DIGISTAT® Smart Scheduler

DIGISTAT® Version 4.3

User Manual

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1. DIGISTAT® “Smart Scheduler”

For general and detailed information about the DIGISTAT® environment and the instruction for use of the Control Bar software see the document “DIG UD CBR IU 0005 ENG V01 - Digistat Control Bar User Manual”.

1.1. Introduction

The DIGISTAT® “Smart Scheduler” system is an instrument for planning operations in the operating room at surgical block or individual room level.

Using “Smart Scheduler”, it is possible to record every significant detail concerning the patient and the surgical, manage room staff, plan time schedules, spaces and operating resources.

The information gathered is for documentation use. The “Smart Scheduler” system is not intended for the replacement or alteration of the management and control practices usually implemented in the structure where it is used.

We also recommend that you keep accurate paper records of every activity performed, making reference to it when necessary.

1.2. Operation state

The “Operation State” concept characterizes work inside the whole “Smart Scheduler” system, so it is necessary to explain it before looking at the different pages and procedures.

The term “Operation state” means the “stage” of the “path” that every surgical operation has to go through from the initial meeting with the patient until completion of the operation.

The Smart Scheduler system envisages three different operation states.

- Foreseen – The operation is “foreseen” when the decision has been made to operate on a specific patient. Therefore the procedure for the operation in question is opened.

- Requested – The operation is usually “requested” when all the bureaucratic or medical requirements in relation to the operation in question have been met. In practical terms, to facilitate the inclusion of emergency operations, an operation can be “requested” by simply indicating the type of operation and its planned duration (see paragraph 6.2).

- Scheduled – The operation is “scheduled” when it has been included in the general schedule of operations. A surgical block, room, date and time are usually assigned in “scheduled” state. It is possible, in order to quickly schedule emergency operations, to “plan” an

operation lacking the above characteristics (either all or some of them). These operations are known as “reserves” and are described in paragraph 7.5.5.

The Smart Scheduler-OranJ combined system envisages six different “operation states”. The three states described above are followed by the “Ready” state (the patient has undergone the surgical block check-in), by the “In progress” state (the operation is in progress) and by the “Completed” state (the patient is out of the operating room).
The last three states, while shown on Smart Scheduler, are managed by the DIGISTAT® *OranJ (Operating Room and Anesthesia Journal) system.*

It is also possible, according to the needs and the procedures in use, to activate on “OranJ” an ulterior state making the “Completed” operations impossible to edit. The data of these operations are “Read-only” data. These operations are characterized by a dark grey colur when displayed both in “OranJ” and in “Smart Scheduler”.

1.3. Lock/Unlock operation

This chapter explains the principles and the goals of the operation lock/unlock functionalities.

The lock/unlock operation procedure is available on different screens. The specific lock/unlock procedures will be explained in this manual contextually with the specific screen.

The operation planning can be locked to increase the reliability and the accuracy of the plan.

When an operation is locked none of the values regarding the operation planning can be edited unless the user has adequate explicit permissions.

When an operation is locked the following data cannot be edited:

- patient name;
- main operation and secondary operations;
- infections and transmissible diseases;
- surgical times;
- date and time;
- room.

There are three possible lock/unlock levels. Each hospital decides - by configuration - how many lock/unlock levels (none, one, two, three) to use.

The different levels can be used to create different user types, characterized by specific lock/unlock permissions.
An operation locked by a certain kind of user can be this way unlocked only by users having the explicit permission to do that. The hospital procedures are this way fixed in a way that increases their reliability.

Three specific icons appearing in the appropriate contexts identify the lock levels:

- First level lock.

- Second level lock.

- Third level lock.

Only certain “lock actions” are enabled for the logged user, depending on the context and his/her permission level.

Fig 1, for instance, shows a situation in which, after a level 1 lock (Fig 1 **A**), the following options are enabled:

lock level 2;

lock level 3;

unlock level 1 (Fig 1 **B**).

The other options are disabled.

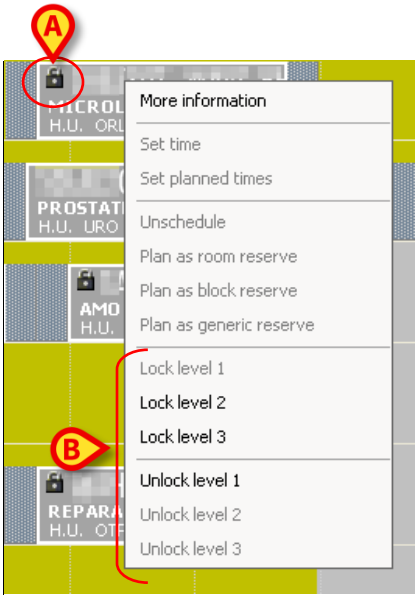


Fig 1 - Lock/Unlock operation options

Only the operations scheduled for either the current day or the future days can be locked/unlocked. The operations scheduled for a past day and not done yet cannot be locked/unlocked.

2. System structure

The DIGISTAT® "Smart Scheduler" system is formed of four modules:

These are:

- **Operation list** - makes it possible to search an operation/patient among those recorded by the system. This module is described in paragraph 3.
- **Schedule** - makes it possible to actually schedule the operations and to display the rooms schedule and availability. This module is described in paragraph 7.
- **Calendar** - provides a global view of the rooms availability in time. This module is described in paragraph 7.6.
- **Staff Management** – makes it possible to manage the operating staff. This module is described in paragraph 8.

3. Operation list

To access the “Operation List” module

- Click the corresponding icon

on the lateral bar.

Fig 2

The following screen will open (Fig 3)

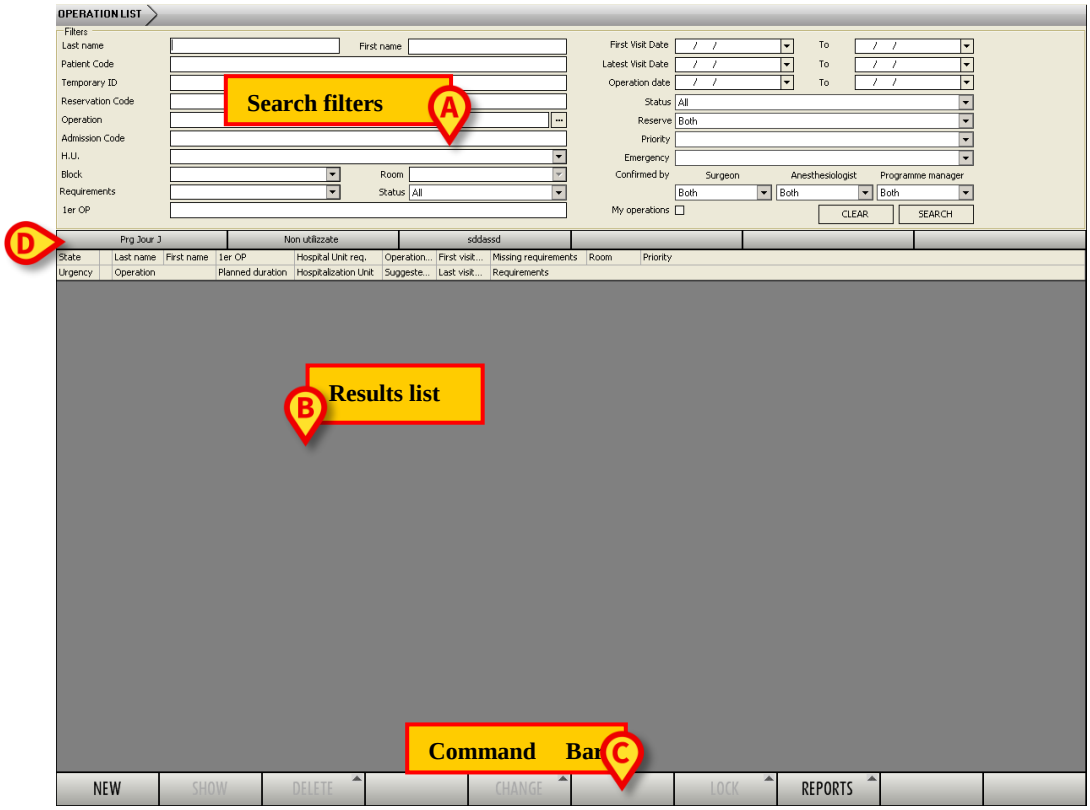


Fig 3 - Operation list

The screen is formed by four main areas:

1) The search filters - The area indicated in Fig 3 **A** contains the search fields that can be used to filter the list of operations. This area is described in paragraph 3.1.1.

2) The results area - The area indicated in Fig 3 **B** displays the search results after the search is performed. This area is described in paragraph 3.2. Each result refers to one of the operations recorded in the system.

3) The command bar - The command bar (Fig 3 **C**) contains a series of buttons making it possible to perform specific procedures. See paragraph 3.3 for a description of these procedures.

4) Pre-defined searches - The buttons indicated in Fig 3 **D** can be used to launch pre-defined searches that were previously recorded by the user. This functionality is described in paragraph 3.1.3.

Each result on this screen refers to an operation record containing all the detailed operation data (patient, date, requirements etc…).

3.1. How to search for an operation

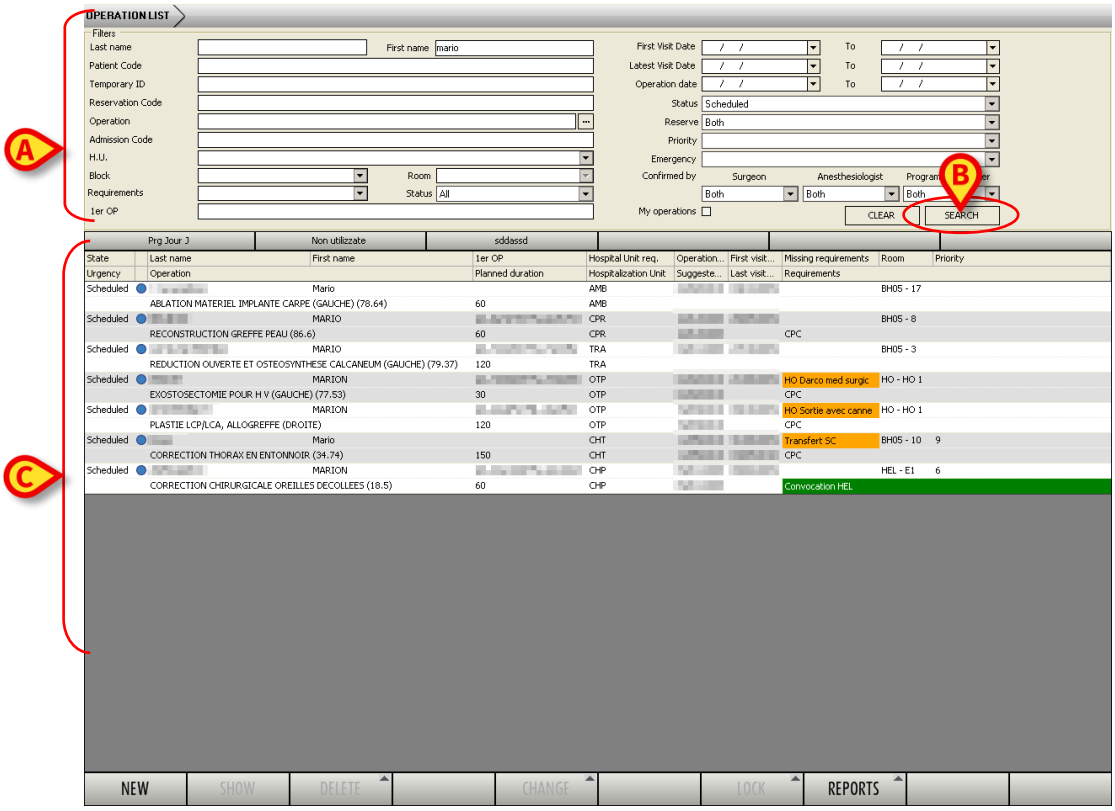


Fig 4 – Operation search

To search for an operation

- Insert the available operation data in the search field (In Fig 4 **A** we are searching for an operation in "Scheduled" state with "Mario" as patient's name).

- Click the **Search** button indicated in Fig 4 **B**.

The list of operations corresponding to the specified values will appear (Fig 4 **C**).

If the results are more than a given number specified by configuration (more than 200 in the configuration we are describing) a specific pop-up message asks for a further specification of the search parameters (Fig 5).

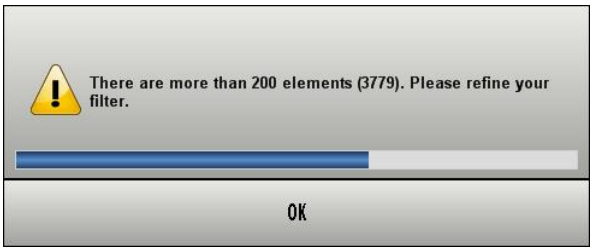


Fig 5

3.1.1. Search parameters

The following parameters can be entered in the search fields.

- Patient name
- Patient surname
- Patient code
- Temporary ID.

  This value is a temporary code which can be assigned to the patient who is not present in the hospital database, when it is necessary to create an operation-entry immediately (see paragraph 3.3.1.1 for the detailed procedure).

- Reservation code.

- Operation.

  Specifies the type of operation to be scheduled.
  A configuration parameter defines the way this field is specified. It can be either through a textual field in which the name of the operation is typed, or through a pop-up search tool.

  In this case the button appears near the field. Click it to open a window making it possible to search and select the operation from a pre-defined list (Fig 6).

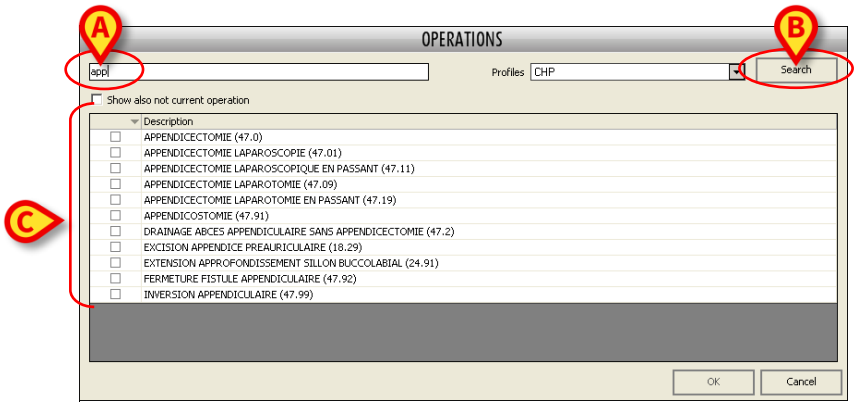


Fig 6 - Operation selection

To use this window

- insert the operation name (or part of it), in the field indicated in Fig 6 **A**.
- Click the **Search** button indicated in Fig 6 **B**.
- The list of operations whose names contain the inserted characters will appear (Fig 6 **C**).
- Select the wanted operation/s.

The name of the operation/s will appear in the "Operation" field. Multiple selection is possible. The result of a search performed with multiple entries in the "Operation" field returns the list of operation records corresponding to any one of the operations specified.

- Admission code.
- H.U.

Specifies the hospital unit of the wanted operation.

The button placed near the field (Fig 7 **A**) opens a drop down menu listing all the possible hospital units.

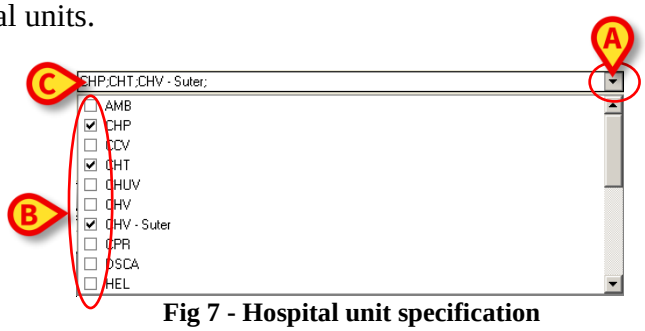


Fig 7 - Hospital unit specification

- Click the box/es placed near the name of the relevant hospital unit/s (Fig 7 **B**).

The box will be selected.

The names of the selected units will appear in the field (Fig 7 **C**).

- Block

  Specifies the block of the wanted operation. Multiple specification is here as well available.

- Room

  Specifies the room scheduled for the operation. Multiple specification is here as well available.

- Requirements.

  This field enables to display the list of the operations for which information on the operation requirements are available (a requirement may be a document, a medical examination, a certain type of test, etc. - see paragraph 6.3 for a detailed explanation of the possible requirements).
  The "Status" field placed nearby enables to specify whether the requirements for the operation are either missing, or obtained, or not obtained, or there is no information available on the operation requirements.

- First Operator

  Specifies the name of the first operator associated to the wanted operation

- First visit date

  It is here possible to specify two dates indicating the time span within which the search is performed.

- Latest visit date

  It is here possible to specify two dates indicating the time span within which the search is performed.

- Operation date

  It is here possible to specify two dates indicating the time span within which the search is performed.

- Status

  Specifies the state of the operation you are searching for.

- Reserve

  This field specifies whether the operation for the patient you are searching for is a reserve and, if so, the type of reserve (see paragraph 7.5.5 for details on the concept

of reserve). “Both” means that you are searching among both “reserves” and “non-reserves”.

- Priority.

  Specifies the type of priority assigned to the wanted operation. The “Priority” and “Emergency” fields are mutually exclusive, i.e. if one is selected the other one is disabled.

- Emergency

  Specifies the emergency level assigned to the wanted operation. The “Priority” and “Emergency” fields are mutually exclusive, i.e. if one is selected the other one is disabled.

- Confirmed by Surgeon/Anesthesiologist/Program manager.

  Specifies whether or not the wanted operation has been confirmed by those specified. Choose “Both” to search among all confirmed and unconfirmed operations.

- My operations

  Choose this box to limit the search to the operations scheduled by the user connected at that time and inserted in a personal list (See paragraph 6.2.19 for a description of this option).

In fields flanked by the arrow click the arrow to enter the value. This opens a window containing different options to choose from. See, for example, Fig 8 related to the “Status” field.

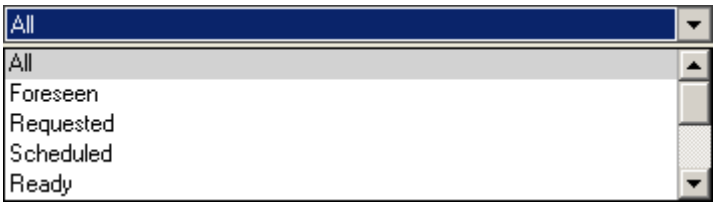


Fig 8 – State selection window

To choose the preferred option, simply click it. The clicked item will appear in the “Status” field.

3.1.2. Date specification

A dedicated tool is available every time the date must be specified.

To open that tool

- Click the button placed near the “date” field.

A calendar-window will open (Fig 9)

Fig 9

The month is specified on top. The numbers correspond to the days.

To insert a date

- click the number corresponding to the wanted day.

The date will be automatically inserted in the field.

Current day is circled (red - 26th of May in Fig 9).

Use the arrows indicated in Fig 9 **A** to select another month. Left arrow displays the previous month, right arrow displays the following month.

Use the **Today** button to select to the current day again.

Use the **Clear** button to close the window without selecting a date.

3.1.3. Pre-defined searches

The bar that divides the upper and lower parts of the page Fig 10 is made up of buttons that can be configured to perform pre-defined searches.

Fig 10 – Pre-defined search buttons

To create a pre-defined search

- Enter the search parameters required.
- Move with the mouse to the button you wish to use for the search (Fig 10 **A**).
- Right click.

The following window will open.

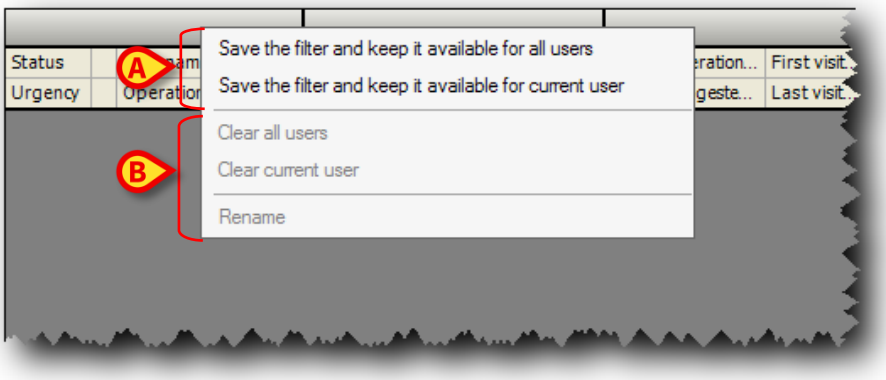


Fig 11 – Setting a pre-defined search

- Click the first or second option (Fig 11 **A**).

The "Save the filter and keep it available for all users" option saves the pre-defined search so that it can be seen by all Smart Scheduler users.

The "Save the filter and keep it available for current user" option saves the pre-defined search so that it can be seen only by the user who created it.

The following window will appear (Fig 12).

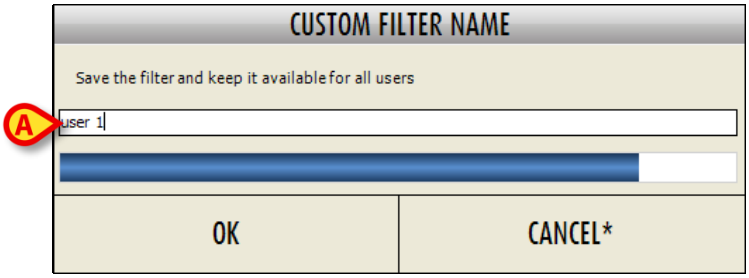


Fig 12 – Name search

- Enter the name you wish to assign to the pre-defined search (Fig 12 **A**).
- Click the **Ok** button.

The name assigned to the search will appear on the chosen button (Fig 13).

Fig 13 – Search button

From now on, when that button (**User 1** in the example) is clicked, the search parameters saved will be automatically set.

To eliminate the type of search created, simply click either the “clear all users” options (if the button is visible to all users) or the “clear current user” option (if the button is only visible to the current user - Fig 11 **B**).

To change the name of a stored search, simply click “Rename” (Fig 11 **B**).

3.2. Search results

The results of the search are shown in the lower part of the page Fig 14).

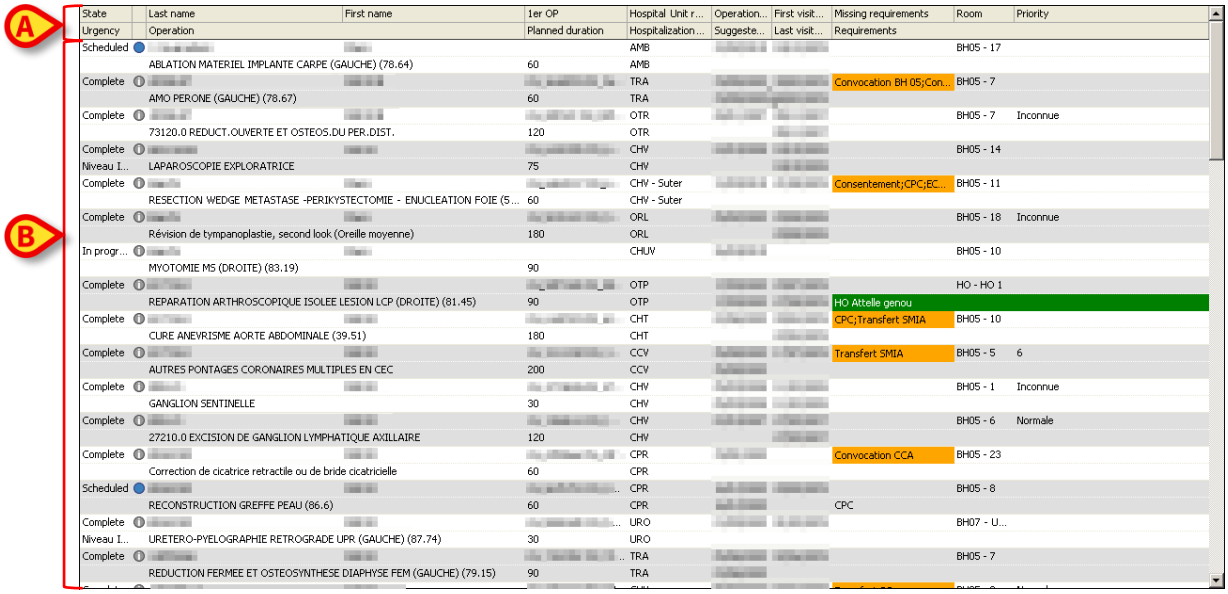


Fig 14 – Search results

In this example, the search has been carried out specifying the patient name (“Mario”). The result is the list of all the operations for patients whose name is “Mario” (or contains these sequence of letters).

Every result is arranged on two lines. The two heading lines provide the key to reading the results, indicating the information available in the list (Fig 14 **A**, Fig 15).

Fig 15 – Results structure

The information contained in every result, starting from the box in the top left corner of Fig 15, comprises:

- The operation state.
- The patient’s last name and name.
- The name of the operating surgeon
- The hospital unit which requested the operation.
- The operation date.
- The first visit date.
- Any missing requirements (see paragraph 3.2.1 for details on this item).
- The scheduled room.

- Any priority assigned to the operation.
- Any degree of urgency specified.
- The type of operation.
- The scheduled duration of the operation.
- The hospitalization unit.
- The suggested date for the operation.
- The last visit date
- Any necessary requirements (see paragraph 3.2.1 for details on this item).

The results can be sorted based on the criteria specified inside the box by simply clicking the box. If, for example, you click the “Last name” box, it will appear like this (Fig 16).

Fig 16

In this case the search results will be arranged by last name in alphabetical order (from A to Z).

If you click the same box again, it will appear like this (Fig 17).

Fig 17

In this case the search results will be arranged, again, by last name in alphabetical order but from Z to A.

Every box on the bar shown in Fig 15 can be clicked to display the results in the preferred order.

Click the icon present on every row (Fig 18),

Fig 18

to open a window containing the main data relating to the operation (Fig 19).

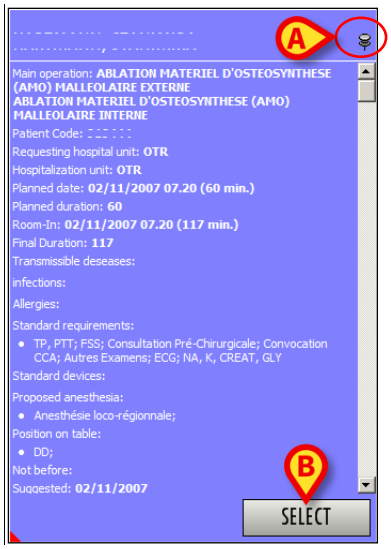


Fig 19 – "Operation data" window

Click the **Select** button in the window (Fig 19 **B**) to access the "Operation Record" relating to the operation (Fig 51, paragraph 4).

The window disappears automatically as soon as the mouse is moved; click the "thumbtack" in the top right corner of the window (Fig 19 **A**) to fix the window to the screen.

The icon possibly appearing before the patient's name means that the operation was planned for a day in the past but still is not executed.

The three icons , and possibly placed before the patient's name indicate that the operation is locked at the level indicated by the icon itself. See paragraph 1.3 for an explanation of the "lock/unlock operation" functionalities in the Smart Scheduler system.

3.2.1. Missing requirements and necessary requirements

A "requirement" may be any document necessary to the progress of the operation procedure (e.g., the result of a medical examination or a patient consent form).

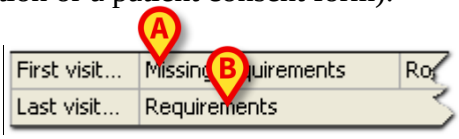


Fig 20

The "Missing requirements" box (Fig 20 **A**) indicates the documents that have to be obtained while the operation is in its current state and the documents which should have been obtained while the operation was in a previous state. The items indicated in this area are the product of procedures which have not yet been completed.

The "Requirements" box (Fig 20 **B**) indicates correctly obtained documents, documents which have not been obtained because the procurement procedure has failed (these are not classed as "missing" because the procurement procedure has been completed, but has had a negative outcome) and documents which must be obtained in a state subsequent to that currently held.

The information related to the missing requirements and the requirements needed for the operation can appear highlighted in different colors.
The color, if present, provides information on the group of requirements requested. This information will be presented in more detail on the subsequent "Operation Record" page (Fig 121, see paragraph 6.3).

The colors have the following meanings.

If the area is highlighted red (Fig 21), at least one of the requirements is missing because the procurement procedure has failed (e.g. failed exam or consent denied).

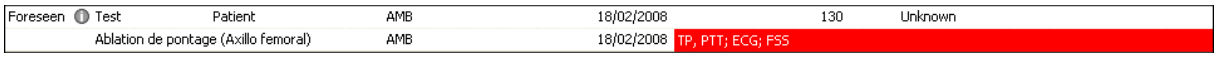


Fig 21 - Patient requirements color code -1

If the area is highlighted orange (Fig 22), one of the missing requirements should have been obtained in the previous state (i.e., the operation procedure has progressed even though one of the requirements should have been satisfied earlier).

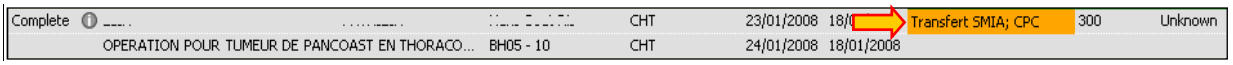


Fig 22 – Patient requirements color code -2

If the area is highlighted green (Fig 23), at least one of the requirements has been obtained successfully (and none of the requirements are missing because the procurement procedure has failed, otherwise the area would be highlighted in red).

Fig 23 – Patient requirements color code -3

If the area is not highlighted (Fig 24), the patient is waiting for the necessary documentation.

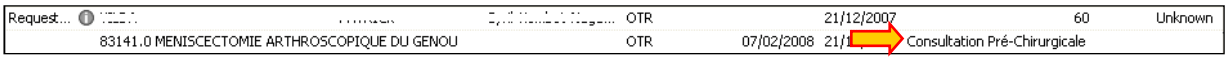


Fig 24 - Patient requirements color code - 4

3.2.2. Reserves

Reserves are those operations for which either no time, no block or no room has been assigned, but which are included in the daily schedule.

The Smart Scheduler system envisages three types of reserve:

- Room reserve – The operation has been assigned an operating room but not a time.
- Block reserve – The operation has been assigned a surgical block but not a room and a time.
- General reserve – No time, room or block have been assigned to the operation.

The "Operation List" page uses special icons to indicate whether one of the operations on the list is a reserve.

Room reserves are identified by the icon (Fig 25).

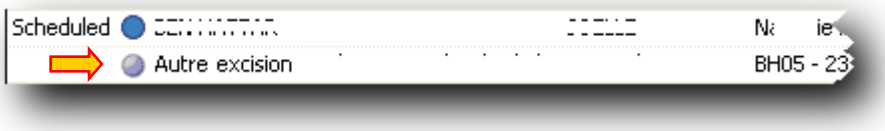


Fig 25 – Room reserve

Block reserves are identified by the icon (Fig 26).

Fig 26 – Block reserve

Generic reserves are identified by the icon (Fig 27).

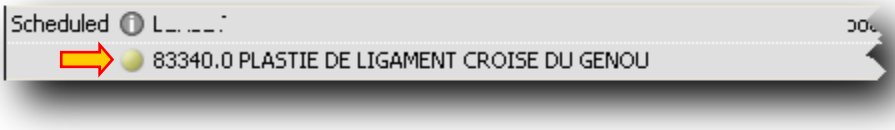


Fig 27 – Generic reserve

3.3. The "Operation list" screen command bar

It is possible to perform various procedures with the items displayed on the "Operation list" screen. These procedures are performed using the buttons on the command bar (Fig 28). This paragraph lists briefly the functions of the different buttons. They will be described in detail in the indicated paragraphs.

Fig 28 - Command bar

NEW — Use this button to create a new operation. See paragraph 3.3.1 for the procedure.

SHOW — Use this button to display the data of an existing operation. See paragraph 3.3.2 for the procedure.

DELETE — Use this button to cancel or annul an existing operation. See paragraph 3.3.3 for the procedure.

CHANGE — Use this button to change the operation state. See paragraph 3.3.4 for the procedure.

LOCK

Use this button to lock/unlock a scheduled operation. See paragraph 3.3.5 for the lock/unlock procedure when used on the "Operation list" screen.

REPORTS

Use this button to create the appropriate print reports.

The buttons on the command bar are enabled or not depending on the screen content (some procedures are not possible in some contexts) and on the logged user permission level (the users can perform only the actions for which they are entitled).

3.3.1. Creating a new operation record

To create a record for a new operation (new operation creation)

- click the **New** button on the command bar (Fig 29).

Fig 29

The patient search and selection software currently in use will open.

Patient management.

The patient archives management tools can change depending on the modules installed, on the user needs, on the chosen configuration etc. The related procedures change accordingly.

The DIGISTAT® module "Patient Explorer" was explicitly created to manage the patient archives. Please refer to the "Patient Explorer" module documentation for the relatedprocedures.

If the DIGISTAT® module "Patient Explorer" is not installed the patient management functions are performed by "Control Bar". When this is the case, the related procedures are described in the specific documentation.

If the patient archives management tool in use is not part of the DIGISTAT® environment please refer the relevant technical documentation.

- Select the patient for which the new operation is being created.

The "Operation record" screen will open (Fig 30). The patient data will appear in the relevant fields (Fig 30 **A**).

The “Operation Record” screen is described in paragraph 4.

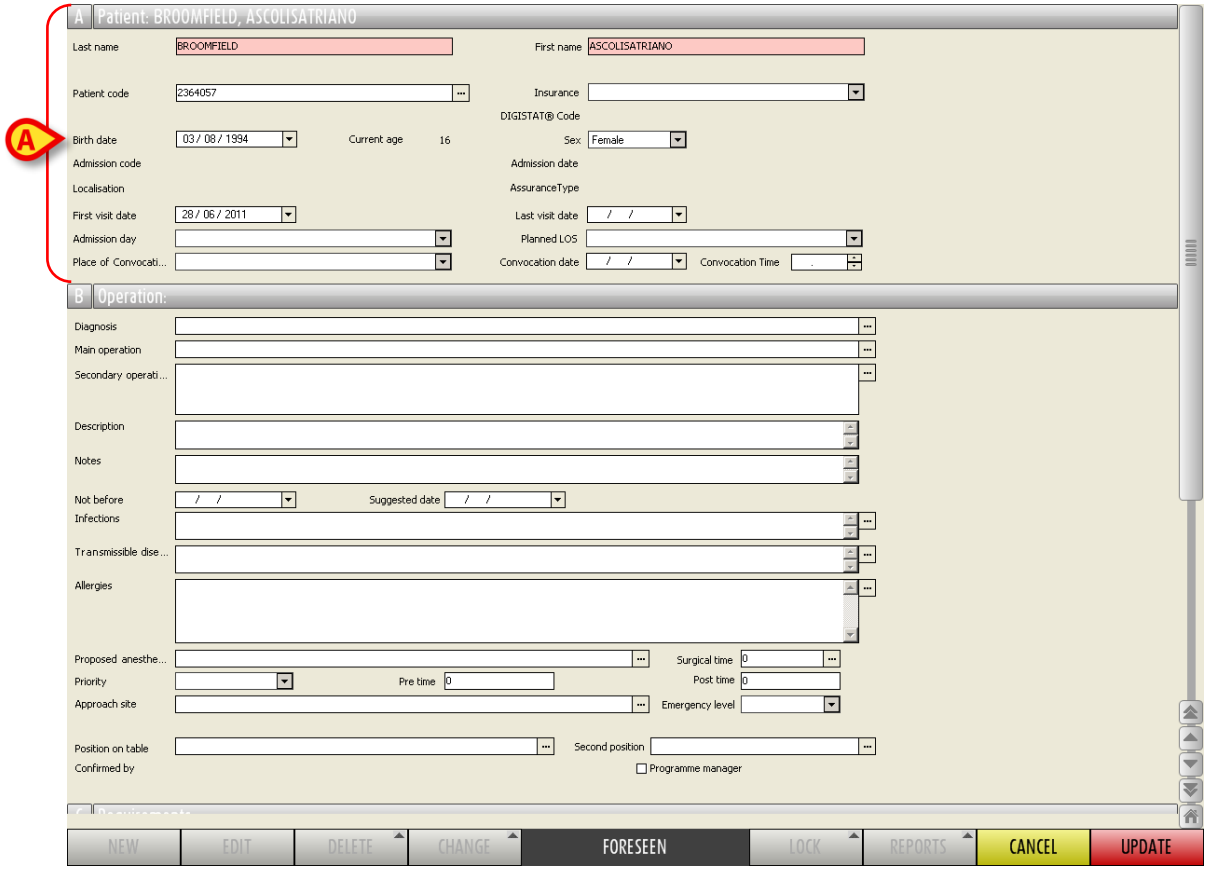


Fig 30 – Operation record

- Fill the operation record with all the relevant data. See paragraph 4 for all the detailed information.

- Click the **Update** button on the command bar.

A new “Operation record” is this way recorded. The operation is in “Foreseen” state.

> *The “Operation Record” can be recorded with no other data than the patient data.*
> *In this case the operation will be in “Foreseen” state. To go further to “Requested” state the name of the main operation and the planned duration at least must be specified.*
>
> *See paragraph 1.2 for a description of the operation states managed by the “Smart Scheduler” system.*

3.3.1.1. Creating a new operation with provisional data

There may be a case in which an operation has to be created for a brand new patient; a patient whose data is not stored in the databases of the structure where you are operating.
In these cases, the procedure envisages the recording of the patient’s data first of all, and then the creation of the new operation.

For various reasons (the particular urgency of the operation, for example) it may be better to proceed directly with the creation of the operation with DIGISTAT® "Smart Scheduler" and then, later, to record the patient's data.

In this case, it is necessary to open an operation record with provisional data.

This possibility depends on a configuration parameter. The system can be configured in a way that inhibits the creation of interventions with provisional data. Please refer to your system administrator to know the details of the configuration in use.

To create an operation record with provisional data

- click the **New** button on the command bar (Fig 29).

The patient search and selection software will open.

- Close the patient search and selection software.

The completely empty "Operation Record" will open, lacking any data relating to the patient (Fig 31).

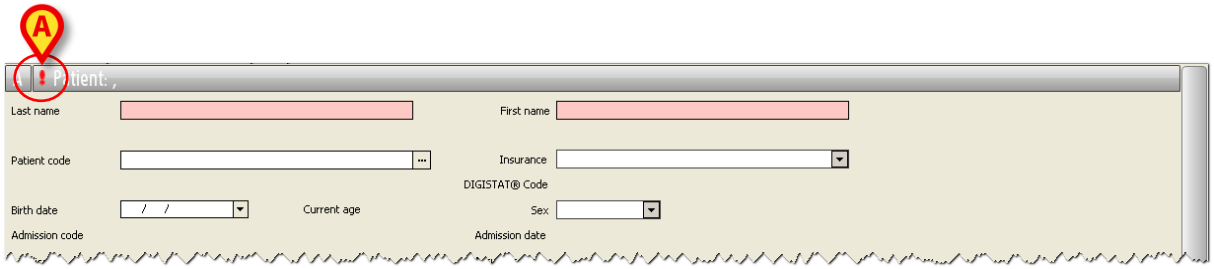


Fig 31 – Operation record with provisional data

- Enter all the known data of the patient and the operation.

To save a record with provisional data, the only mandatory data is the patient's name and last name.

- Click the **Update** button on the command bar.

The new record will be saved by the Smart Scheduler system as a provisional record.
The red exclamation mark towards the top left of the page (Fig 31 **A**) warns that the patient's data is provisional.
Once the record has been saved, the exclamation mark is also displayed on the "Operation List" page (Fig 32 **A**).

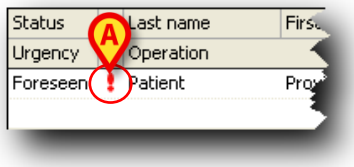


Fig 32

The exclamation mark on this page can be clicked to display the window containing the main information on the operation (Fig 33).

