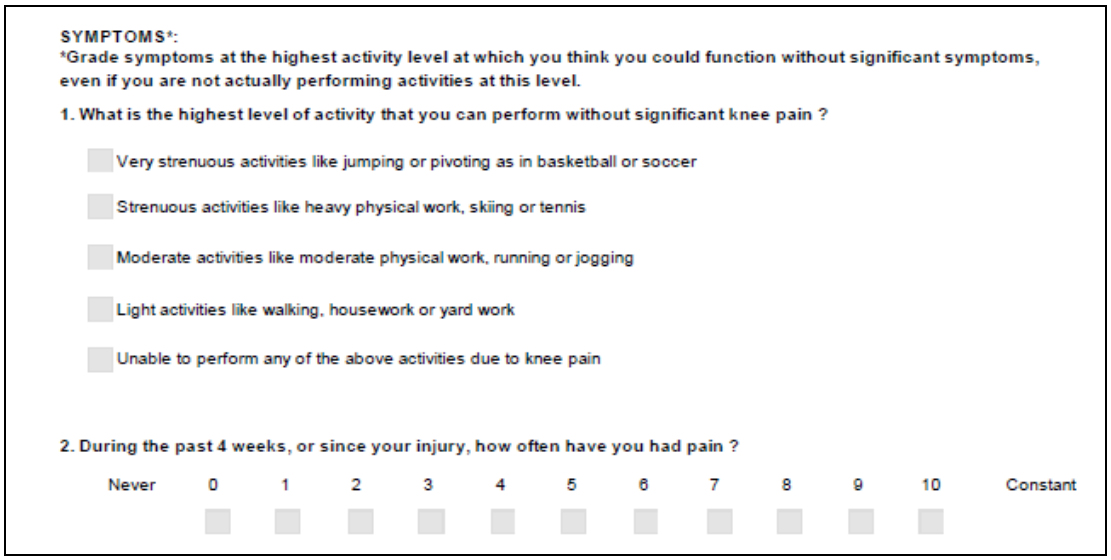
Patient responses can be entered manually, but most can also be scanned in using a standard office scanner. Web based patient data entry is available for most of the patient completed scores in English only.

The scan forms are specialised forms generated from within Socrates. They can be printed out using the **Print icon** on the screen of each score, or there are PDF copies in the Forms folder of your program.

> ***You must use these particular versions of the forms to enable the scan function to work properly.***



A sample of a form which can be printed from within the Socrates program and scanned.



SYMPTOMS*:
***Grade symptoms at the highest activity level at which you think you could function without significant symptoms, even if you are not actually performing activities at this level.**

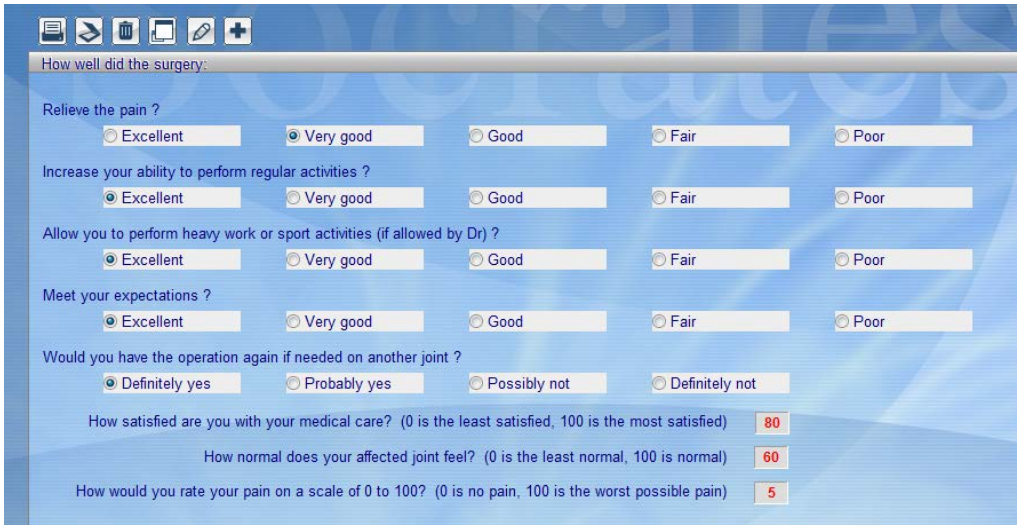
1. What is the highest level of activity that you can perform without significant knee pain ?

- ☐ Very strenuous activities like jumping or pivoting as in basketball or soccer
- ☐ Strenuous activities like heavy physical work, skiing or tennis
- ☐ Moderate activities like moderate physical work, running or jogging
- ☐ Light activities like walking, housework or yard work
- ☐ Unable to perform any of the above activities due to knee pain

2. During the past 4 weeks, or since your injury, how often have you had pain ?

Never 0 1 2 3 4 5 6 7 8 9 10 Constant

A **pre and post satisfaction score** is also included. It's a good idea to use this score as well, because sometimes the patient may not have the greatest score, but may be very happy with the surgery. Results can happen the other way around of course, but either way, it's good to know.



How well did the surgery:

Relieve the pain ?
○ Excellent ◉ Very good ○ Good ○ Fair ○ Poor

Increase your ability to perform regular activities ?
◉ Excellent ○ Very good ○ Good ○ Fair ○ Poor

Allow you to perform heavy work or sport activities (if allowed by Dr) ?
◉ Excellent ○ Very good ○ Good ○ Fair ○ Poor

Meet your expectations ?
◉ Excellent ○ Very good ○ Good ○ Fair ○ Poor

Would you have the operation again if needed on another joint ?
◉ Definitely yes ○ Probably yes ○ Possibly not ○ Definitely not

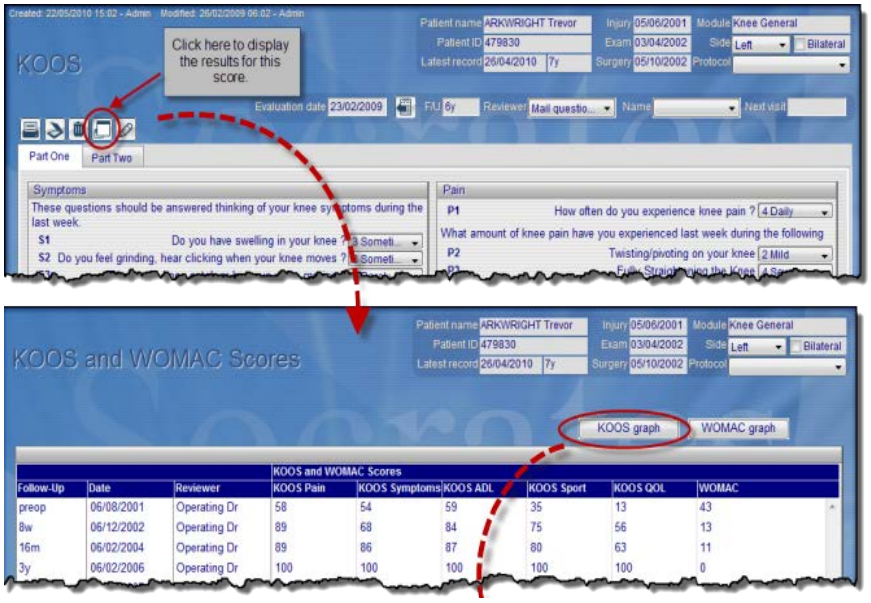
How satisfied are you with your medical care? (0 is the least satisfied, 100 is the most satisfied) 80

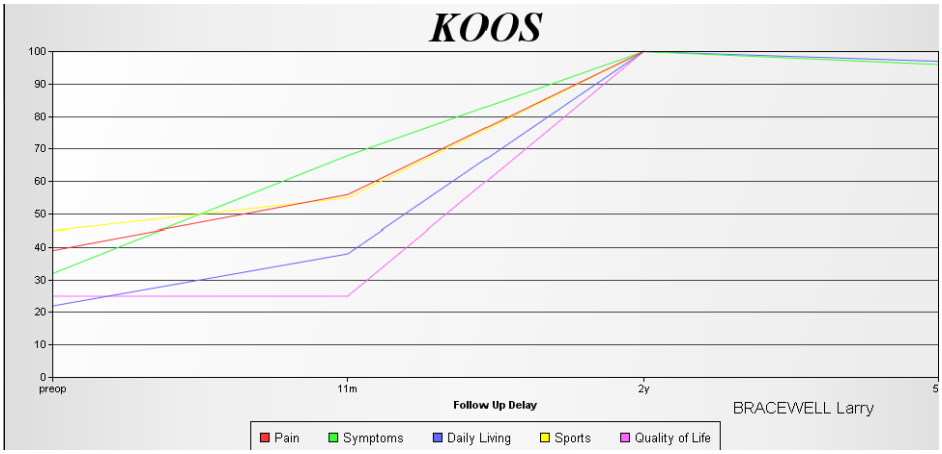
How normal does your affected joint feel? (0 is the least normal, 100 is normal) 60

How would you rate your pain on a scale of 0 to 100? (0 is no pain, 100 is the worst possible pain) 5

Score Results

Results for individual patients' surgery scores can be displayed by clicking on the **results icon** next to the trash bin, and then a graph can be viewed, printed, or exported for that individual result by clicking on the **graph icon.**





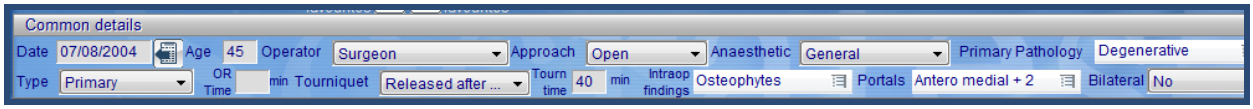
KNEE GENERAL SURGERY SCREENS

Now we get to the screen where you record the surgical details if you want to record this level of detail. Don't forget you have options as to the amount of detail you collect, so don't get overwhelmed by the detailed screens.

From the **Knee History Screen**, click on the **Surgery icon** to access details of the surgery.

COMMON DETAILS

The top section of the screen records the primary pathology, details of the approach and anaesthetic, portals used, surgery and traction time, type of surgery and whether navigation was used and some general findings.