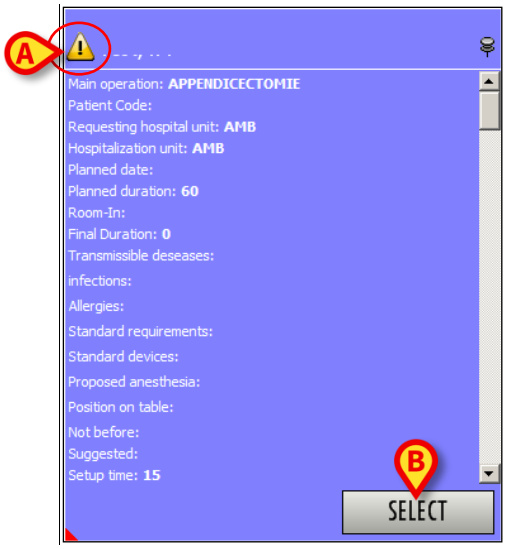


Fig 33

The icon highlighted in Fig 33 **A** indicates that the information window refers to an intervention with provisional data.

Click the **Select** button in the window (Fig 33 **B**) to access the "Operation Record" screen relating to the operation (Fig 51)

The window disappears if clicked again.

3.3.1.2. How to make the data of a record final

To make the data of a provisional record final

- Access the provisional operation record (to do that double click the corresponding line on the "Operation List" screen - Fig 3).
- Click the **Edit** button (Fig 34).

Fig 34 - "Operation record" screen command bar

The screen will turn to "Edit" mode. I.e. data entry will be enabled.

➢ Click the "Patient Code" field (Fig 35 **A**), or the **Patient** button on Control Bar (Fig 36).

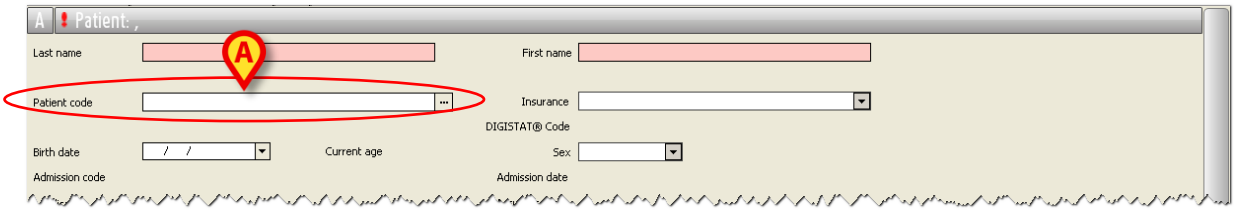


Fig 35

Fig 36

The patient management software in use will open (DIGISTAT® "Patient Explorer", for instance).

➢ Enter the patient's data.

The patient's operation record (see Fig 51 for an example) will open again, containing the final data.

In this way, all the patient's data contained in the database are transferred to the operation record which is no longer provisional (the exclamation mark is no longer present).

If the data contained in the DIGISTAT® registry differ from those present in other systems in use of which DIGISTAT® is "Slave", the red exclamation mark may remain after the data are made final. This feature signals the possible differences between the DIGISTAT® registry and the data of the other systems in use.

3.3.2. How to display an "Operation record"

To display a specific record, on the "Operation list" screen (Fig 37),

➢ search for the wanted record using the procedures described in paragraph 3.1.

The corresponding row will appear on screen.

➢ Click the row.

The row will be highlighted (Fig 37 **A**).

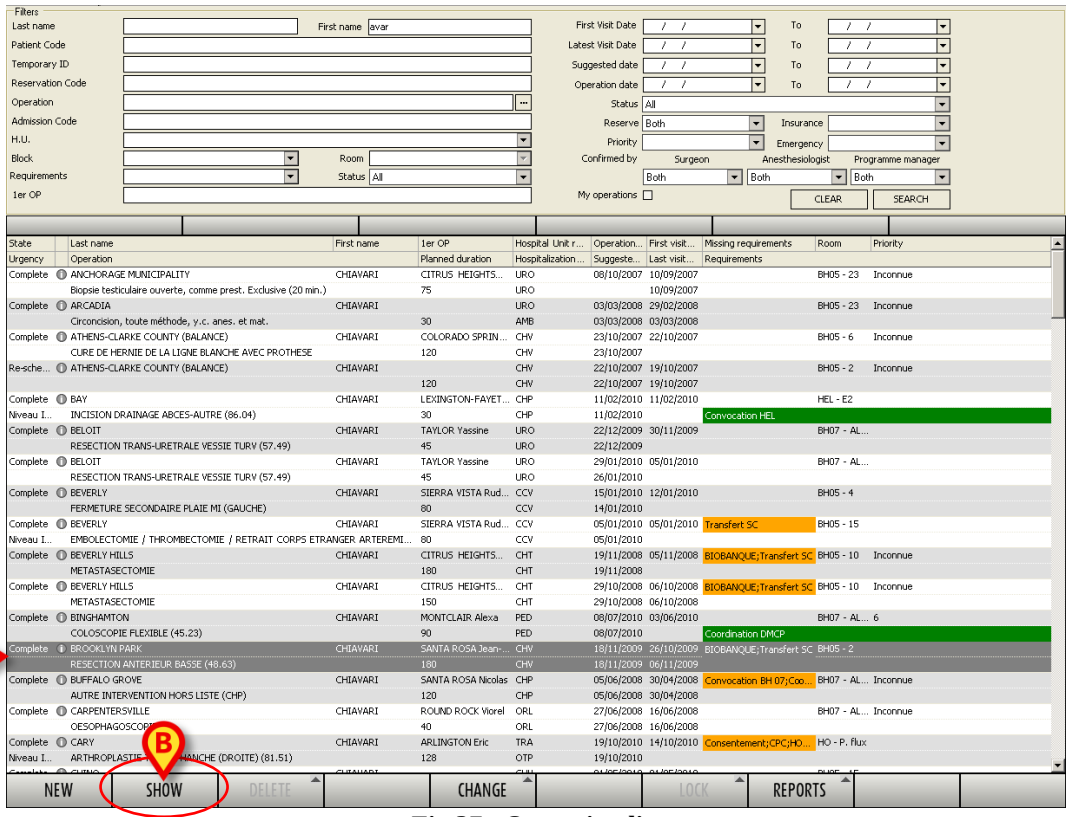


Fig 37 - Operation list

- click the **Show** button on the command bar (Fig 37 **B**).

The corresponding "Operation record" will open (Fig 38).

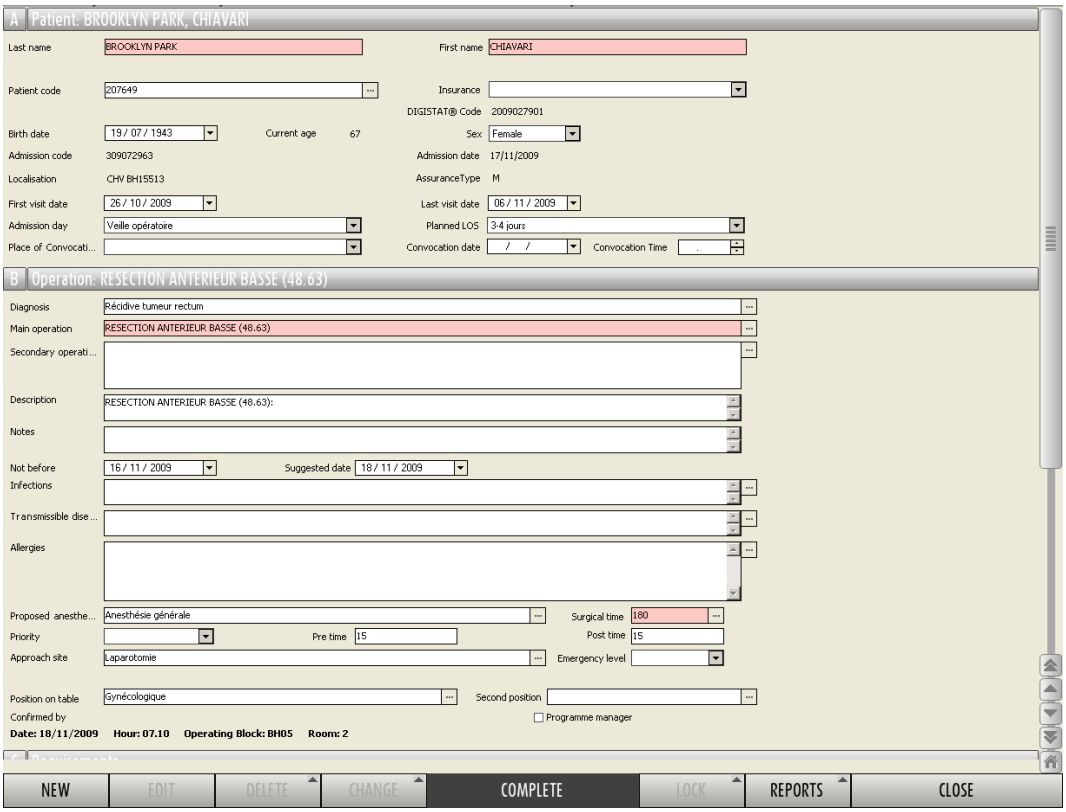


Fig 38 - Operation Record

You can also double-click the relevant row to open the corresponding "Operation record".

3.3.3. How to either delete or annul an operation

To either delete or annul an operation record, on the "Operation list" screen (Fig 39),

- search for the wanted record using the procedures described in paragraph 3.1.

The corresponding row is displayed.

- Click the row.

The row is this way highlighted (Fig 39 **A**).

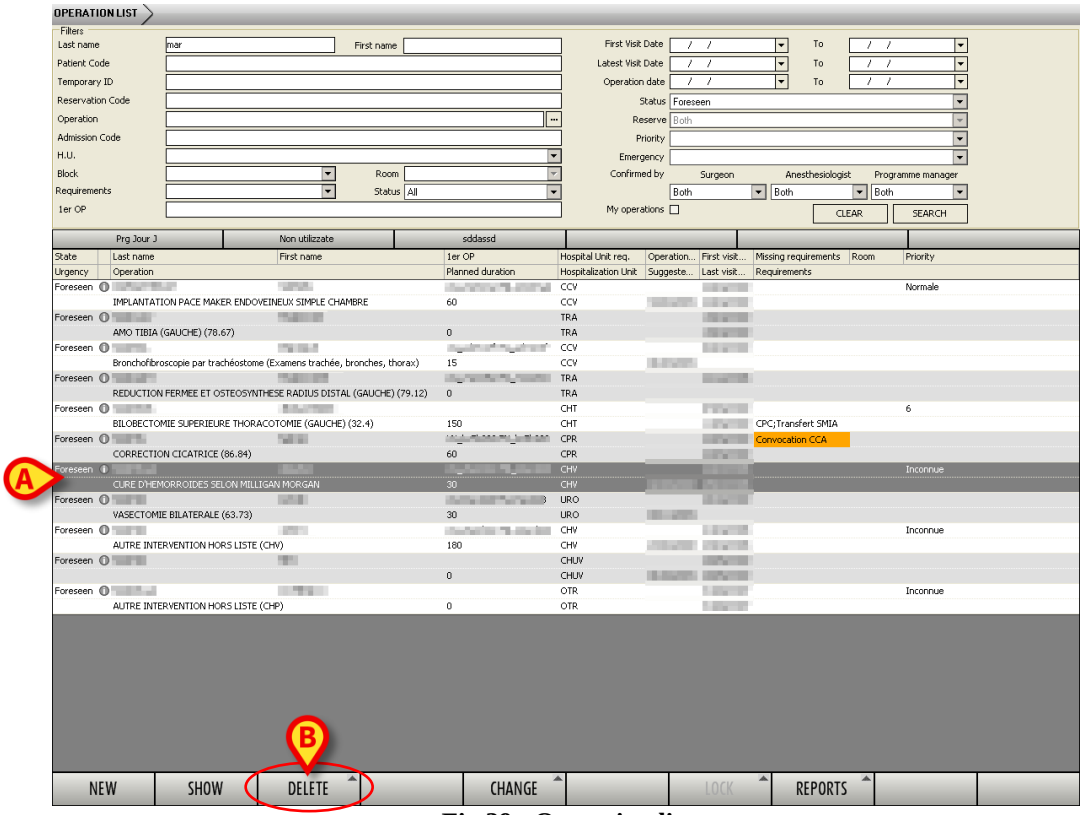


Fig 39 - Operation list

- Click the **Delete** button (Fig 39 **B**).

A menu containing two options opens (Fig 40).

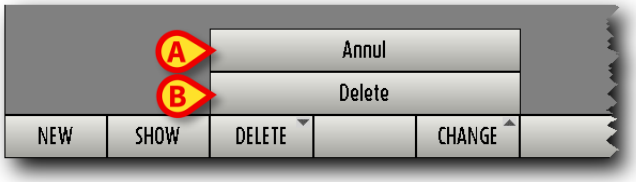


Fig 40

Annul - Use the "Annul" option (Fig 40 **A**) to annul the selected operation.

After clicking on "Annul" the following window opens, requesting to specify the annulment reason (Fig 41).

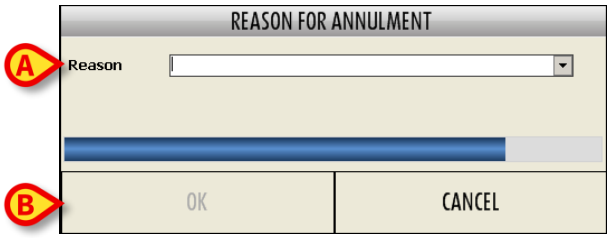


Fig 41

- Enter the reason for annulment in the "Reason" field (Fig 41 **A**).
- Click **Ok** to annul the operation (Fig 41 **B**).

The selected operation is this way annulled. Annulling an operation is an irreversible administrative procedure indicating that the operation will not be managed in any way by any hospital unit. The operation record will be stll visible in read-only mode as "Annulled operation".

Delete - Use the "Delete" option (Fig 40 **B**) to delete the operation highlighted.

After clicking on "Delete" the following window opens, requesting to specify the deletion reason (Fig 42).

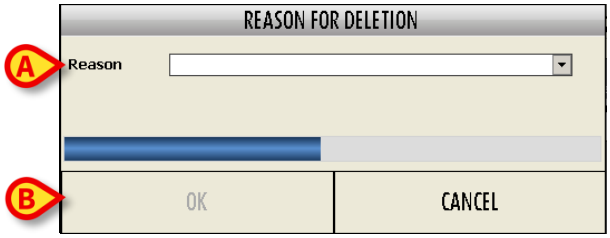


Fig 42

- Enter the reason for deletion in the "Reason" field (Fig 42 **A**).
- Click **Ok** to delete the operation (Fig 42 **B**).

Operation deletion permanently deletes the operation data. The "Operation record" disappears from the DIGISTAT® Smart Scheduler system. This procedure can only be used only in case of wrong or double operation records.

3.3.4. Changing the operation state

The **Change** button on the "Operation list" screen command bar makes it possible to change the state of an operation.

To change the operation state

- search for the operation whose state must be changed using the procedures described in paragraph 3.1.

The corresponding row will appear on screen.

- Click the row.

The row will be highlighted (Fig 43 **A**).

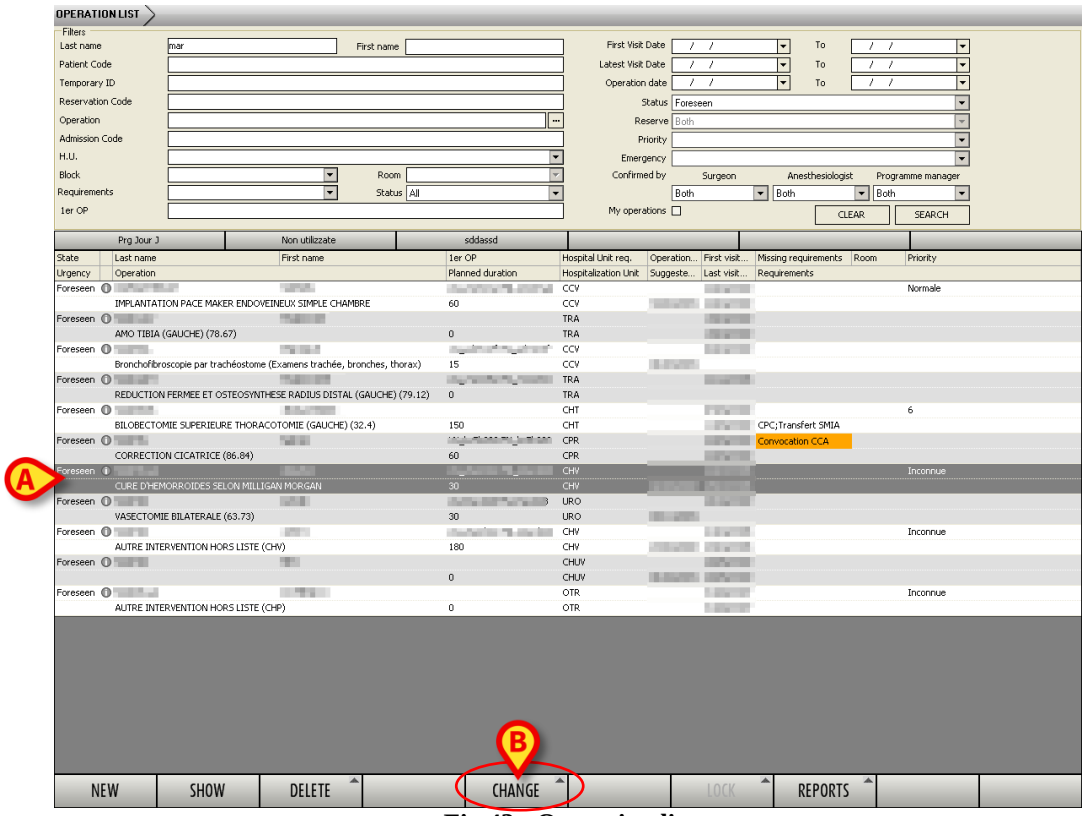


Fig 43 - Operation list

- Click the **Change** button (Fig 43 **B**).

The menu shown in Fig 44 will open.

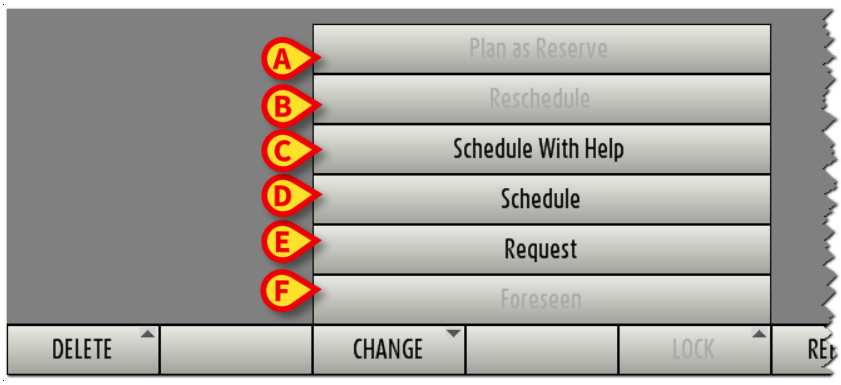


Fig 44 – "Change" button

On the menu shown in Fig 44 the buttons can be either enabled or disabled depending on the state and the characteristics of the selected operation. Only the procedures that are coherent with the selected operation will be enabled.

If the **Change** *button is not active it is not possible to change the state of the selected operation.*

- Plan as reserve (Fig 44 **A**).

The "Plan as reserve" option enables to quickly manage the urgent operations. The option is enabled only if the highlighted operation is marked as "Emergency level I" and is not already scheduled. The emergency level is specified by the appropriate field on the "Operation record" screen (see Fig 51).
After clicking this option the system requests to specify the date and the block of the operation. The window shown in Fig 45 appears.

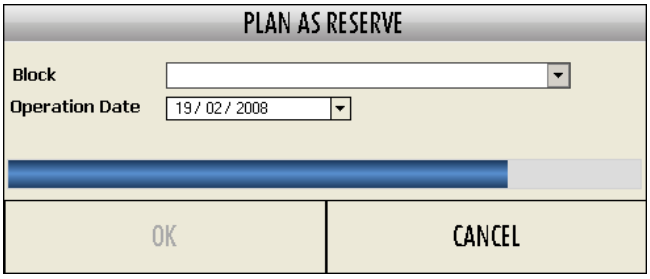


Fig 45

- Specify the block and the date.
- Click **Ok**.

The operation will be directly scheduled as block reserve for the specified date and block. See paragraph 7.5.5 for an explanation of the meaning of "reserve" in the Smart Scheduler System

- Reschedule (Fig 44 **B**)

The "Reschedule" option enables to change the selected operation schedule. This option is active only if the chosen operation is already planned. The procedure is described in paragraph 7.5.3.

- Schedule with help (Fig 44 **C)**

The “Schedule with help” option enables to access the “Shedule with help” screen to schedule the selected operation (Fig 232, see paragraph 7.7).

- Schedule (Fig 44 **D)**

The “Schedule” option enables to access the “Schedule” screen to schedule the operation (Fig 173, paragraph 7).

- Request (Fig 44 **E)**

The “Request” option changes the operation state to “Requested”. See paragraph 1.2 for the explanation of “Operation state”.

- Foreseen (Fig 44 **F)**

The “Foreseen” option changes the operation state to “Foreseen”. See paragraph 1.2 for the explanation of “Operation state”.

It is possible to select numerous operations at the same time on the “Operation list” screen. In order to do that, click the corresponding row while keeping the **Ctrl** *key pressed on the workstation keyboard.All the clicked rows will be highlighted.*

3.3.5. Locking and unlocking an operation

Use the **Lock** button to either lock or unlock a scheduled operation. A locked operation cannot be rescheduled. Only the operation scheduled for the current day and for the future days can be locked/unlocked, not those that were scheduled for a day in the past and have not been executed yet. In these cases the **Lock** button is not active.

To lock/unlock an operation

- search for the operation that must be locked/unlocked using the procedures seen in paragraph 3.1.

The corresponding row will appear on screen.

- Click the corresponding row.

The row will be highlighted (Fig 46 **A**).

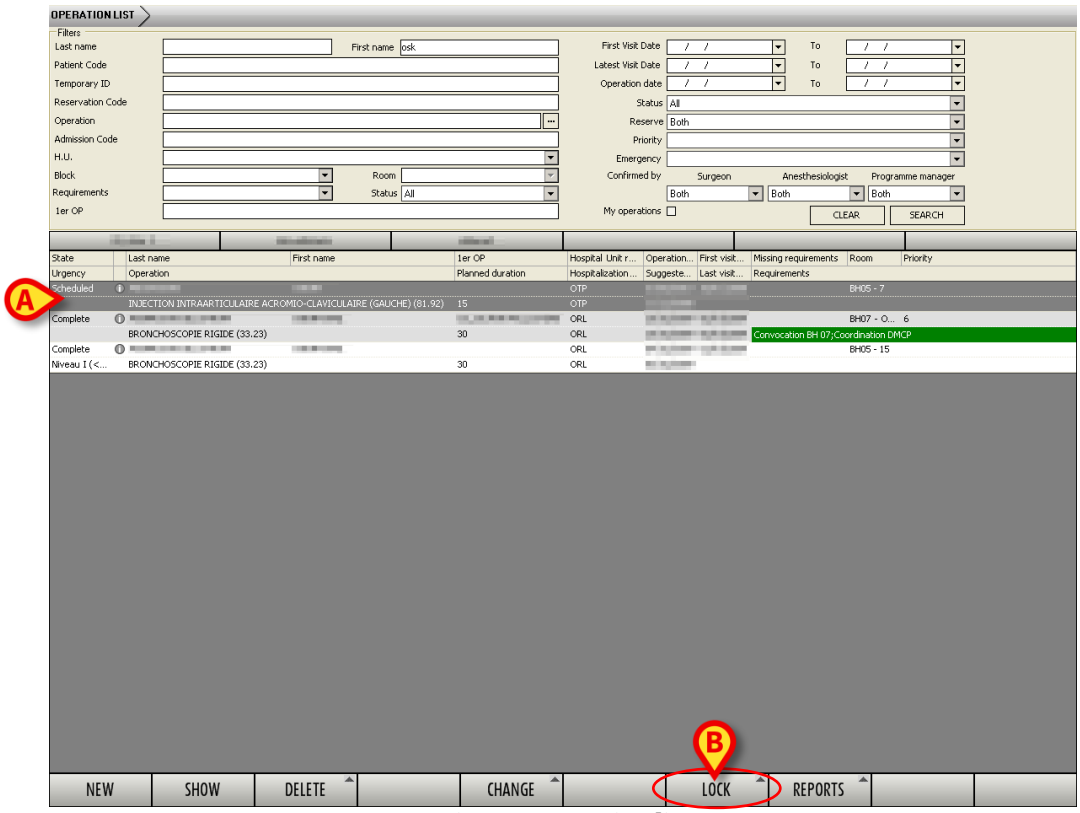


Fig 46 - Operation list

- Click the **Lock** button (Fig 46 **B**).

The following menu will open (Fig 47).

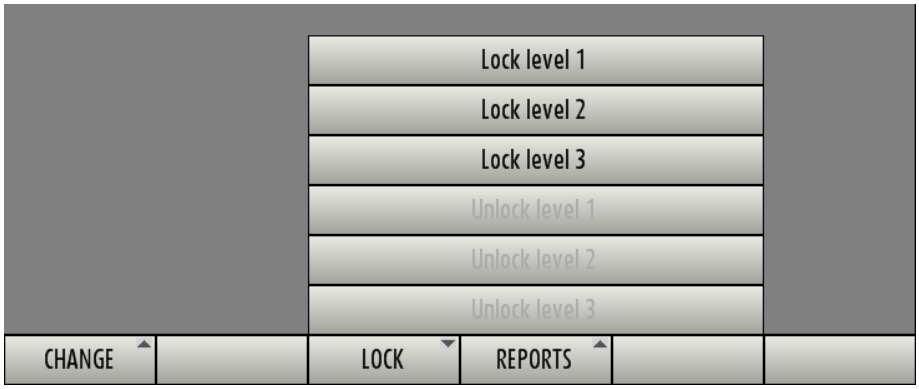


Fig 47 - Lock/Unlock operation

Three lock levels are possible in the configuration here explained (Fig 47).
See paragraph 1.3 for a detailed explanation of the goals and features of the lock/unlock functionalities.
Only certain procedures are enabled for the logged user, depending on his/her permission level and the current context.

In Fig 47, for example, the user has the possibility to lock level 1, 2, 3 an unlocked operation (Fig 46 **A**).

- Click the wanted option on the menu.

The operation will be locked/unlocked at the specified level.
A specific icon is placed on the row corresponding to the operation to indicate that it is locked (Fig 48).

Fig 48 - Operation locked level 1

Three different icons identify three lock levels:

- level 1 lock;

- level 2 lock;

- level 3 lock.

The options triggered by the **Delete**, **Change** *and* **Lock** *buttons can also be activated by right-clicking the row corresponding to the relevant operation. A menu containing the different options described in this chapter will open (Fig 49).*

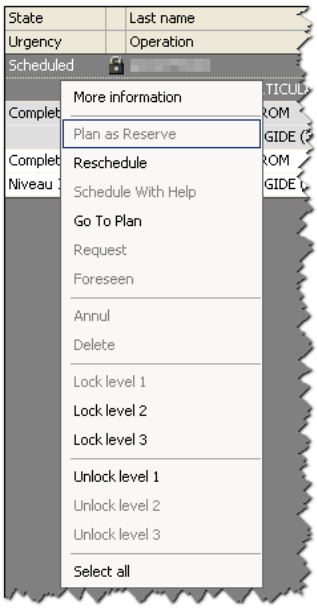


Fig 49

The "More information" option on the menu displays the window seen in Fig 19.

3.3.6. Printing documentation

The **Reports** button on the command bar enables the creation of a document containing the data of the patients and operations in the database.

Fig 50 – Operation list screen command bar

To create the document

- Click the **Reports** button.

Several options are displayed. Their number and their kind depend on the configuration in use.

- Click the wanted option.

A print preview is displayed.

4. Operation Record: main features

The “Operation Record” (Fig 51) page contains all the available data of an operation.

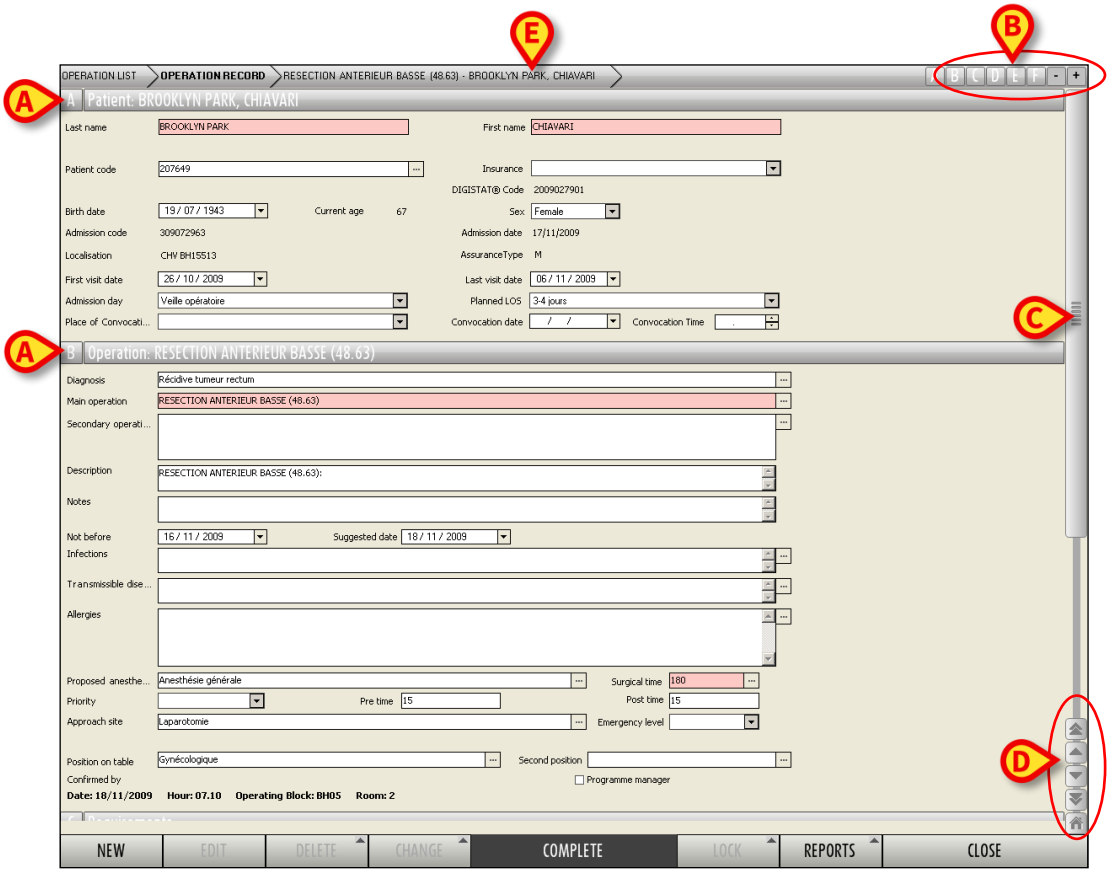


Fig 51 – Operation Record

4.1. Page structure

The page is divided into 5 sections.

Every section is identified by a letter and by a title indicating the type of information contained.

The five sections are:

A. “Patient” section. This section contains information relating to the patient (name, last name, birthdate etc.).

B. “Operation” section. This section contains information relating to the operation (type, duration, diagnosis etc.).

C. “Requirements” section. This section contains information relating to the requirements necessary to the operation (necessary documents, medical examinations to be carried out etc.).

D. “Planned Staff” section. This section contains information relating to the personnel who will be involved in the operation.

E. “Special Services” section. This section contains information relating to any specific services or machinery required for the operation.

F. “Materials”. This section makes it possible to schedule the necessary materials required for the operation.

The sections are separated from each other by horizontal gray bars (Fig 51 **A**).

Click on one of the bars to close or open the section below (Fig 52).

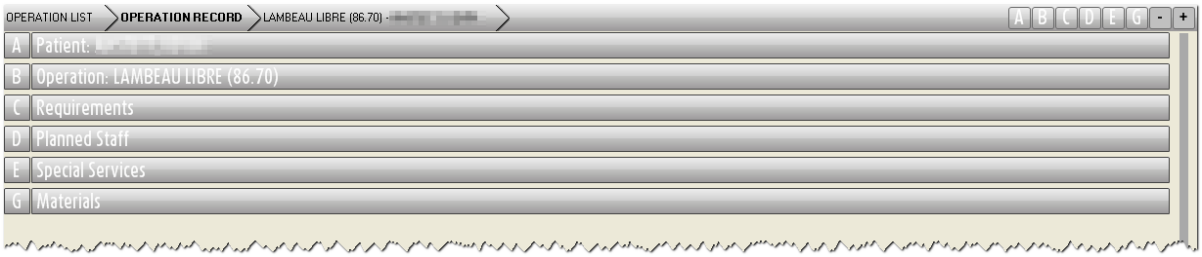


Fig 52 – “Closed” sections

Fig 52 shows a page where all the sections have been closed.

Click the bar again to reopen the section below (Fig 53).

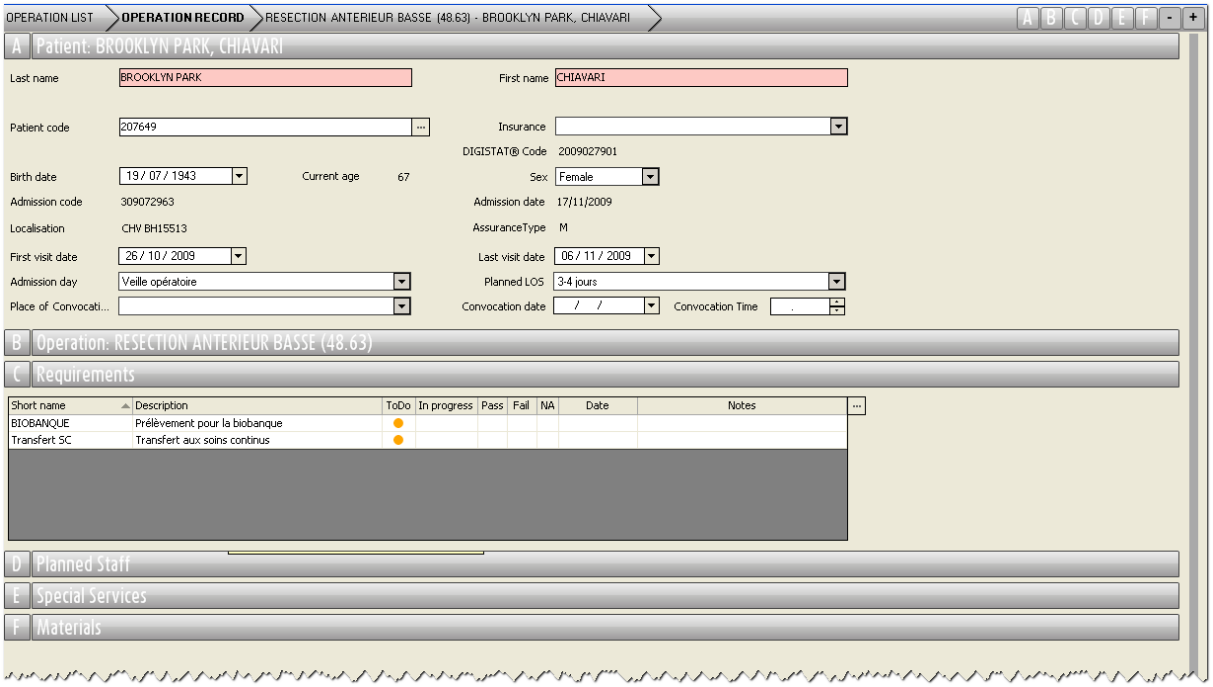


Fig 53 – “Patient” and “Requirements” areas

Fig 53 shows a page where only the “Patient” and “Requirements” sections have been reopened.

The buttons in the top right corner of the page (Fig 51 **B**, Fig 54) make it possible to directly access the different sections.

Fig 54

Click button C, for example, to directly access the "Requirements" area, or click button D to directly access the "Planned Staff" area.
The - button closes all sections.
The + button expands all sections.

The bar on the right side of the screen makes it possible to scroll up and down the page (Fig 51 **C**).

The arrow buttons in the bottom right corner perform the same function (Fig 51 **D**).

The and buttons make it possible to move slowly up and down.

The and buttons make it possible to move quickly up and down.

The button makes it possible to return the beginning of the page.

The navigation bar in the top left corner of the page indicates the path followed to reach the current page, the type of operation envisaged and the patient's name. (Fig 51 **E**, Fig 55).

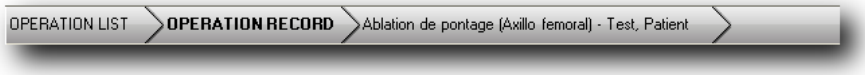


Fig 55 – Navigation Bar

Fig 55 indicates we passed from the "Operation List" page to the "Operation Record" page of the patient and operation specified.

5. Operation Record: procedures and functionalities

The page control bar (Fig 51 , Fig 56) contains various buttons which make it possible to perform various operations.

Fig 56 – "Operation Record" command bar

This paragraph lists briefly the main functionalities of each button. The related procedures are described in the paragraphs indicated.

Click this button to create a new operation record. See paragraph 3.3.1 for the related procedures.

Click this button to edit the data displayed on screen. After clicking the **Edit** button the operation record turns to "edit" mode. See paragraph 5.1.

Click this button to either delete or annul an existing operation. See paragraph 5.2.

Click this button to change the operation state. See paragraph 5.3.

The central part of the command bar is not a button. It displays the current state of the selected operation record.

Click this button to either lock or unlock a planned operation. See paragraph 5.4.

Click this button to create different kinds of print reports. See paragraph 5.5

Click this button to close the "Operation record" screen.

5.1. How to edit the "Operation Record"

The **Edit** button (Fig 57) makes it possible to edit the page.

Fig 57 – Operation record screen command bar

Every time you decide to change something on the "Operation record" page, whether you wish to add information or change information already registered, it is necessary to click the **Edit** button.

When you click the **Edit** button, the control bar changes its appearance (Fig 58).

Fig 58 – Command bar in "Edit" mode

In Fig 58 you can see that:

- The **New** button is no longer active (so in this situation you cannot create a new record).
- The **Edit** button is selected (meaning that the screen is in "edit mode").
- The **Change** button is active (you can change the operation state or scheduling).
- The **Reports** button is no longer active.
- The **Close** button disappeared and was replaced by the two buttons **Cancel** and **Update**.

After making the changes required to the page, it is necessary to

- click the **Update** button to save the changes.

After that, the **Edit** button is deselected and the control bar returns to the appearance shown in Fig 56.

5.2. Deleting/annulling an operation record

The **Delete** button opens a menu containing two options (Fig 59).

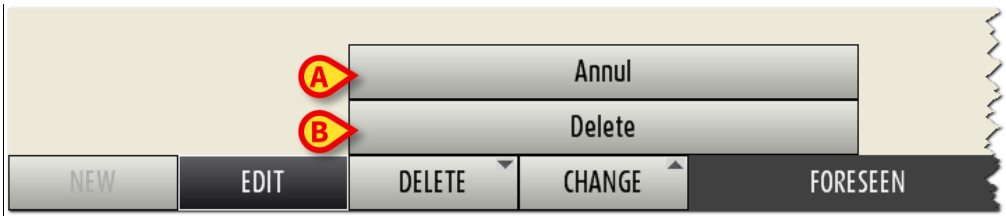


Fig 59

Annul - Use the "Annul" option (Fig 59 **A**) to annul the operation.

After clicking on "Annul" the following window opens, requesting to specify the annulment reason (Fig 60).

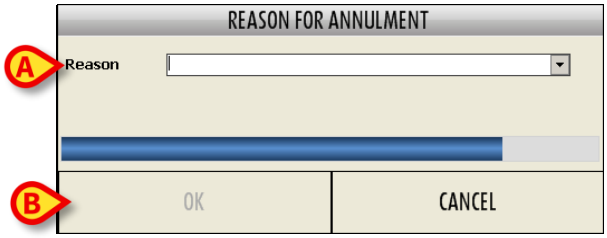


Fig 60

- Enter the reason for annulment in the "Reason" field (Fig 60 **A**).

- Click **Ok** to annul the operation (Fig 60 **B**).

The selected operation is this way annulled. Annulling an operation is an irreversible administrative procedure indicating that the operation will not be managed in any way by any hospital Unit. The operation record will be stll visible in read-only mode as “Annulled operation”.

Delete - Use the “Delete” option (Fig 59 **B**) to delete the operation.

After clicking on “Delete” the following window opens, requesting to specify the deletion reason (Fig 61).

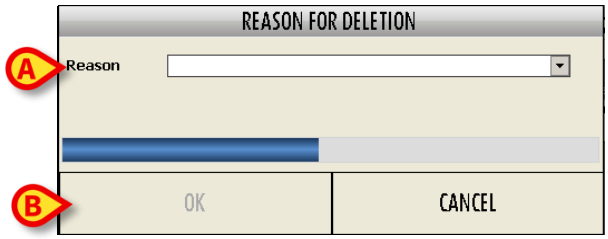


Fig 61

- Enter the reason for deletion in the “Reason” field (Fig 61 **A**).
- Click **Ok** to delete the operation (Fig 61 **B**).

The selected operation record is this way deleted. Operation deletion permanently deletes the operation data. The “Operation record” disappears from the DIGISTAT® Smart Scheduler system. This procedure should only be used in case of wrong or double operation records.

5.3. Changing the operation state

The **Change** button makes it possible to change the operation state.

To change the operation state,

- click the **Edit** button on the command bar (Fig 62).

Fig 62 – Operation record command bar

The screen turns to “edit” mode. The command bar changes in the way shown in Fig 63.

Fig 63 – Command bar in “Edit” mode

- Click the **Change** button

The menu shown in Fig 64 opens.

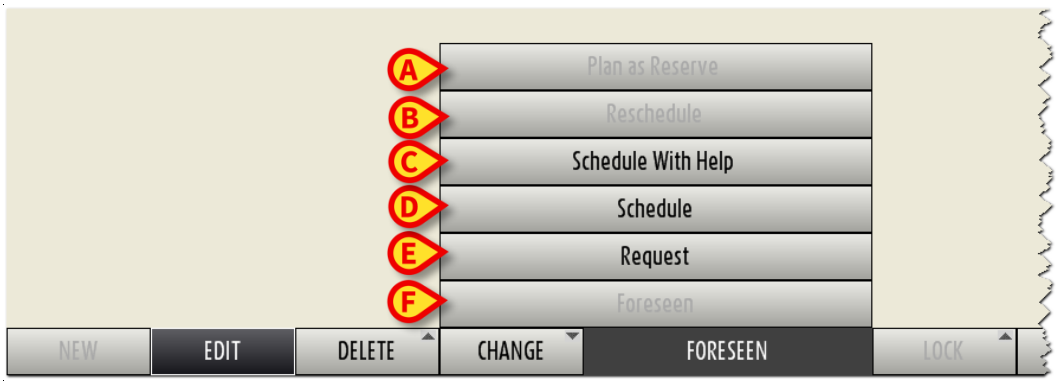


Fig 64 – "Change" button

On the menu shown in Fig 64 the buttons can be either enabled or disabled depending on the state and the characteristics of the selected operation. Only the procedures that are coherent with the selected operation are enabled.

If the **Change** *button is not active it is not possible to change the state of the selected operation.*

- Plan as reserve (Fig 64 **A**).

The "Plan as reserve" option makes it possible to quickly manage the urgent operations. This option is enabled only if the highlighted operation is marked as "Emergency level I" and is not already scheduled. The emergency level is specified by the appropriate field on the "Operation record" screen (see Fig 114).
After clicking this option the system requests to specify the date and the block of the operation. The window shown in Fig 65 appears.

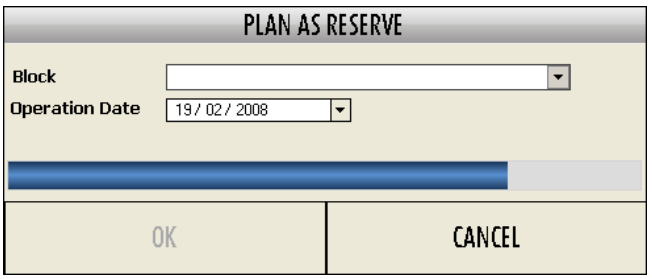


Fig 65

- Specify the block and the date.
- Click **Ok**.

The operation will be directly scheduled as block reserve for the specified date and block. See paragraph 7.5.5 for an explanation of the meaning of the term "reserve" in the Smart Scheduler System

- Reschedule (Fig 64 **B**)

The “Reschedule” option makes it possible to change the selected operation schedule. This option is active only if the chosen operation is already planned. The procedure is described in paragraph 7.5.3.

- Schedule with help (Fig 64 **C)**

The “Schedule with help” option enables to access the “Shedule with help” screen to schedule the selected operation (Fig 232, see paragraph 7.7).

- Schedule (Fig 64 **D)**

The “Schedule” option enables to access the “Schedule” screen, making this way possible to schedule the operation (Fig 173, paragraph 7).

- Request (Fig 64 **E)**

The “Request” option changes the operation state to “Requested”. See paragraph 1.2 for the description of the “Operation states”.

- Foreseen (Fig 64 **F)**

The “Foreseen” option changes the operation state to “Foreseen”. See paragraph 1.2 for the description of the “Operation states”.

5.4. Locking/Unlocking the operation

The **Lock** button makes it possible to either lock or unlock a scheduled operation. A locked operation cannot be rescheduled.
Only the operations scheduled for either the current day or the future days can be locked. The operations scheduled for a day in the past and not yet executed cannot be locked.
To lock/unlock an operation

- click the **Edit** button on the command bar (Fig 66).

Fig 66 – Operation record command bar

The screen turns to “edit” mode. The command bar changes in the way shown in Fig 67.

Fig 67 – Command bar in “Edit” mode

- Click the **Lock** button (Fig 67).

The following menu opens (Fig 68).

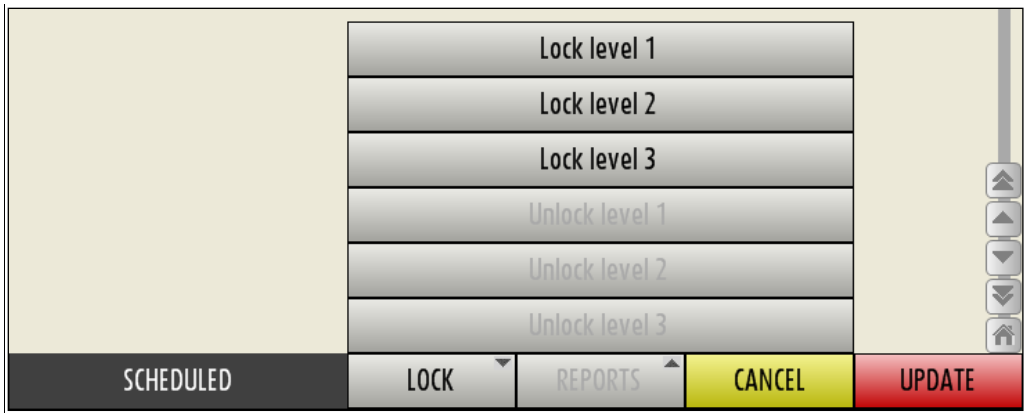


Fig 68 - Lock/Unlock operation

There are three possible lock/unlock levels. Each hospital decides - by configuration - how many lock/unlock levels to use (none, one, two, three). The menu shown in Fig 68 refers to a configuration enabling three lock levels. See paragraph 1.3 for a more detailed description of the lock/unlock functionalities.

Only certain "lock actions" are enabled for the logged user, depending both on the context and on his/her permissions level.

In Fig 68, for example, the user is enabled to lock an unlocked operation level 1,2 or 3.

- Click the wanted option on the menu.

The operation will be locked/unlocked at the corresponding level.

An icon on the top left corner of the "Operation record" signals that the operation is locked (Fig 69).

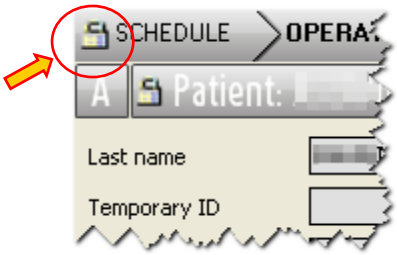


Fig 69 - Locked operation (Operation record screen)

5.5. Printing documentation

The **Reports** button on the command bar makes it possible to create a document which reports some of the information managed by the "Smart Scheduler" system.

Fig 70 – Operation record command bar

To create the document

- Click the **Reports** button (Fig 70).

Several options are available. Their number and nature depend on the specific configuration.

- Click the wanted option.

A print preview is displayed.

6. Operation Record: description of the different areas of the page

The “Operation Record” page is divided into five separate areas. We will analyze them one by one in this paragraph.

The fields highlighted in pink are required. It is not possible to proceed without specifying a value in these fields. The number and the kind of required fields changes according both to the configuration and to the specific procedures in use.

The “Operation record” screen is customizable, i.e. some fields can be either hidden or displayed by configuration. Therefore, the screens actually used in your structure can be slightly different from those displayed here.

6.1. The “Patient” area

The “Patient” area contains all the data regarding the selected patient.

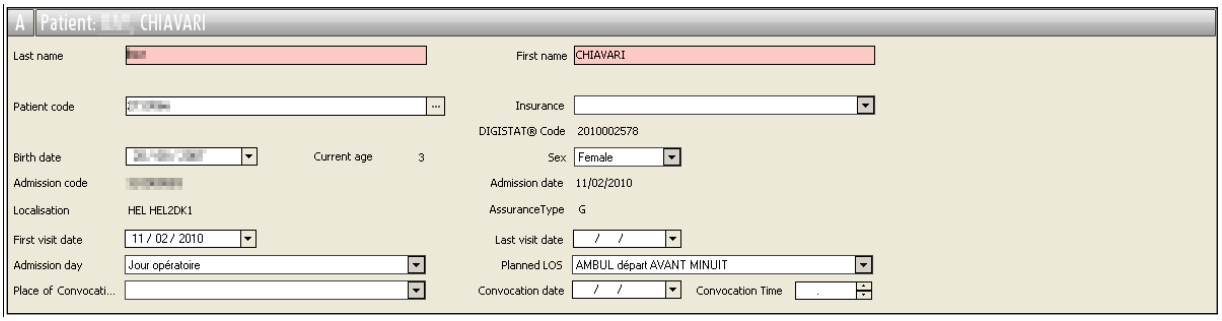


Fig 71 – The “Patient” area

This data is

- The last name and name.
- Temporary ID

The temporary ID is a code assigned to the patient in the absence of a final patient code.

- ID type

This field requests specification of the type of ID used to temporarily identify the patient.

- Patient code

This is the final patient code assigned when the patient is included in the structure's databases.

- Insurance

This specifies the patient's type of insurance cover (if any).

- DIGISTAT® code

This is the code assigned by the DIGISTAT® systems when a new operation is created.

- Estimated weight
- Estimated height
- Birthdate
- Current age
- Sex
- Admission code
- Admission date
- Location
- Age when operated
- Room number
- Assurance type
- First visit date
- Last visit date

Every time you have to enter a date it is possible, clicking the *arrow next to the field, to enter it using a digital calendar (Fig 73)*

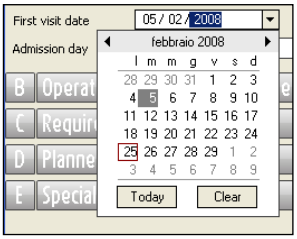


Fig 72 – Digital calendar

To enter the date, simply click the day required. The corresponding date will automatically appear in the field. Paragraph 3.1.2 describes the digital calendar in detail.

- Admission day
- Envisaged duration of hospitalization (Planned LOS).
- Place of convocation
- Convocation date
- Convocation time

Remember that, to make any change, before making the change you must click the **Edit** *button on the command bar.*
After making the change, either click the **Update** *button to save the new data or click the* ***Cancel*** *button to return to the data prior to the change.*

6.2. The “Operation” area

The “Operation” area displays the information concerning the operation to be performed (Fig 73).

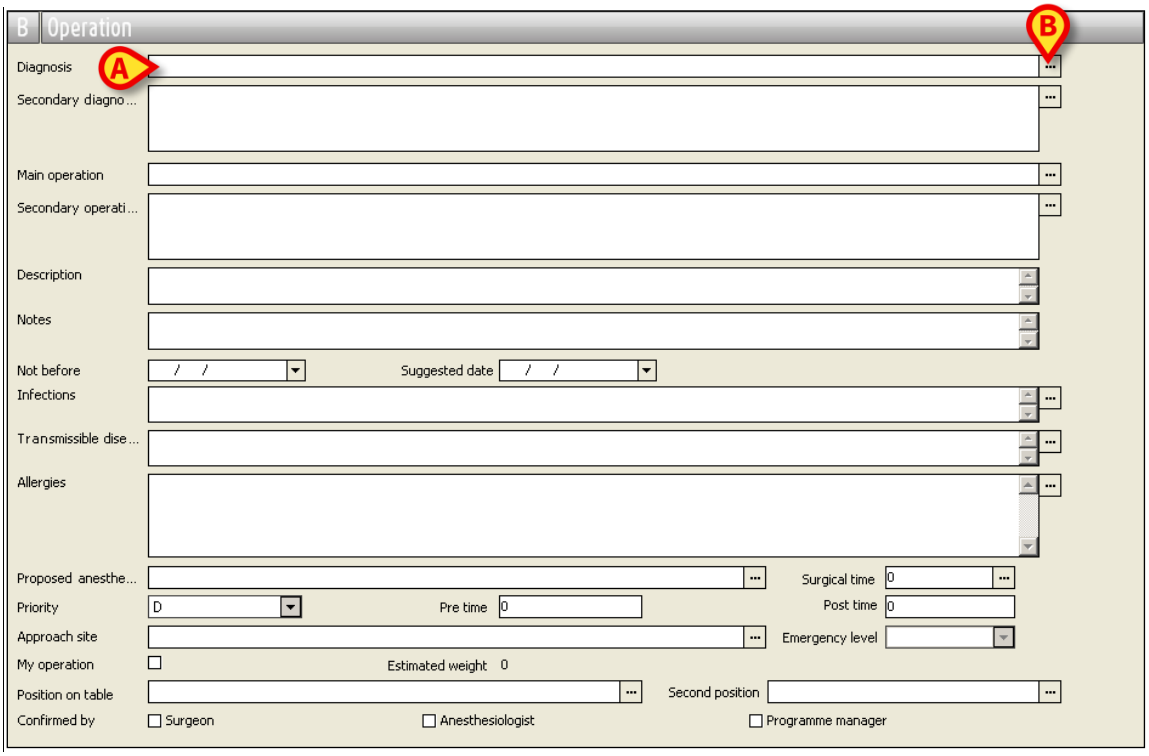


Fig 73 – “Operation” Area

The following paragraphs describe the procedures related to the operation data specification.

6.2.1. Diagnosis

The “Diagnosis” field makes it possible to specify diagnostic codes according to the most common standards. There are three possible ways of selecting the diagnosis. The one actually used depends on the configuration chosen. All these three methods are described in the following paragraphs. Only one is relevant for the system in use in your structure.
A fourth possibility makes use of the “Free field” and “DIGISTAT® Codefinder” options at the same time.

6.2.1.1. Free field

The “Diagnosis” field can be a free field, i. e. an area in which the appropriate text can be freely typed. In this case, to specify the diagnosis, a user can simply click the field and then type the text.

6.2.1.2. DIGISTAT® Codefinder

The DIGISTAT® “Codefinder” software can be used to directly insert the diagnostic codes according to the most common standards. This functionality can be activated by configuration.
To use DIGISTAT® “Codefinder”:

- Click the **Edit** button on the command bar.
- Click the [...] button placed alongside the "Diagnosis" field (Fig 73 **B**).

The following window opens (Fig 74).

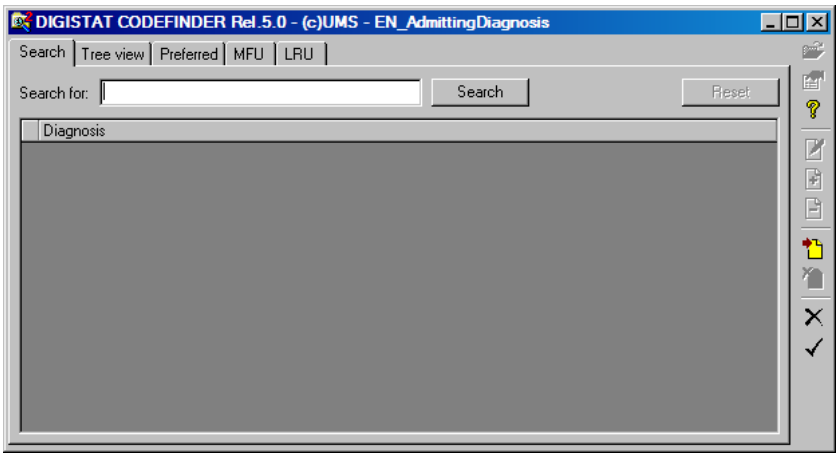


Fig 74 - Codefinder

This tool makes it possible to rapidly search and select the wanted diagnostiuc codes. All procedures and functionalities are described in the user manual, provided with the product. See the DIGISTAT® "Codefinder" user manual to know these procedures and functionalities.

Once the diagnosis is specified, to save the data entered,

- click the **Update** button on the command bar.

By configuration, the "Free field" and DIGISTAT® "Codefinder" procedures can be used together.

6.2.1.3. DIGISTAT® selection window

The diagnosis can be insrted using a specific DIGISTAT® search and selection window.

To activate this tool

- Click the **Edit** button on the command bar.

Data entry is this way enabled.

- Enter the first letters of the operation required in the "Diagnosis" field (Fig 73 **A**).

Otherwise

- click the [...] button placed alongside the "Diagnosis" field (Fig 73 **B**).

In both cases the "Diagnosis" window is displayed (Fig 75).

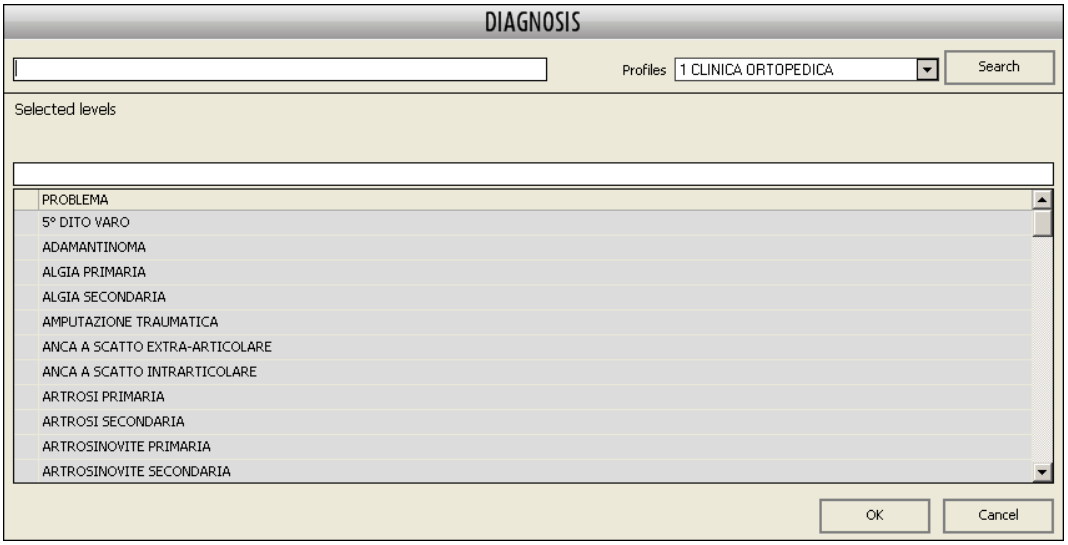


Fig 75

This window makes it possible to search the diagnosis coded according to DIGISTAT® parameters.

6.2.1.4. DIGISTAT® diagnosis search and selection

There are two ways to search for a diagnosis: one requires the specification of the diagnosis name (or part of it), one makes it possible to get to the right diagnosis by selecting the appropriate levels on a tree-structure. Both methods are described in the following paragraphs.

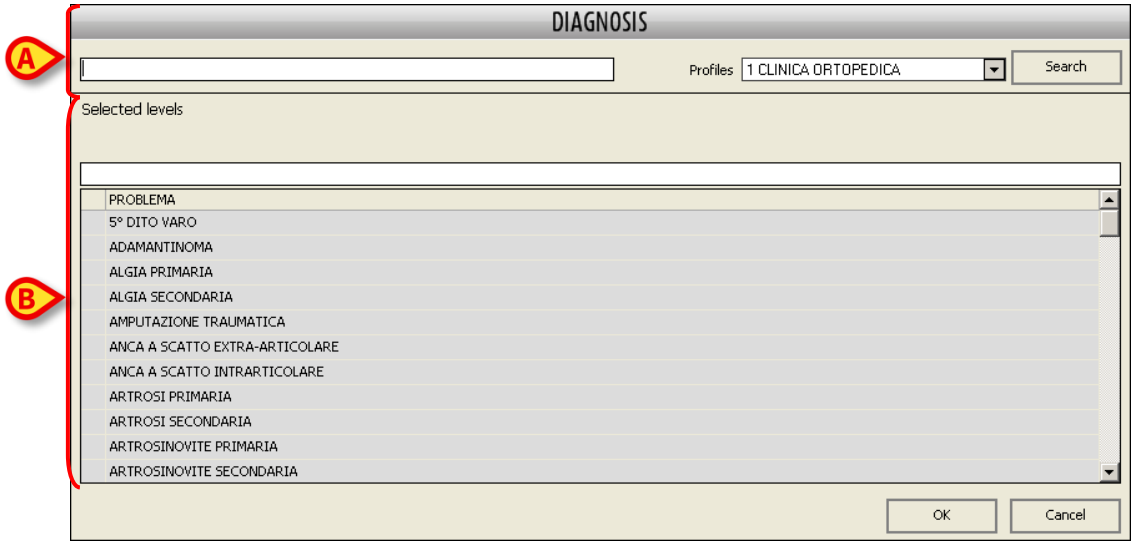


Fig 76

1) Search by name

The upper part of the window (indicated in Fig 76 **A** and displayed in Fig 77) can be used to search the diagnosis by name.

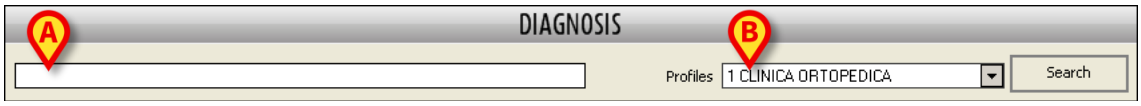


Fig 77

There are two fields in this area. The field on the left (Fig 77 **A**) makes it possible to specify the name (or part of it) of the wanted diagnosis; the field on the right (Fig 77 **B**) is a drop down menu making it possible to specify the relevant hospital area. If no area is selected the search is performed on all areas. Each user is enabled to search only the areas for which he/she is qualified.

To perform the search

1. Insert the name (or part of the name) of the diagnosis in the field indicated in Fig 78 **A**.

2. Either wait for the system to automatically search, or click the **Search** button (Fig 78 **B**).

All the diagnosis whose name contains the typed charcters are displayed (Fig 78 **C**).

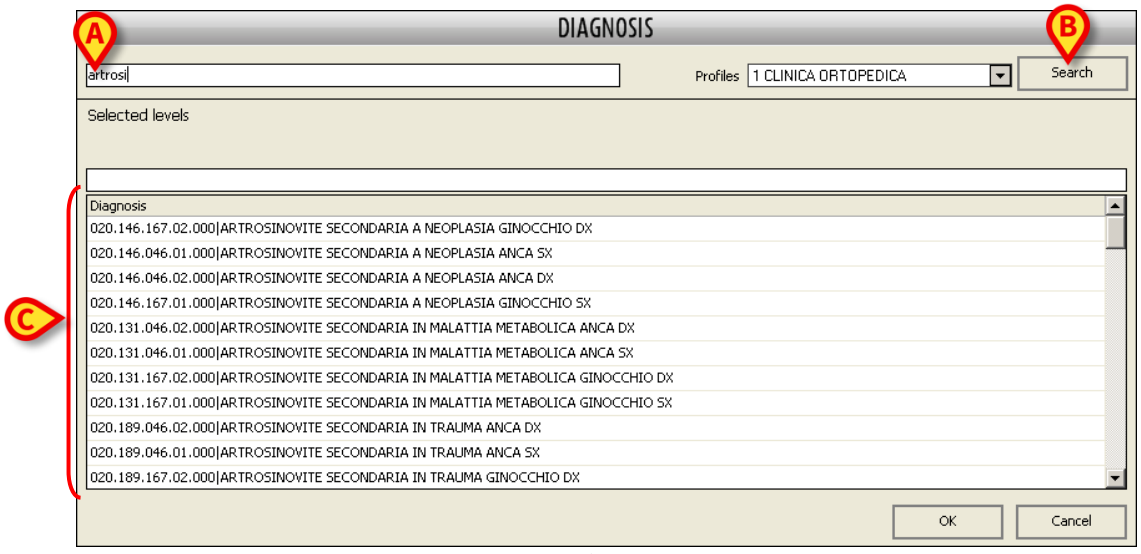


Fig 78

3. Double click the row containing the relevant diagnosis.

The diagnosis is this way inserted in the “Operation record”, in the “Operation” area (Fig 79).

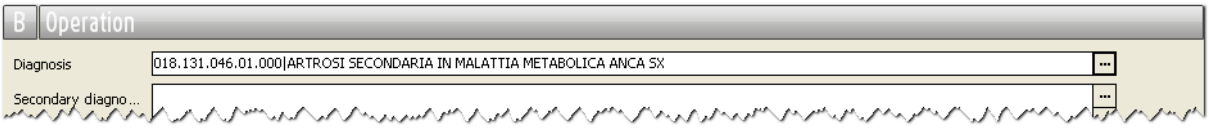


Fig 79

4. Click the **Update** button on the command bar.

2) Search by structured levels

The lower part of the window (indicated in Fig 76 **B** and enlarged in Fig 80) can be used to search the diagnosis by selecting successive levels on a tree-structure.

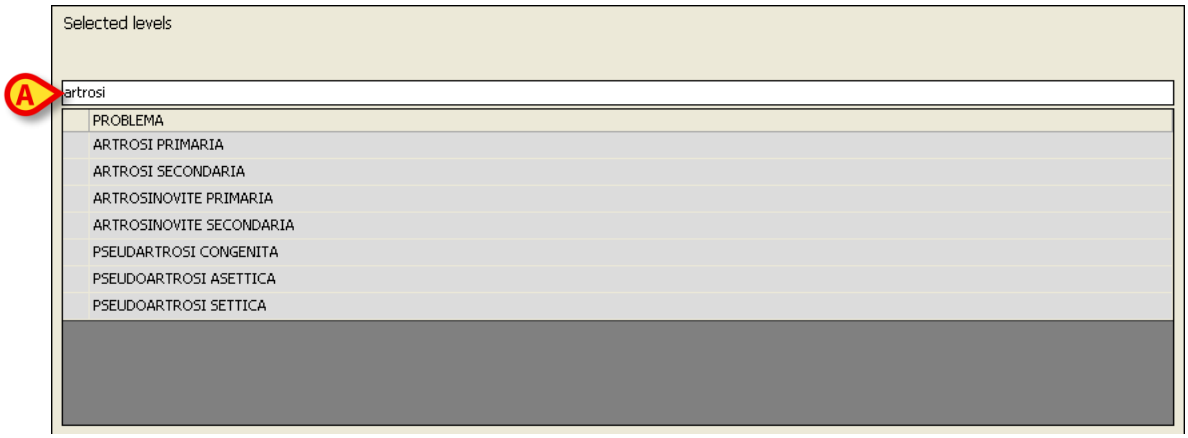


Fig 80

The first level concerns the diagnosis' general area of reference. The filter indicated in Fig 80 **A** can be used to search for the wanted area of reference. In the figure, as example, the word "artrosi" has been specified in the filter. All the areas containing the specified word are displayed in the lower part of the window.

1. Double click the row corresponding to the wanted area. "Artrosi secondaria" is now selected.

The next level is displayed, making it possible to indicate the cause (Fig 81).

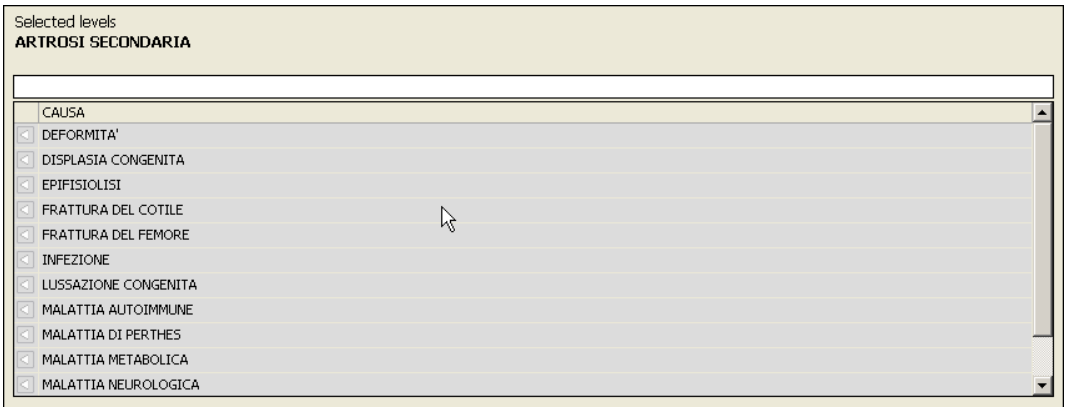


Fig 81

2. Double click the wanted cause. "Malattia metabolica" is now selected.

The next level is displayed, making it possible to indicate the site (Fig 82).

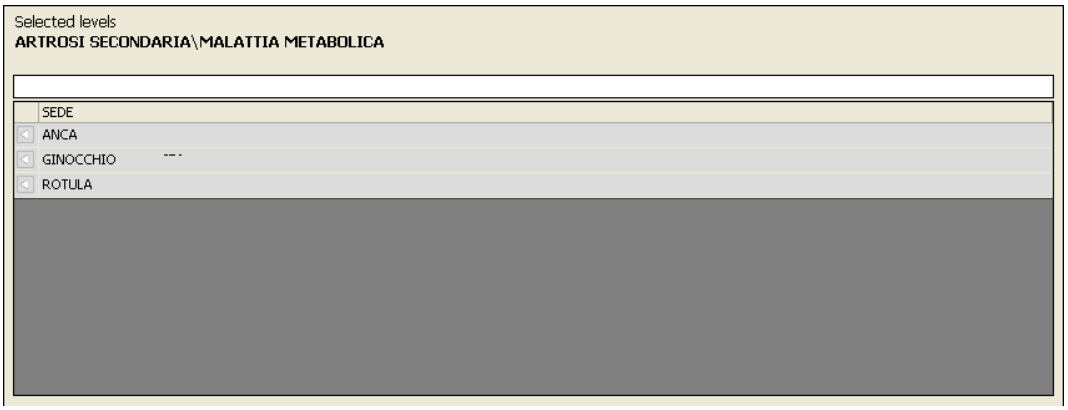


Fig 82

3. Double click the wanted site. “Anca” is now selected.

The next level is displayed, making it possible to indicate the side (Fig 83).

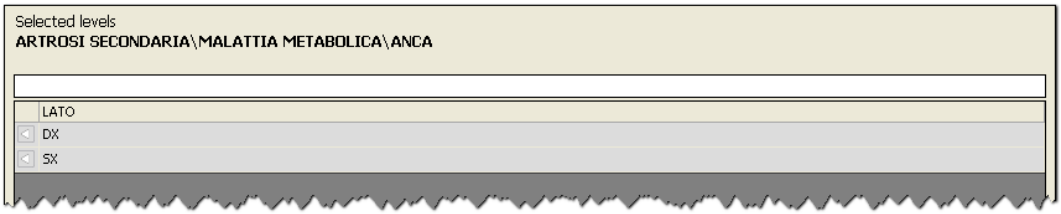


Fig 83

4. Double click the wanted side. The left side “SX” is now selected.

The next level is displayed, making it possible to indicate the level (Fig 84).

Fig 84

5. Double click the wanted level. In this case the only option is “non-determined” (N.D.).

Information for the user.

“Non Determined” means that the information is not relevant for the diagnosis specification. In other words: the value of this level is not part of the definition of the diagnosis to be specified.

The diagnosis is now displayed (Fig 85).

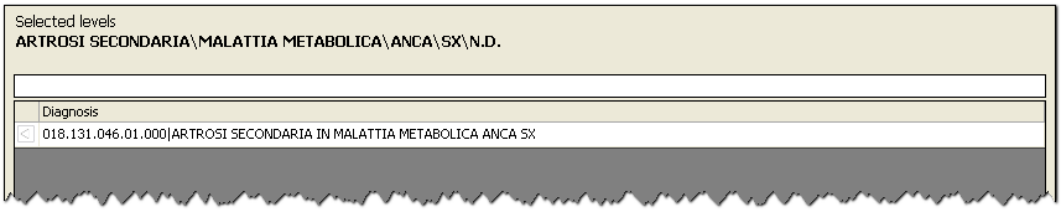


Fig 85

6. Double click the diagnosis. The diagnosis is this way inserted in the "Operation record", in the "Operation" area (Fig 86).

Fig 86

7. Click the **Update** button on the command bar.

The button is available on the selection window, on each level and for each row, to make it possible to go back to the previous level (Fig 87 **A**). The chosen path is indicated in the "Selected levels" area (Fig 87 **B**).

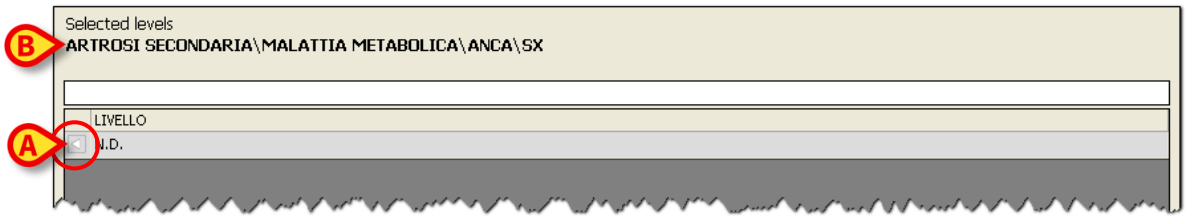


Fig 87

6.2.2. Secondary diagnosis

If the diagnosis selection modality is the one described in paragraph 6.2.1.4 (by DIGISTAT® selection window) another field activates, making it possible to specify the secondary diagnosis.

To specify the secondary diagnosis, after main diagnosis specification,

1. Click the **Edit** button on the command bar.

2. Click the button placed alongside the "Secondary diagnosis" field (Fig 88 **A**).

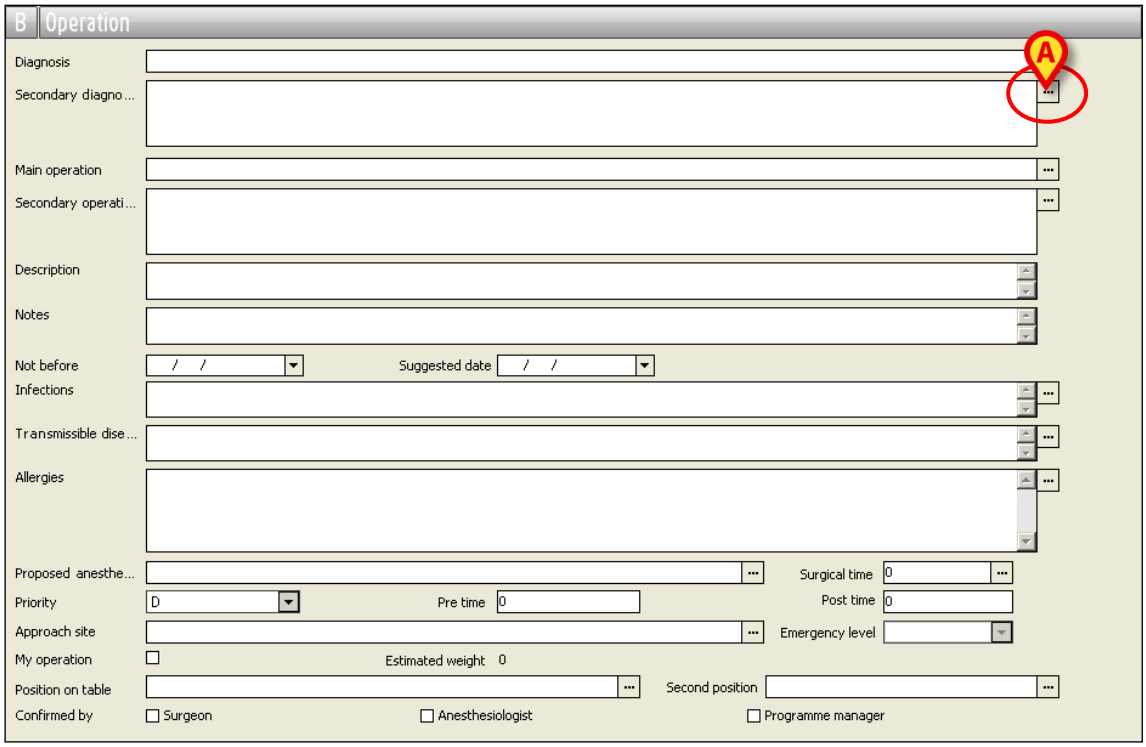


Fig 88

The following window opens (Fig 89).

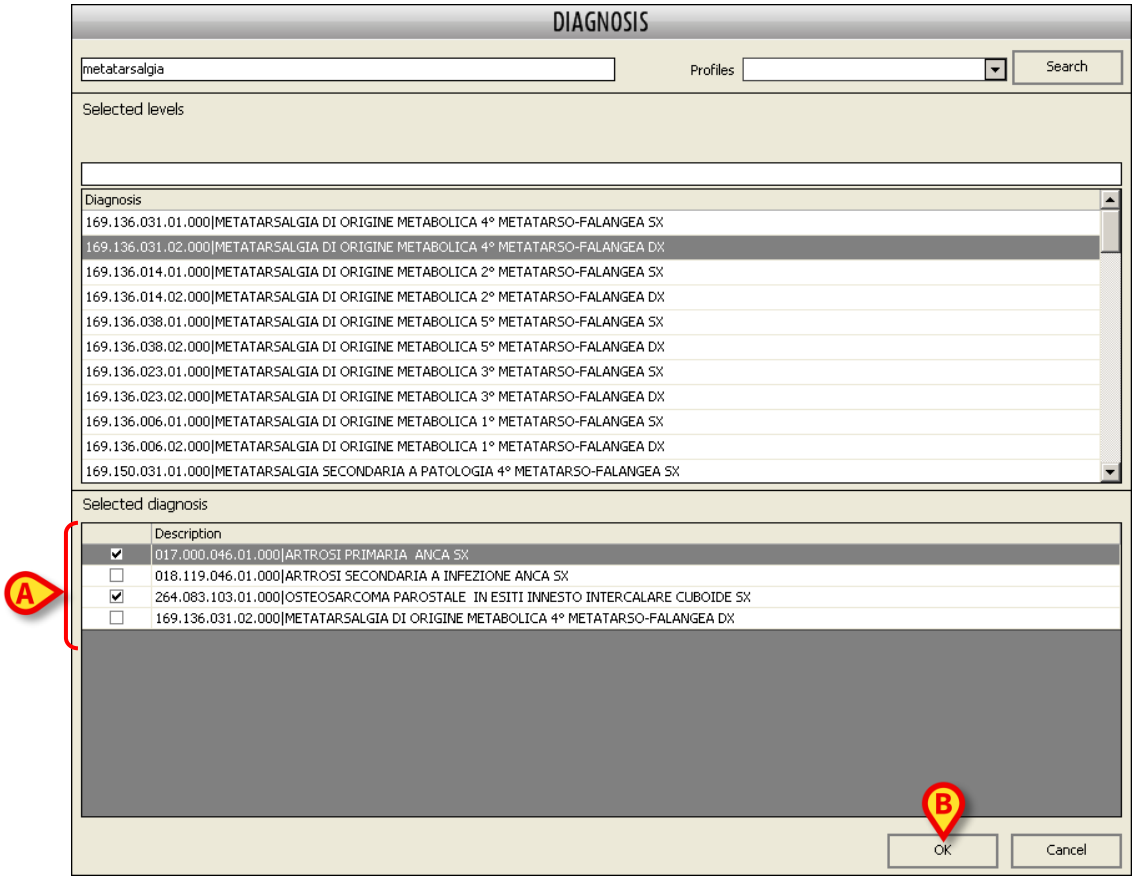


Fig 89

The procedures relating to the secondary diagnosis specification are similar to those relating to the main diagnosis specification. Therefore, see paragraph 6.2.1 for these procedures.