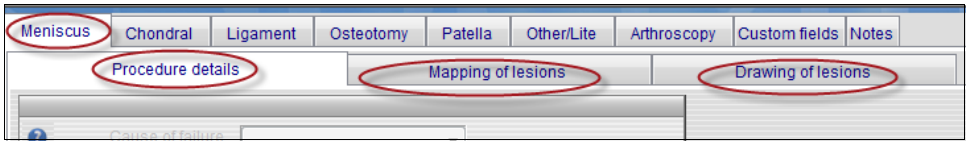


The surgery screen in this module has nine tabs, and accommodates as much (or as little) detail as you want to collect. There are *no mandatory fields* other than the Date of Surgery and Type (Primary, Revision, or Re-operation).

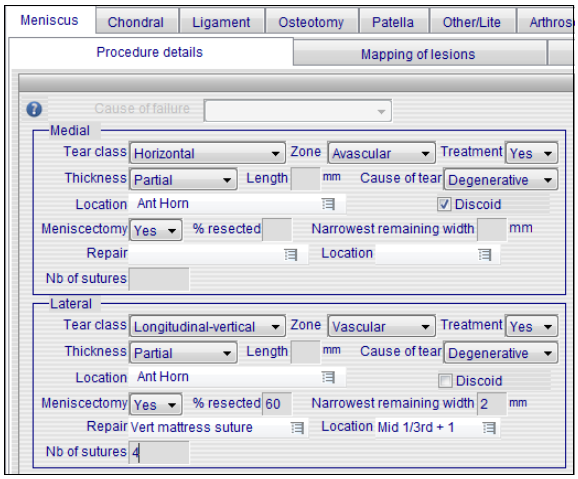
The first five tabs allow data to be recorded regarding the **pathology** found, and what was **treated** for the Meniscus, Chondral surfaces, Ligament (ACL, PCL etc) Osteotomies and Patella Femoral procedures.

MENISCUS SCREEN

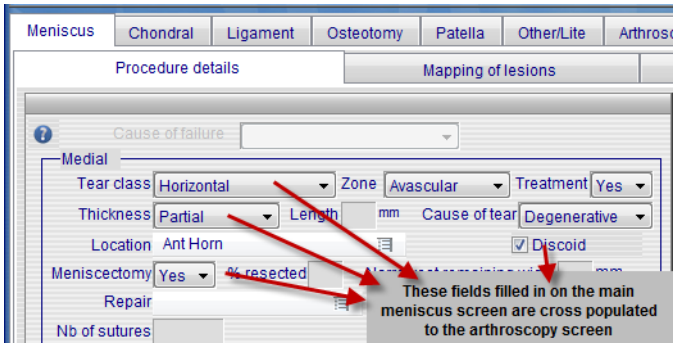
There are three sub-tabs/screens for meniscal procedures – **Procedure Details, Mapping, and Drawing**. The fields for lateral and medial sides are identical. If you don't want to record this level of detail for the meniscus, go to the **Arthroscopy screen,** where there is the option of entering less detail.

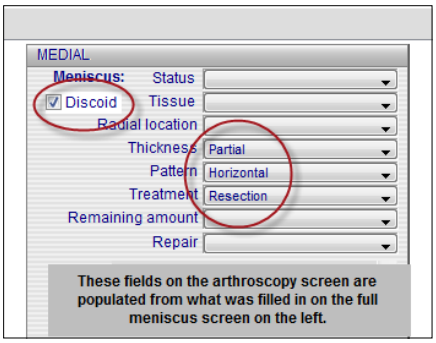


Meniscus procedure details



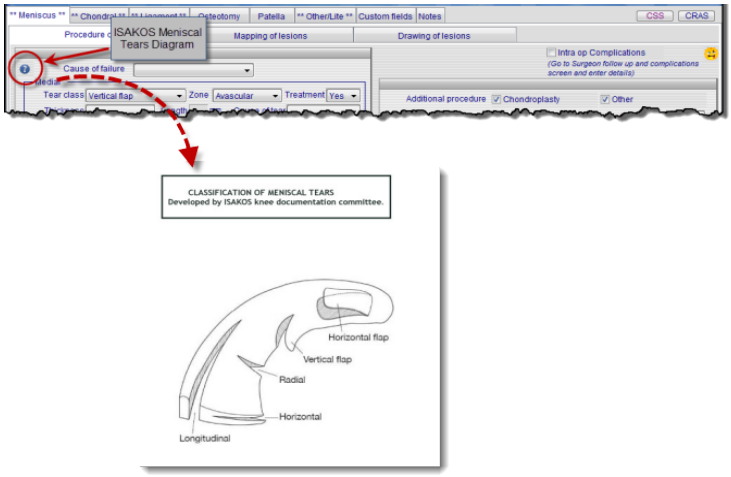
If you do enter data on the full screen, the basics will be cross-populated to the **Arthroscopy screen** if there are matching fields , so if you search for **tear type** (partial or full), **classification of tear**, and whether it was **resected,** and **discoid,** it will show up on the search regardless of which screen you entered the data.





Classification of Meniscal Tears

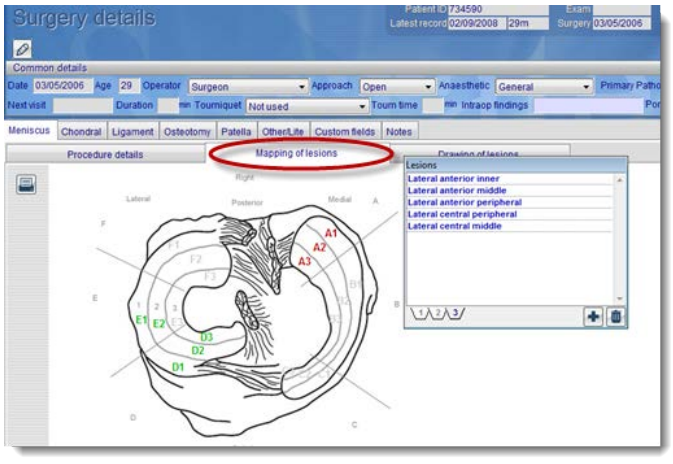
Click on the **Info button** above Medial on the main **Meniscus screen** to display the diagram.



The classification of tears and the map and zone descriptions were kindly supplied by the ISAKOS Knee Documentation Committee.

Meniscal Lesion Mapping

The mapping function is accessed by the second tab on the **Meniscus screen**. You can record the location of the meniscal lesions in two ways: either on this Lesion Mapping Screen, or more simply on the **Surgery screen** by Zone (Avascular, Vascular or a Combination).



Only the affected limb for this surgery entry will be displayed on the lesion map.

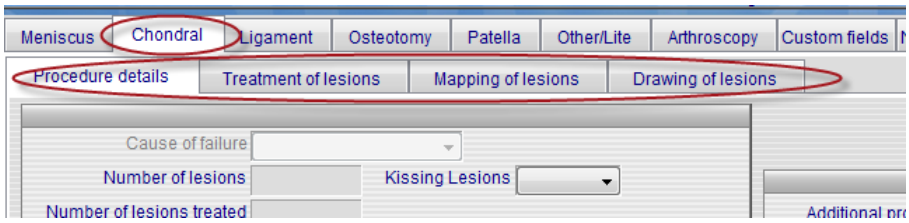
An unlimited number of lesions and/or locations of tears can be recorded. ***Each lesion or tear should be recorded separately***. By selecting the add icon to add a new lesion. The anatomic description will automatically appear in the **Lesions Window**.

Up to nine grid zones per lesion are possible. So, if the whole medial meniscus is affected, you can click on all nine zones for the one lesion. If there is more than one lesion or a separate tear, click on the **Add icon** again, and another tab for the second lesion will be created. Continue this way with Lesion 2, Lesion 3, etc.

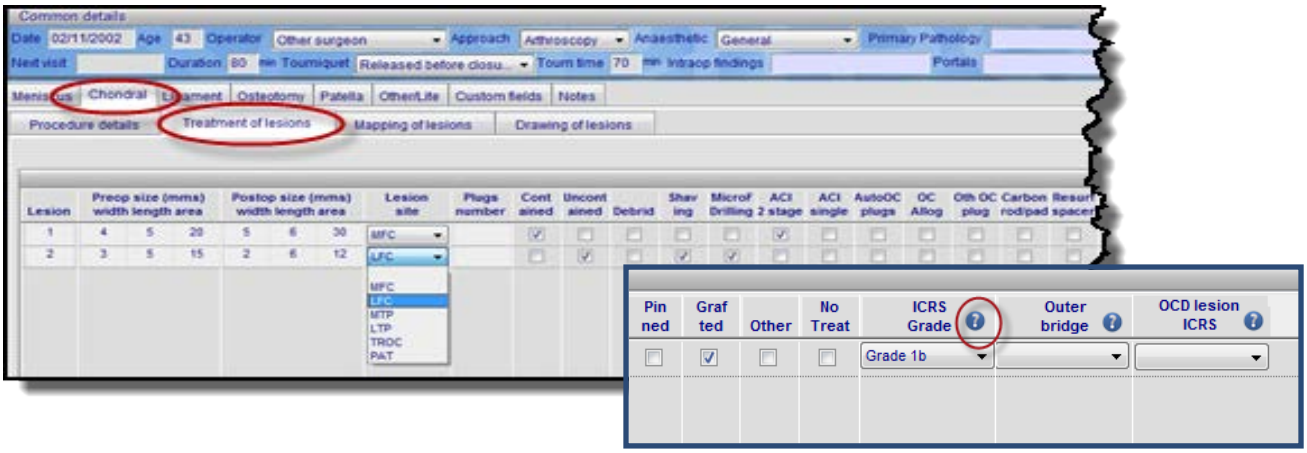
Chondral Screen

There are four sub-tabs/screens for chondral procedures – Procedure details, Treatment of Lesions, Mapping, and Drawing. You can really go to town on what you found and what you did to the cartilage if you want to...