There is a difference: the secondary diagnosis can be more than one, and they can be specified all at the same time. For this reason, when one diagnosis is selected (by double-clicking the corresponding row), the diagnosis is not directly inserted in the "Operation record", but is inserted in a list displayed below the selection window. The list is indicated in Fig 89 **A**.
On this list, a checkbox is placed at the beginning of each row.
To select the diagnosis that will be inserted as secondary diagnosis

1. Click the checkbox corresponding to the diagnosis to be inserted.

2. Click the **Ok** button (Fig 89 **B**).

All the "checked" diagnosis are this way inserted on the "Operation record" (Fig 90).

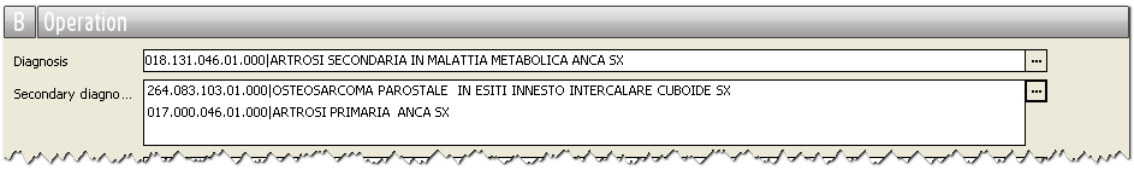


Fig 90

3. Click the **Update** button on the command bar.

6.2.3. Main Operation

The "Main operation" field makes it possible to specify the name of the operation to be performed.

The "Main operation" field, together with the patient's data (name, last name and patient code) and the envisaged duration of the operation, is required to change the operation state from "foreseen" to "requested".

To specify the main operation

- click the **Edit** button on the command bar.

Data entry is this way enabled.

- Enter the first letters of the operation required in the "Main operation" field (Fig 73 **A**).

Otherwise

- click the [...] button next to the field (Fig 73 **B**).

The "Operations" window opens (Fig 91).

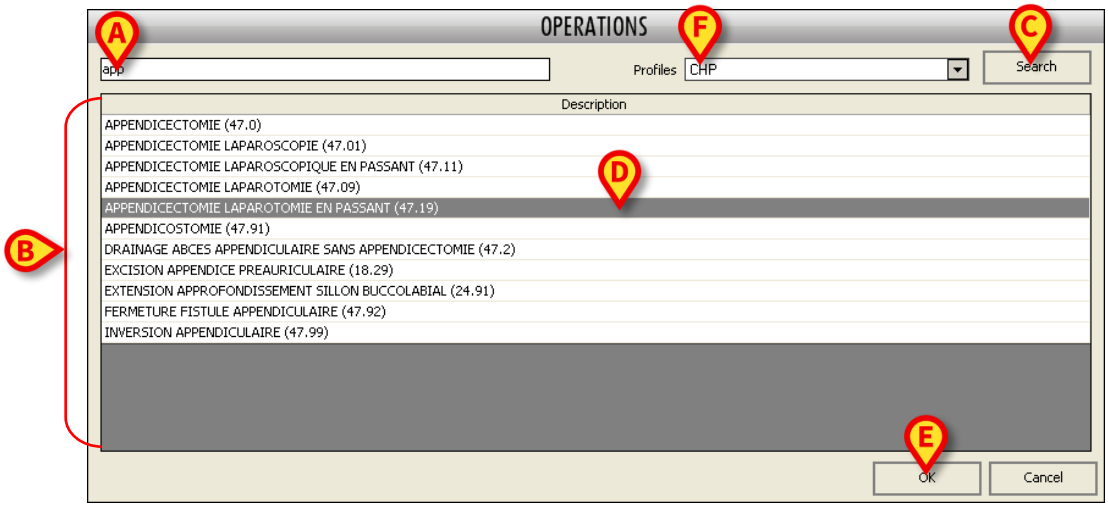


Fig 91 – Operation Selection

The "operations" window makes it possible to search for and select the operation required.

To search for the operation

- Enter the name (or part of it) of the operation in the space indicated in Fig 91 **A.**

From the third letter entered onwards, the system will automatically display in the middle of the window the list of all the operations with names containing the sequence of letters entered. The list appears inside the "description" area (Fig 91 **B**).

If only one or two letters are entered and you wish to proceed with the search, you must click the **Search** button (Fig 91 **C**).

If you click the **Search** button without entering any letters, the list of all possible operations will appear.

- After finding the operation to be entered, click it.

The operation will appear as selected (Fig 91 **D**).

- Then click the **Ok** button (Fig 91 **E**).

The operation selected appears inside the "Main operation" field of the "Operation Record" page (Fig 92). This result is also obtained by double clicking the name of the operation to be entered.

Fig 92

If you click the **Cancel** button, the "Operations" window closes without any changes being made.

The “profiles” field (Fig 91 **F**) in the operation entry window makes it possible to limit the group of operations in which the search is performed.

Click the button alongside the “profiles” field to open a menu containing different options (Fig 93). Each one usually specifies a location or an area of responsibility. Select one of these options to limit the search to the group of operations performed in that location or that area.

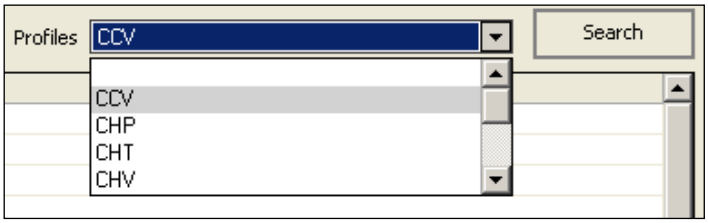


Fig 93 – Profile Selection

The profiles are defined during configuration. You can create a specific profile for the user so that he/she can view only the operations for which he/she is responsible. For further information, contact the system administrator.

In short, the procedure to enter an operation in the “Main operation” field of the “Operation Record” page is the following.

- Click the **Edit** button on the command bar.
- Enter the first letters of the operation required in the search field (Fig 73 **A**)

or

- Click the button next to the field (Fig 73 **B**).

The “Operations” window opens (Fig 91).

- Search for the operation required.
- Double click the name of the operation found.

The operations window disappears and the name of the operation is displayed inside the “Main operation” field (Fig 92).

- Click the **Update** button on the command bar to save the data.

6.2.3.1. Select an operation linked to the diagnosis

A configuration parameter makes it possible to link the operation search to the diagnosis previously selected. If enabled by configuration, a checkbox named “Based on selected diagnosis” is displayed on the operation search and selection window (Fig 94).

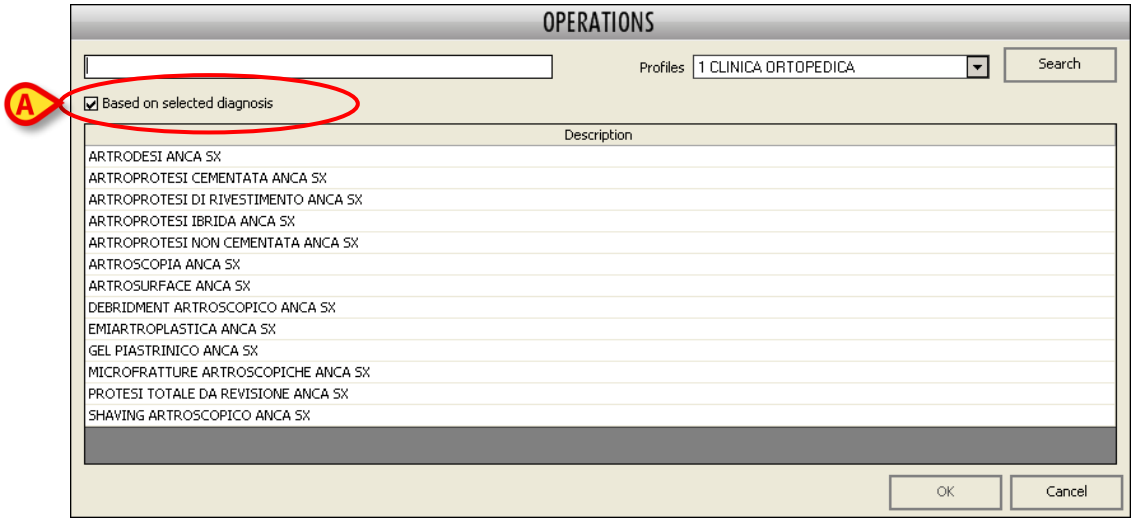


Fig 94

When the box is checked only the operations linked to the selected diagnosis (visible in the “Diagnosis” field) are displayed on the operations search and selection window.

This option is only available if the main diagnosis selection is performed on the DIGISTAT® search and selection window, described in paragraph 6.2.1.4. In this case the main operation selection can be performed only after diagnosis has been selected.

6.2.4. Secondary operations

The “Secondary operations” field (Fig 95) specifies the list of any other operations that the patient has had or will have to have and are considered significant in relation to the current operation.

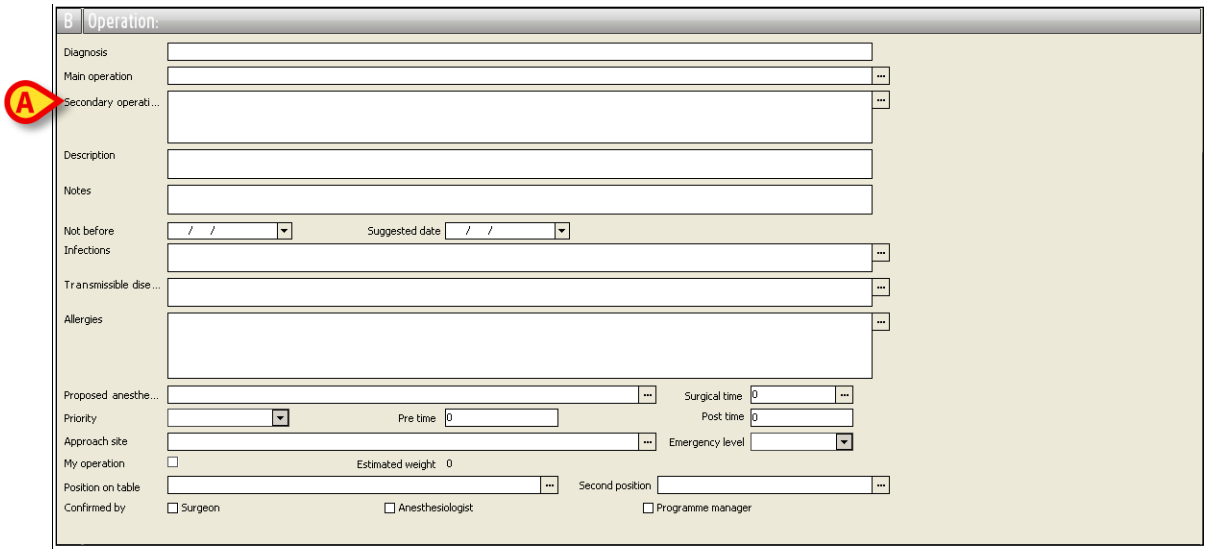


Fig 95 – “Operation” Area

The function of this field is exactly the same as that of the “Main operation” field and describred in paragraph 6.2.3.

To specify the possible “Secondary operations”,

- click the **Edit** button on the command bar.

Data entry is this way enabled.

- Enter the first letters of the operation required in the “Secondary operations” field.

Otherwise

- click the [...] button next to the field.

The “Operations” window opens (Fig 96).

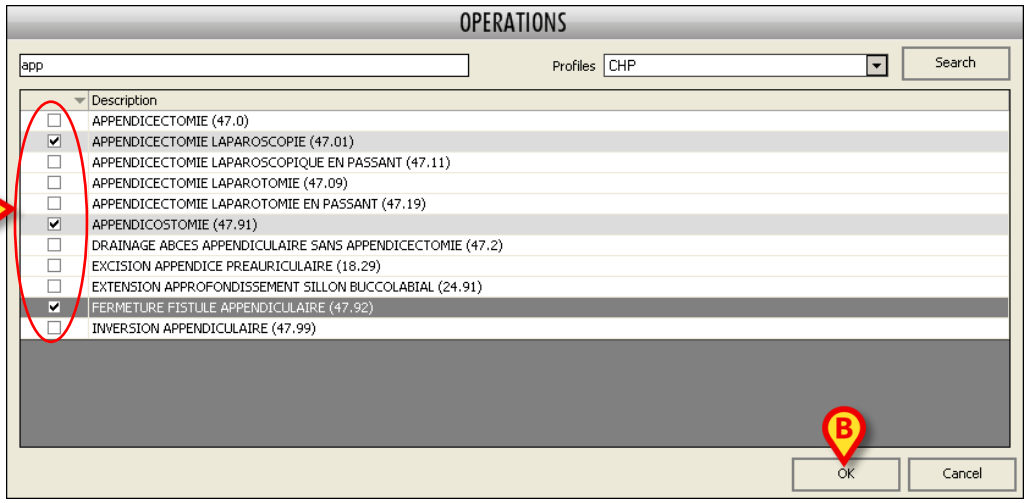


Fig 96 – Other Operations

The window shown in Fig 96 offers the chance to select and enter more than one operation at the same time.

Then click the **Ok** button (Fig 96 **B**) to enter all the operations selected in the "Secondary operations" field of the "Operation Record" page.

6.2.5. Description

This field makes it possible to enter a more detailed description of the operation to be performed. It is a free field, meaning that it is not conditioned by pre-defined selections.

6.2.6. Notes

This field makes it possible to enter any notes relating to the operation to be performed. It is a free field, meaning that it is not conditioned by pre-defined selections.

6.2.7. Not before...

This field makes it possible to enter a date before which it is not possible to perform the operation. This value is binding to the value to be entered into the next field "Suggested date". If the date 20/05/2010 is entered into the "Not before…" field, it is not possible to enter an earlier date in the "Suggested date" field".
The value is not binding in relation to the scheduling of the operation. This means that the operation can be scheduled for a date before that specified here. In this case the system will warn the user that the scheduling contrasts with that specified previously.

6.2.8. Suggested date

This field makes it possible to indicate a date as being the best for performing the operation. The suggestion need not necessarily be observed during scheduling; i.e., the date entered is not binding in relation to the scheduling of the operation. This date is, however, binding in relation to the value to be entered into the "Not before…" field. For instance, if the date 20/05/2010 is entered into the

"Suggested date" field without entering a value into the "Not before…" field, the latter field assumes the date in the "Suggested date" field (20/05/2010 in this case) as default.

Every time you have to enter a date it is possible, clicking the ▼ *arrow next to the field, to enter it using a digital calendar.*

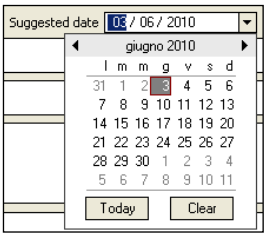


Fig 97 – Digital calendar

To enter the date simply click the day required. The corresponding date will automatically appear in the field. Paragraph 3.1.2 describes the digital calendar in detail.

6.2.9. Infections

The "Infections" field makes it possible to specify any possible infections.

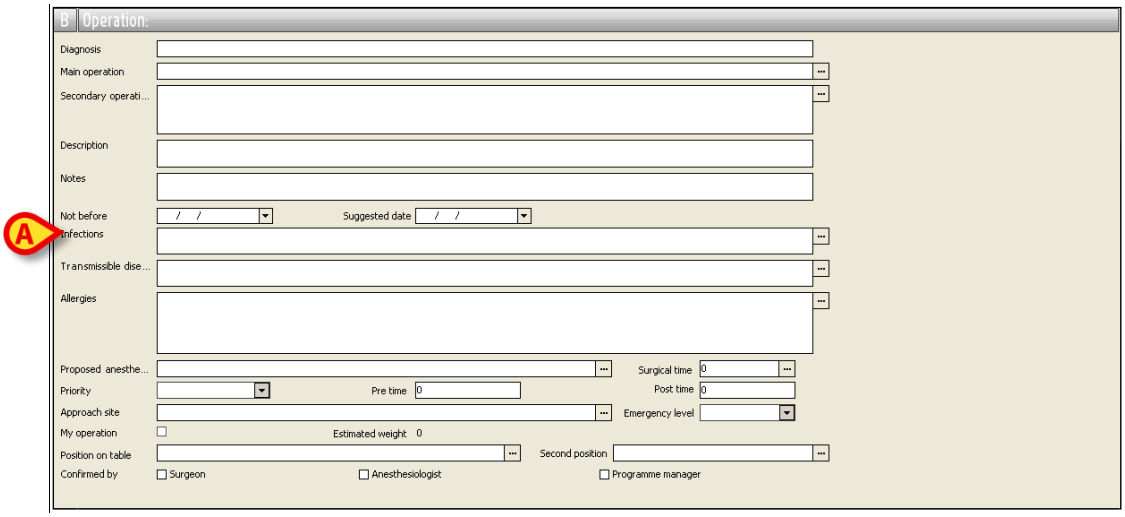


Fig 98 – "Operation" Area

To enter an infection

- click the **Edit** button on the command bar.
- Enter the first letters of the infection being searched for in the "infections" field.

Otherwise

- click the ... button next to the field.

The "Infections" window will appear (Fig 99).

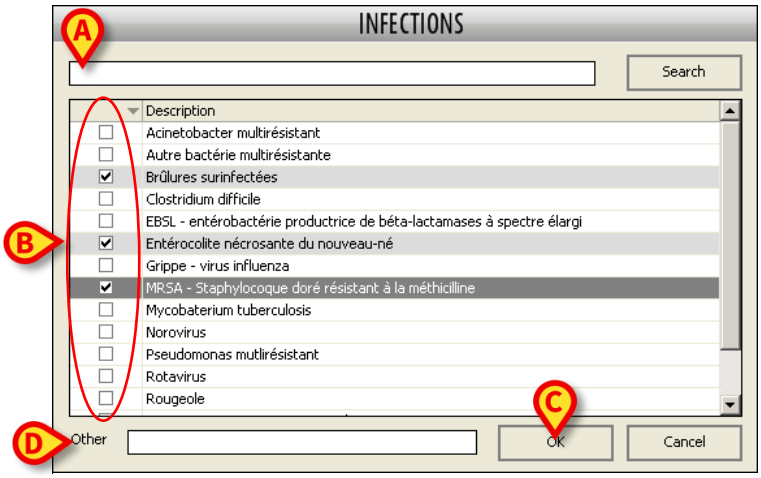


Fig 99 – Specify Infections

- Search, if necessary, the wanted item using the search field on the window (Fig 99 **A**).
- Click the checkbox corresponding to the infections that must be specified (Fig 99 **B**).

Multiple selection is possible.

- Click the **Ok** button (Fig 99 **C**) to display all the selected infections on the "Operation record" screen.

The "Infections" window offers the chance to manually enter an infection not contained in the database.

This is possible using the "other" field (Fig 99 **D**).

To enter an infection not contained in the database, simply write the name of the infection in the field and click **Ok**.
The name appears inside the "Infections" field of the "Operation Record" page.

When you enter an infection, the system can be configured to automatically add a certain amount of time to the estimated time required to clean the room (Fig 100). The actual duration is specified by configuration.

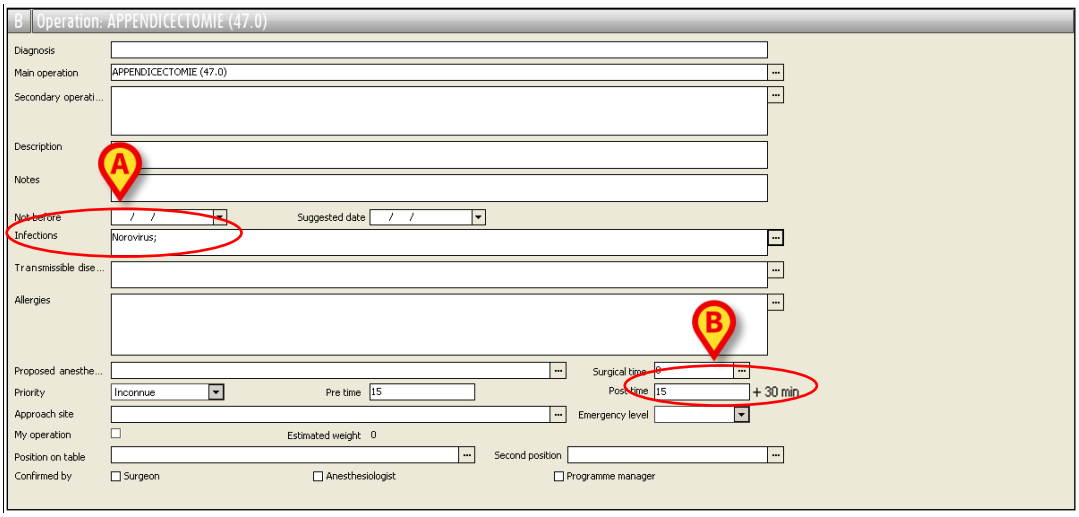


Fig 100 – Infection in progress and cleaning times

6.2.10. Transmissible diseases

The "Transmissible diseases" field makes it possible to specify any transmissible diseases suffered by the patient.

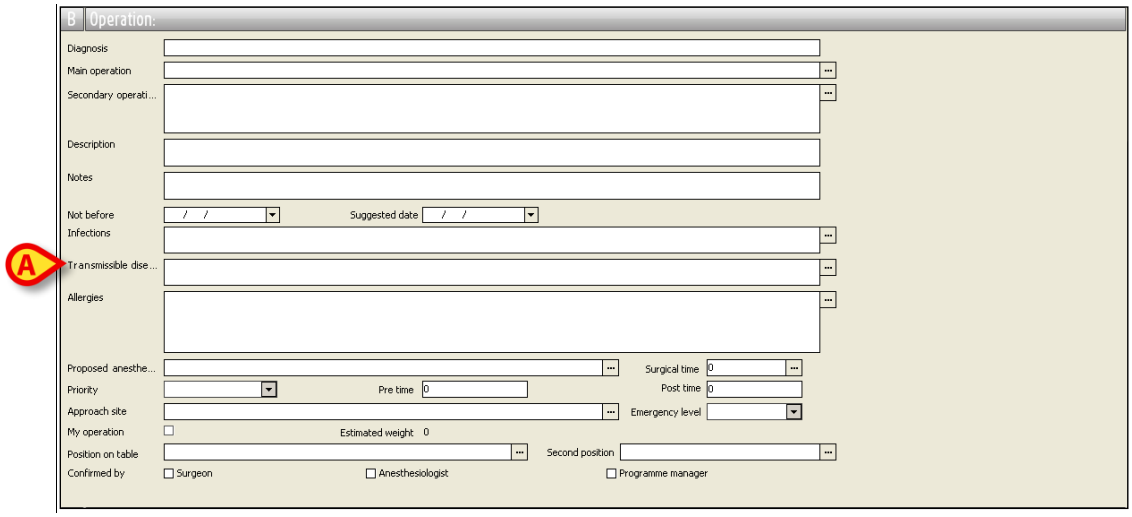


Fig 101 – "Operation" Area

To specify a transmissible disease

- click the **Edit** button on the command bar.
- Enter the first letters of the transmissible disease being searched for in the "Transmissible diseases" field.

Otherwise

- click the [...] button next to the field.

The "Transmissible diseases" window appears (Fig 102).

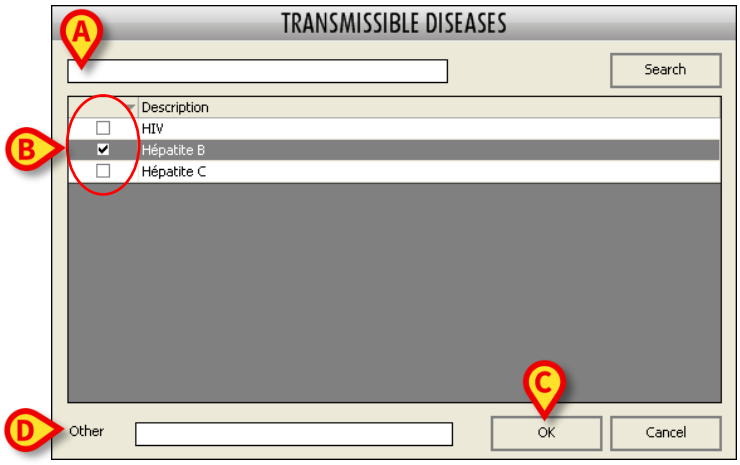


Fig 102 – Specify transmissible diseases

- Search, if necessary, the wanted item using the search field on the window (Fig 102 **A**).
- Click the checkbox corresponding to the diseases that must be specified (Fig 102 **B**).

Multiple selection is possible.

- Click the **Ok** button (Fig 102 **C**) to display all the selected diseases on the "Operation record" screen.

The "Transmissible diseases" window offers the chance to manually enter a disease not contained in the database.

This is possible using the "other" field (Fig 102 **D**).

To enter a disease not contained in the database, simply write the name of the disease in the field and click **Ok**.
The name is displayed in the "Transmissible diseases" field of the "Operation Record" page.

When you enter a disease, the system can be configured to automatically add a certain amount of time to the estimated time required to clean the room (Fig 100). The actual duration is specified by configuration.

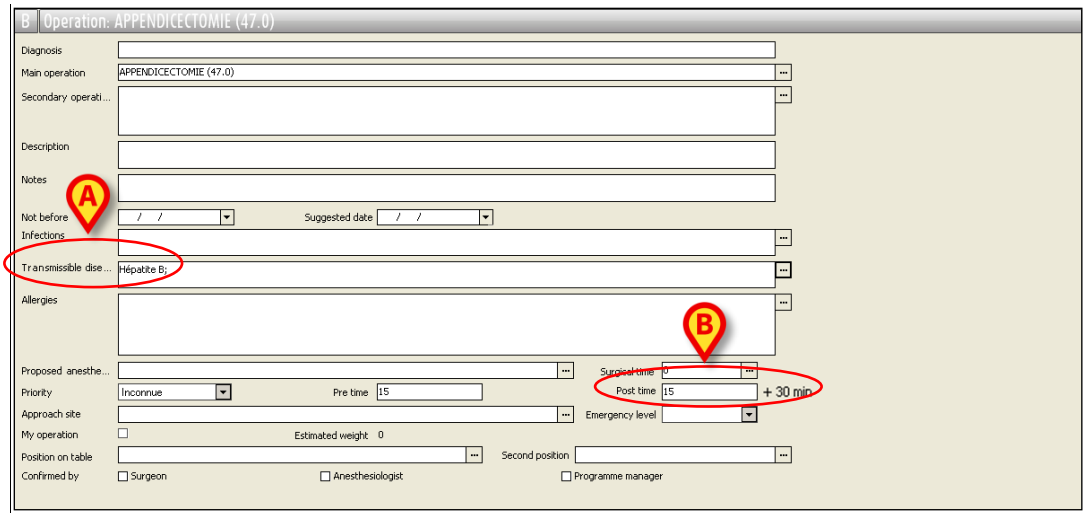


Fig 103 – Transmissible diseases and cleaning times

6.2.11. Allergies

The “Allergies” field (Fig 104 **A**) makes it possible to specify any allergies suffered by the patient.

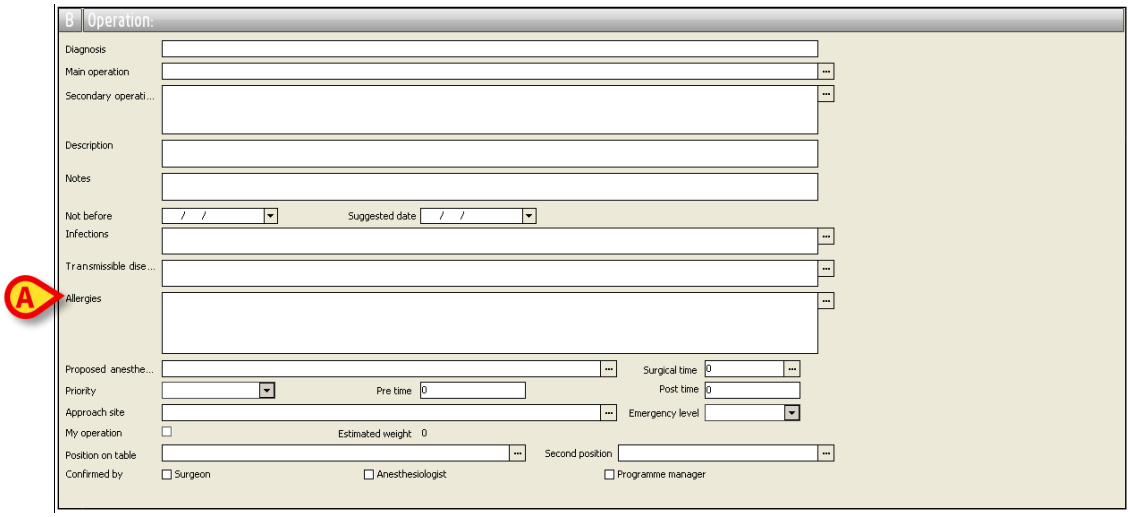


Fig 104 – “Operation” Area

To specify an allergy

- click the **Edit** button on the command bar.
- Enter the first letters of the allergy being searched for in the “Allergies” field.

Otherwise

- click the [...] button next to the field.

The “Allergies” window opens (Fig 105).

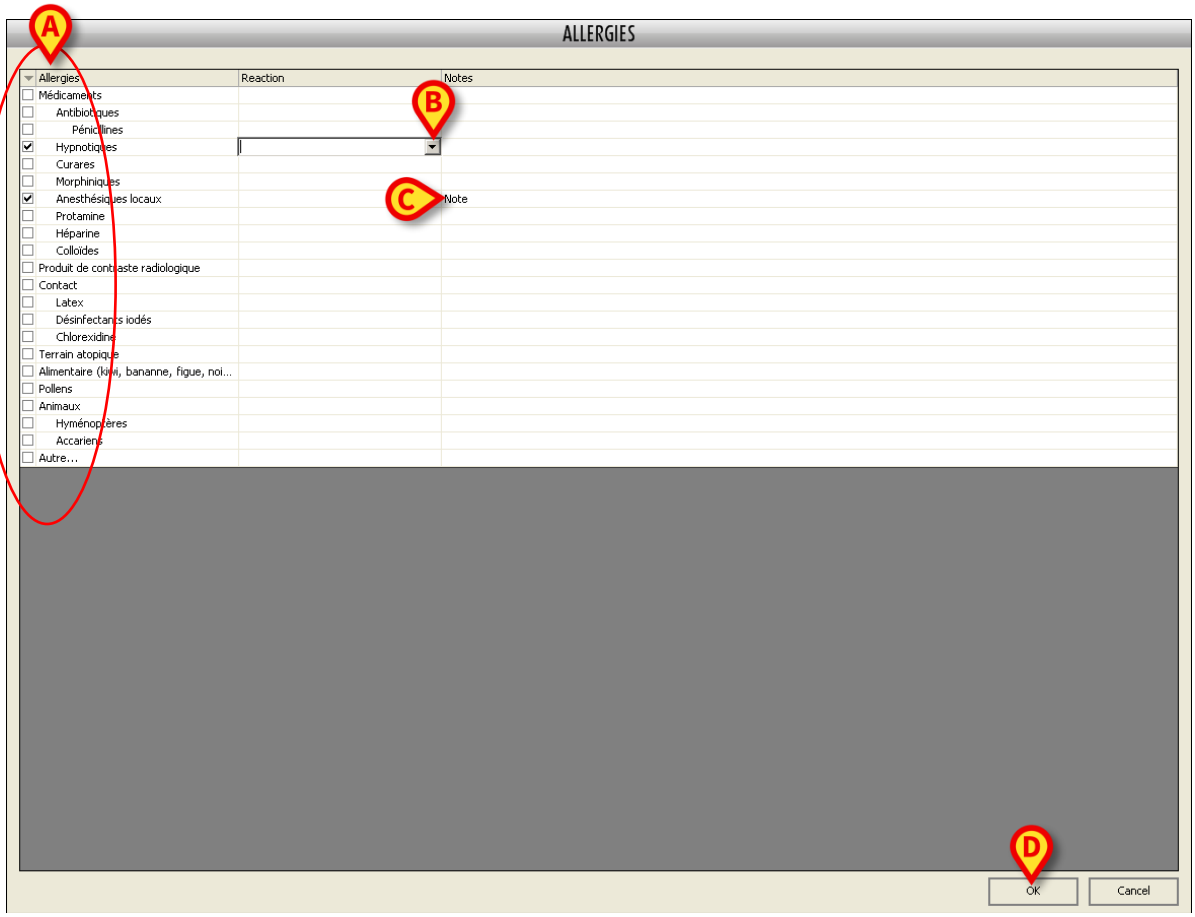


Fig 105 – Specify Allergies

To specify an allergy,

- click the box alongside the name of the allergy selected (Fig 105 **A**).

Multiple selection is possible. All the selected items are inserted in the "Operation record" screen.

Click the "Reaction" column on the row corresponding to the selected allergy to specify the kind of allergic reaction (if so configured, the kind of allergic reaction can be selected on a list of pre-defined options - Fig 105 **B**).

Click the "note" column for the allergy selected to enter any notes concerning the allergy selected (Fig 105 **C**).

- Click the **Ok** button (Fig 105 **D**) to enter all the allergies selected in the "Allergies" field of the "Operation Record" page.

The icon ⚠, which may appear alongside the field, highlights the presence of notes relating to the allergies entered (Fig 106).

Fig 106 – Allergy Notes

6.2.12. Proposed Anesthesia

The “Proposed Anesthesia” field (Fig 107 **A**) makes it possible to specify the type of anesthesia proposed for the operation.

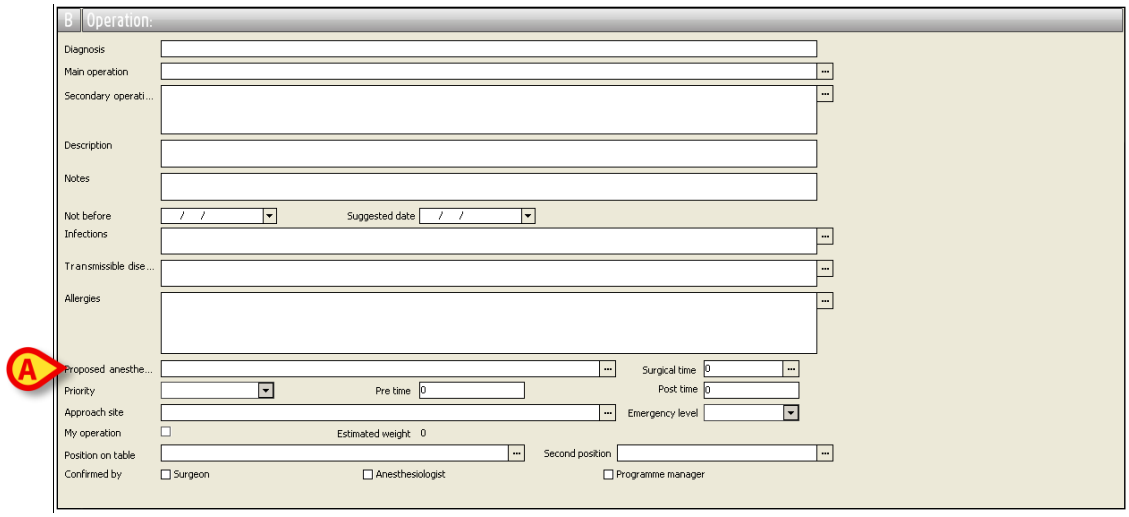


Fig 107 – “Operation” Area

To specify a type of anesthesia

- click the **Edit** button on the command bar.
- Enter the first letters of the anesthesia being searched for in the “Proposed anesthesia” field.

Otherwise

- click the [...] button placed next to the field.

The “Anesthesia” window opens (Fig 108).

Fig 108 – Specify Anesthesia

- Search, if necessary, the wanted item using the search field on the window (Fig 108 **A**).

- Click the checkbox corresponding to the anesthesia that must be specified (Fig 108 **B**).

Multiple selection is possible.

- Click the **Ok** button (Fig 108 **C**) to display all the selected anesthesias on the "Operation record" screen.

The "Anesthesia" window offers the chance to manually enter an anesthesia not contained in the database.

This is possible using the "Other" field (Fig 108 **D**).

To enter an anesthesia not contained in the database, simply write the name of the anesthesia in the field and click **Ok**.

The name appears inside the "Proposed anesthesia" field of the "Operation Record" page.

6.2.13. Surgical time

The "Surgical time" field (Fig 109 **A**) makes it possible to specify the envisaged duration of the operation.

The "Surgical time" field, together with the patient's main data (name, last name and patient code) and the type of operation envisaged, is required to change the operation state from "foreseen" to "requested".

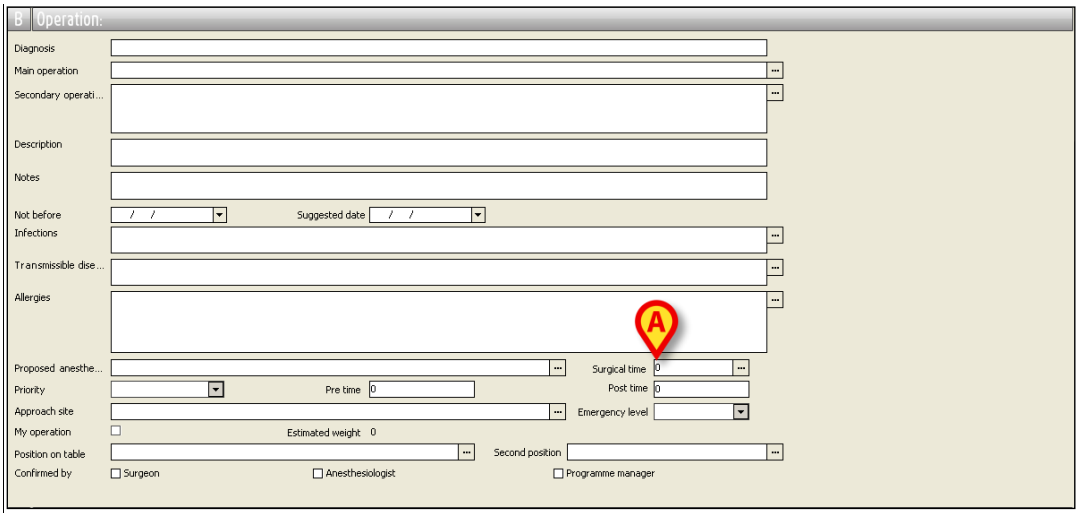


Fig 109 – "Operation" area

To specify the surgical time:

- click the **Edit** button on the command bar.

- Insert the duration (in minutes) in the "Surgical time" field.

Otherwise

- click the [...] button placed near the field.

In both cases the “Surgical time” window appears (Fig 110).

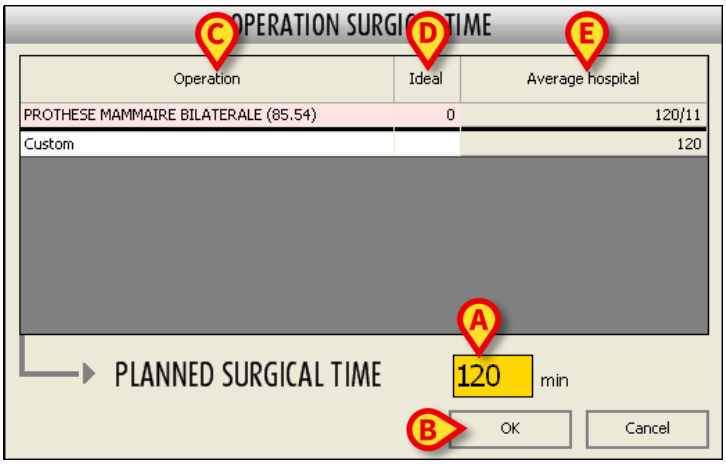


Fig 110 – Expected surgical time specification

- Insert the value (in minutes) in the field indicated in Fig 110 **A**.
- Click the **Ok** button (Fig 110 **B**).

The specified duration appears in the “Surgical time” field on the “Operation record” screen.

The central part of the window can display, if specified by configuration, three different kinds of information.

The “Operation” column (Fig 110 **C**) displays the envisaged operation name.

The “Ideal” column (Fig 110 **D**) displays the optimal duration for that kind of operation.