Procedure Details



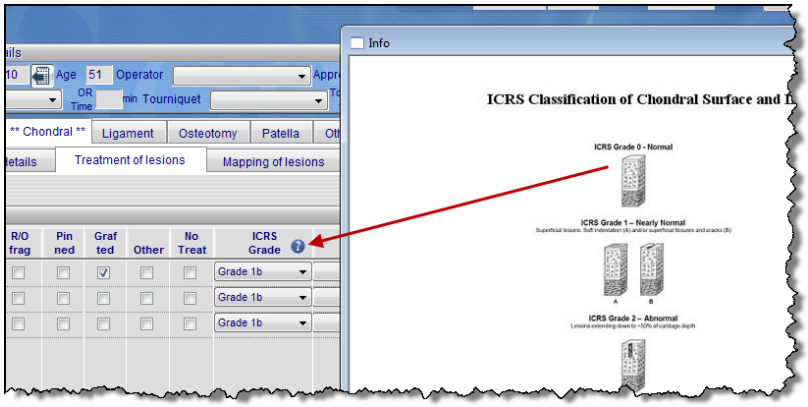
Treatment of chondral lesions



> ***NOTE: Keep scrolling along to the right to access all of the treatment modalities and grading classifications available on this screen.***

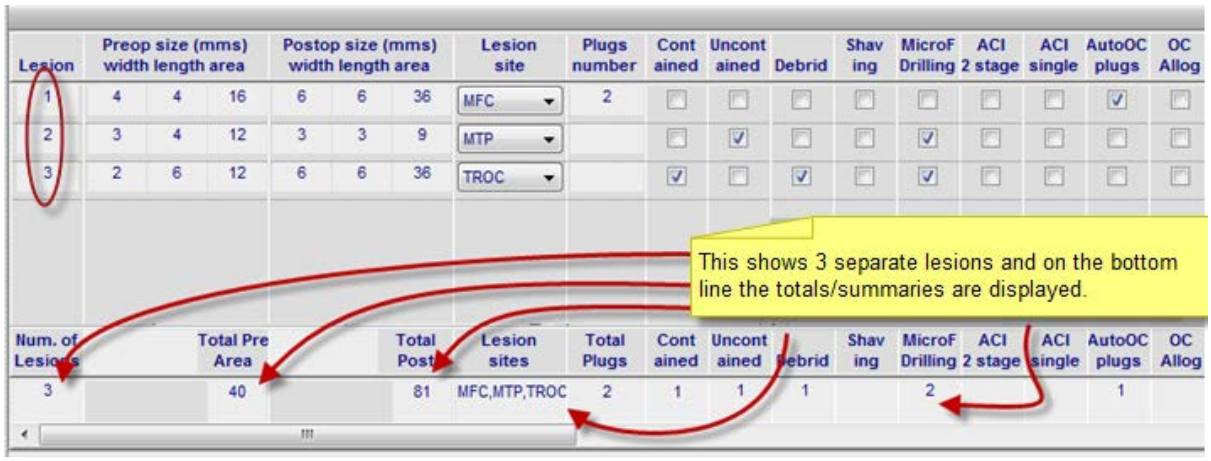
This screen allows for recording an unlimited number of lesions.

Click on the **Info buttons** to see a description of the classifications.



For each defect, add another lesion. You can have more than one in the same region i.e. MFC x 3 lesions.

You might end up with the screen looking like this if you had three separate lesions.



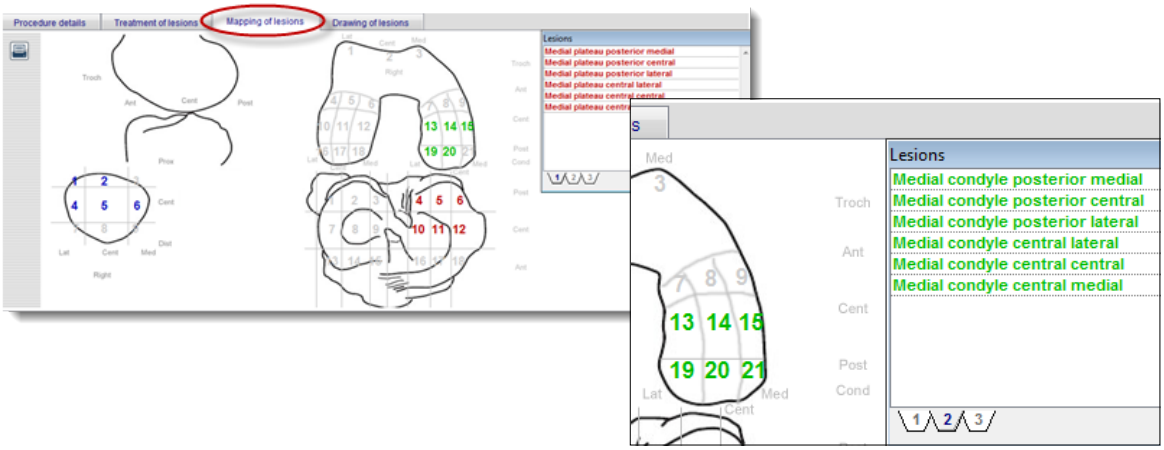
Mapping of Chondral Lesions

This screen is accessed by the third tab on the **Chondral screen**. You can record the location of the lesions in the knee either on this **Lesion Mapping screen,** or perhaps more simply on the **Treatment of Lesions screen** under lesion site (LFC, MFC, etc.), as seen in the previous section. If you use this method of mapping, be aware that you will probably need the services of a statistician to analyse it, since there are a lot of possible combinations. Data can be exported to Excel for this purpose.

Only the affected limb will be displayed on the lesion map. In other words, if the surgery entry for the joint is the Right Side, only an illustration of the right knee will be displayed.

To enter details, first click on the **Modify icon** at the top of the screen, and then start to enter details for Lesion One by clicking on the greyed-out grid number(s) to mark out where the lesion was located. The anatomic description will automatically appear in the **Lesions Window**. Up to nine grid zones per lesion are possible. In other words, if the whole MFC is affected, you can click on all nine zones for the one lesion.

If there is more than one lesion, simply click on the **Add icon**, and another tab for the second lesion will be created. Continue with Lesion 2, Lesion 3, etc. To delete, click on the **Trash icon**. To print, click on the **Print icon**. So, three separate lesions would show up in three different colours, and there would be three tabs selected, with the description of the anatomic location of each lesion on each tab.



Drawing Lesions – Chondral and Meniscal

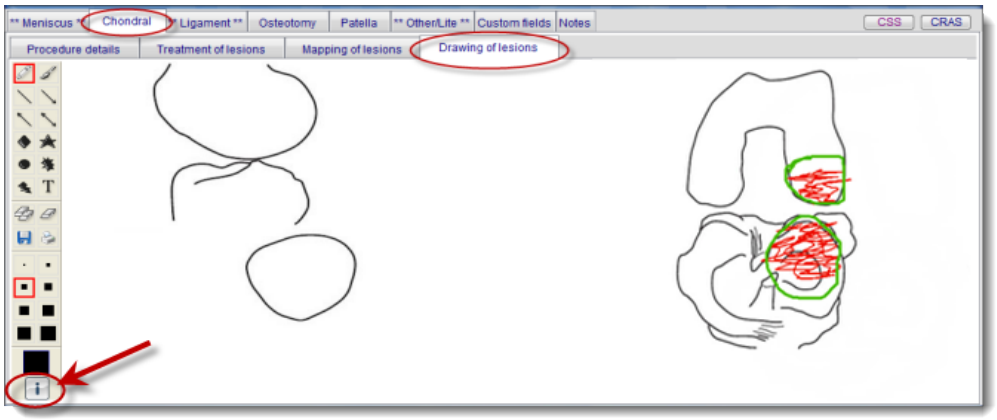
Both the **meniscus** and **chondral surgical screens** have a drawing screen accessed through the sub-tab on the right. , It takes a bit of practice to learn how to use it , but can be useful to remind yourself, or to give the patient a picture of what you did. Sorry to the Mac users, but the drawing function isn't available on the Mac.

> ***Note that the chondral and meniscal images here are only drawings. The information from these screens is not stored in the program other than as graphic images, and therefore is not available for Search or Statistics.***

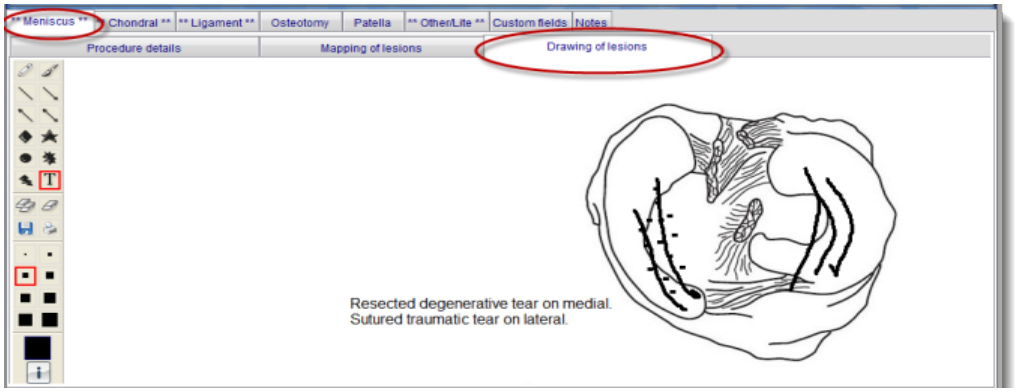
This feature gives a **graphic depiction** of what was found and treated at time of surgery. It can be printed to give to the patient, stored in a file as a hard copy, exported to store in another electronic medical record, or just remain in the Socrates patient file as a graphic reminder.

You will need to spend a little time initially getting to understand the icons and sizes, etc. The **Info button** at the bottom of the screen under the large black square will give you some drawing hints. See the chapter on Data Entry for more detailed instruction on the drawing function.

To access the drawing screen, click on the **Drawing of Lesions tab**, then the **Modify icon**, and the screen below is displayed.



It possible to "draw" sections on Drawing of Lesions – Meniscal and Chondral



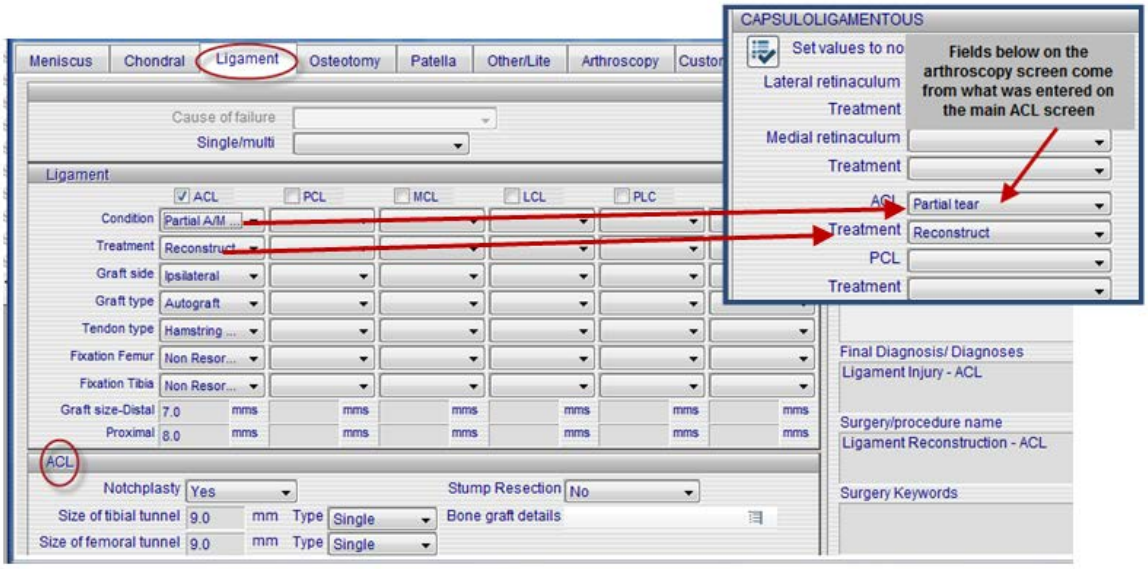
Ligament Screen

The next tab under types of General Knee Surgeries covers **Ligament Procedures**. The screen allows documentation of up to six ligament repairs on the knee in one procedure. The options include:

- Anterior Cruciate Ligament
- Posterior Cruciate Ligament
- Medial Collateral Ligament
- Lateral Collateral Ligament
- Postero Lateral Corner
- Postero Medial Corner

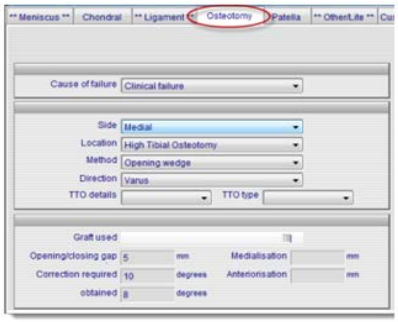
Additional information is included for the ACL in a section at the bottom of the screen.

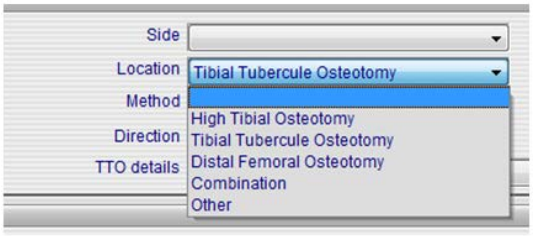
If you are using this screen to record your ACL surgery (as opposed to collecting less data on the Arthroscopy screen), don't forget that you can set the screen up with "Favourites" which will pre-populate the screen with your routine procedures including the diagnosis and procedure. Additionally, data entered here about a meniscal tear and treatment method will automatically populate across to the arthroscopy screen.



Osteotomy Screen

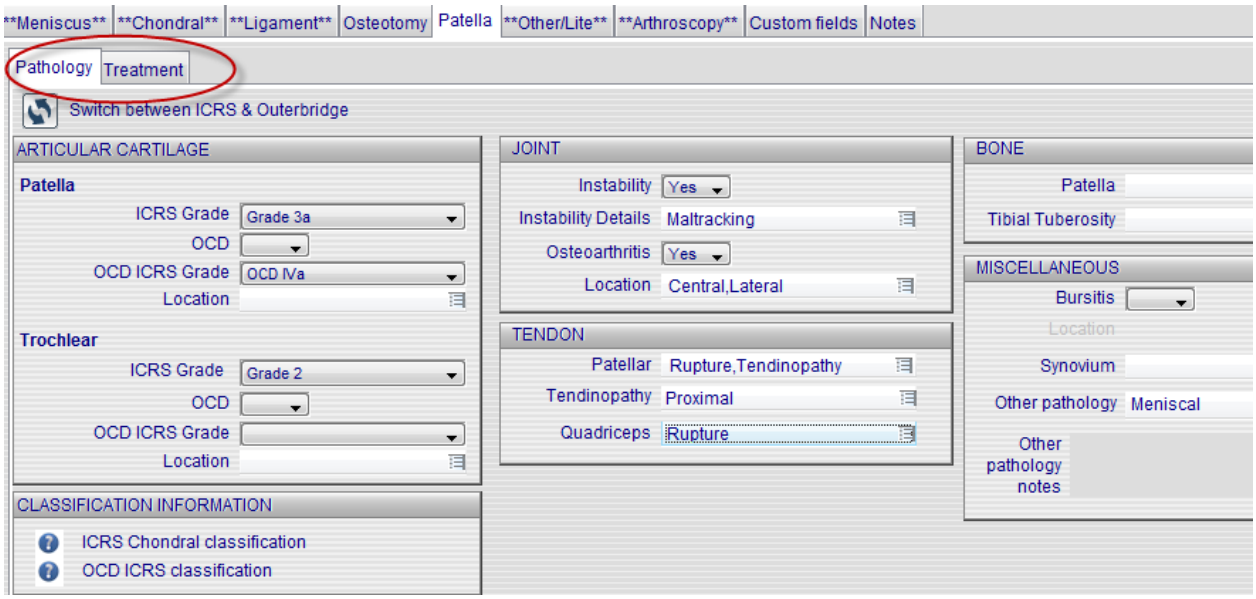
This screen is intended to document details of **Tibial and Femoral Osteotomies.**





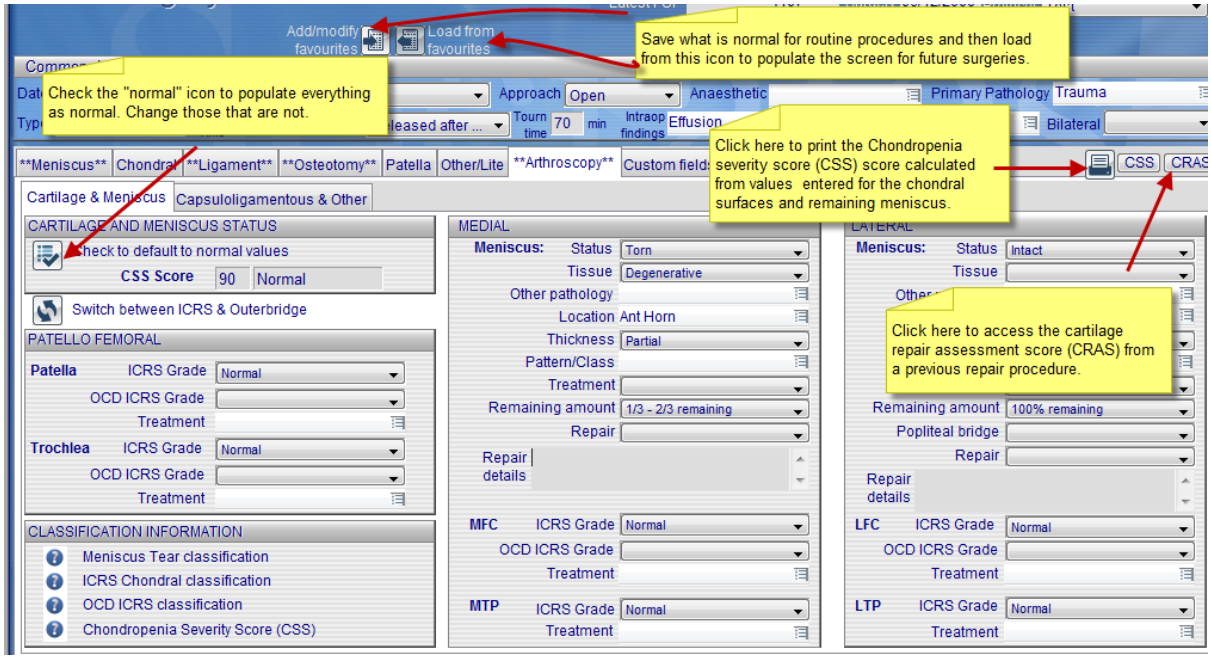
Patella Screen

This screen is for **Patello femoral pathology and** procedures. There is a screen for pathology, and another for treatment.



Arthroscopy Screen

This screen captures most of what you might want to record during a routine Arthroscopy. There are Favourites and Normal buttons, so you can set up both screens to default to “normal” or “no treatment”, or set up what you want as a Favourite for a routine surgery.



How to enter two-stage Autologous Chondrocyte Implantation (ACI)

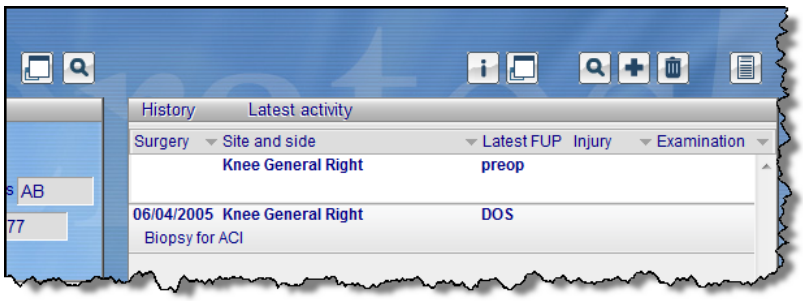
This surgery requires some thought and a decision made about how to set it up. There are 2 options for how to record this as it involves 2 surgeries. The first procedure is normally to take a biopsy which is sent for culturing and expansion, the second the implantation procedure, usually some weeks or months later.

All of the scores or surveys used to assess the surgical outcome both pre and post op should be attached to the 2nd implantation procedure.

Technically the first procedure is still a surgical procedure so if you are keeping track of all your surgeries for audit purposes and want to record this as a surgery we suggest you record this with the procedure name to reflect that it was a biopsy only. If this procedure name isn't yet an option on your list of procedure names go to the Set Up screen and add it to your list. This surgery shouldn't have pre or post op scores attached to it. Thus the last follow up period for this biopsy only procedure would always say DOS (day of surgery)

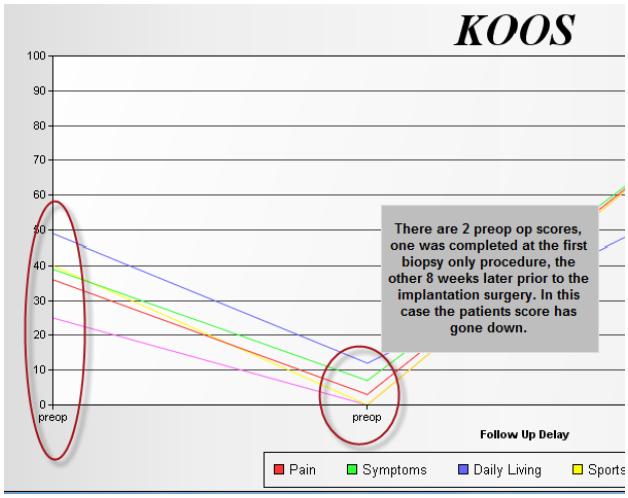
If you don't yet know the date of the 2nd procedure but you have asked the patient to complete a preop score create a new record which will be for the forthcoming implantation procedure and enter the pre op score into this record. Your screen would show this as below. The latest follow up period (FUP) shows that a preop score has been entered for the 2nd procedure but since it has not yet been done there is no date of surgery recorded.