The “Average hospital” column (Fig 110 **E**) displays the average duration for that kind of operation in the form “*average/number of operations on which the average is calculated*”. For example: “45/8” means that hospital average duration is 45 minutes calculated on 8 operations of the same kind.

If there are secondary operations specified the average duration of each of them is displayed separately.

The “Ideal” and “Average” values can be double-clicked to be inserted as surgical time on the “Operation record”.

The expected duration of the operation influences the operation scheduling possibilities. Every operation can be scheduled in relation to the expected duration. On the "Operation Scheduling" pages, analyzed in detail in paragraph 7, the operations are displayed as boxes (Fig 179) and the length of the boxes is proportional to the duration of the operation.

6.2.14. Priority

The "priority" field makes it possible to specify the level of priority assigned to the operation.
The levels of priority are established during configuration according to the user's requirements. The example shown allows for 4 possibilities (Fig 111):

1) Unknown priority;
2) Normal priority;
3) High priority;
4) Very high priority.

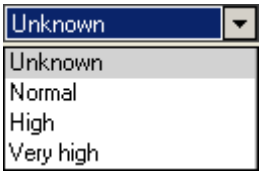


Fig 111 - Priority

The fields "prority" and "emergency level" are mutually exclusive, i.e. when the the "priority" is specified the "emergency level"field is disabled and vice versa.

6.2.15. Pre - time

The "Pre time" field ("pre surgical time") makes it possible to specify the estimated time required to prepare the room for the operation. To enter this value, simply type it into the field. The time entered is added to the operation duration when it is scheduled. It will be displayed on the "Schedule Operation" screen (paragraph 7) as a gray portion (see Fig 182). In the configuration here described the default pre surgical time is 15 minutes.

6.2.16. Post - time

The "Post time" field ("post surgical time") makes it possible to specify the estimated time required to make the room ready again after the operation. In the configuration shown in the example, the system assigns a default post surgical time of 15 minutes. To enter a different value, simply type it into the field. The time entered is added to the operation duration when it is scheduled. It will be displayed on the "Schedule Operation" screen (paragraph 7) as a grey portion (see Fig 182).

6.2.17. Approach site

The “Approach site” field makes it possible to specify the approach mode to the patient.

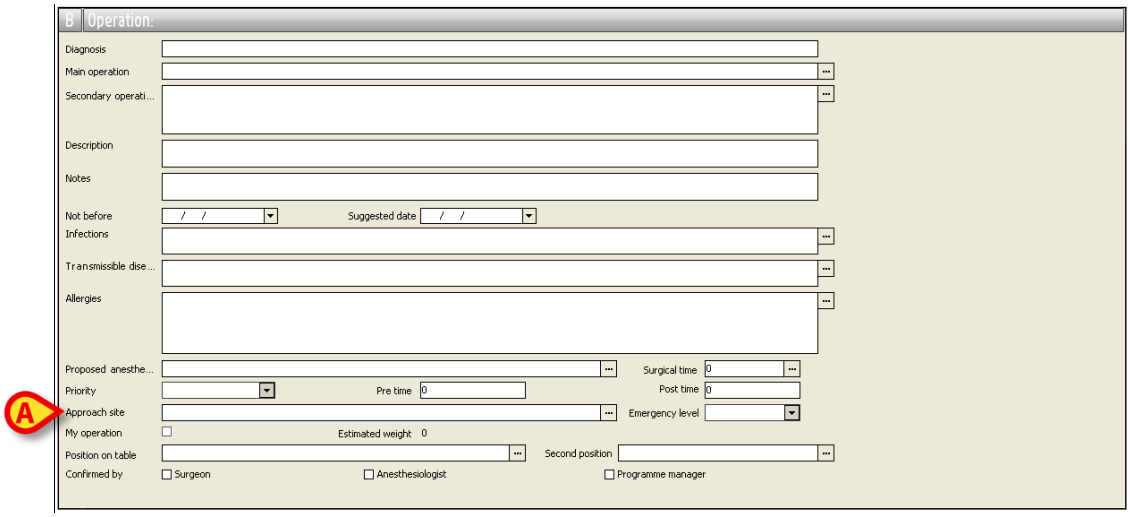


Fig 112 – “Operation” area

To specify an approach mode

- click the **Edit** button on the command bar.
- Enter the first letters of the kind of approach being searched for in the “Approach site” field.

Otherwise

- click the [...] button placed next to the field.

The “Approach site” window appears (Fig 113).

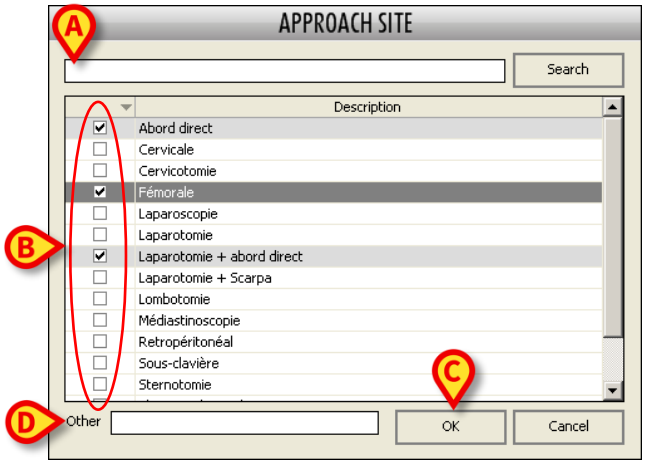


Fig 113 – Approach site

- Search, if necessary, the wanted item using the search field on the window (Fig 113 **A**).
- Click the checkbox corresponding to the approach that must be specified (Fig 113 **B**).

Multiple selection is possible.

- Click the **Ok** button (Fig 113 **C**) to display all the selected approaches on the "Operation record" screen.

The "Approach site" window offers the chance to manually enter an approach mode not contained in the database. This is possible using the "Other" field (Fig 113 **D**).

To enter an approach mode not contained in the database, write the name of the approach mode in the field and click **Ok**.
The name appears inside the "Approach site" field of the "Operation Record" page.

6.2.18. Emergency level

The "Emergency level" field (Fig 115 **A**) makes it possible to specify the urgency of an operation.

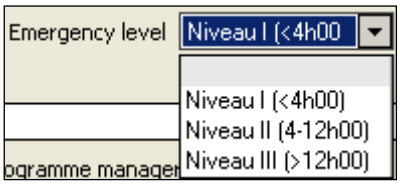


Fig 114

When an emergency level is assigned (any level in the configuration here described) it is possible to directly schedule the operation as a day reserve; i.e. the "Plan as reserve" option in the **Change** menu of the control bar is activated (Fig 115 **B**). See paragraph 7.5.5 for an explanation of the meaning of "reserve" in the Smart Scheduler system.

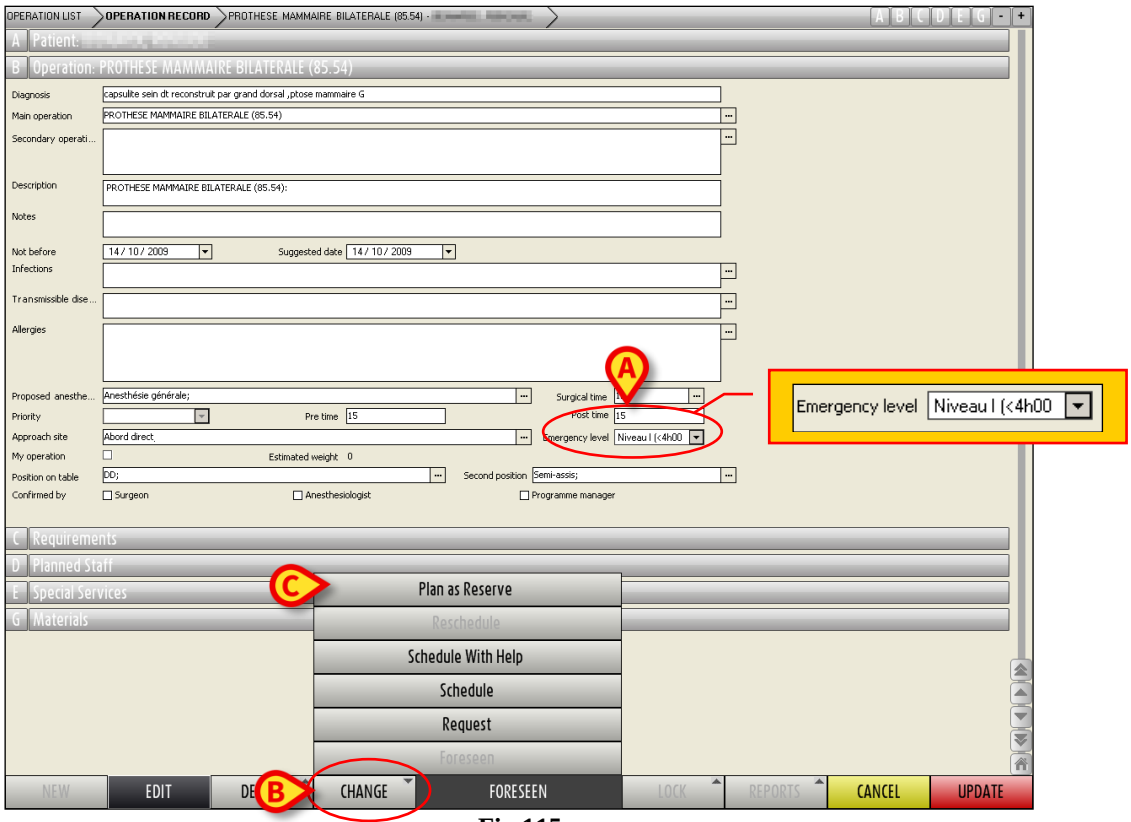


Fig 115

To plan the operation as reserve

- Click the **Change** button on the command bar (Fig 115 **B**).

The menu shown in Fig 115 will open

- click the “Plan as reserve” option (Fig 115 **C**).

The window shown in Fig 116 will open.

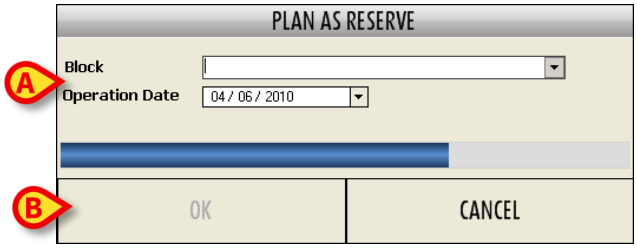


Fig 116

- Specify the operating block and the operation date in the appropriate fields (Fig 116 **A**).
- Click Ok.

The operation will be scheduled as reserve for the specified date and block. The operation state will change to “Scheduled”

When an operation is indicated as “Emergency” (any level), the corresponding rectangle in the graphic representation of the “Schedule” module is bordered in red (Fig 117). See paragraph 7 for the scheduling procedure.

Fig 117

The fields “priority” and “emergency level” are mutually exclusive, i.e. when the the “priority” is specified the “emergency level”field is disabled and vice versa.

6.2.19. My operation

The “My operation” checkbox makes it possible to enter the operation in the user’s personal list of operations. A user having the required permissions level (this option is usually granted to surgeons) can check this box to limit the visibility of the operation. The operation this way checked is (and will be) only visible to the user who is creating or editing it.
This option is only available if the operation is in “Foreseen” state. In the moment it turns to “Requested” state, the operation becomes visible to all users.
This option is linked to the “My operations” field of the “Operation list” page (see paragraph 3.1.1). When performing a search, select this field to display the list of operations that are only visible to the user currently logged, i.e. the list of operations for which the “My operation” checkbox was selected.

6.2.20. Estimated weight

The “Estimated weight” field shows the patient’s weight. This field cannot be directly edited. The “estimated weight” value is entered in the “patient” area of the page. See paragraph 6.1

6.2.21. Position on the operating table

The “Position on table” field makes it possible to specify the patient’s position on the operating table.

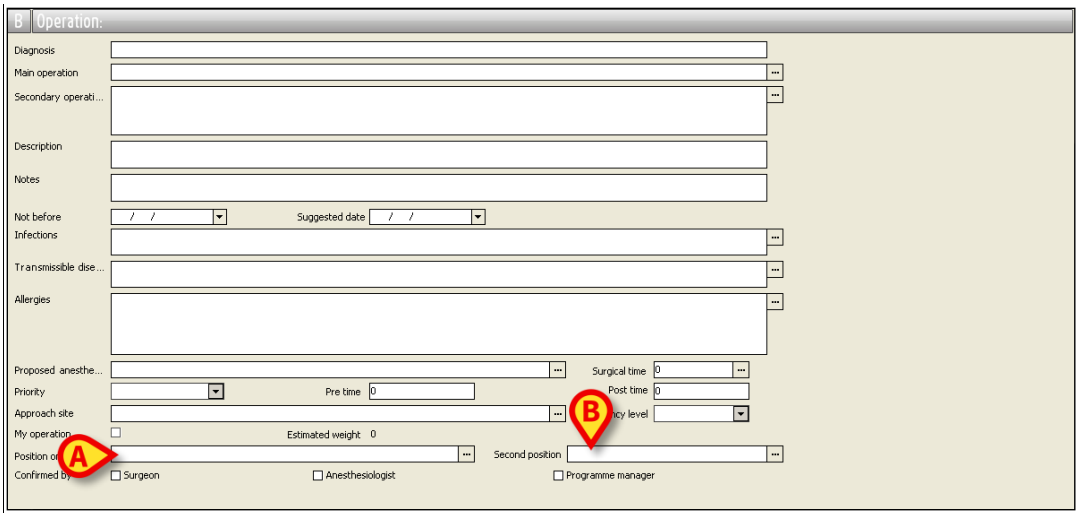


Fig 118 – "Operation" area

To specify a position

- click the **Edit** button on the command bar.
- Enter the first letters of the position being searched for in the "Position on table" field.

Otherwise

- click the [...] button placed next to the field.

In both cases the "Position on table" window appears (Fig 119).

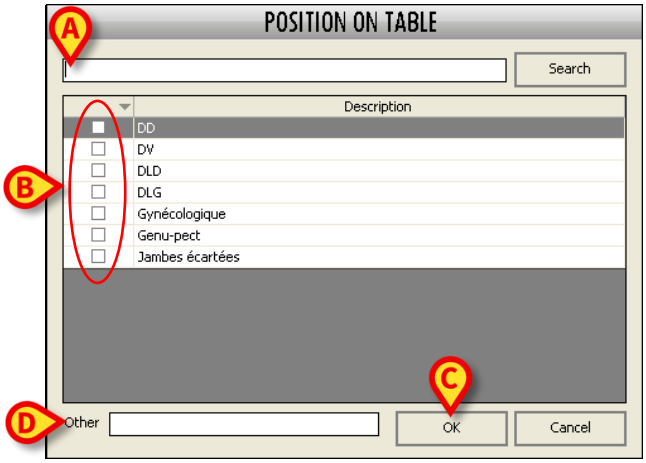


Fig 119 – Position on Table

- Search, if necessary, the wanted item using the search field on the window (Fig 119 **A**).
- Click the checkbox corresponding to the position that must be specified (Fig 119 **B**).

Multiple selection is possible.

- Click the **Ok** button (Fig 119 **C**) to display all the selected positions on the "Operation record" screen.

The "Position on table" window offers the chance to manually enter a position not contained in the database.

This is possible using the "Other" field (Fig 119 **D**).

To enter an a position not contained in the database, simply write the name of the position in the field and click **Ok**.

The name appears inside the "Position on table" field of the "Operation Record" page.

6.2.22. Second position

Use the "Second position" field to specify a possible second position for the patient during the operation. The "Second position" specification procedure is identical to that described in paragraph 6.2.21 for the "Position on table" specification.

6.2.23. Confirmed by...

This field makes it possible to specify whether or not confirmation to proceed with the operation has been given by the

1) Surgeon

2) Anesthesiologist

3) Program Manager

To specify that confirmation has been given, select the checkbox corresponding to the person who has given confirmation.

6.2.24. Operation schedule summary

After the operation has been scheduled, the "operation" area shows, at the bottom, the date, time, room and block established (Fig 120).

Fig 120

6.3. The “Requirements” area

The “Requirements” area makes it possible to specify and manage the patient’s requirements necessary to the performance of the operation (Fig 121).

A “requirement” is any document necessary to the progress of the operation procedure (e.g.: the result of a medical examination or patient consent form).

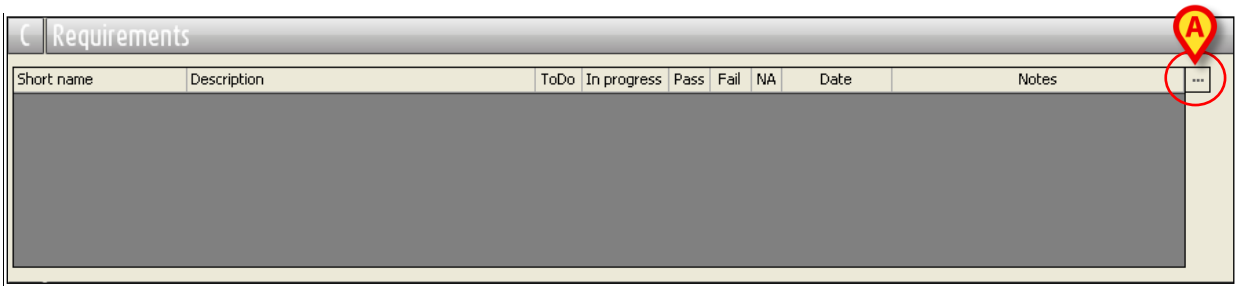


Fig 121 – “Requirements” Area

To enter a new requirement

- Click the **Edit** button on the command bar of the “Operation Record” page.
- Click the ... button alongside the “Requirements” table (Fig 121 **A**).

The following window opens.

Fig 122 – Enter Requirement

The central part of the window contains the list of possible requirements. The area is split into three columns. The first contains the selection boxes (Fig 122 **A**). Click a box to select the corresponding requirement; you can select more than one requirement at a time. The second column contains the

abbreviated name of the requirement (Fig 122 **B**). The third column contains a more detailed description of the requirement in question (Fig 122 **C**).

Click the button alongside the "type" field to open a menu which makes it possible to indicate the type of requirement being searched for. A "Hospital Unit" filter is also available (Fig 122 **D**). The requirements list displayed is linked to the hospital unit, i.e. the number and kind of requirements displayed depend on the hospital unit selected.

To enter the requirements desired

- Select the corresponding box (Fig 122 **A**).
- Click the **Ok** button (Fig 122 **E**).

The requirements selected appear on the "Operation Record" page (Fig 123).

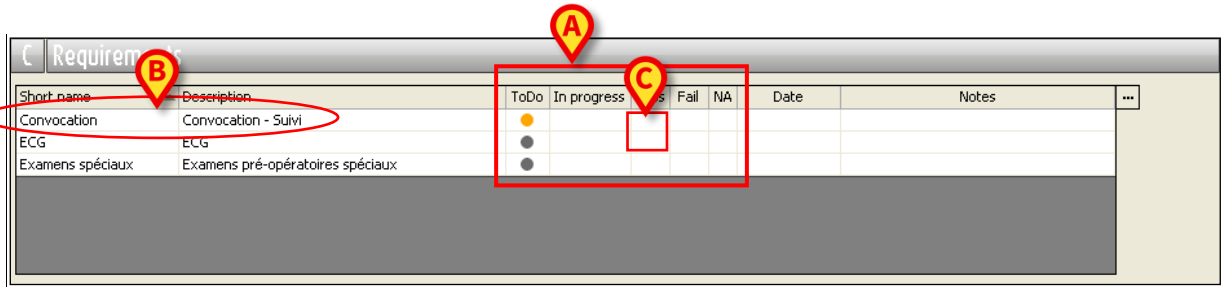


Fig 123 – Requirements Table

The "Requirements" table (Fig 123) makes it possible to display various kinds of information concerning the state of the acquisition process of every requirement.
The first two columns of the table contain the abbreviated name and the description of the requirement.

The columns indicated in Fig 123 **A** show the position of the requirement in the acquisition process.

The way the icon looks (shape and colour) provides additional information.

The ● icon indicates that the requirement should have been obtained in one of the previous states.

The ● icon indicates that the requirement should have been obtained in the state preceding current state.

The ● icon indicates that the requirement must be obtained in the current state.

The ● icon indicates that the requirement will have to be obtained in a subsequent state.

The ✓ indicates that the requirement has been properly obtained.

The ⊗ icon indicates that the process for obtaining the requirement has failed (e.g., a test has resulted negative or a patient consent form has not been signed).

The ● icon indicates that no information is available for the particular requirement concerned.

Remember that the term "state" indicates the state of the operation (see paragraph 1.2 for a description of possible states). So, for example, if the operation has "scheduled" state, the "previous state" is the "requested" state, while if the operation has "requested" state, the previous state is the "foreseen" state.

Every icon is in a specific column of the "Requirements" table

The "To Do" column will contain the ●, ● or ● icons, depending on whether or not the requirement has to be obtained in the current state, should have been obtained in a previous state or must be obtained in a subsequent state.
The "In Progress" column will contain the ●, ● or ● depending on whether or not the requirement has to be obtained in the current state, should have been obtained in a previous state or must be obtained in a subsequent state.

The "Requirement Pass" column will contain the ✓ icon if the requirement has been properly obtained.
The "Requirement Fail" column will contain the ✗ if the process the obtain the requirement has failed.

The "N/A" column will contain the ● icon if no data is available for the requirement indicated.

To indicate a change in a requirement acquisition process (e.g., to indicate the acquisition of the requirement in question), simply click the corresponding box.
If, for example, you wish to indicate that the "Convocation" requirement (Fig 123 **B**) has been obtained, simply click the box indicated in Fig 123 **C**.
The table will change as shown below.

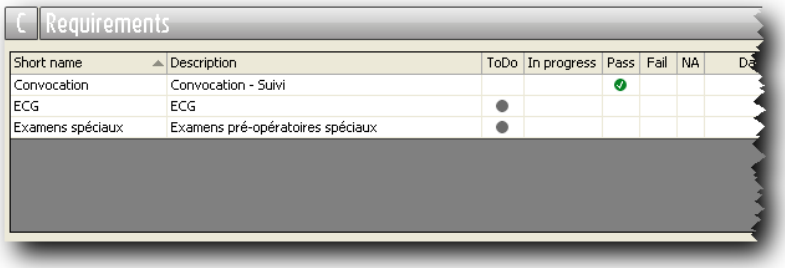


Fig 124 – Requirement Obtained

The "Date" column makes it possible to indicate the date on which a requirement was obtained or the date on which the acquisition process failed.

The "Notes" column makes it possible to enter any notes on the requirement in question.

To enter a note or a date, simply click the corresponding box.

You can add or remove a requirement from the list by right clicking. Right click the "requirements" area to open the menu shown in Fig 125.

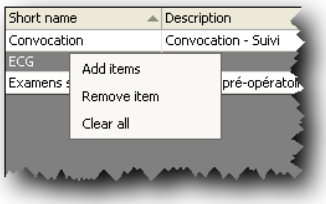


Fig 125

Click “Add items” to open the window shown in Fig 122 and add new requirements.

Click “Remove item” to remove an item selected from the list of requirements

Click “Clear all” to clear all items from the list of requirements.

To display a window providing information on one of the requirements on the list, pass the mouse pointer on the item (Fig 126).

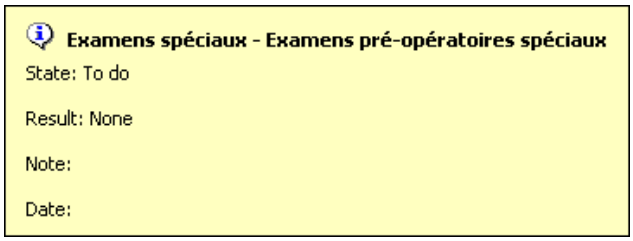


Fig 126 – Requirement information

6.4. The “Planned staff” area

The “Planned Staff” area” (Fig 127) makes it possible to indicate the staff required for the operation, stating both their “roles” (surgeon, anesthesiologist etc.) and their identities (specific names and last names).

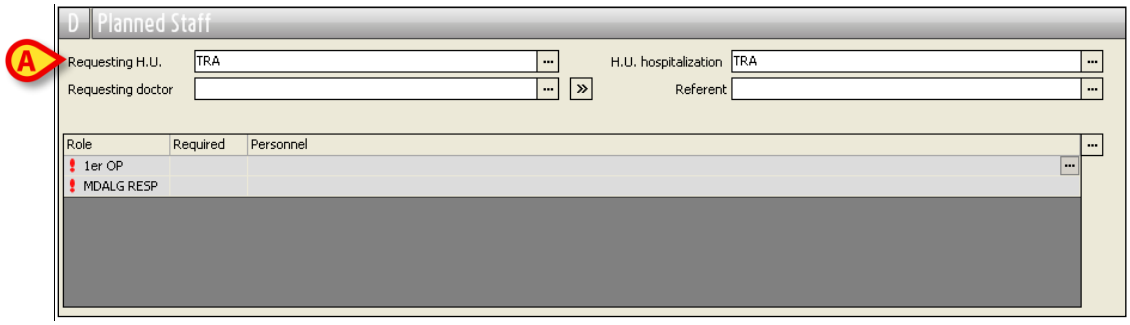


Fig 127 – Planned Staff

To select the staff, you must first specify the hospital unit requesting the operation.

To specify the requesting hospital unit

- Click the **Edit** button on the command bar of the “Operation Record” page.

- Enter the first letters of the name of the requesting unit in the "Requesting H.U." field (Fig 127 **A**).

Or

- click the ... button alongside the "Requesting H.U." field.

The following window opens (Fig 128).

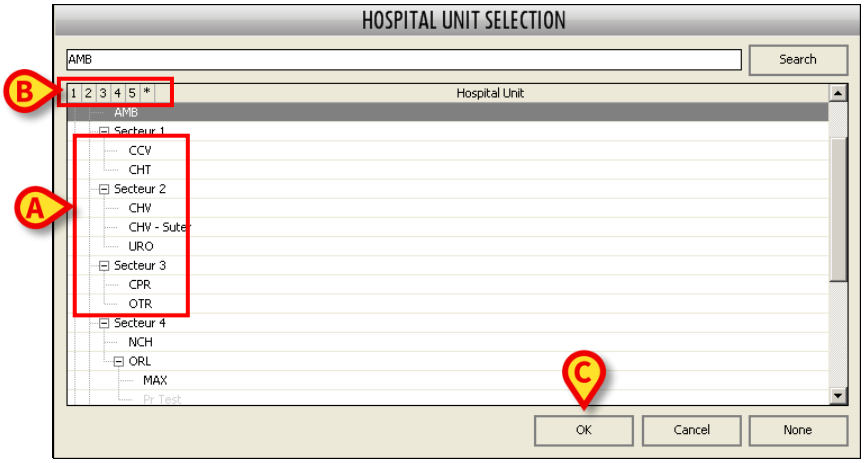


Fig 128 – Hospital unit selection

The central part of the window reflects the organization of the hospital structure where you are operating. This means that the various locations, blocks or areas of the hospital are specified. These are shown as a tree structure which highlights their inclusion relationships. The area shown in Fig 128 **A** indicates that Sector 2 includes the two locations called CHV and URO and that Sector 3 includes the locations called CPR and OTR; both sectors are included in a structure called AMB.
To indicate the position occupied by an item on the list in the tree structure, we say that the specific item is at a specific level. In the figure, for example, level 1 indicates the whole hospital, level 2 indicates the sub-units of the hospital, level 3 indicates the sub-units of these sub-units, and so on. The sectors in the figure shown are at level 4, and the locations included in them are at level 5.

The buttons in the top left corner (Fig 128 **B**) make it possible to display only items of the level specified by the button (and those of lower levels).

To select one of the items on the page, simply double click it, or click it and then press the **Ok** button (Fig 128 **C**).

Every user, depending on the permissions held, will be permitted to select only the locations for which he/she is responsible. The permissions of every user are specified during configuration by the system administrator.

The "hospital unit selection" window makes it possible to search for the item required. To do so, simply enter the first letters of the name of the item being searched for in the search field (Fig 129 **A**) then click the **Search** button (Fig 129 **B**).

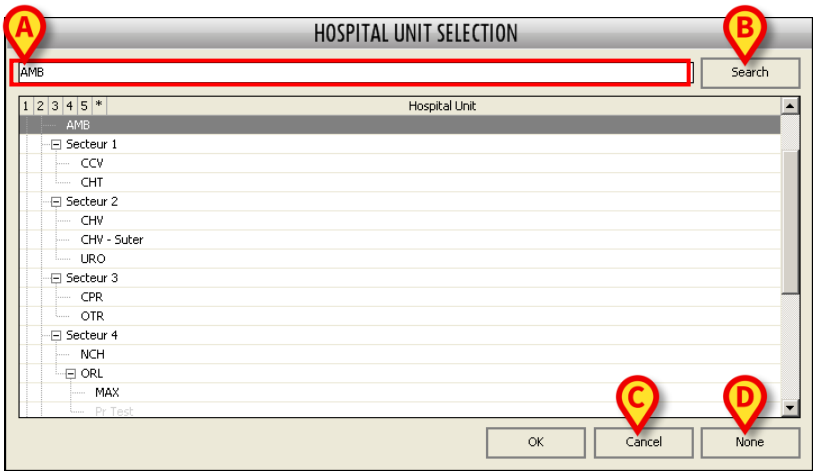


Fig 129 – Hospital unit selection

The **Cancel** button (Fig 129 **C**) makes it possible to close the window without making any changes.

The **None** button (Fig 129 **D**) makes it possible to "clean the field", i.e., to eliminate any previously selected items.

The "Requesting Hospital Unit" field is a mandatory field. This information cannot be omitted.

6.4.1. Selecting the hospitalization unit

The field shown in Fig 130 **A** makes it possible to specify the location where the patient will be hospitalized.

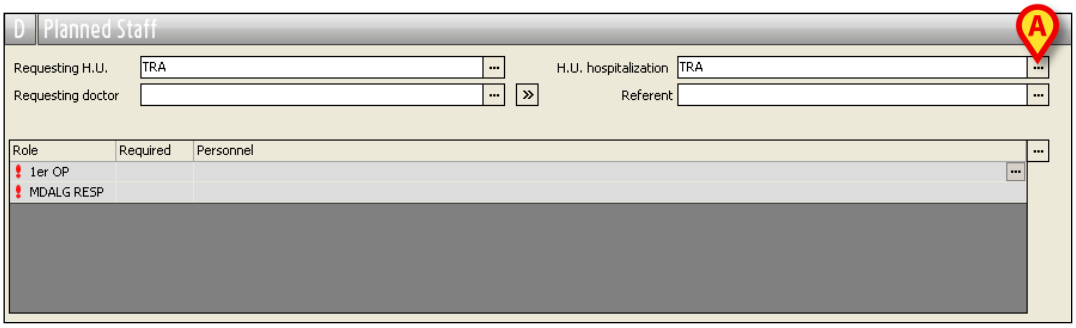


Fig 130

To specify the hospitalization unit

- Click the **Edit** button on the command bar of the "Operation Record" page.
- Enter the first letters of the name of the hospital unit required in the "H.U. Hospitalization" field.

Or

- click the [...] button alongside the "Hospitalization H.U." field.

The window shown in Fig 128 and Fig 129 opens. See the previous paragraph for the selection procedure.

6.4.2. Selecting the requesting doctor

The field shown in Fig 131 **A** makes it possible to specify the name of the doctor requesting the operation.

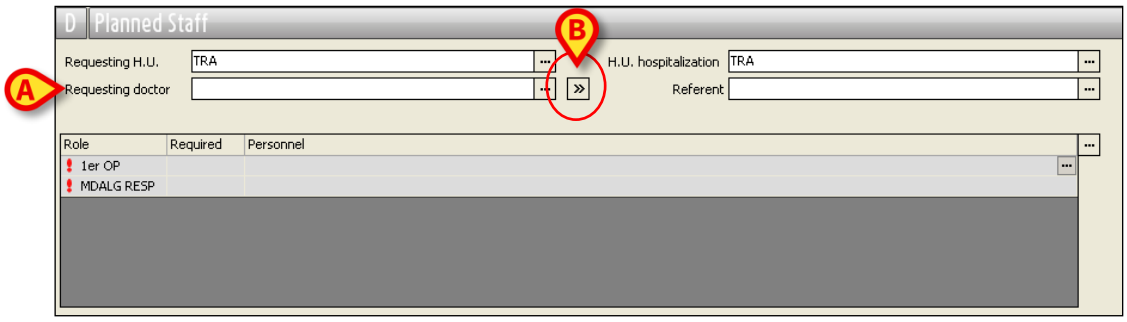


Fig 131

To specify the requesting doctor

- Click the **Edit** button on the command bar of the "Operation Record" page.

- Enter the first letters of the name of the person required in the “Requesting doctor” field.

Or

- click the [...] button alongside the “Requesting doctor” field.

The following window opens (Fig 132).

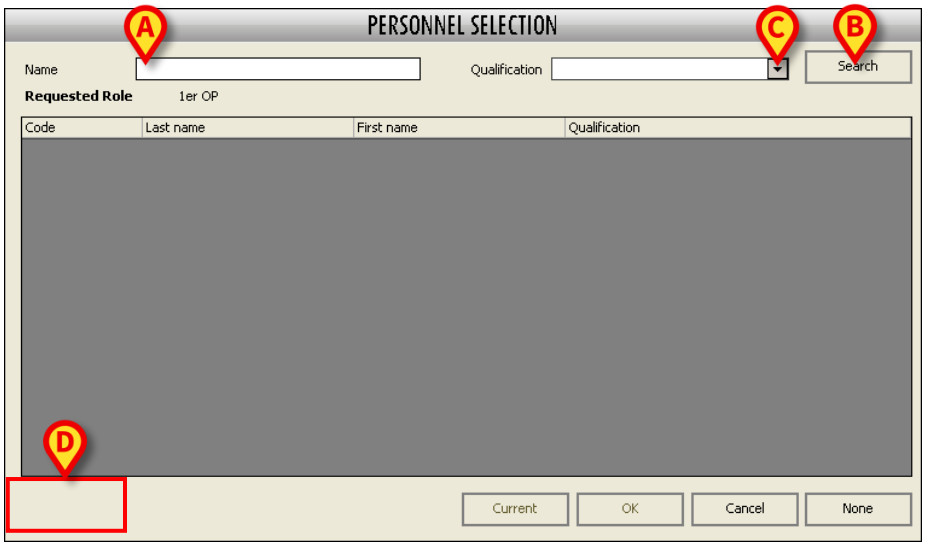


Fig 132 – Select the requesting surgeon

To search for the name, enter the name (or part of it) of the person being searched for in the “Name” field (Fig 132 **A**) then click the **Search** button (Fig 132 **B**).

Click the **Search** button without entering any letter to obtain the list of all those with permission to perform that function.

You can limit the search exclusively to people who occupy a specific role.
To do so, use the “Qualification” field. Click the arrow indicated in Fig 132 **C** to open a menu containing the possible options (Fig 133 **A**). Select one of these options to display only the names of the people with the qualification specified.

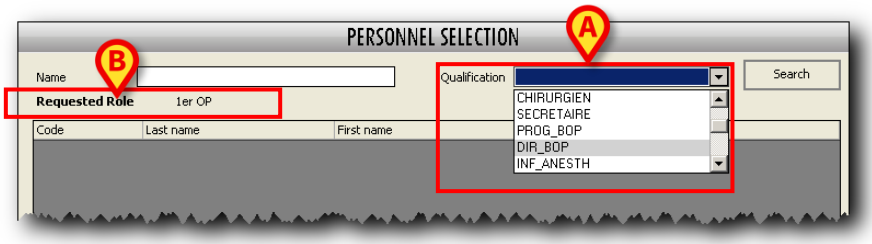


Fig 133 – Selection by Qualification

The “requested role” area (Fig 133 **B**) indicates the qualification necessary for selection as doctor requesting the operation. In the example shown, only those with the qualification of first operator can request an operation. This specification is made during configuration and cannot be changed by the users.

Once the role requested has been selected, it is possible to select a name only from those who possess the specified qualification.

If the system is so configured, the name of the user connected can appear in the area indicated in Fig 132 **D**. If the user connected has the qualification necessary to cover the role of requesting doctor, he/she can simply click the **Current** button to enter his/her name in the "Requesting Doctor" field.

The **Cancel** button makes it possible to close the window without making any changes.

The **None** button makes it possible to "clean the field", i.e. to eliminate any previously selected items.

The » button in Fig 131 **B** and Fig 134 **A** makes it possible to assign the name of the requesting doctor also to the "Referent" field and to the role of "First Operator" of the operating room staff (Fig 134 **B**).

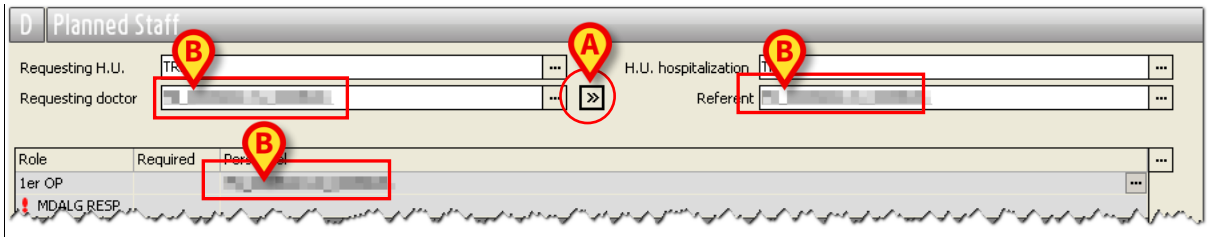


Fig 134

6.4.3. Referent doctor

The "Referent" field indicates the name of the person who is the direct referent for the patient in question (Fig 135 **A**).

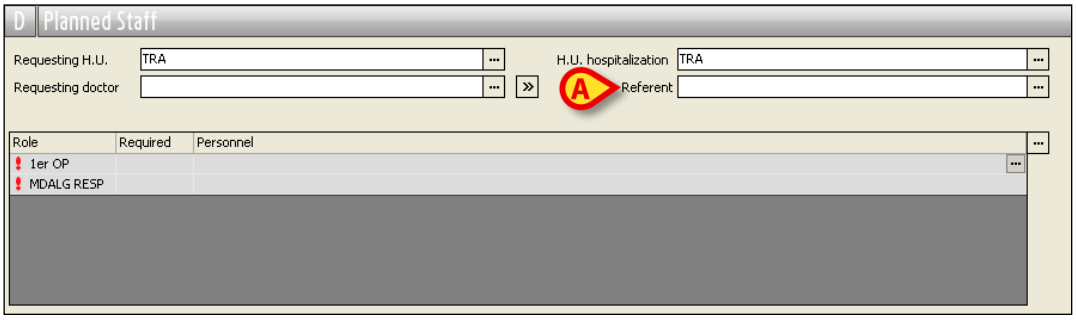


Fig 135

To specify the patient referent

- Click the **Edit** button on the command bar of the "Operation Record" page.
- Enter the first letters of the name of the person required in the "Referent" field,

or

- click the ... button alongside the "Referent" field.

The following window opens (Fig 136).

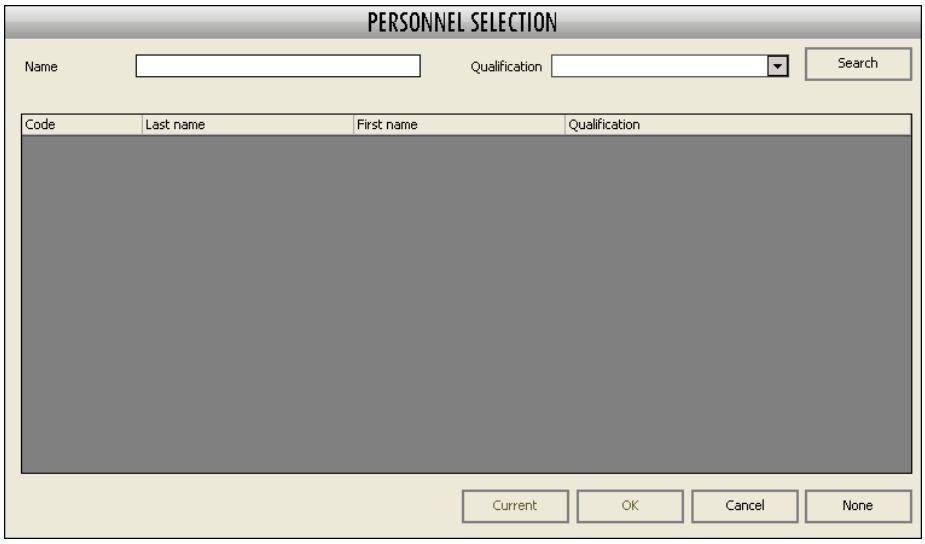


Fig 136 – Select the referent doctor

The function of this window is the same as that of the window shown in Fig 132, so see the previous paragraph for the selection procedure.
The only difference is that the specification of the role requested is not shown here (Fig 133 **B**).