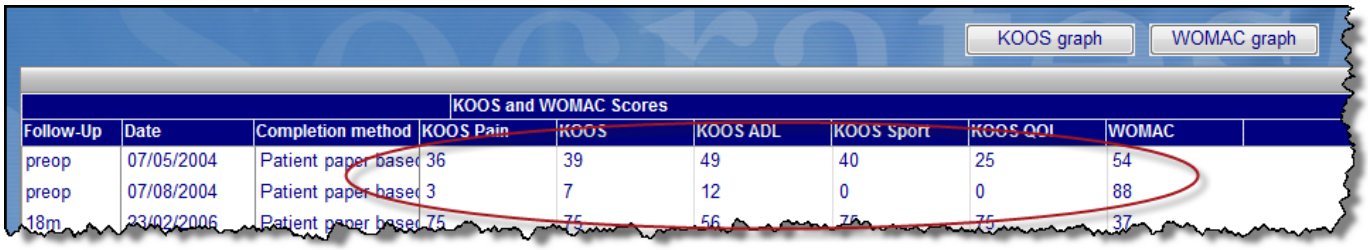
Note: If you enter the preop score into the first biopsy surgery it will not be linked to the second surgery.



Since there will a delay between the biopsy and the 2nd procedure it's normally advisable to have the pre op score as close as possible to the definitive procedure. You can ask the patient to complete one at each procedure if you want to, and enter them both as preop scores for the 2nd op (it's possible to have 2 scores at the same follow up period) Enter the scores with the actual date rather than just preop so you can see which ones were done at the 2 different time points. This can be useful to show that the patient has not improved over time, or may have deteriorated while waiting for the 2nd procedure.

The patients preop graph and results might then look like this

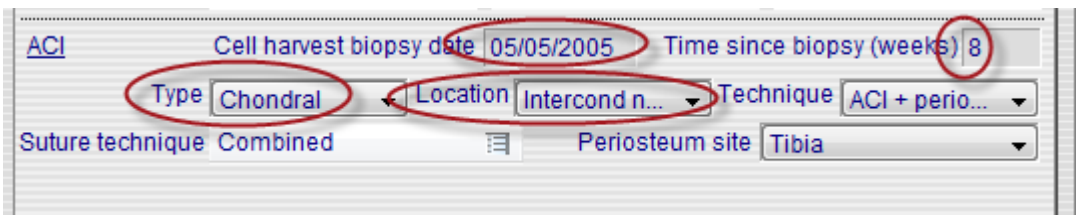




However If you are following only specific surgeries you may not be concerned about recording the first surgery at all since if you are doing a two stage procedure it's a given that you would have done a biopsy.

Thus the patient would only have one record as below. The preop scores are recorded here, and the latest Follow Up date. Anything that has been entered on this record are the surgical details which show up as DOS (day of surgery).

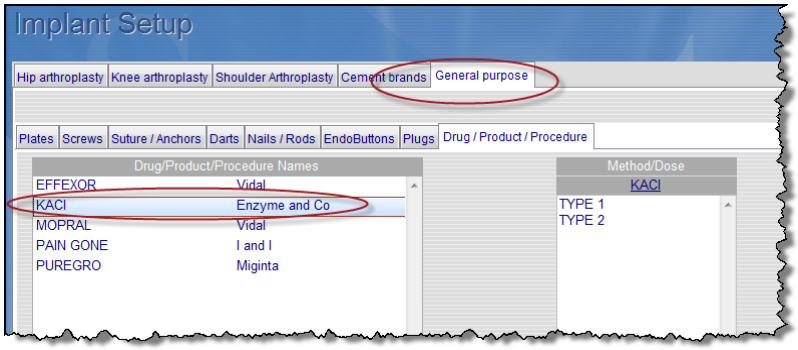
Data about the biopsy – date, type and location of biopsy can then be entered into the screen of the implantation surgery. Note that the program will calculate the time between biopsy and surgery once both dates are entered. Even though these details relate to the biopsy surgery they should be recorded into the screen of the second surgery since this is the one you will be following up.

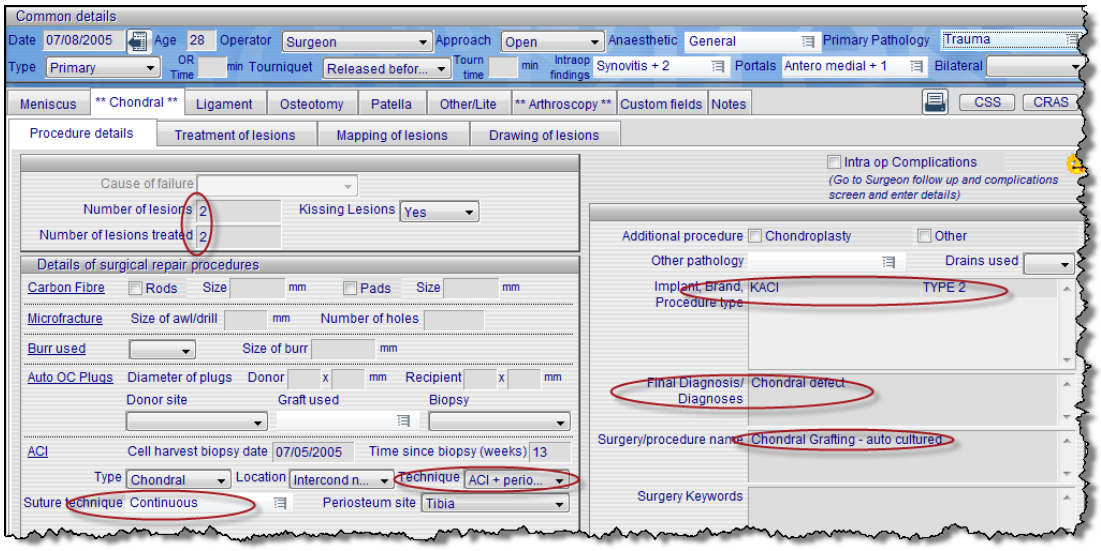


A rule to remember is that everything that matters is entered into the second implantation surgery.

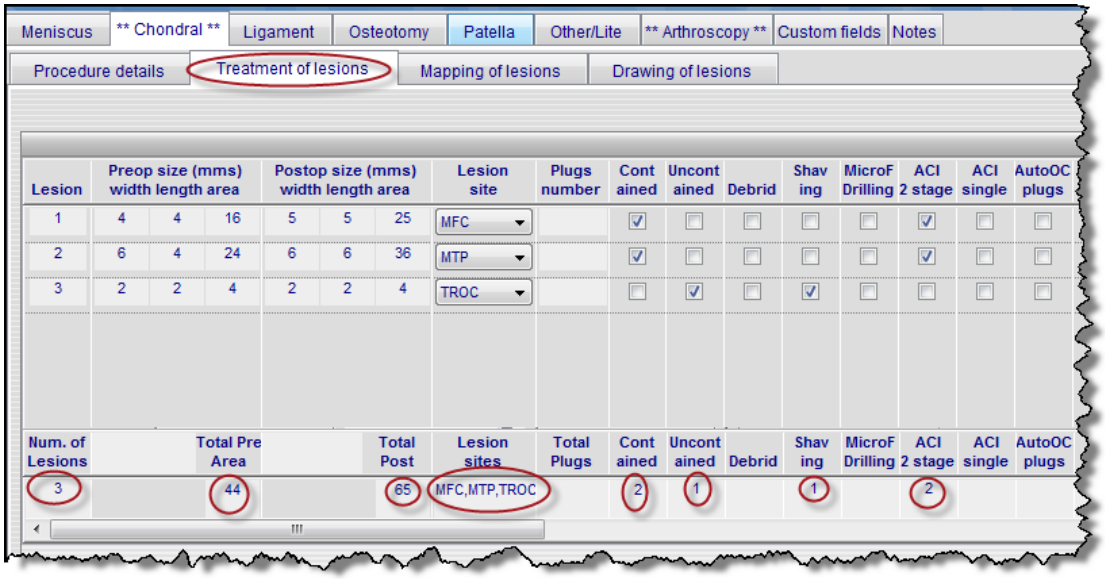
OK, so let's assume that now you have created either one or 2 records and have the preop scores and some details about the biopsy in the second implantation surgery ready for when the actual surgery goes ahead.

How much data on the implantation procedure you enter from here depends entirely on what you choose. You can decide to just enter a diagnosis and procedure name and that's it. The first chondral surgical screen allows you to record the details as shown in the next screen shot. You can also record the number of lesions, diagnosis and the details of the brand name of cells you are using. These are created on the Set Up screen, under General Purpose - Drug/Product/procedure.

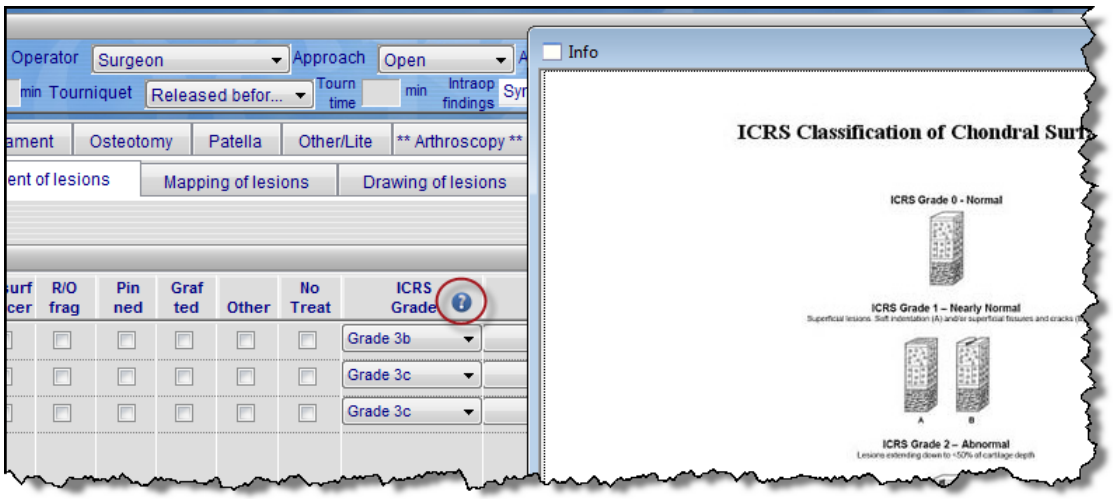




Or you can choose to enter more data and select the next tab "treatment of lesions" screen to enter a lot more - size of lesions, grade, location etc. The details are summarised down below and searchable.



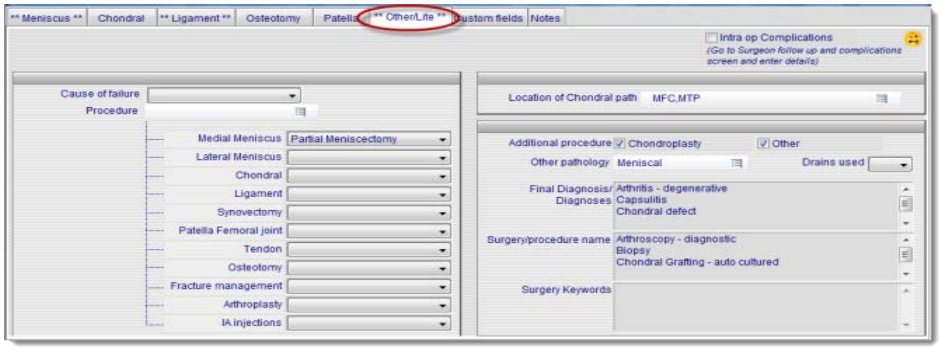
Scroll along to the end and you will see there is provision to record the grade of the lesions also, the little info button will give you the descriptions of the grades if you have forgotten.



If you want more details about exactly where in each condyle the pathology was you found can select the Mapping screen and record this also. These data can be exported for statistical analysis.

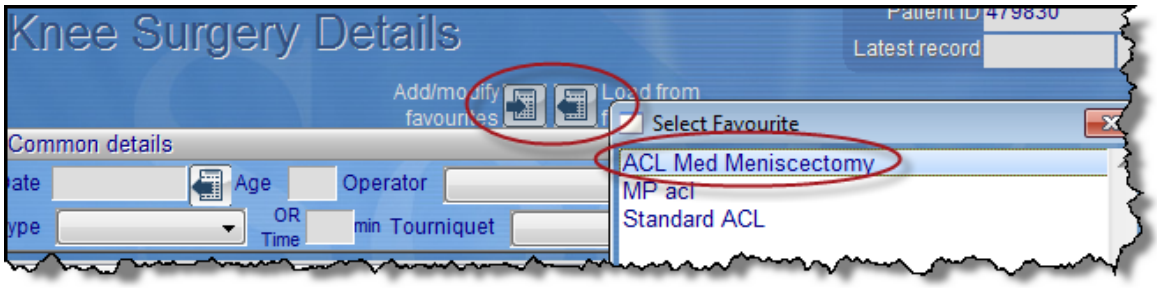
Other/Lite Screen

This screen was added to enable you to keep a basic clinical audit of all the procedures you perform, or for you to add other procedures that may be performed during the main surgery. However, since we first developed Socrates, we have added additional modules, (as well as a General Surgery one), so **we don't recommend that this screen is used by new users.**

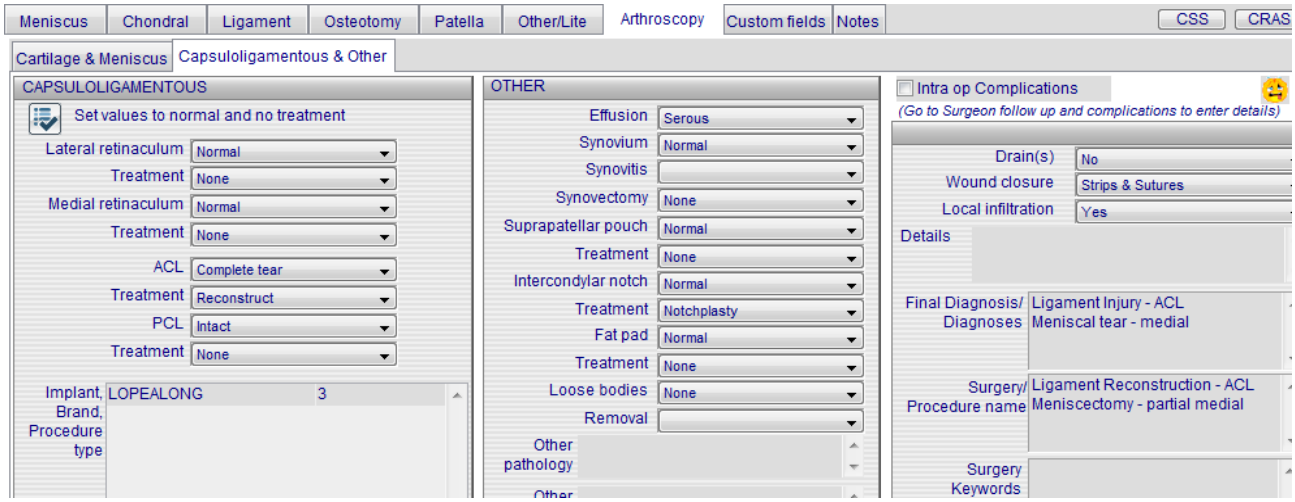


Favourites

Don't forget about these: a little time spent setting them up *saves a lot of time down the track*.



One click on the ACL/Medial Meniscectomy Favourite populates both of the arthroscopy screens; just change those few details that vary with this surgery, and Save. This took less than a minute, and you could generate an Op Report from this screen also, with another click on the Reports screen.

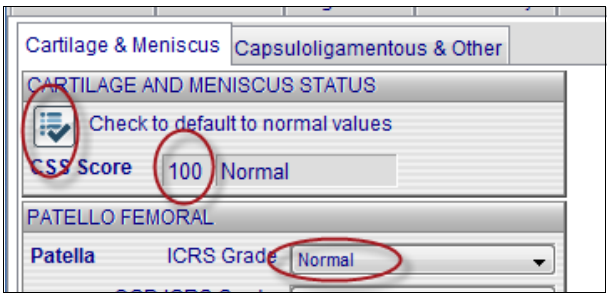


Cartilage Severity Score – CSS

This score was developed as a method of giving an objective score based on the *condition of the chondral surfaces and the meniscus*. The score uses the ICRS method of grading the chondral surfaces, and the total is 100 points.

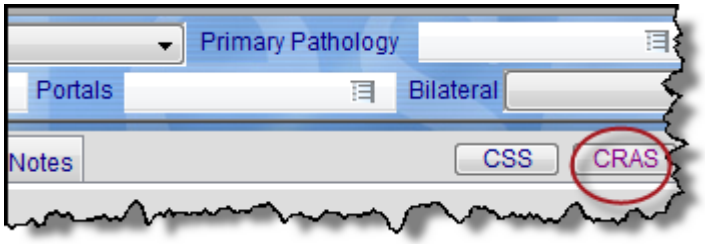
If you elected to use the Outerbridge method (you choose which one you'll use in the Set-Up screen), you won't be able to calculate this score nor see it on the search lists.

Use the **Print icon** to print the summary. Click on the **Info icon** to display the ICRS classifications. Just click on the **Tick icon,** and all the chondral surfaces show up as normal, the meniscus as being 100% intact. Make the appropriate changes, and the score will change accordingly.



Cartilage Repair Assessment Score – CRAS

The **Cartilage Repair Assessment Score (CRAS)** is accessed by a button on the right of the screen.

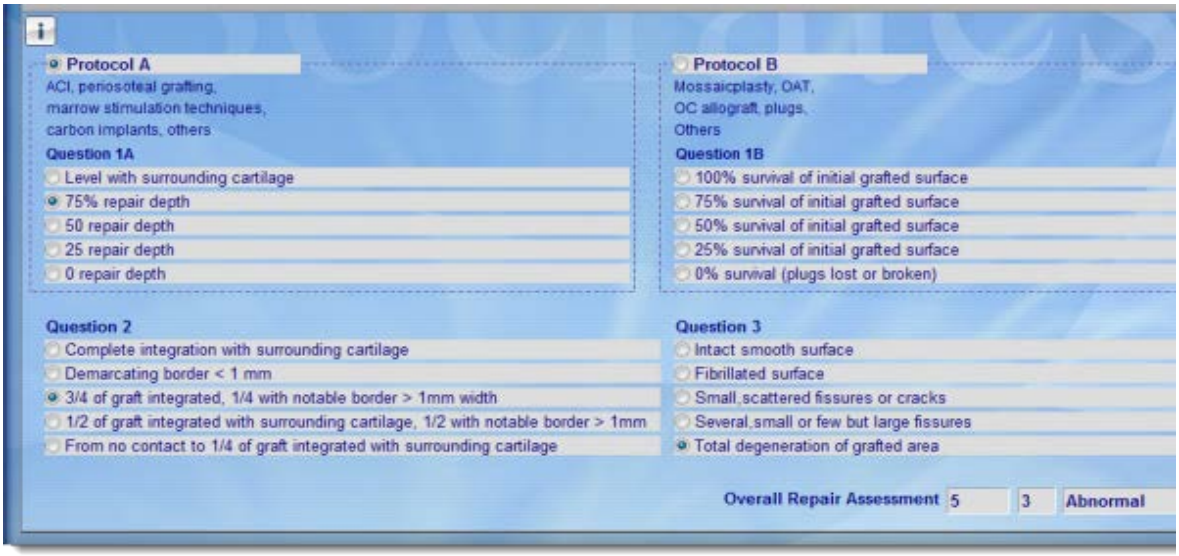


This score was developed by the ICRS to assess the appearance of the chondral surface and grafted region *after cartilage repair procedures* such as ACI and Mosaicplasty.