6.4.4. Cost center selection

Some configurations require the specification of the cost center to which the operation must be associated. When the cost center specification is required it is performed through an additional field placed under the "Requesting doctor" field.

To specify a cost center,

- click the **Edit** button on the command bar of the "Operation Record" page.
- Enter the first letters of the name of the cost center required in the "Cost Center" field,

or

- click the [...] button alongside the "Cost Center" field.

A window enabling the cost center search and selection will open.

6.4.5. The “Planned Staff” table

The “Planned Staff” table makes it possible to specify ad/or request the staff to perform the operation (Fig 137 **A**).

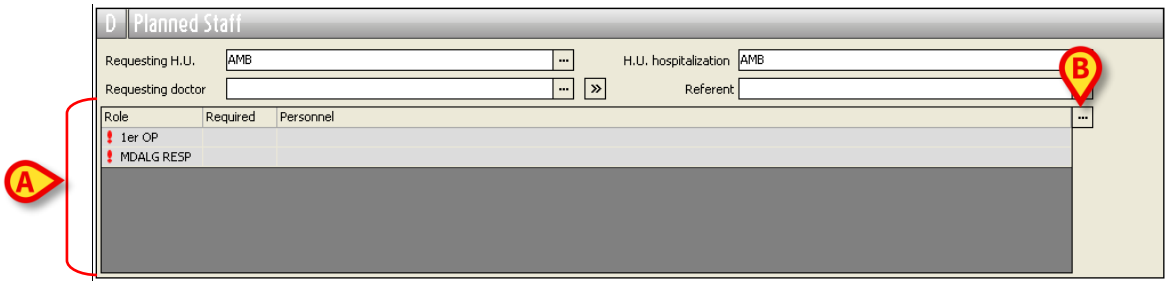


Fig 137 – Room staff selection

Before making any selection, the area contains the list of roles indispensable to the operation. In Fig 137 there are two roles indicated as indispensable (the first operator and the “Mdalg Resp”, i.e. the anaesthetist).

By configuration, for every type of operation, you can specify the minimum indispensable staff to perform it. In this case, after specifying the operation, the system enters all the indispensable roles as mandatory.

To select the room staff

- Click the **Edit** button on the command bar of the “Operation Record” page.
- Click the [...] button alongside the table (Fig 137 **B**).

The following window opens (Fig 138).

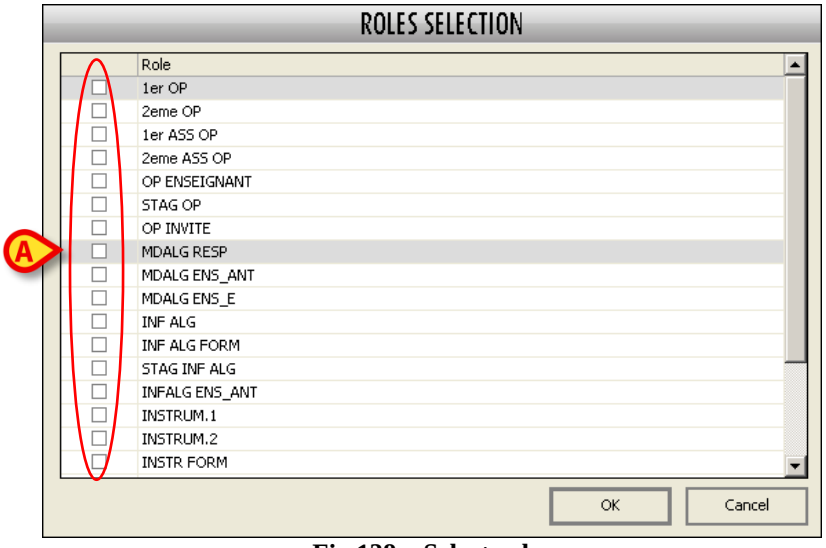


Fig 138 – Select roles

This window makes it possible to select the roles but not the names of the room staff.

The window contains the list of all possible roles. Alongside every role there is a selection box (Fig 138 **A**).

To select the roles

- Click the checkbox corresponding to the role required.

The corresponding role appears as selected (Fig 139 **A**).

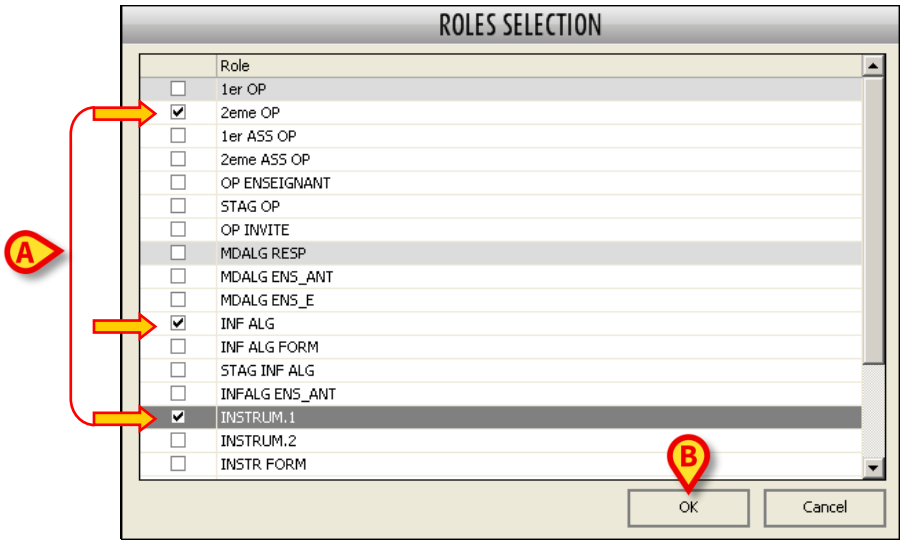


Fig 139 – Selected roles

- Click the **Ok** button (Fig 139 **B**).

The list of selected roles is displayed in the "Planned Staff" table (Fig 140).

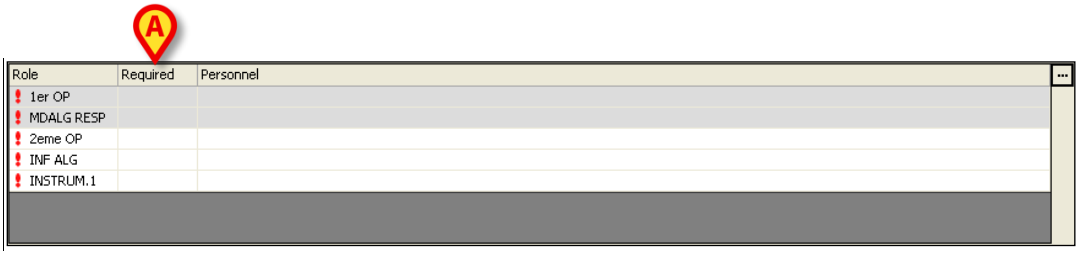


Fig 140 – Selected staff

The exclamation mark alongside every role indicates that no name has been specified for that role and there has been no declaration that any person qualified for that role is acceptable.

To declare that any person qualified for that role is acceptable, click the "Required" column in the box alongside the role (Fig 140 **A**). The list of roles changes as shown in Fig 141.

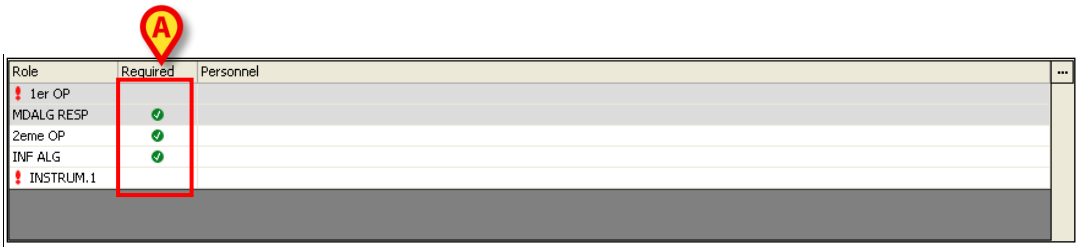


Fig 141 – Requested staff

The ✓ icon alongside the role means that any person qualified for that role is acceptable (Fig 141 **A**).

To specify the name of the person requested, click the line corresponding to the role.

The following window appears (Fig 142).

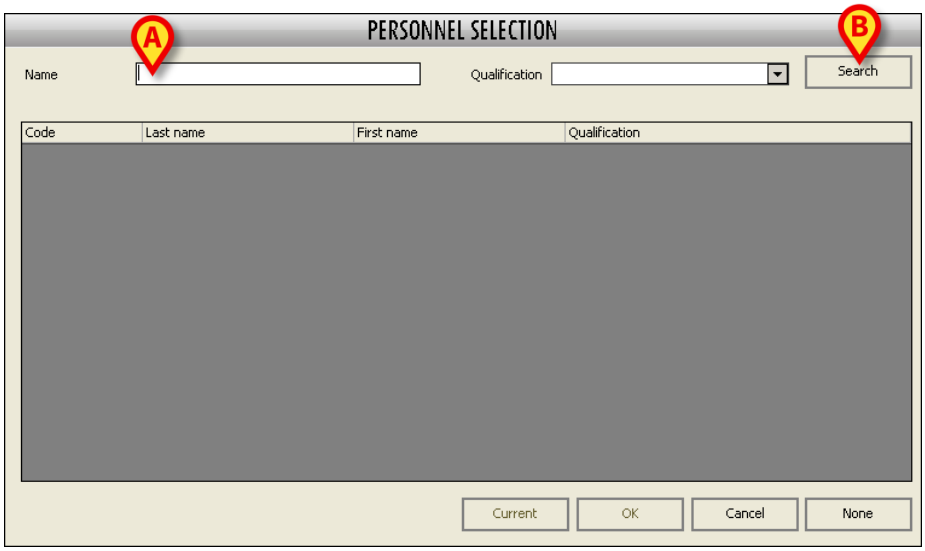


Fig 142 – Select room staff

To search for a specific person type his/her name (or part of it) in the "Name" field (Fig 142 **A**) and then click the **Search** button (Fig 142 **B**).

The list of names containing the search string appears on the window. Select the wanted name and click **Ok**. The name appears on the line selected (Fig 143).

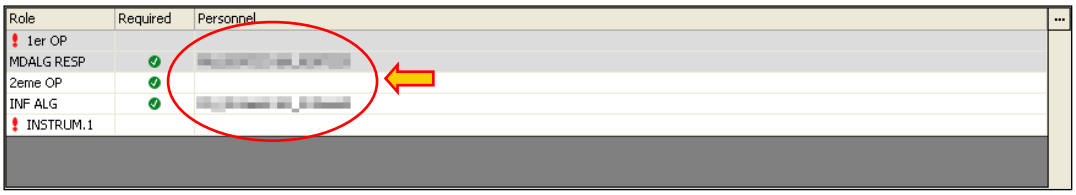


Fig 143 – Selected staff

You can either add or remove an item from the table by right clicking.
Right click the "Planned staff" table to open the menu shown in Fig 144.

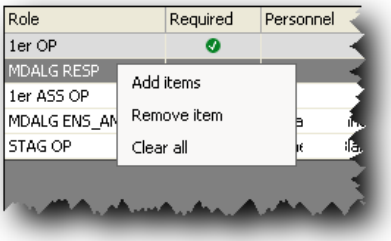


Fig 144

Click “Add items” to open the window shown in Fig 139, and add new roles.

Click “Remove item” to remove an item selected from the list of roles.

Click “Clear all” to clear all items from the list.

Staff can be also scheduled, with different procedures, on the “Staff management” module, described in paragraph 8.

A “System Option”has been defined in order to avoid conflicts between the staff planned on the “Operation Record” (described in this paragraph) and the staff planned on the “Staff management” module.

This “System Option”, named **DisablePlannedStaffEditingOnOperationRecord**, *if activated, enables staff editing on the “Operation Record” only if the operation is either in “Foreseen” or “Requested” state. The staff of the planned operations is only managed on the “Staff management” module.*

To activate the system option set its Value=Yes.

6.5. The “Special Services” area

The “Special Services” area (Fig 145) makes it possible to specify any room devices required for the operation.

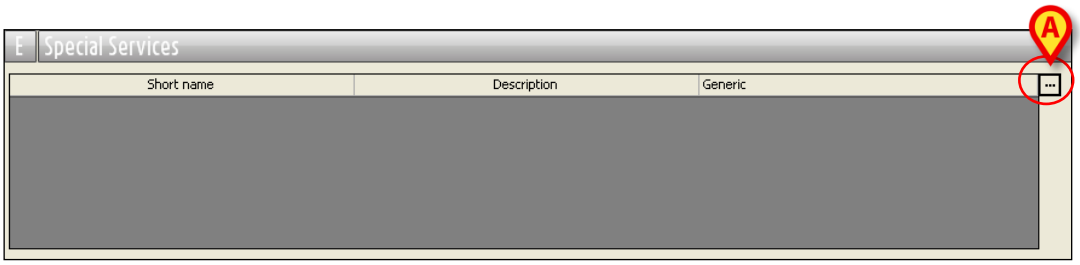


Fig 145 – The “Special Services” area

To specify the devices required

- Click the **Edit** button on the command bar of the “Operation Record” page.
- Click the ... button alongside the area (Fig 145 **A**).

The following window opens (Fig 146).

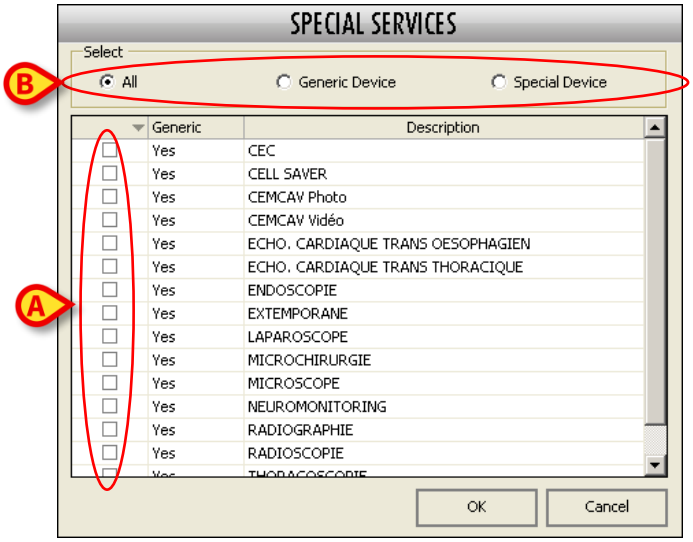


Fig 146 – Add devices

The window contains the list of all possible devices. There is a selection box alongside every device (Fig 146 **A**).

To select a device

- click the checkbox corresponding to the device required.

The box will be selected (Fig 147 **A**).

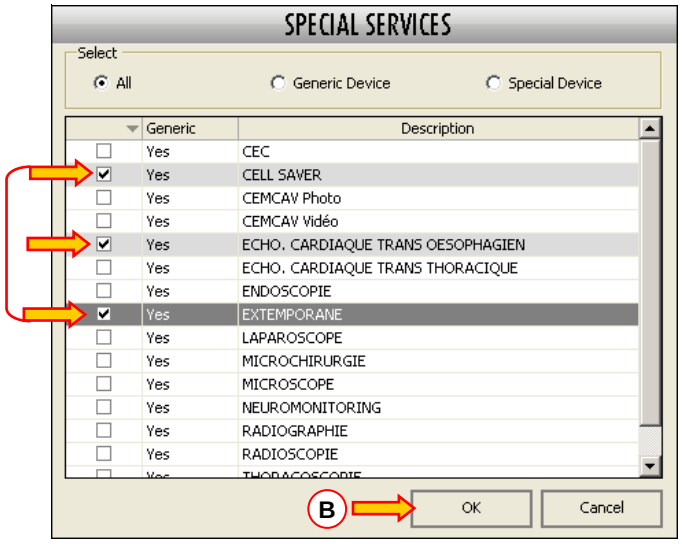


Fig 147 – Devices selected

- Click the OK button (Fig 147 **B**)

The list of devices selected appears in the "Special Services" table of the "Operation Record" page (Fig 148).

Short name	Description	Generic
CELL SAVER	CELL SAVER	Yes
ETO	ECHO. CARDIAQUE TRANS OESOPHAGIEN	Yes
EXTP	EXTEMPORANE	Yes

Fig 148 – List of devices

This table is split into three columns.

- The "Short name" column contains the abbreviation which identifies the device.

- The "Description" column contains a brief description of the device.

- The "Generic" column indicates whether it is a generic device (Yes) or a special device (No).

The same distinction between generic and special devices is found in the selection window (Fig 146 **B**).

Select "Generic devices" in this window to display the list of generic devices only, "Special devices" to display the list of special devices only and "All" to display the list of all devices.

The presence of devices in an operating room will be indicated by special icons on the scheduling pages (see paragraph 7.2.1 and Fig 179).

You can add or remove a device from the table by right clicking.
Right click the "Special Services" table to open the menu shown in Fig 149.

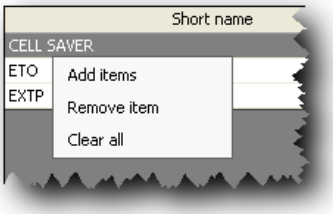


Fig 149

Click “Add items” to open the window shown in Fig 147 and add new devices.

Click “Remove item” to remove an item selected from the list of devices.

Click “Clear all” to clear all items from the list.

6.6. The “Materials” area

The “Materials” area makes it possible to schedule the required room materials (Fig 150).

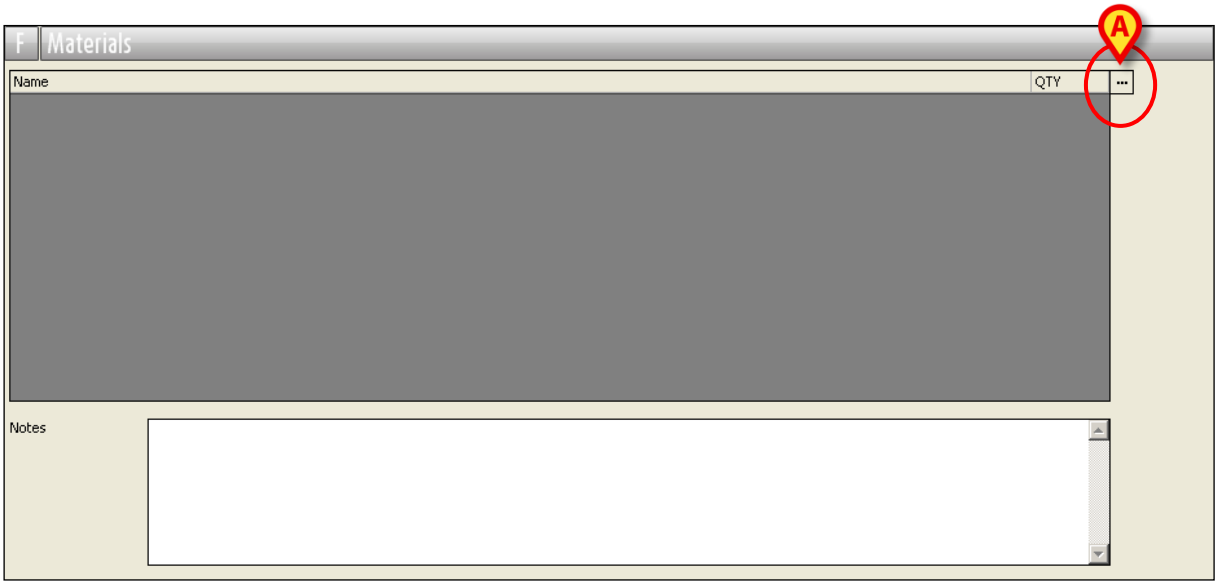


Fig 150

To schedule the room materials

1. Click the **Edit** button on the command bar.
2. Click the [...] button placed alongside the “Materials” area (Fig 150 **A**).

The following window is displayed (Fig 151).

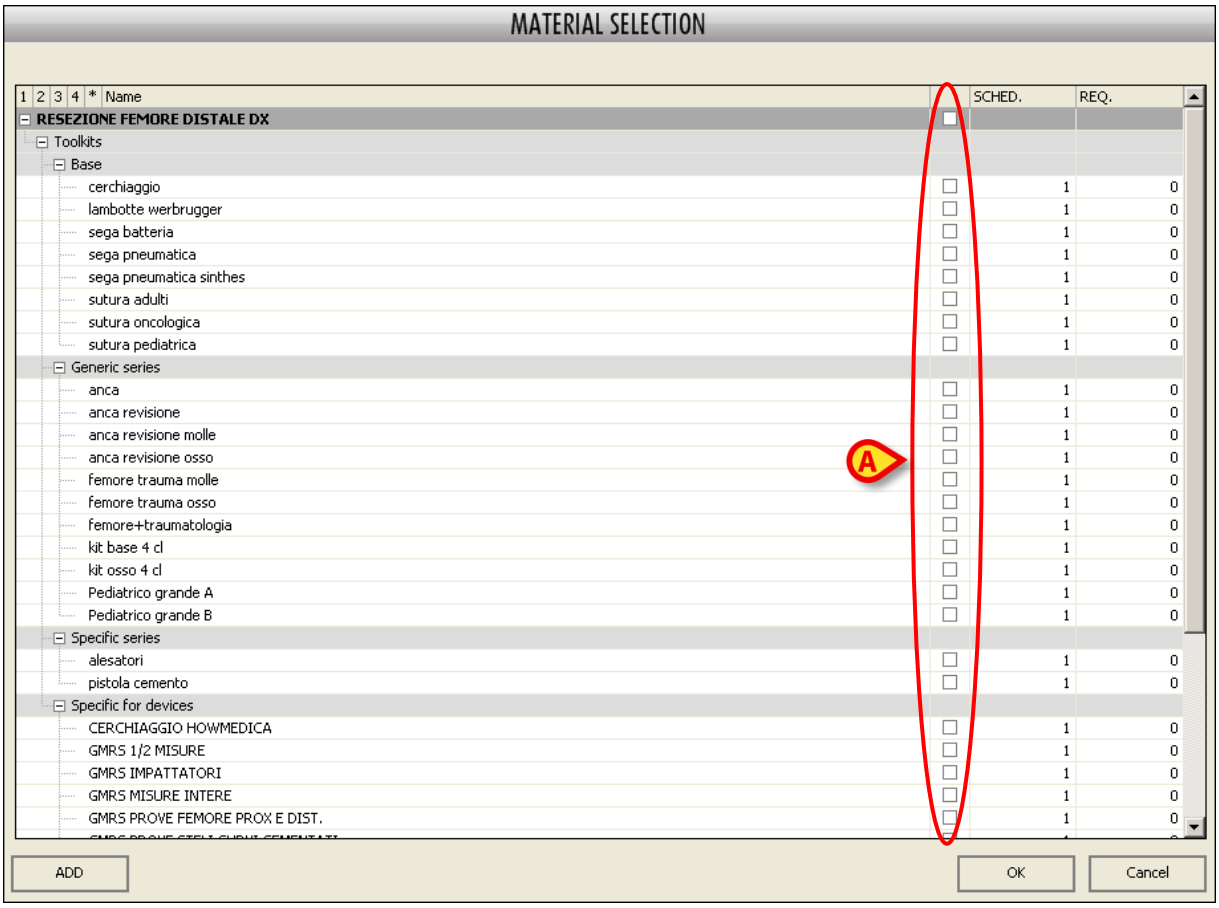


Fig 151

The resources that are linked by configuration to the operation selected as "Main operation" are listed on the window. The resources are ordered in a tree-structure and grouped in "baskets" and operating "kits". The tree-structure is described in paragraph 6.6.1.

3. Click the checkbox corresponding to the resources to be planned (Fig 151 **A**).

The box is this way checked (Fig 152 **A**).

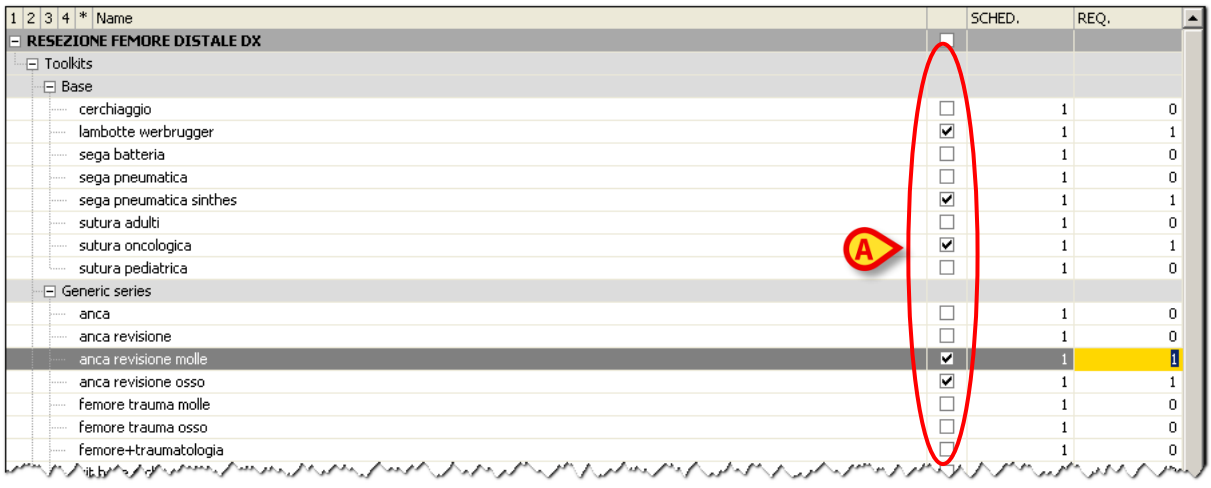


Fig 152

4. Set the required quantity of each resource to be planned.

The required quantity is indicated in the last column on the right (Fig 153 **A**). The required quantity is set to 1 by default. This value can be edited when the corresponding cell is highlighted yellow. The cell is highlighted either when the resource is selected or by double-clicking the cell itself.

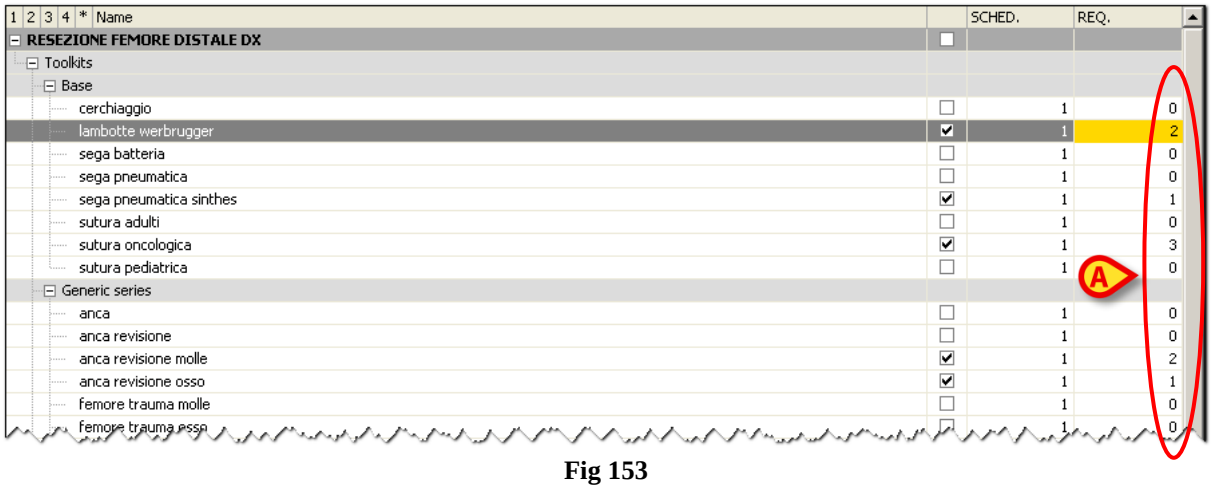


Fig 153

When all the resources to be planned have been specified and the corresponding quantities have been indicated,

5. Click the **Ok** button on the window, in the bottom-right corner of the window.

The planned resources are displayed in the "Materials" area of the "Operation record". The tree-structure is maintained (Fig 154).

Fig 154

6. Click the **Update** button on the command bar.

6.6.1. Table contents description

The resources are ordered on the table in a four levels tree-structure. These four levels are indicated in the top-left area of the window (Fig 155 **A**). Each one of the five buttons - 1 2 3 4 * - displays the "tree" up to the level corresponding to the clicked number. The star makes it possible to expand the whole tree. The different levels can be either hidden or displayed by clicking on the tree nodes. The nodes are represented by the ⊟ and ⊞ symbols (Fig 155 **B**). The first one, when clicked, hides the node; the second one displays it.

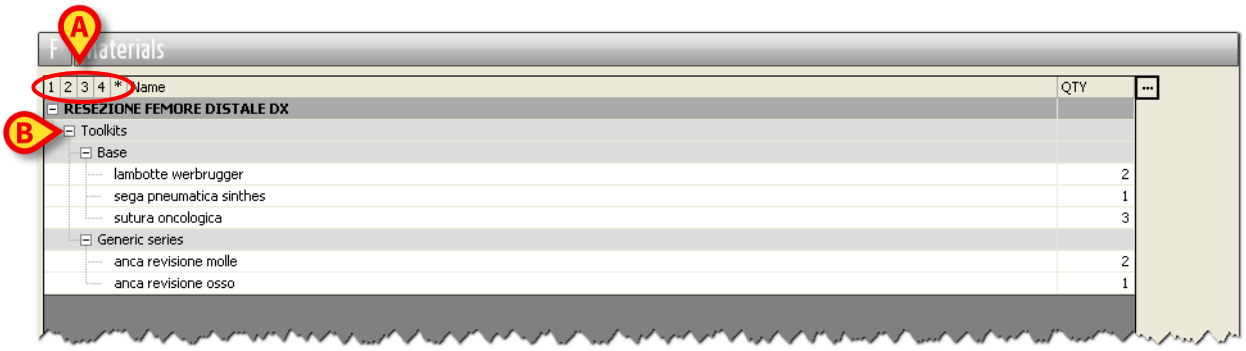


Fig 155

The first level represents the main operation (Fig 156).

Fig 156

Either kit, toolkits, series or single resources can be represented in the second level (Fig 157).

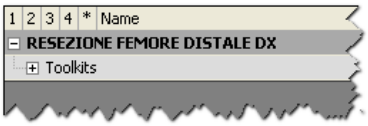


Fig 157

The kind of kit, series, toolkit or resource is specified in the third level (Fig 158).

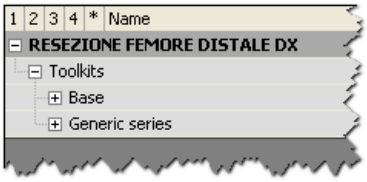


Fig 158

The fourth level lists the single resources (Fig 159).

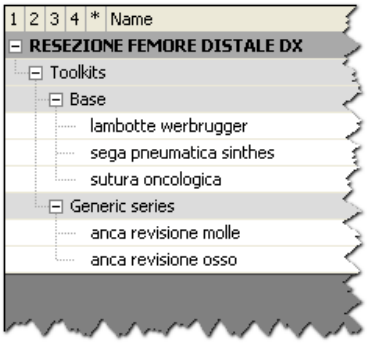


Fig 159

6.6.2. How to schedule all the materials displayed by configuration

It is possible to quickly specify all the materials listed on the selection window.

To do that, on the "Materials selection" window (Fig 160),

1. Click the checkbox placed on the row corresponding to the main operation name (Fig 160 **A**).

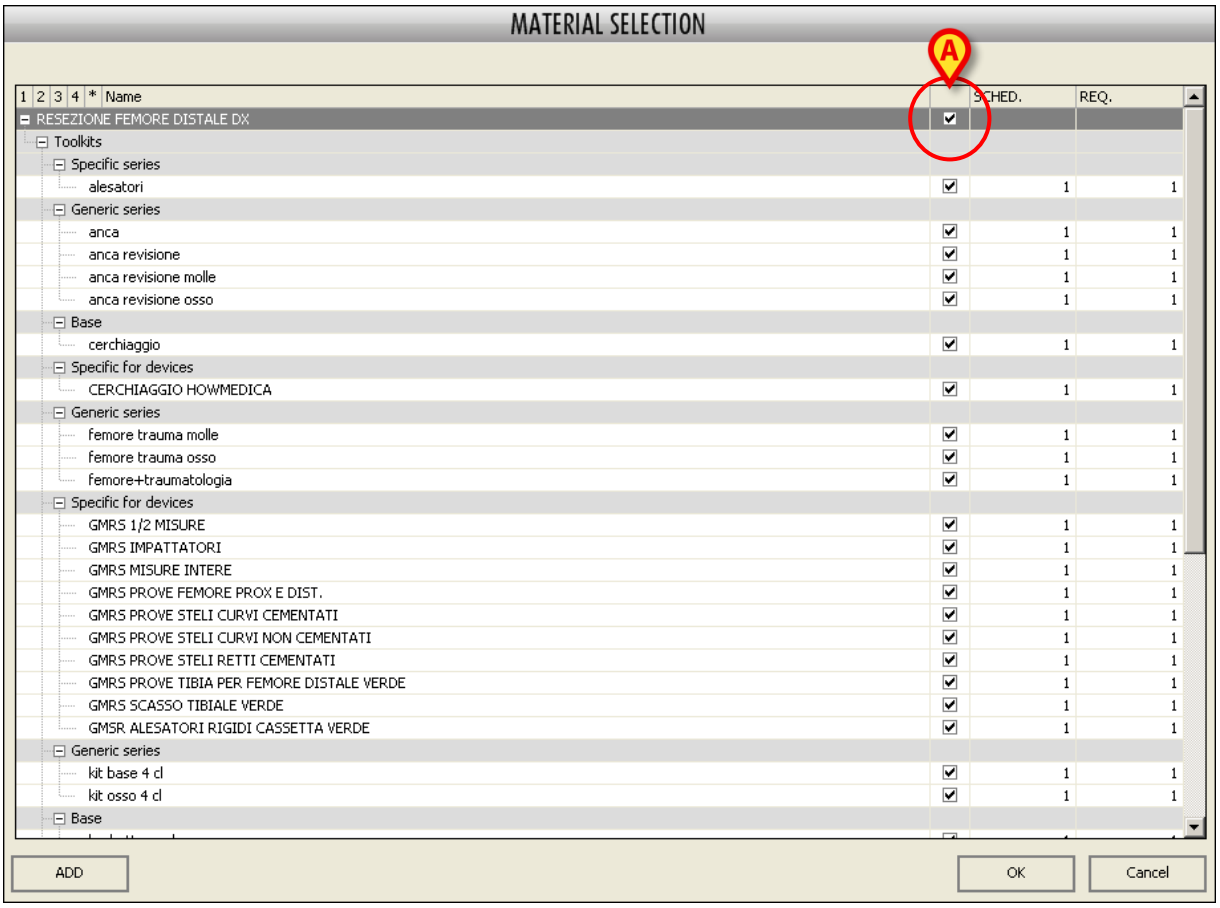


Fig 160

2. Click the **Ok** button on the window (bottom-right corner).

All the materials are this way inserted in the operation record (1 piece for each item if not differently specified - Fig 161).

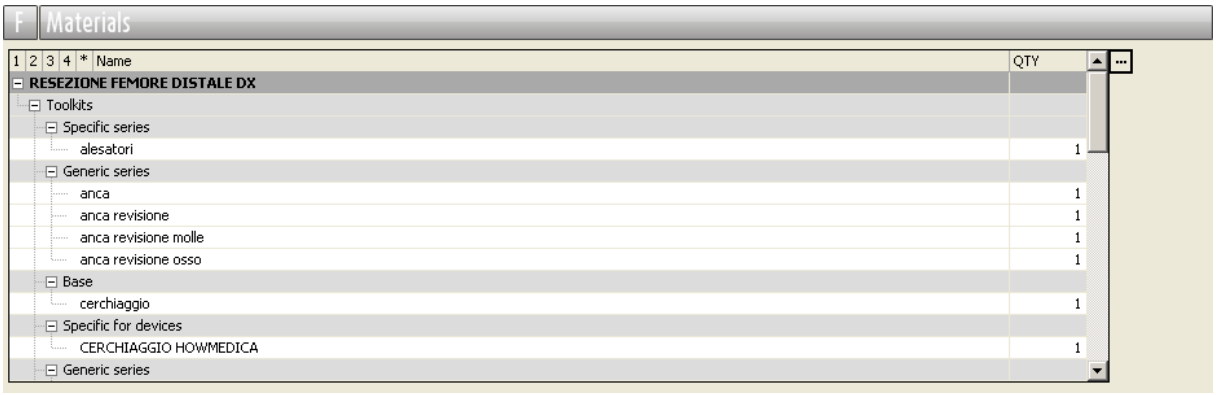


Fig 161

6.6.3. How to add a resource

To schedule a resource that is not already present in the pre-configured list, on the materials selection window (Fig 162),

1. Click the **Add** button (Fig 162 **A**).

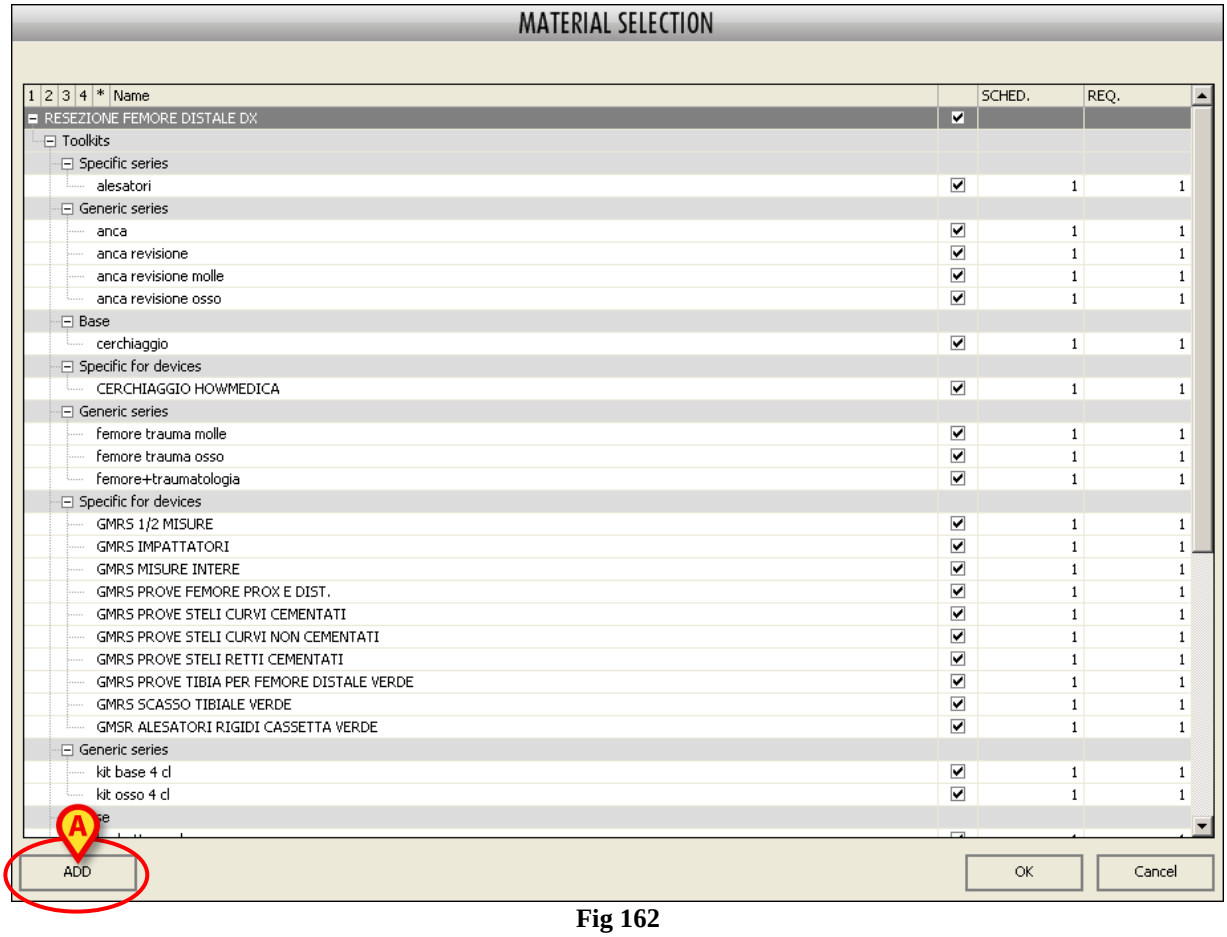


Fig 162

The following window opens (Fig 163).