There are two options, allowing assessment after different procedures:

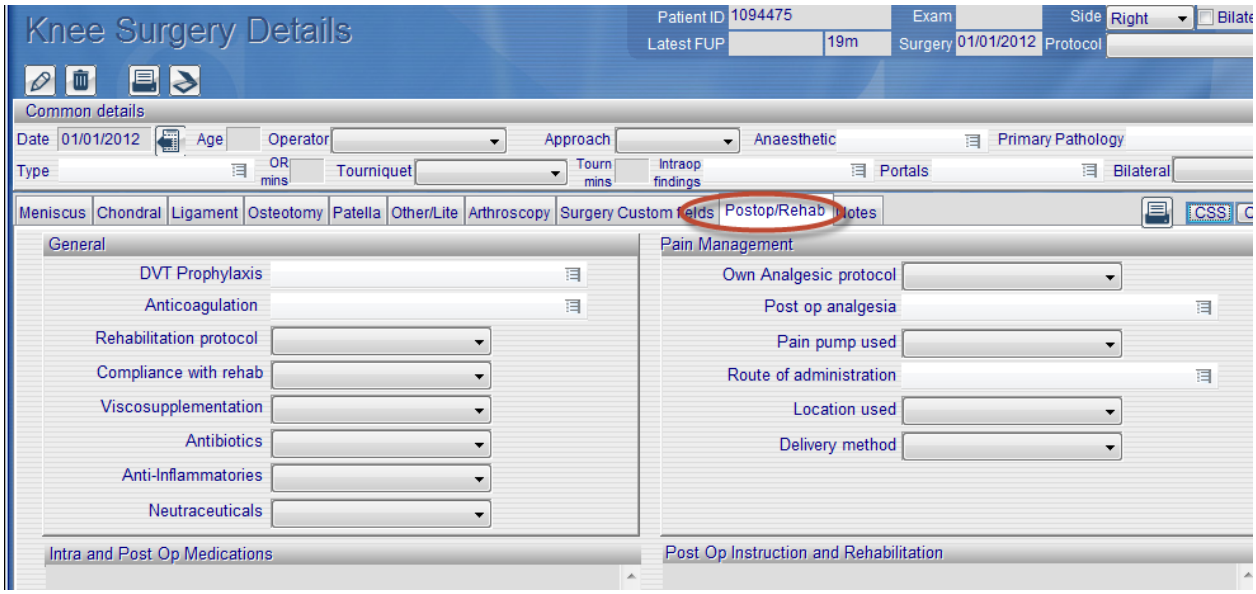
- Protocol A – ACI, periosoteal grafting, marrow stimulation techniques, carbon implants, others; and
- Protocol B – Mosaicplasty, OAT, OC allograft, plugs, others.

More information and references about both these scores are found in the chapter on Scores.



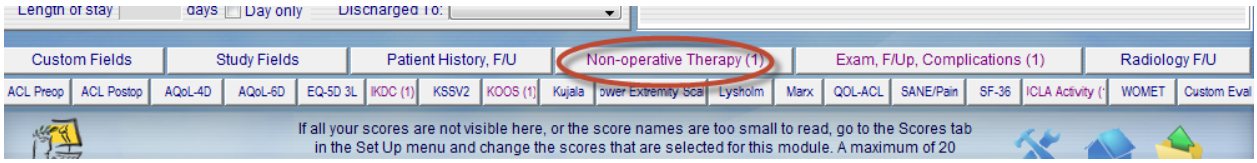
POST-OP AND REHAB DETAILS

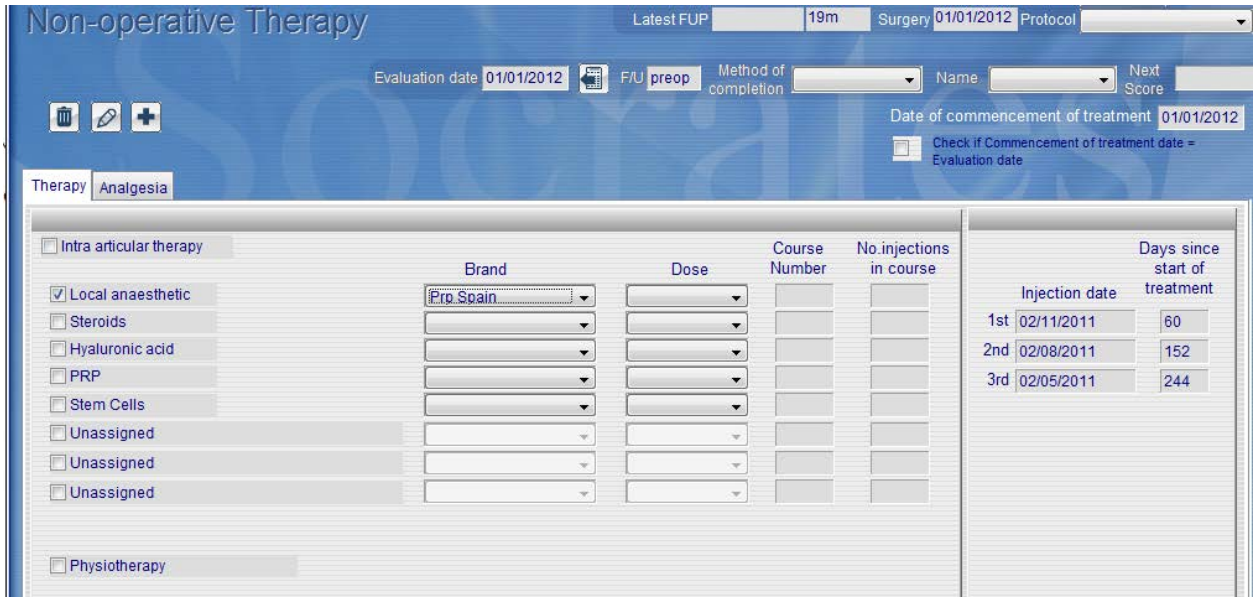
This screen is common to all the modules. It is accessed by clicking on the Post Op/Rehab tab on the surgery screen.



Non-Operative Therapy Screen

The Hip and Knee General modules include a **Non-Operative Therapy screen**. If you can't see this screen, go to Set-Up –- Scores, and select it from the list of score to be displayed. This screen allows collection of detailed data and follow-up of non-operative therapies such as Steroids, Analgesia or Intra-articular Treatment such as Hyaluronic Acid.





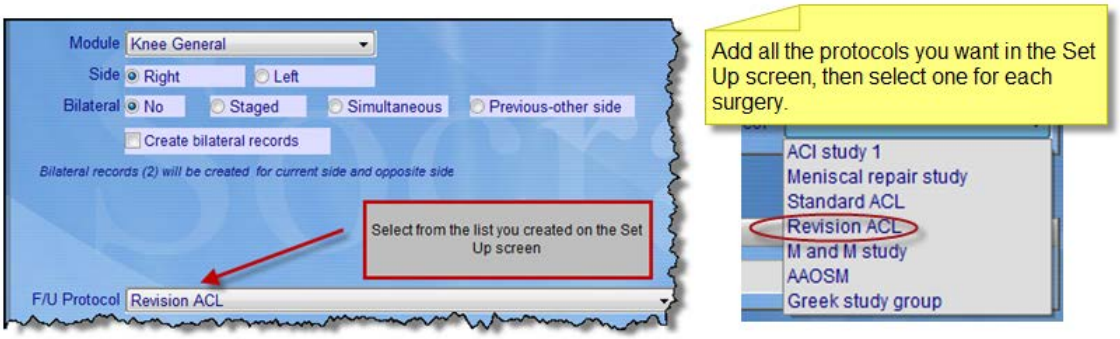
IMAGES (XRAYS, VIDEOS, CT SCANS, MRIs, ETC.)

Images can be stored, searched for, printed and exported from the **Knee Surgery screen**, by clicking on the **X-ray icon** on the right of the screen. See the chapter on **Images** for more details, including how to give the images Keywords for easy searching and selection at a later date.

FOLLOW-UP PROTOCOLS

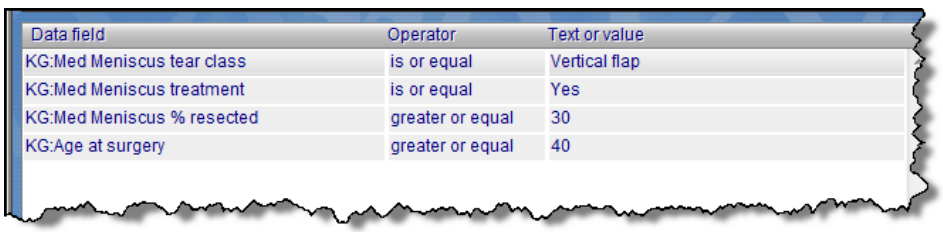
Don't lose your patients (unless you want to!) You can choose a **Follow-Up Protocol** so the program knows when patients are due to complete their next scores and can remind you. The different options in the drop-down menu are created by you in the **Set-Up screen** (**tools icon**). A protocol is a set of scores and time points – really a follow up regime.

It's a good idea to make sure that each surgery is allocated to one of the protocols you set up, as it makes it easy to generate statistics and search for patients and surgery outcomes, as well as to follow them up at the required time points. For example if you set up a protocol for primary ACL, Revision ACL's, it is easy to pull data on the pre-op and post-op scores for all surgeries in these groups.



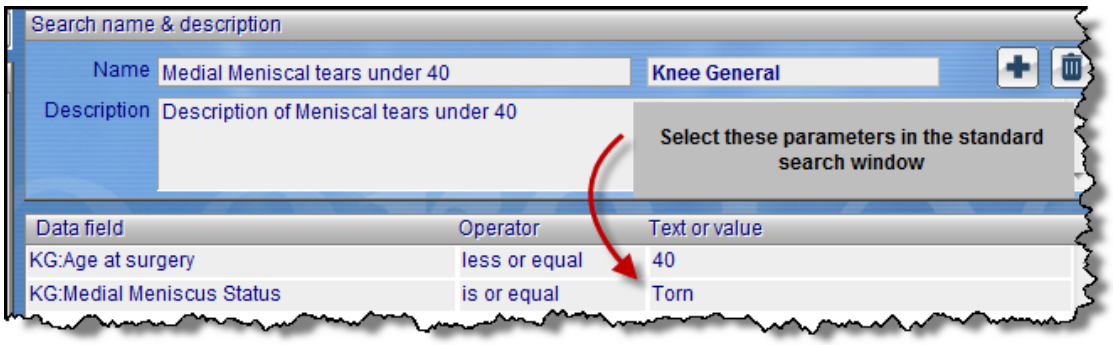
SEARCH

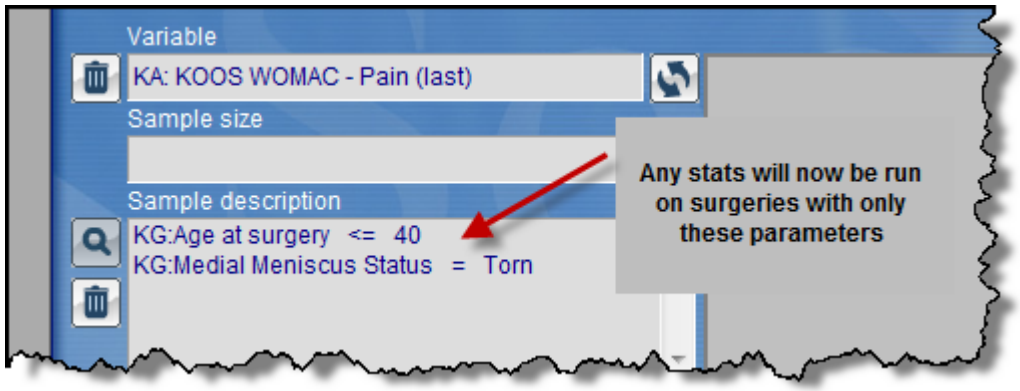
The search function in Socrates allows you to search for any field or combination of fields in the database. The example below shows the window that sets up a search for all surgeries with some details about meniscal tears See the chapter on Searching for details on setting up your own Searches.