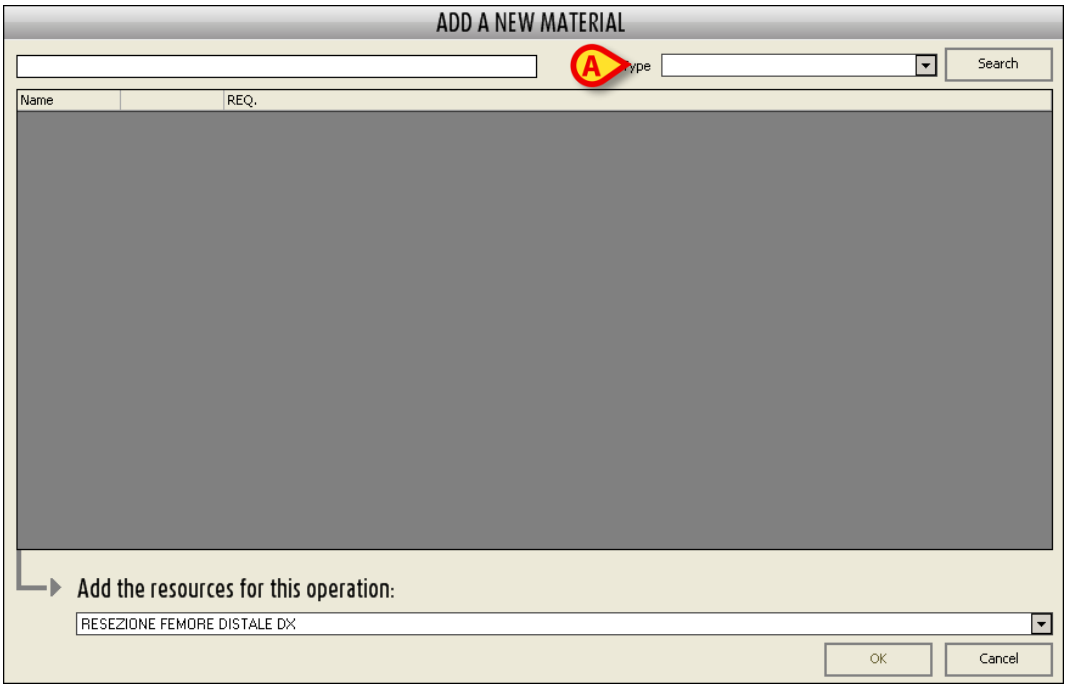


Fig 163

2. Use the drop down menu indicated in Fig 163 **A** and enlarged in Fig 164 to indicate the kind of material to insert.

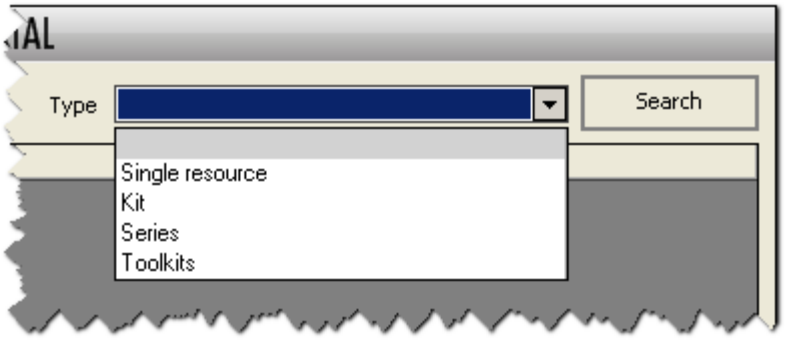


Fig 164

This menu makes it possible to choose the kind of item to be searched (either single resource, basket, kit or series). In the example shown in Fig 165 the “basket” option has been selected. All the possible baskets are now listed on the window. If, for example, the option “single resource” had been selected, the list of all the single resources would have been displayed. The same thing is true for the kits and the series.

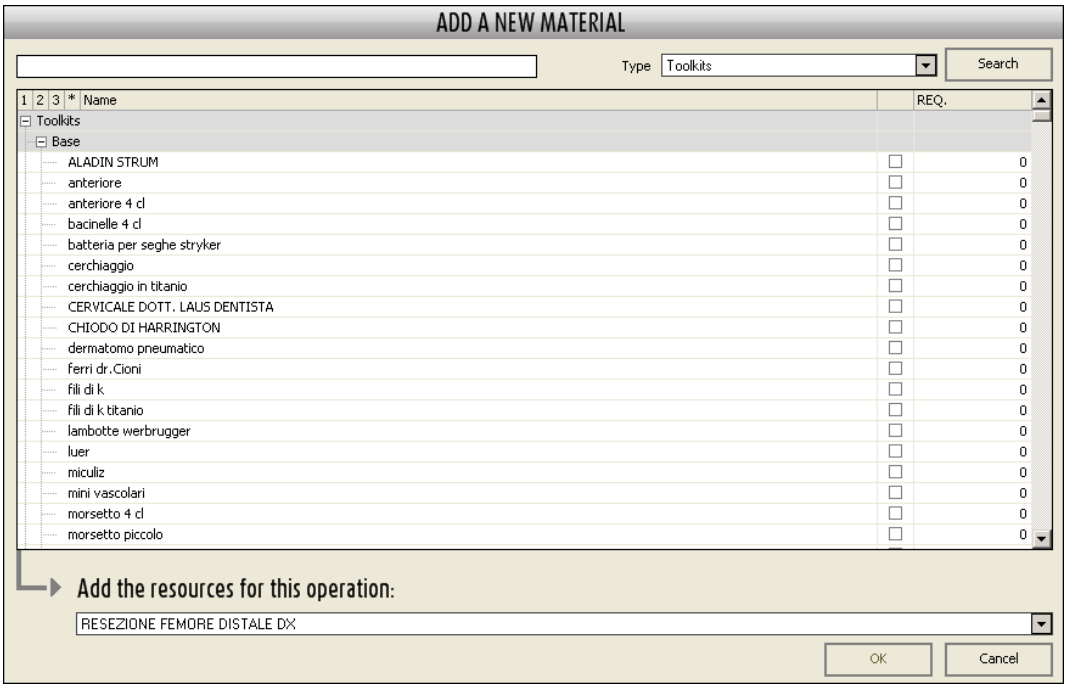


Fig 165

3. Insert the name (or part of the name) of the wanted toolkit in the field indicated in Fig 166 **A**.

The list of all toolkits corresponding to the typed text is displayed on the window.

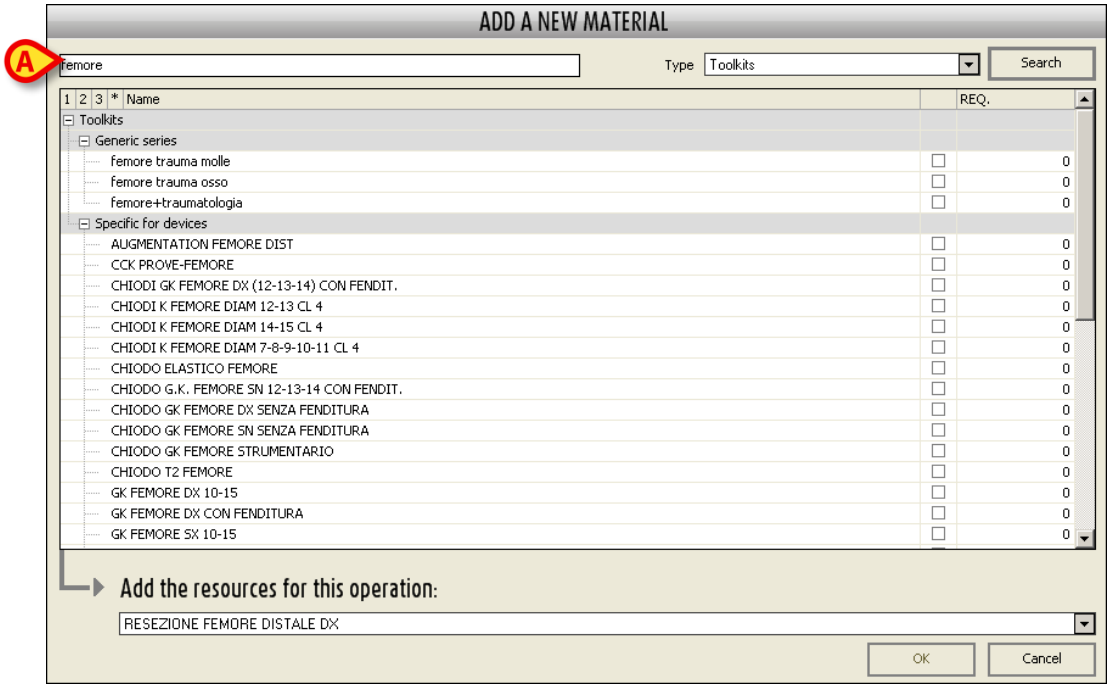


Fig 166

4. Click the checkbox corresponding to the toolkit (or toolkits) to be scheduled (Fig 167).

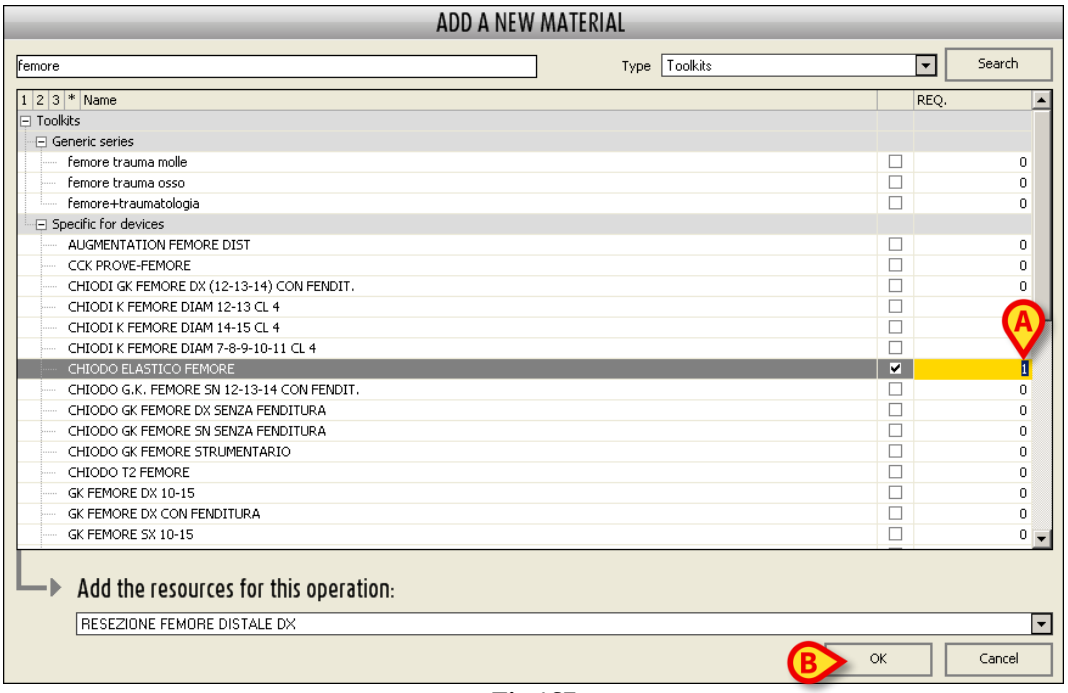


Fig 167

5. Specify the required quantity on the cell indicated in Fig 167 **A**. The default quantity is 1.

6. Click the **Ok** button (Fig 167 **B**).

The selected toolkit (or toolkits) will be added to the list of pre-configured resources, on the materials selection window, in the specified quantity (Fig 168 **A**).

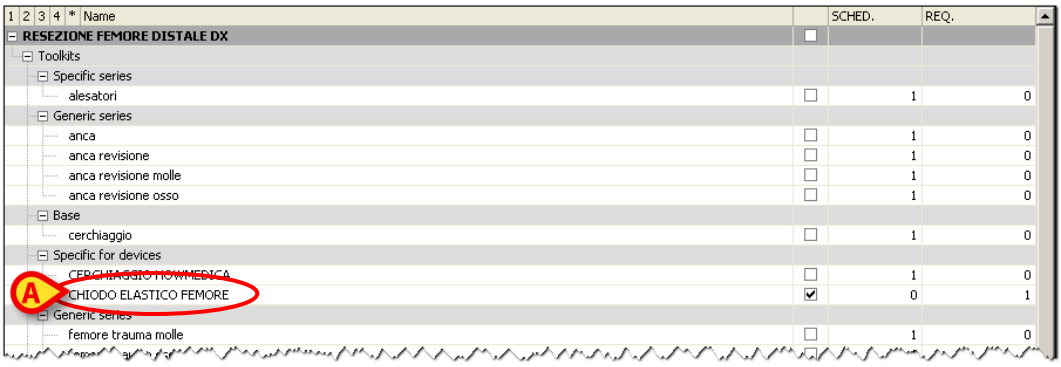


Fig 168

Repeat the procedure, if necessary, to add other resources. Otherwise,

7. Schedule the selected materials using the procedure described in paragraph 6.6.

6.6.4. How to add a note

The “Notes” field placed in the “Materials” area of the “Operation record” (Fig 169 **A**) makes it possible to add all the information that can be meaningful for an accurate materials scheduling (for example: possible indications on the kind of material required, or on the way a certain material must be handled etc...).

Fig 169

It is a free text field. To add a note

1. Click the **Edit** button on the command bar.
2. Click inside the “Notes” area.

A cursor appears on the area.

3. Type the note (Fig 170).

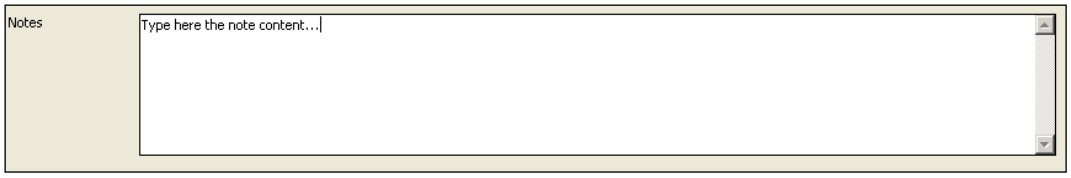


Fig 170

4. Click the **Update** button on the command bar.

7. The “Schedule” Module

The “Schedule” module of the Smart Scheduler system makes it possible to add the operations requested to the operating schedule. This module makes it possible to schedule when and where an operation will be performed.

7.1. How to access the scheduling page

To access the “Schedule” module main page

- Click the corresponding icon

on the lateral bar (Fig 171).

Fig 171

Otherwise you can use the menu activated by the **Change** button on the command bar of the “Operation list” and “Operation record” screens (Fig 172 **A**)

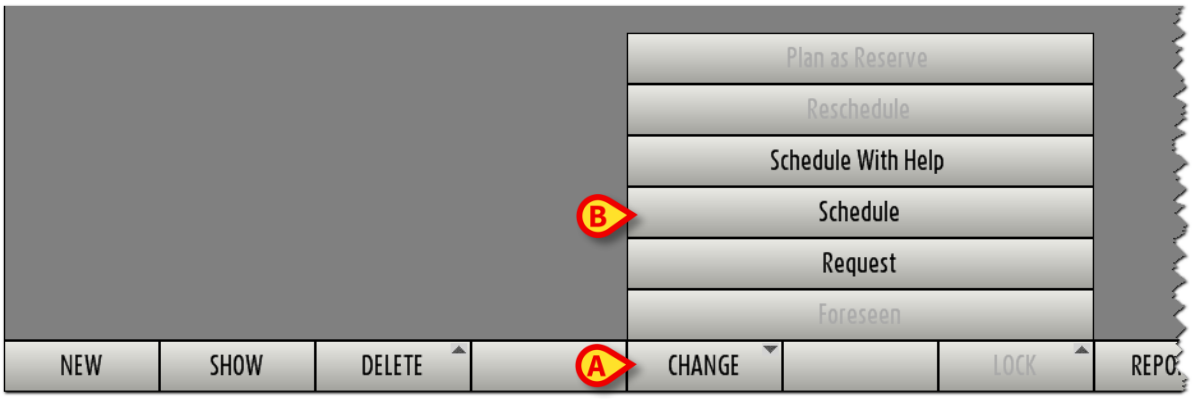


Fig 172

- Click, when enabled, the “Schedule” option (Fig 172 **B**).

The screen shown in Fig 173 will open.

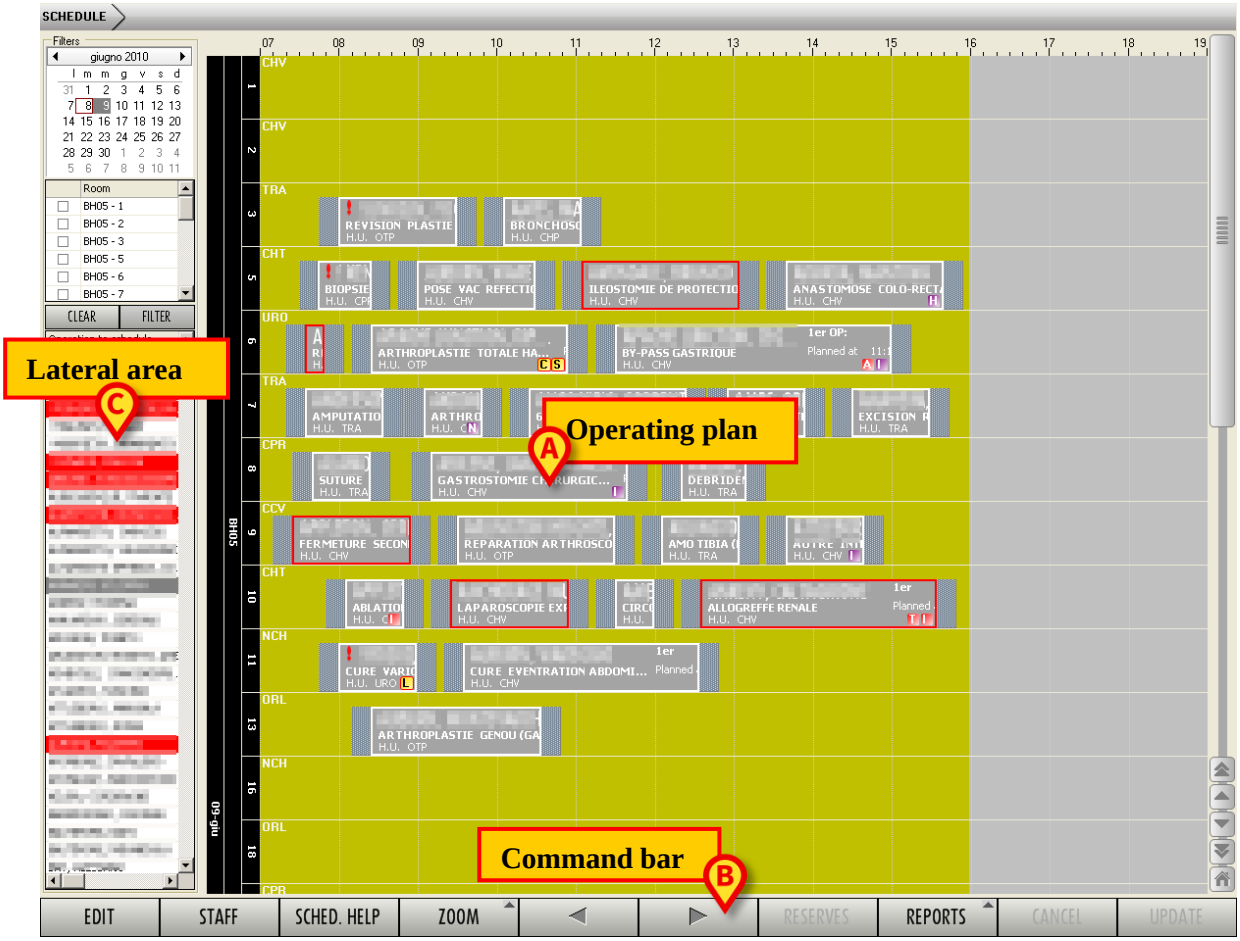


Fig 173 – Scheduling Page

This screen is formed of three areas.

1) The central part of the screen represents in a graphic form the operations schedule (Fig 173 **A** - see paragraph 7.2 for the description).

2) The command bar contains the function-button making it possible to perform different procedures (Fig 173 **B** - see paragraph 7.4 for a description).

3) The lateral area contains several tools making it possible to operate on the screen contents (Fig 173 **C** - see paragraph 7.3 for a description).

Scheduling an operation makes the operation progress from "Requested" state to "Planned" state.

7.2. The operating schedule

The central part of the page offers a graphic representation of the operating schedule of one or more operating day/s (Fig 173 **A**).

Every line represents the day of an operating room. Fig 174 highlights the line that represents the operating day in room 11. The number (or the name) of the room is indicated at the start of every line (Fig 174 **A**).

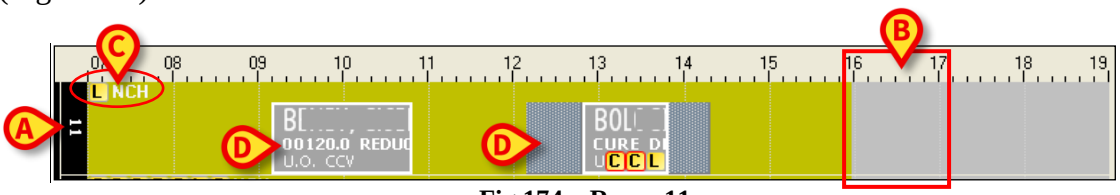


Fig 174 – Room 11

Every box represents a time of day. Fig 174 **B** highlights the box that indicates the hour from 16:00 to 17:00.
The number line above the central part of the page indicates the time.

The ochre yellow part indicates the hours during which the room is open and available for scheduling.
The gray part indicates the hours during which the room is closed. The room shown in Fig 174 is open from 7:00 to 16:00.

The letters highlighted in Fig 174 **C** indicate the devices in the room (yellow letters) and the location (NCH in this case). Every yellow letter represents a device. The letter is the initial of the name of the device. For more details on the devices present move the mouse pointer on the letter. A tooltip containing the full list of the room devices appears (Fig 175).

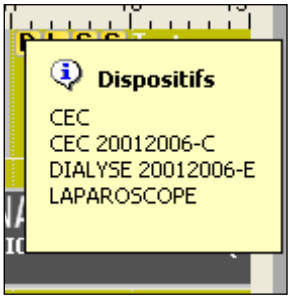


Fig 175 – Devices list

The gray rectangles highlighted in Fig 174 **D** represent the operations scheduled.

The various rooms are grouped into surgical blocks.

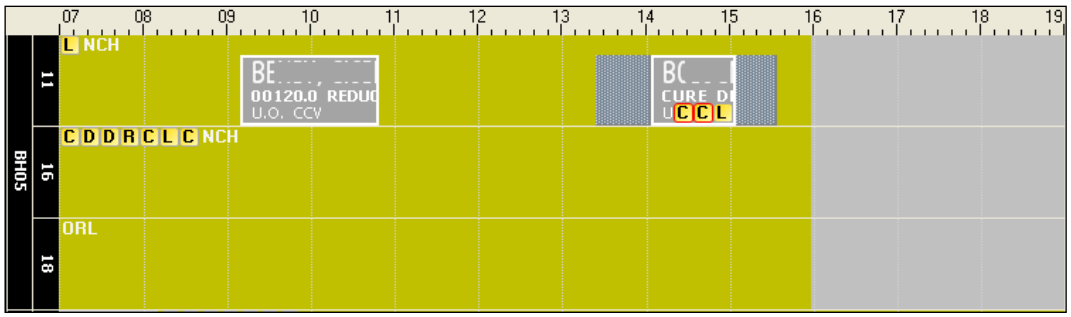


Fig 176 – Block BH05

In Fig 176, rooms 11, 16 and 18 are in block BH05.

The various blocks displayed make up the operating day.

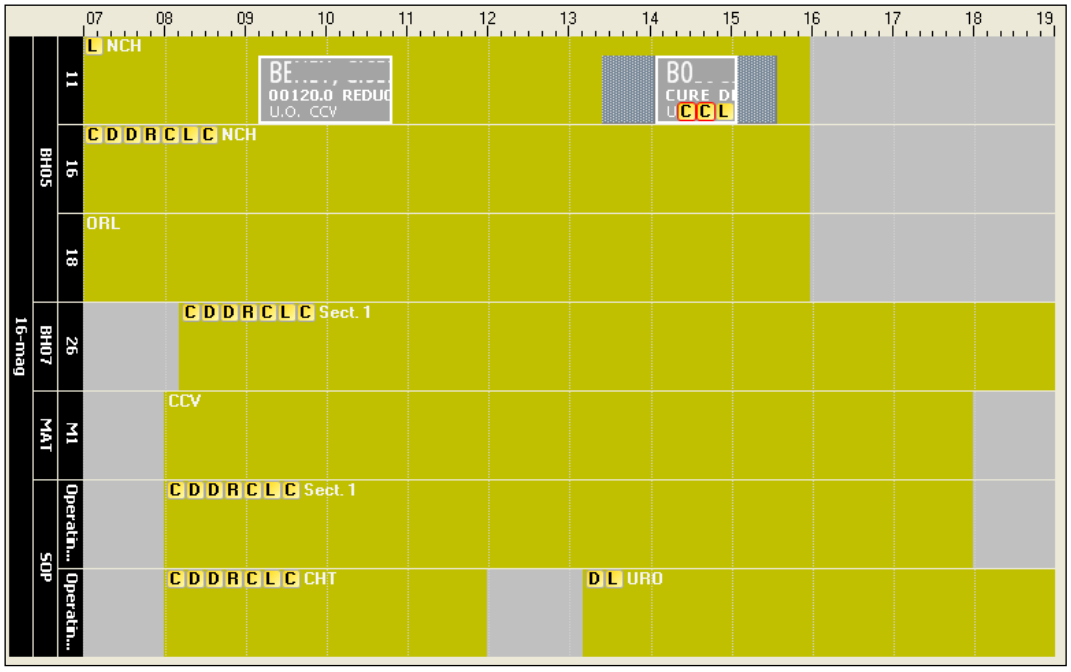


Fig 177 – Day 16/05

Fig 177 shows May 16.

Every user sees only the rooms in which he/she is permitted to work. This depends on the permissions held by the user. For information on the user definition procedure, contact the system administrator.

The scheduling grid can contain dark gray hatched areas (Fig 178 **A**).

Fig 178 – Unavailable Slot

These areas indicate periods of time in which the room displayed, despite being open, is not available for scheduling (due to tests, maintenance or other reasons).

7.2.1. The graphic representation of the operation

Every scheduled operation is represented on the daily schedule by a gray rectangle.

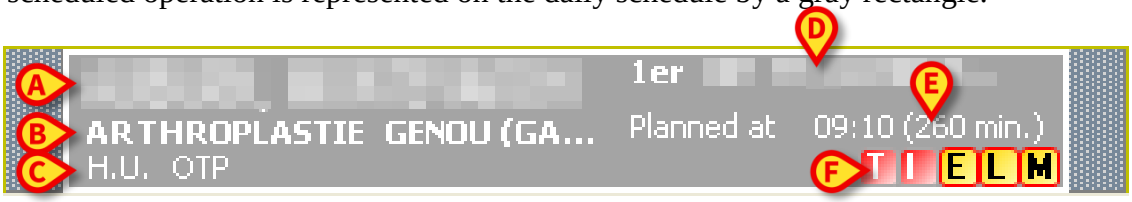


Fig 179 - Operation

The rectangle contains a variety of information.

- The name of the patient (Fig 179 **A**).
- The type of operation (Fig 179 **B**).
- The requesting hospital unit (Fig 179 **C**).
- The name (if indicated) of the first operator (Fig 179 **D**).
- The scheduled start time and duration of the operation (Fig 179 **E**).
- The devices required for the operation, the transmissible diseases, the allergies, the infections and the priority of the operation (Fig 179 **F**, Fig 180).

Fig 180 – Indication of Devices

The yellow letters - E L M - indicate the devices required for the operation. Every yellow letter indicates a device. The letter is the initial of the name of the device. When the letter is circled it means that the device is not currently present in the room for which the operation is scheduled.

The purple letters N , H and M indicate the priority assigned to the operation. The priority indicators (the specific letters used) are configurable.

The blue letter N indicates that the operation has been scheduled to take place before the date suggested on the “Not before…” field on the “Operation record screen” (see paragraph 6.2.7).

The red letters - T, I - indicate the transmissible diseases, the allergies and the infections.

One or more requirements can be configured to be displayed on the “Operation box”. For instance: to indicate that an ICU bed is required after an operation, or to indicate that an operation requires no anesthesia. The requirement is displayed on the operation box as a small square, having customizable colour and indicating the first letter of the name of the requirement. In all cases, to know the meaning of an icon, you can place the mouse pointer on it. The meaning will be displayed inside a “tooltip”.

A red exclamation mark - - placed on the top-left corner of the operation rectangle indicates that the information on the patient is provisional (see paragraph 3.3.1.1).

The three icons - - - placed on the top-left corner of the operation rectangle indicate that the operation is locked. The icon indicates the lock level. See paragraph 1.3 for the explanation of the operation “lock/unlock” functionalities.

The icon placed on the top-left corner of the operation rectangle means that the current user cannot edit the operation.

The length of the operation rectangle is proportional to the operation duration. The longer the rectangle, the longer the duration.

The position of the operation rectangle in the scheduling grid indicates the scheduled start and end time and the room where the operation will be performed.

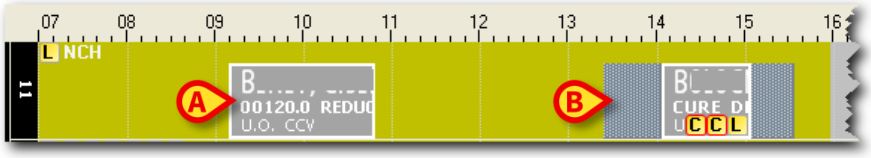


Fig 181 – Position of operations in the grid

The operation shown in Fig 181 **A** is scheduled for room 11, at 09:10 and should end at 10:50.

The operation shown in Fig 181 **B** is scheduled for room 11, at 14:00 and should end at 15:00

The dark gray areas indicated in Fig 182 represent the pre-surgical time (left) and post-surgical time (right) indicated on the “Operating record” screen. See paragraphs 6.2.15 and 6.2.16.

Fig 182

Click the operation rectangles to display a window containing a summary of the information available on the operation (Fig 183).

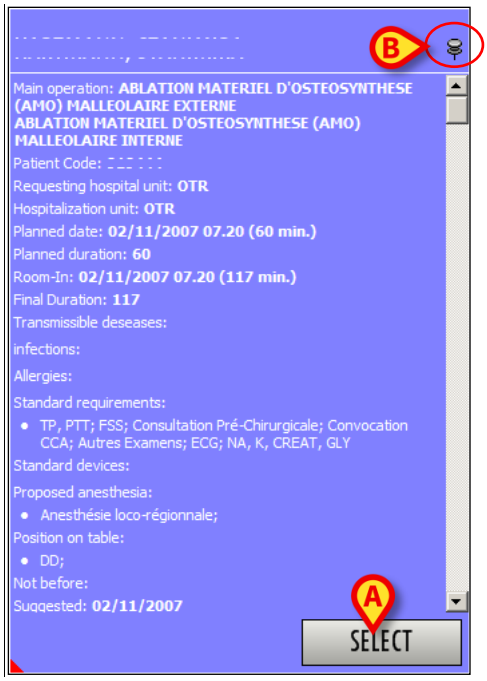


Fig 183 – Operation data

Click the **Select** button in the window (Fig 183 **A**) to access the "Operation Record" page relating to the operation clicked (Fig 51).

The window disappears automatically when you move the mouse.
To "fix it" to the page, click the thumbtack in the window (Fig 183 **B**).

7.2.1.1. Operation schedule direct editing

Right click the operation rectangles to open a menu making it possible to directly edit the operation schedule (Fig 184).

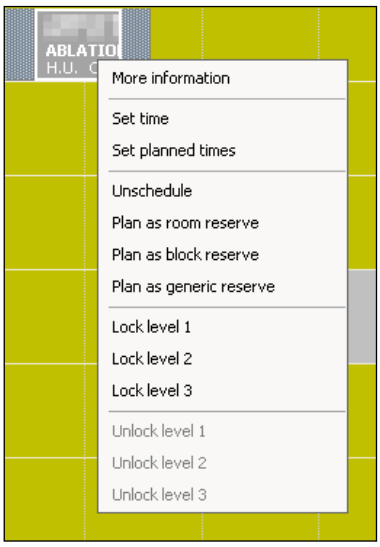


Fig 184

The functions described here are schedule changes and are only enabled after pressing the **Edit** *button (see paragraph 7.5).*

- The “More information” option opens the window shown in Fig 183.
- The “Set time” options displays a window in which you can enter a new start time scheduled for the operation (Fig 185).

Fig 185 – Set time

To set the new start time, enter the time required in the box and press the ENTER key. The rectangle is automatically moved to the point corresponding to the start time entered.

An operation start time can also be changed using the mouse or keyboard.
With the mouse: after clicking the **Edit** *button, simply drag the operation to the start time required.*
With the keyboard: after selecting the operation (i.e., after clicking the **Edit** *button and then the operation box) using the combinations of the “Alt + ←” and “Alt + →” keys, move the rectangle to the left and right.*

- The “Set planned times” option displays a window in which it is possible to enter separately the pre-surgical, surgical and post-surgical times (Fig 186).

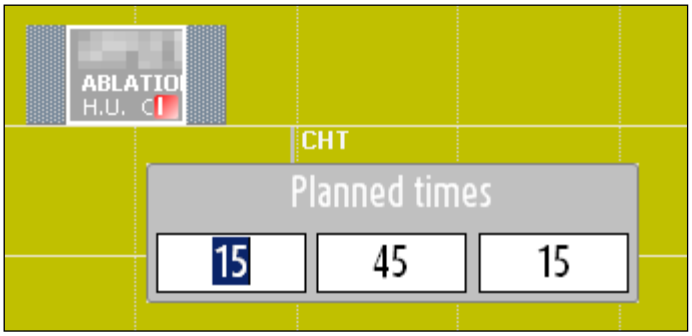


Fig 186 – Set planned times

To set a new duration, enter (in minutes) the duration required in the box and press the ENTER key. The rectangle will be automatically enlarged or shrunk depending on the new duration entered.
In case of transmissible diseases and infections specified for the operation, the post-surgical time cannot be less than that added after the disease/infection specification.

The scheduled duration of an operation can also be changed using the mouse or keyboard.
With the mouse: simply move the mouse to the right side of the rectangle, click and, keeping the button pressed, "enlarge" or "shrink" the rectangle.
With the keyboard: after selecting the operation (i.e., after clicking the **Edit** *button and then the operation box) using the combinations of the "Ctrl + ←" and "Ctrl + →" keys, shrink or enlarge the rectangle.*

- The "Unschedule" option makes it possible to remove the operation from the daily schedule. Click this option to eliminate the operation rectangle from the scheduling grid and return the operation to the list of operations to be scheduled. See paragraph 7.5 for the operation scheduling procedures.

- The "Plan as room reserve" option makes the operation a room reserve. Click this option to eliminate the operation rectangle from the scheduling grid and indicate it as room reserve (see paragraph 7.5.5 for the explanation of the concept of reserve and for the connected procedures).

- The "Plan as block reserve" option makes the operation a block reserve. Click this option to eliminate the operation rectangle from the scheduling grid and indicate it as block reserve (see paragraph 7.5.5 for the explanation of the concept of reserve and for the connected procedures).

- The "Plan as generic reserve" option makes the operation a generic reserve. Click this option to eliminate the operation rectangle from the scheduling grid and indicate it as generic reserve (see paragraph 7.5.5 for the explanation of the concept of reserve and for the connected procedures).

- The various "lock/unlock operation" options make it possible to lock/unlock the operation at the wanted level. Only the options are enabled, that are logically consistent both with the context (i.e. with the possible lock level already specified) and with the permissions of the current user. See paragraph 1.3 for an explanation of the lock/unlock functionalities.

7.2.2. Color of boxes and operation state

In the Smart Scheduler system, the operation boxes corresponding to operations in "Scheduled" state are light gray (Fig 187).

Fig 187 – Smart Scheduler operation box

The emergencies are red circled on the planning grid (Fig 188).

Fig 188 - Emergency

The Smart Scheduler system manages an operation in three states (see paragraph 1.2). These are:

- Foreseen
- Requested
- Scheduled

The Smart Scheduler-OranJ combined system envisages three further state for an operation. These are:

- Ready
- In progress
- Completed

These three states, which no longer refer to scheduling but to the performance of the operation, are managed by the DIGISTAT® OranJ system. The OranJ system indicates the operation state by the color of the relevant operation rectangle.

The “Ready” state is characterized by the color green (Fig 189).

Fig 189 – Operation state: “Ready”

The “In progress” state is characterized by the color cyan (Fig 190).

Fig 190 – Operation state: “In progress”

The “Completed” state is characterized by the color dark gray (Fig 191).

Fig 191 – Operation state: “Completed”

When the Smart Scheduler and OranJ systems work together, the changes in state recorded by OranJ are also visible in Smart Scheduler.

Therefore, an operation which progresses to “ready” state in OranJ will be displayed in Smart Scheduler as a green rectangle; an operation which progresses to “in progress” state in OranJ will be displayed in Smart Scheduler as a cyan rectangle and an operation which progresses to “completed” state in OranJ will be displayed in Smart Scheduler as a dark gray rectangle.

Once an operation has begun (i.e. it progressed to “in progress” state – cyan) it can no longer be changed using Smart Scheduler.

There are rare cases in which two operations overlap, having been scheduled at the same time from two different workstations. In this case, the operation rectangle will be red (Fig 192).

Fig 192 – Overlapping operations

In this case we suggest the rescheduling of the operation.

In the case of overlapping operations, we suggest the rescheduling of the operation. See paragraph 7.5 for the scheduling procedure.

The current day displayed on the Smart Scheduler “Schedule” module may not correspond to the current day displayed on the OranJ “Plan” module. This occurs due to the different purposes for which the two types of software are designed. Smart Scheduler is largely a scheduling tool, also suitable over the long term, for the activities of the surgical block, while OranJ is a tool for managing and monitoring the actual performance of the operating activity. The activity of a block may change suddenly and radically as a result of unscheduled activities which take absolute priority, and this means that the actual performance of the operating activity (correctly displayed by Oranj Plan) is different from that displayed in the scheduling of Smart Scheduler. The Smart Scheduler system updates its own plan on the basis of the changes registered by OranJ, but in the event of several changes made at the same time, it may not be usable to precisely display all the changes made.
Therefore, we suggest that you DO NOT use Smart Scheduler as a tool for monitoring the activities of a room, preferring the plan displayed by OranJ for this purpose.

DO NOT use Smart Scheduler as a tool for monitoring the activities of a room. Use the plan displayed by OranJ for this purpose.

7.3. The lateral area

The left side of the scheduling page (Fig 173 **C**, Fig 193) is divided in three areas.

- a date filter (Fig 193 **A**),
- a block and room filter (Fig 193 **B**),
- a table containing the list of all the operation in “Requested” state, ready to be scheduled (Fig 193 **C**).

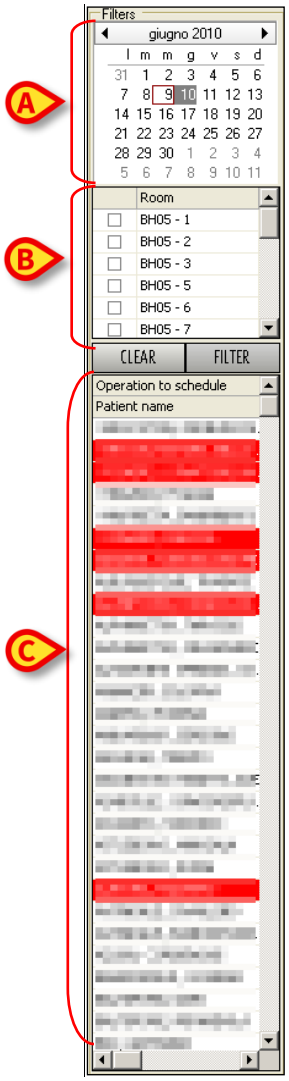


Fig 193 – Lateral area

7.3.1. Date filter

The calendar indicated in Fig 193 **A** and Fig 194 makes it possible to select the day displayed on screen.