Data field	Operator	Text or value
KG:Med Meniscus tear class	is or equal	Vertical flap
KG:Med Meniscus treatment	is or equal	Yes
KG:Med Meniscus % resected	greater or equal	30
KG:Age at surgery	greater or equal	40

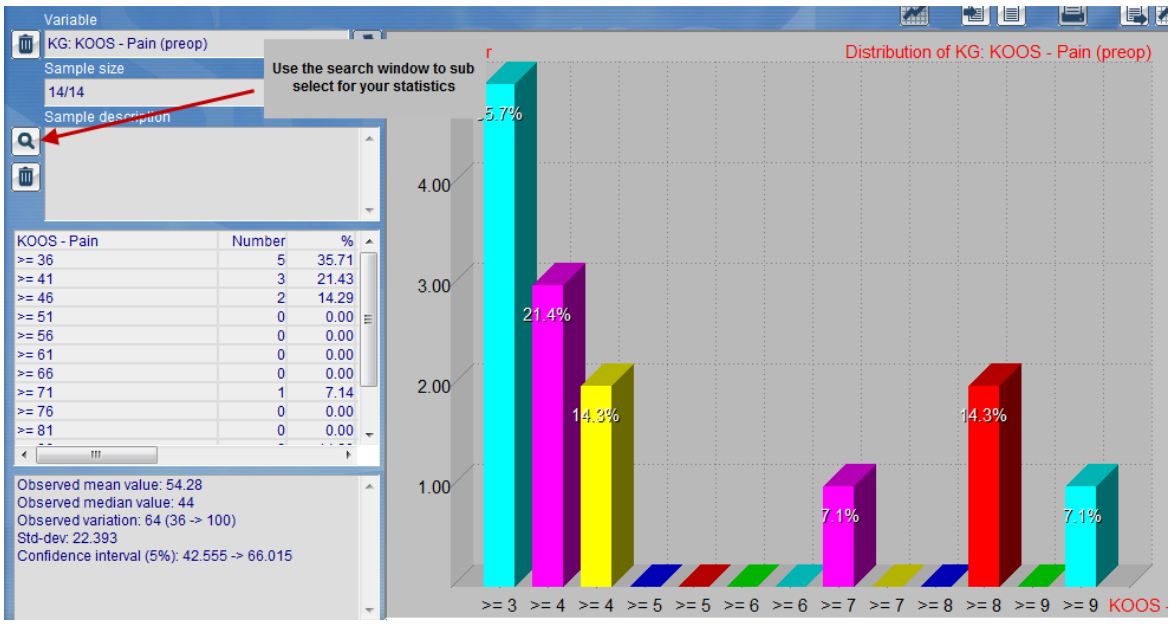
You can also use the same search window to run stats on any subset you determine. For example, you would use this window to search for your mean KOOS scores on this group, for age to “equal or less than 40,” with a meniscal tear.

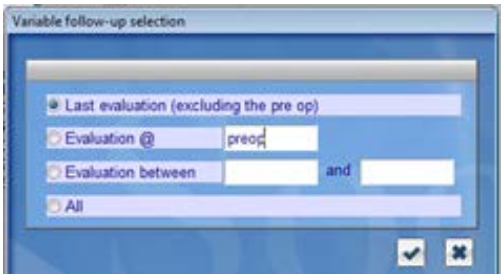




STATISTICS

Socrates provides you with basic Descriptive Statistics functions for you to calculate and demonstrate your own basic statistics without the help of a statistician. However, if you do find you want to do more sophisticated statistical analysis, all of the fields in Socrates can be exported to Excel for transfer to a dedicated stats package. See the chapter on Statistics for more information on how Socrates does stats.

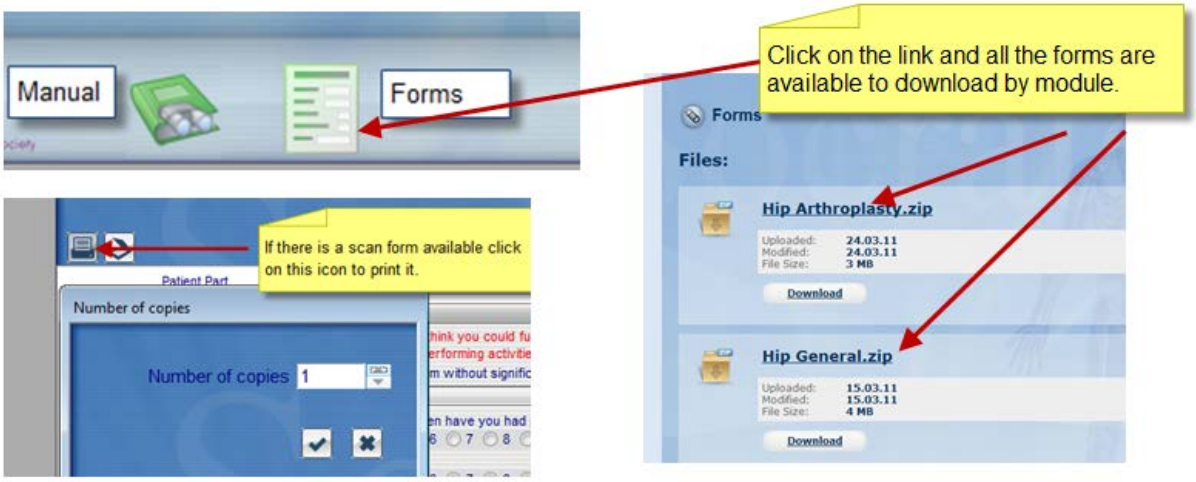




Now…you need to go to the chapter on ***Set-Up and Customisation*** *to learn how to set up your database for your own use, and then wade through the chapter on* ***Data Entry****. It will take a bit of time, but you only have to do it once*

FORMS

All the screens in Socrates have forms to match. There are also scannable forms inside the forms folders in their individual modules but these can be printed out from each screen where you see a print icon. There are also scannable forms for the surgical details. On the home page there is also a link to the Socrates web site which will access the up-to-date forms.



List of Forms

LEGEND
Y: these forms are available in the format of the column heading.
ALG missing: Y indicates that an algorithm is built in to the score so that if some questions are missing, a score is still possible. See chapter on scores for individual scores information.
Scan forms: forms available as a scannable PDF to capture data via a Scanner
Type: QS = patient questionnaire; SU = surgeon form; SC = Score
Patient/Surg: P indicates the patient completes the form; S is a surgeon completed form; C is combined

KNEE GENERAL	KG	WORD FORM	WEB SCORE	SCAN FORM	ALG MISSG	Type	Patient/ Surg
GROC Global Rating of Change		Y		Y		QS	P
Patient History Work & Sport PreOp	KG 1	Y		Y		QS	P
Patient Satisfaction, Normal, and Pain VAS Postop	S8	Y	Y	Y		QS	P
Patient Satisfaction, Normal, and Pain VAS Preop	S8	Y	Y	Y		QS	P
Patient Work & Sport PostOp	KG 3	Y	Y	Y		QS	P
SOMOS - US Military Patient History		Y	Y	Y		QS	P
Brittberg	S21	Y	Y		N	SC	P
Euroqol EQ5D		Y	Y	Y		SC	P
IKDC Paediatric	S18	Y	Y	Y	Y	SC	P
IKDC Patient	S18	Y	Y	Y	Y	SC	P
Knee Society Score	S14	Y	Y	Y		SC	P
KOOS - Knee Injury and Osteoarthritis Outcome Score	S15	Y	Y	Y	Y	SC	P
Kujala		Y	Y	Y		SC	P
Lysholm	S17	Y	Y	Y		SC	P
Marx	S23	Y	Y	Y		SC	P
Oxford Knee Score	S16	Y	Y	Y	Y	SC	P
Psychovitality	KG 17	Y				SC	P
Quality of Life Assessment in ACL Deficiency		Y	Y	Y		SC	P
Tegner	S20	Y	Y			SC	P
UCLA Activity		Y	Y			SC	P
VAS Pain			Y	Y		SC	P
VAS Pain Expectations	KG 19	Y	Y			SC	P
Veteran Rand-12 General Health Survey		Y	Y	Y		SC	P
Veteran Rand-36 General Health Survey		Y	Y	Y		SC	P
WOMAC Knee	S10	Y	Y	Y		SC	P
WOMET - Western Ontario Meniscal Evaluation		Y	Y	Y		SC	P
IKDC Surgeon	S19	Y				SC	S
Chondral	KG 6	Y				SU	S
Chondral Lesion Map	KG 7	Y				SU	S
Chondropenia Score	KG 9	Y				SU	S

KNEE GENERAL	KG	WORD FORM	WEB SCORE	SCAN FORM	ALG MISSG	Type	Patient/ Surg
Complications		Y		Y		SU	S
CRAS Cartilage Repair Score	KG 8	Y				SU	S
Knee Arthroscopy Surgery Details	KG 20	Y		Y		SU	S
Knee Symptoms Exam PostOp	KG 4	Y				SU	S
Knee Symptoms Exam PreOp	KG 4	Y				SU	S
Ligament	KG 12	Y				SU	S
Ligament and Meniscus	KG 13	Y				SU	S
Meniscus	KG 10	Y				SU	S
Meniscus Lesion Map	KG 11	Y				SU	S
Non Surgical Knee		Y				SU	S
Osteotomy	KG 14	Y				SU	S
Other/Lite	KG 16	Y				SU	S
Patello Femoral	KG 15	Y				SU	S
Patient Demographics and Surgery Details	NEW	Y				SU	S
Radiology	KG 5	Y				SU	S
Rehab and PostOp	S9	Y				SU	S

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