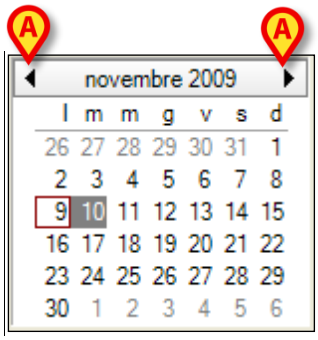


Fig 194 - Calendar

The day displayed on the scheduling grid is highlighted grey. The figure shown displays the 10th of November. The operations indicated on the scheduling grid are those relating to the 10th of November.

If the current day is different from that selected, it appears in a red box.

To display the schedule for a different day, click the number of the date required.
The arrows alongside the name of the month make it possible to change the month displayed (Fig 194 **A**).
In the example shown in the figure, the month of October 2009 is displayed by clicking the left arrow and the month of December 2009 is displayed by clicking the right arrow.

You can select (and therefore display) more than one day at a time. To do so, simply move the mouse to the days you wish to display, keeping the left button pressed. For example, if you select 10th and 11th of November together, the calendar will look like this.

Fig 195 – Selecting several days together

The schedule of the two days will be displayed on the same screen.

You can display a maximum of 7 days at the same time.

7.3.2. Room filter

The “room” area makes it possible to display only the rooms selected (Fig 193 **B**, Fig 196).

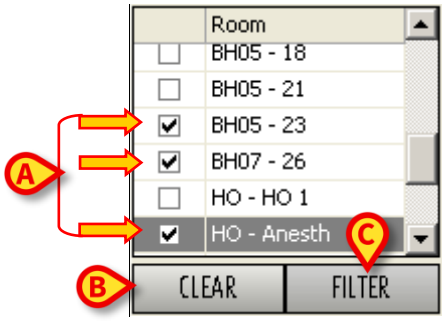


Fig 196 – Room Selection

The area shown contains the list of rooms which can be displayed. Alongside each room there is a selection box.

To display certain rooms only

- Click the checkboxes alongside the wanted room.

The boxes appear as selected (Fig 196 **A**).

- Click the **Filter** button (Fig 196 **C**)

In the example shown we have selected room 23 of block BH05, room 26 of block BH07 and room “Anesth” of block HO. After clicking the **Filter** button, the following grid is displayed.

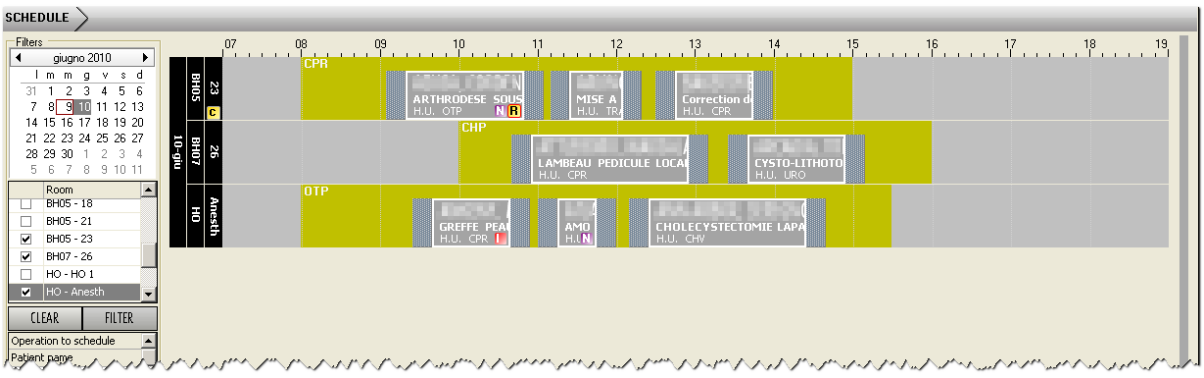


Fig 197 – Three rooms selected

To go back to displaying all the rooms

- Click the **Clear** button (Fig 196 **B**).

The rooms previously selected are deselected.

- Click the **Filter** button (Fig 196 **C**)

The grid containing all the rooms will be displayed again.

7.3.3. Operations to schedule

The “Operations to schedule” contains the list of operations still to be scheduled (Fig 193 **C**, Fig 198). The list comprises all and only those operations which have “requested” state and are in the rooms that the connected user has permission to see.

Fig 198 – Operations to Schedule

The area is split into four columns. For space-related reasons only one column can be displayed at a time.

The first column contains the names of the patients for whom an operation is requested.

Use the bar indicated in Fig 198 **A** to display the other columns. The other columns display the following information:

- the operation name;
- the planned duration;
- the priority of the operation;
- the emergency level (when the operation is an emergency it is highlighted red);
- the name of the first operator.

Click one of the lines in this area to display a window summarizing the information available on the operation (Fig 199).

Fig 199 – Operation Data

Click the **Select** button in the window (Fig 199 **A**) to access the "Operation Record" screen relating to the operation clicked (Fig 51).

When you are in "edit" mode, i.e., after the **Edit** button has been clicked, to display this information window you must right click the line corresponding to the operation.
A window like that shown in Fig 199 opens but this window has no **Select** button.

The list of operations contained in this table makes it possible to create a proper schedule. See paragraph 7.5 for the description of the scheduling procedures.

7.4. The command bar of the scheduling page

The control bar on the page (Fig 200) contains various buttons which make it possible to perform various operations. This paragraph briefly lists the functions of the different buttons. They will be explained in detail in the paragraphs indicated.

Fig 200 – Command bar of the "Schedule" screen

This button makes it possible to schedule the operations. See paragraph 7.4.1 for the detailed procedure.

This button makes it possible to display detailed information on the room staff scheduled for the operations. See paragraph 7.4.2.

This button makes it possible to access the "Schedule with help" functionalities (Fig 232). See paragraph 7.7.

This button makes it possible to change the way the sheduling grid is displayed. See paragraph 7.4.3.

These buttons make it possible to scroll the screen contents backwards or forward. The left arrow displays the plan related to a time preceding the time currently displayed; the right arrow displays the plan related to a time following the time currently displayed.

This button makes it possible to display the detailed list of all reserves. See paragraph 7.4.4.

This button makes it possible to create various kinds of print reports. See paragraph 7.4.5.

7.4.1. How to edit the operations schedule

The **Edit** button on the command bar (Fig 201) makes it possible to change the operations schedule.

Fig 201 – Command bar of the "Schedule" screen

Before making any changes to the schedule, it is necessary to click the **Edit** button.

After clicking this button, the control bar changes appearance and looks like the one shown in Fig 202.

Fig 202 – "Edit" mode

The **Edit** button appears as selected.

The **Cancel** and **Update** buttons are active.

The page is in "edit" mode meaning that it can be changed.

To make any changes to the schedule, in terms of time, date, room, duration, block, etc…, it is necessary to

- click the **Edit** button.

The screen turns to "edit" mode.

- Make the change required.
- Click **Update** to save the data.

The detailed procedure is explained in paragraph 7.5.

7.4.2. How to display information on the operating staff

The **Staff** button (Fig 203) makes it possible to access a page containing all the information on the room staff requested for the scheduled operations (Fig 204).

Fig 203 – Command bar of the "Schedule" screen

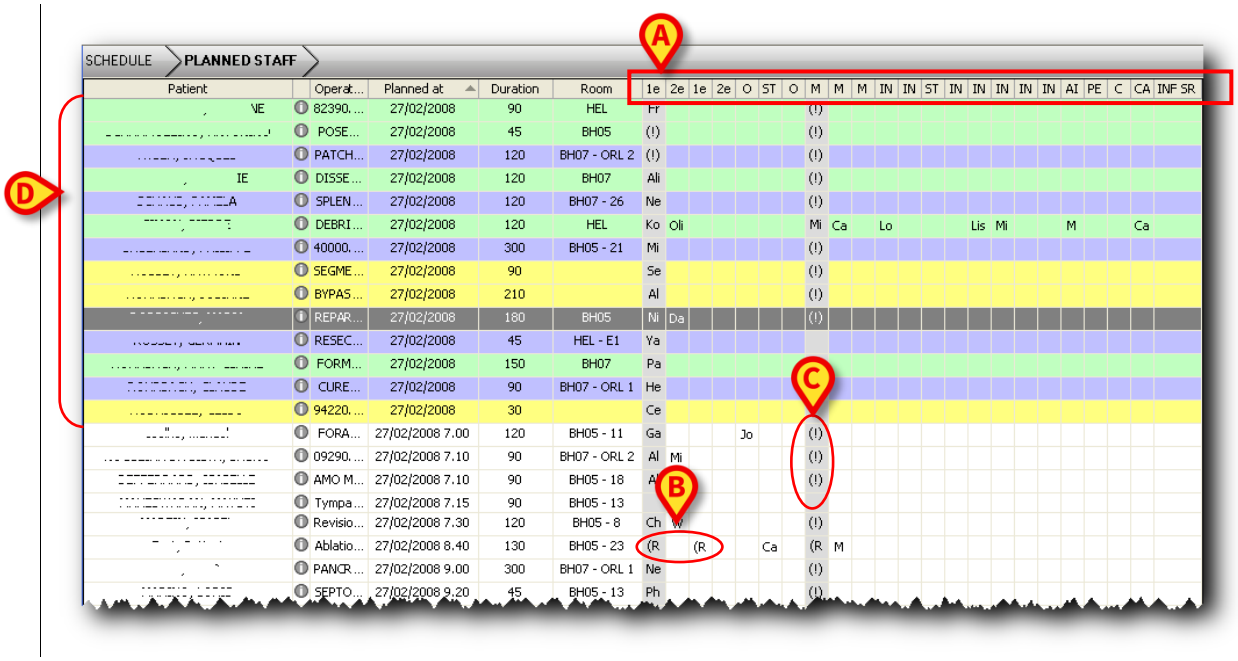


Fig 204 – "Planned Staff" Page

The table shown in Fig 204 contains the main information on every operation scheduled during the day and in the rooms displayed.

Every line contains data relating to an operation.

The first 6 columns contain, in the following order

- The name of the patient to be operated on.
- The "information" symbol. Click the symbol to open a window containing further information on the operation (see Fig 199).
- The type of operation scheduled.
- The start time and date scheduled for the operation.
- The scheduled duration.
- The scheduled block and room (if specified).

The remaining columns (Fig 204 **A**) show details of the information available on the operating staff.

Every column corresponds to a role.

The name of the person holding a specific role in a specific operation is found in the box where the role column and operation column intersect.
Not all roles are associated with a person. This is because the room staff need not necessarily be specified or may not be requested for a particular operation.

If a role has been indicated as "requested" but no specific name has been indicated for that role, the system places an (R) in the corresponding box (Fig 204 **B**).

The (D) on the staff page corresponds to the symbol of the "planned staff" page on the "Operation Record" screen (Fig 141 **A***).*

If a role has been entered among the scheduled staff but neither the name nor the fact that the role has been requested are specified, the system places an (!) in the corresponding box (Fig 204 **C**).

The (!) symbol on the staff page corresponds to the symbol of the "planned staff" area on the "Operation Record" page (Fig 141).

The operations that appear highlighted on the staff page are reserves (Fig 204 **D**). See paragraph 7.5.5 for the explanation of the concept of reserve.

Operations highlighted in yellow are generic reserves.

Operations highlighted in green are block reserves.

Operations highlighted in blue are room reserves.

7.4.3. Zoom

The **Zoom** button on the command bar (Fig 205) makes it possible to change the time range displayed.

Fig 205 – Command bar of the "Schedule" screen

Click this button to open the different options possible (Fig 206).

Fig 206 – Change time range displayed

To change the time range displayed

- Click the **Zoom** button.

The options available appear (Fig 206).

- Click one of the options offered.

The page changes consequently. Click **4 hours**, for example, to display a range of 4 hours. Click **8 hours** to display a range of 8 hours etc.

7.4.4. How to display the reserves list

The **Reserves** button (Fig 207) makes it possible to display the detailed list of all reserves (Fig 208 **A** - See paragraph 7.5.5 for the explanation of the concept of reserve).

Fig 207 – Command bar of the "Schedule" screen

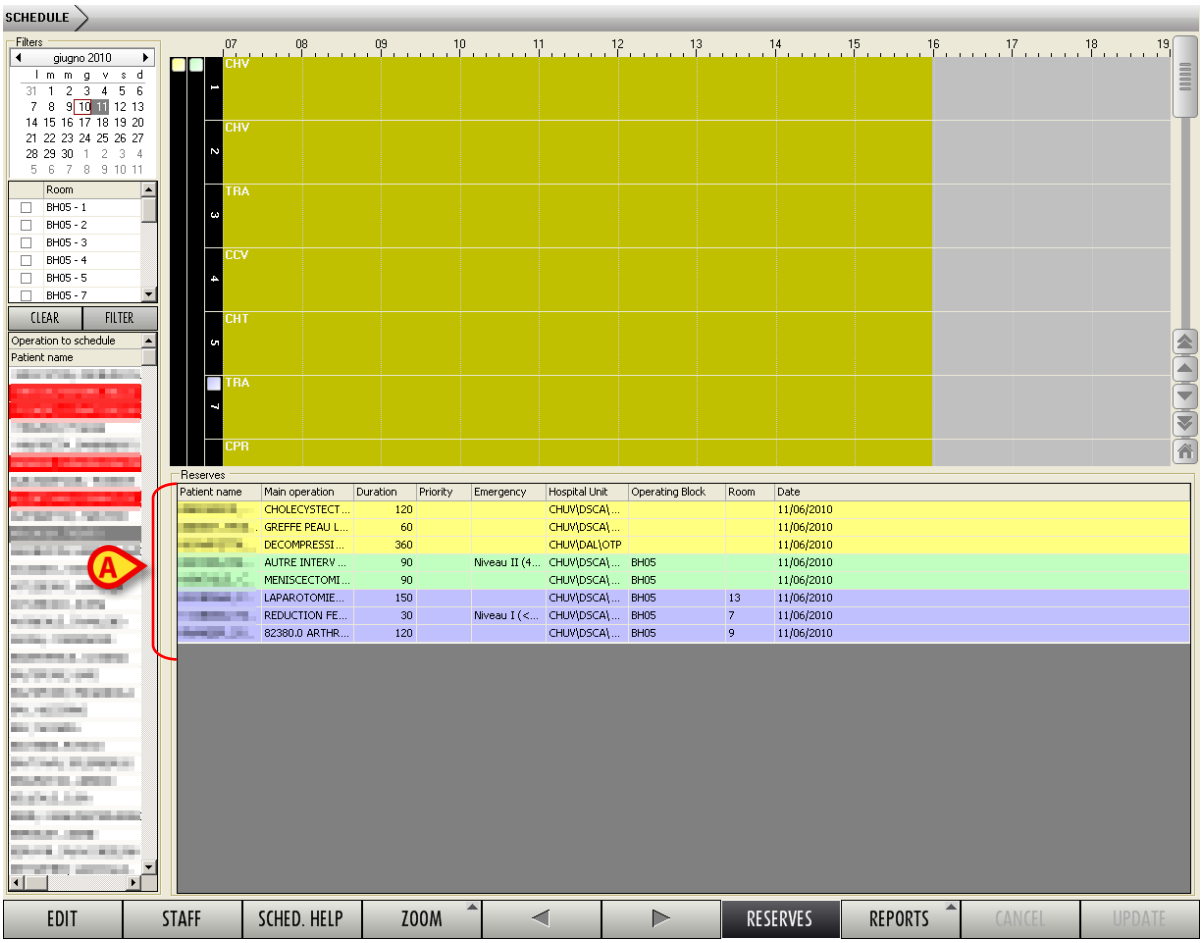


Fig 208 – All reserves

The list of reserves is presented in a table (Fig 208 **A,** Fig 209).

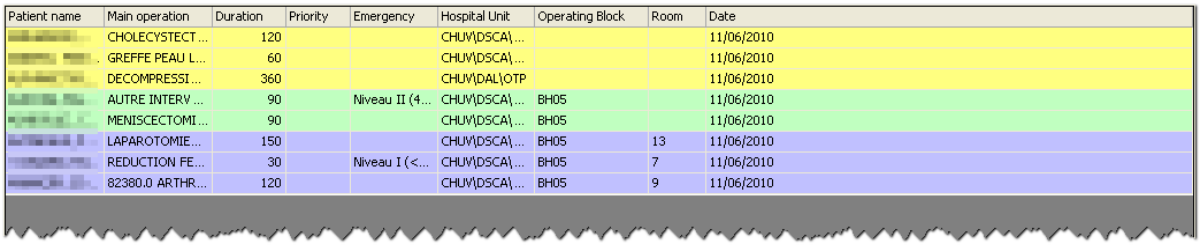


Fig 209

Every line of the table shows data relating to an operation.

This data, arranged into columns, is

- the name of the patient,
- the type of operation scheduled,
- the scheduled duration,
- the level of priority assigned,

- the hospital unit of reference,
- the surgical block (if specified),
- the operating room (if specified),
- the scheduled date.

Operations highlighted in yellow are generic reserves (the block, room and time are not specified).

Operations highlighted in green are block reserves (the room and time are not specified).

Operations highlighted in blue are room reserves (the time is not specified).

7.4.5. Reports

The **Reports** button (Fig 210) makes it possible to create a document which shows the information available on the operations scheduled.

Fig 210 – Command bar of the "Schedule" screen

To create the document

- Click the **Reports** button.

Several options are available. Their number and their nature depend on the configuration. Once the kind of document is selected, the system displays a print preview.

7.5. How to schedule an operation

The list of operations with "requested" state awaiting scheduling appears in the portion of the screen that appears in the bottom left corner of the page (Fig 211 **A**).

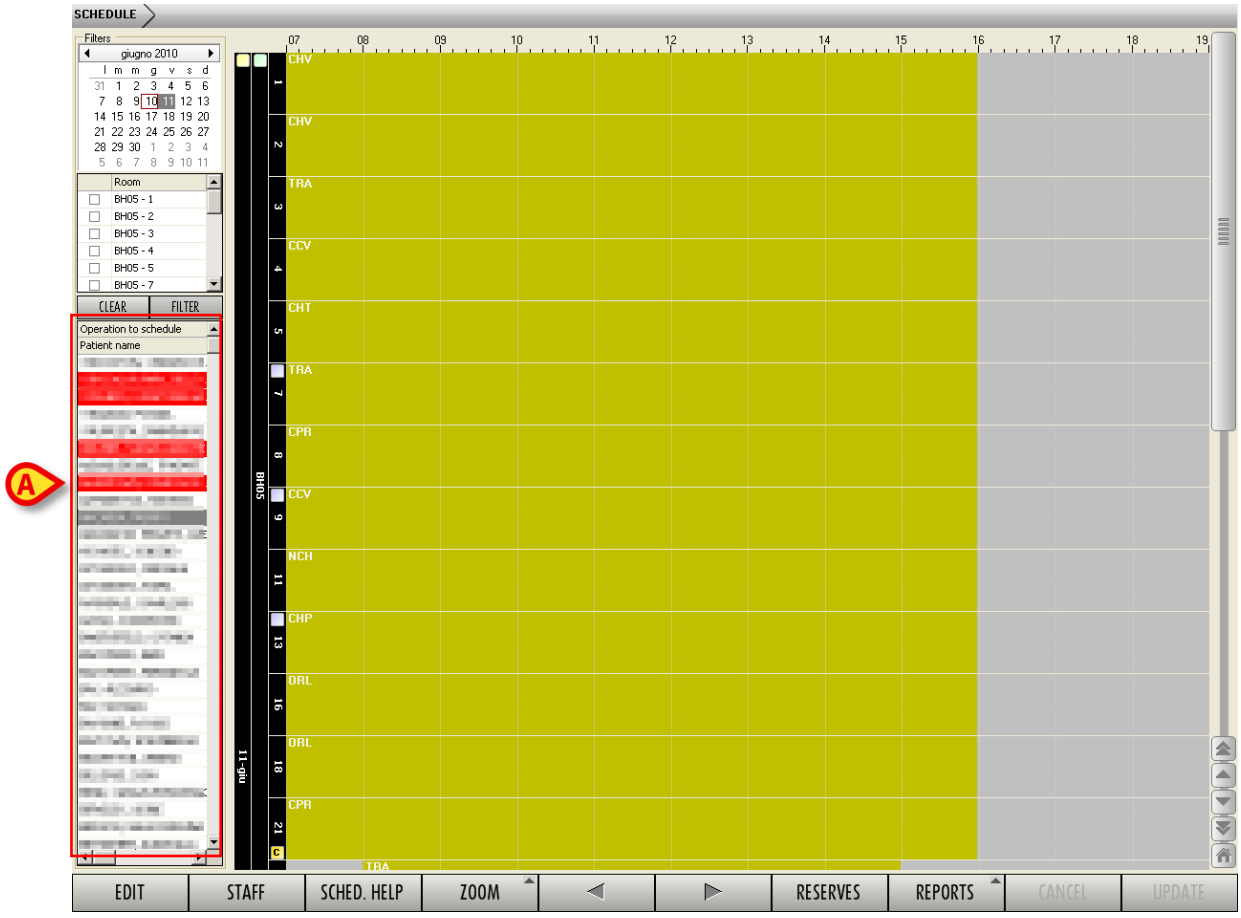


Fig 211 – List of operations to schedule

To schedule an operation, you must

- Click the **Edit** button on the command bar.

The screen turns to "edit" mode.

- Move the mouse pointer over the item in the list of "operations to schedule" that you wish to schedule (in the area indicated in Fig 211 **A**).
- Drag it to the scheduling grid, on the point corresponding to the wanted time and location.

To "drag", move the mouse pointer over the object required, left-click and, keeping the button pressed, physically move the object to the position required. The object (the box in this case) moves with the cursor.

The operation disappears from the list of operations to schedule and appears, in the form of an operation rectangle, inside the scheduling grid (Fig 212 **A**).

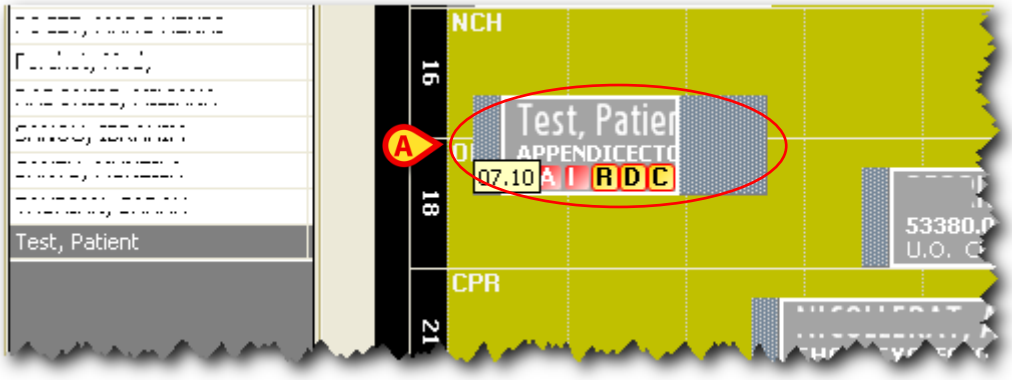


Fig 212 – Operation rectangle being dragged

- Release the mouse button.

The operation rectangle remains in the point required and the patient's name disappears from the list of operations to schedule (Fig 213 **A**).

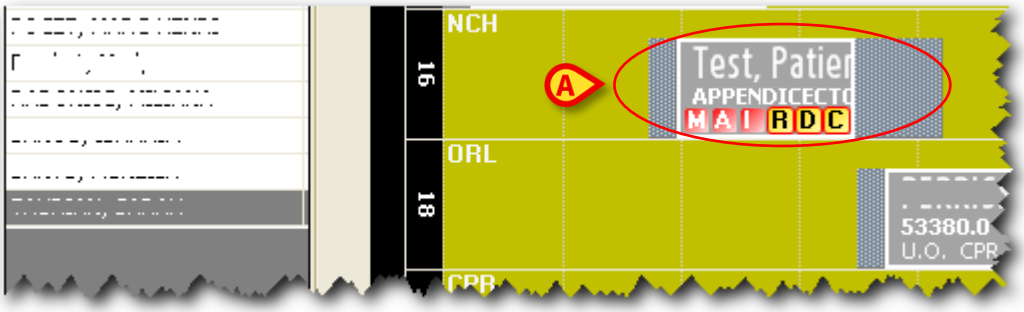


Fig 213 – Scheduled Operation

- Click the **Update** button on the command bar to save the change made.

The operation is now scheduled for the room and time required.

7.5.1. How to schedule an emergency operation

The “Emergencies” are highlighted red in the “Operations to schedule” area on the left of the screen (Fig 214).

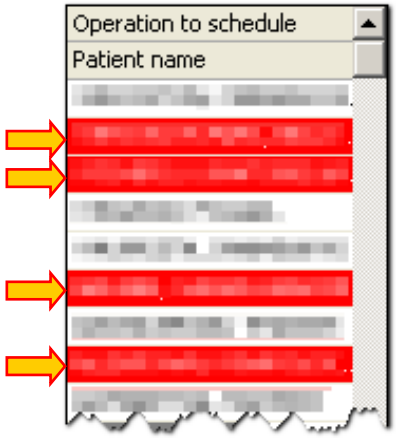


Fig 214

Specific user permissions are required in order to schedule an “Emergency”. These permissions, specified by configuration, make it possible to

a) enable to schedule the “Emergencies”;
b) enable to schedule the operations that are not “Emergencies” (called “Elective”).

These permissions are separate, i.e. a user can have them both enabled.

When the scheduling of an “Elective” operation causes the re-scheduling of an “Emergency” operation the permissions to schedule the emergencies are required.

The “Emergencies” are red circled on the planning grid (Fig 215).

Fig 215

7.5.2. How to remove an operation from the plan

To remove an operation from the planning grid

- Click the **Edit** button on the command bar.
- Move the mouse pointer over the operation-rectangle that must be removed from the plan.
- Drag the rectangle back on the “Operations to schedule” list (Fig 214 **A**).

- Click the **Update** button on the command bar to save the changes.

The operation goes back to “Requested” state.

7.5.3. How to reschedule an operation

To reschedule an operation, if you are on the scheduling page,

- click the **Edit** button on the command bar.
- Move the mouse pointer over the operation rectangle for which you wish to change schedule.
- Drag the rectangle to the point on the grid corresponding to the new time and/or new room.
- Click the **Update** button on the command bar.

Otherwise it is possible to change the scheduling of an operation by selecting it directly from the “Operation List” page (see paragraph 3).

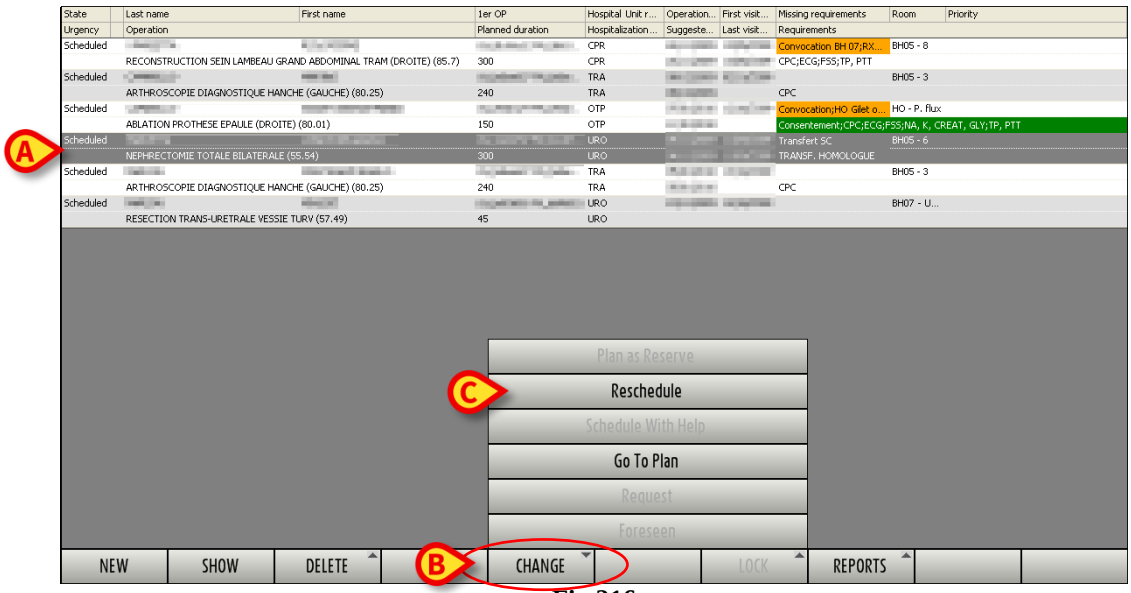


Fig 216

To do so, you must

- Access the “Operation list” screen (see paragraph 3).
- Search for the operation you wish to reschedule (see paragraph 3.1 for the search modes).

This operation must have “Scheduled” state.

- Click the row corresponding to the operation to reschedule.

The row will be highlighted (Fig 216 **A**).

- Click the **Change** button on the command bar (Fig 216 **B**).

A menu containing different options opens.

- Click the **Reschedule** option (Fig 216 **C**).

A window requesting confirmation of the operation opens (Fig 217).

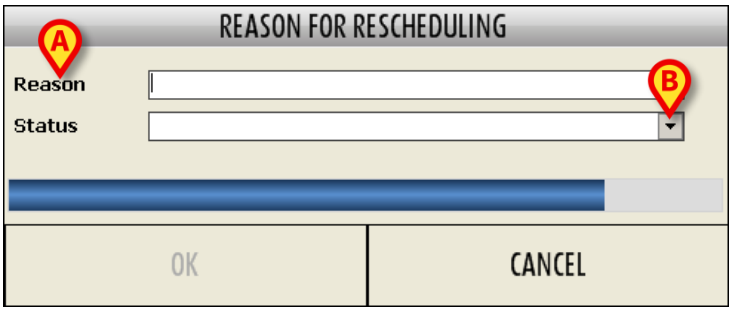


Fig 217 – Rescheduling an operation

- Enter the reason for rescheduling in the "Reason" field (Fig 217 **A**).

The possible reasons can be pre-defined during configuration. In this case you can click the button alongside the "Reason" field and choose from the options offered.

- Click the button alongside the "State" field (Fig 217 **B**).

A menu offering the choice between four options opens (Fig 218).

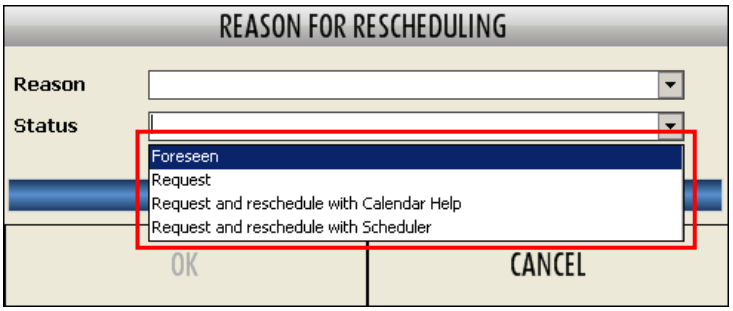


Fig 218 – Rescheduling options

Each of them allows the performance of a different operation.

The "Foreseen" option makes it possible to take the operation back to the "Foreseen" state.

The "Request" option makes it possible to take the operation back to the "Requested" state.

The "Request and reschedule with calendar help" option takes the operation back to the "Requested" state and gives direct access to the "Schedule with help" page (Fig 232, paragraph 7.7).

The “Reschedule” option takes the operation back to the “requested” state and gives direct access to the scheduling page (Fig 173, paragraph 7.2).

- Click the option required.
- Click the **Ok** button.

7.5.4. Locked operations

It is possible, on the scheduling screen, to lock a single operation. It is also possible to lock all the operations of a room, a slot, a block, a day at the same time. A locked operation is an operation which cannot be rescheduled.

The term “slot” indicates the length of time in which an operating room is available to a hospital unit for scheduling. From the graphic point of view, the slot is indicated on the scheduling grid as an ochre yellow colored area.

Fig 219 - Slot

The goals and features of the “Lock/unlock operation” functionalities are described in paragraph 1.3.

To lock/unlock an operation

- Click the **Edit** button on the command bar.
- Move the mouse pointer on the rectangle corresponding to the operation to be locked/unlocked.
- Right click.

A window containing various options appears (Fig 220). The lock/unlock options are indicated in Fig 220 **A**.

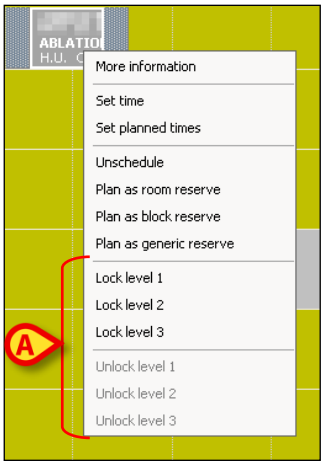


Fig 220 – Lock Operations

Only the options that are consistent with the context and the user permission level are available.

- Click the required “Lock” option.

On the operation rectangle, in the top-left corner, the icon corresponding to the lock level chosen appears (Fig 221 **A**).

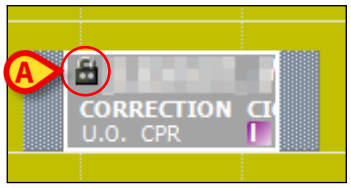


Fig 221 - Operation locked level 2

- Click the **Update** button on the command bar to save the change made.

To lock/unlock all the operations of a slot

- Click the **Edit** button on the command bar.
- Move the mouse pointer on the relevant slot.
- Right click.

The window shown in Fig 220 appears.

- Click the required “Lock” option.

All the operation in the slot will be locked/unlocked.

- Click the **Update** button on the command bar to save the change made.

To lock/unlock all the operations in a room the procedure is the same, only you must right click the black bar indicating the room number (Fig 222 **A**) and then click the required “lock” option.

To lock/unlock all the operations in a block you must right click the black bar indicating the name of the block (Fig 222 **B**) and then click the required “lock” option.

To lock/unlock all the operations in an operating day you must right click the black bar indicating the date (Fig 222 **C**) and then click the required “lock” option.

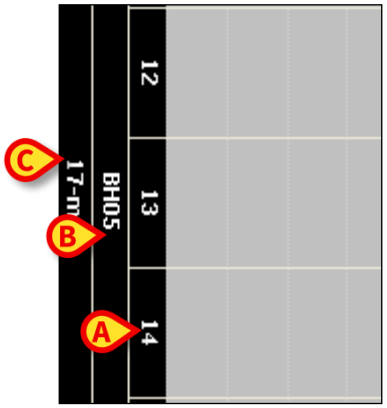


Fig 222

Only the operations scheduled either for the current day or for a day in the future can be locked/unlocked. The operations scheduled for a day in the past and not yet performed cannot be locked/unlocked.

When all the operations of either a room, a slot, a block or a day are unlocked at a certain level, the action affects only the operations that are locked at that same level.

That is, for instance:

there are three operations scheduled in a room: two of them are locked at level 2, one of them is locked at level 3. If the room is “unlocked level 2”, then only the operations locked level 2 will be unlocked (and will pass to level 1). The operation locked at level 3 remains locked at level 3.

7.5.5. Reserves

Reserves are those operations for which no time slot, block or room have been assigned, but which are included in the daily schedule.

The “reserve” concept has been introduced to enable the immediate scheduling of emergency operations which become necessary from one minute to the next. The criterion observed for these urgent cases is “as soon as a place is free, the operation goes ahead”.

The Smart Scheduler system envisages three types of reserve:

1) room reserve (the operation has been assigned a block and an operating room but not a time – this type of reserve is identified by the color blue);
2) block reserve (the operation has been assigned a block, but neither an operating room nor a time – this type of reserve is identified by the color green);
3) generic reserve (the operation has been assigned neither a block, nor an operating room nor a time – this type of reserve is identified by the color yellow).

The list of all reserves can be displayed by clicking the **Reserves** button on the command bar (see paragraph 7.4.4 and Fig 208 for the description of the relative page).

7.5.5.1. How to create a reserve

To create a reserve,

- click the **Edit** button on the command bar.

The screen turns to "edit" mode.

- Move the mouse pointer over either one of the operations in the list of "operations to schedule" (Fig 223 **A**) or one of the operations already in the scheduling grid.

Left-click it and drag it to the black bar indicating the day, block or room (Fig 223 **B**, **C**, **D**).
If the operation is dragged to the bar indicating the day (Fig 223 **B**) a generic reserve is created.
If the operation is dragged to the bar indicating the block (Fig 223 **C**) a block reserve is created.
If the operation is dragged to the bar indicating the room (Fig 223 **D**) a room reserve is created.

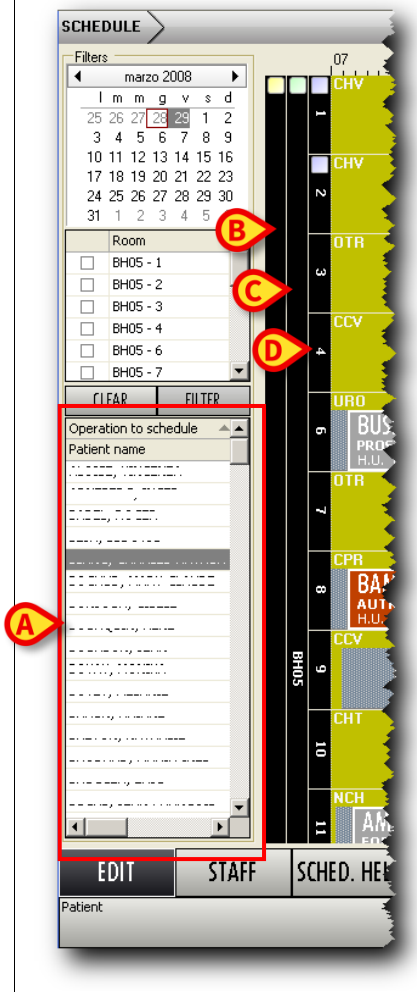


Fig 223 - Reserves

When there are reserves, special icons appear on the black bar (Fig 224).

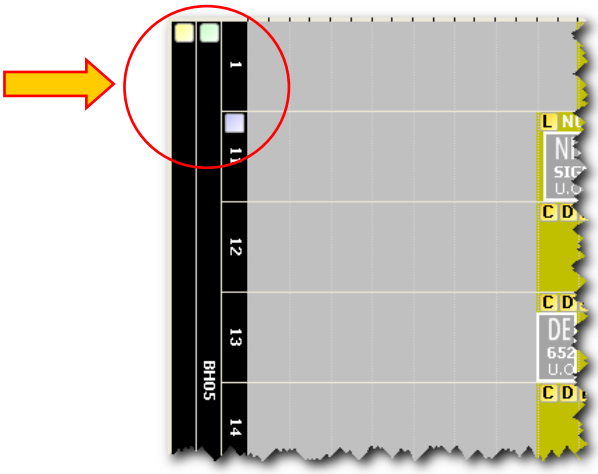


Fig 224 – Reserve Indication

The icon indicates the presence of at least one generic reserve for the day displayed.

The icon indicates the presence of at least one block reserve for block BH05.

The icon indicates the presence of at least one room reserve for room 11.

Click one of the icons to open the list of all reserves (Fig 208).

To add a reserve to the scheduling grid, after clicking the **Edit** button on the command bar, click the corresponding row in the “reserves” table (Fig 209) and drag it to point of the grid corresponding to the room and time required.

To return a reserve to the list of operations to schedule, after clicking the **Edit** button on the command bar, click the corresponding row in the “reserves” table (Fig 209) and drag it back to the “Operations to schedule” area.

7.6. Calendar

The “Calendar” screen of the DIGISTAT® “Smart Scheduler” system offers an overview of the operating room and block schedule (Fig 226).

To access this screen

- click the icon on the lateral bar.

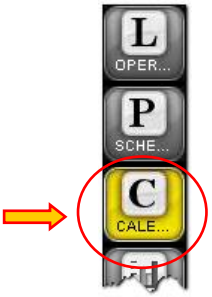


Fig 225

The screen shown in Fig 226 will open.

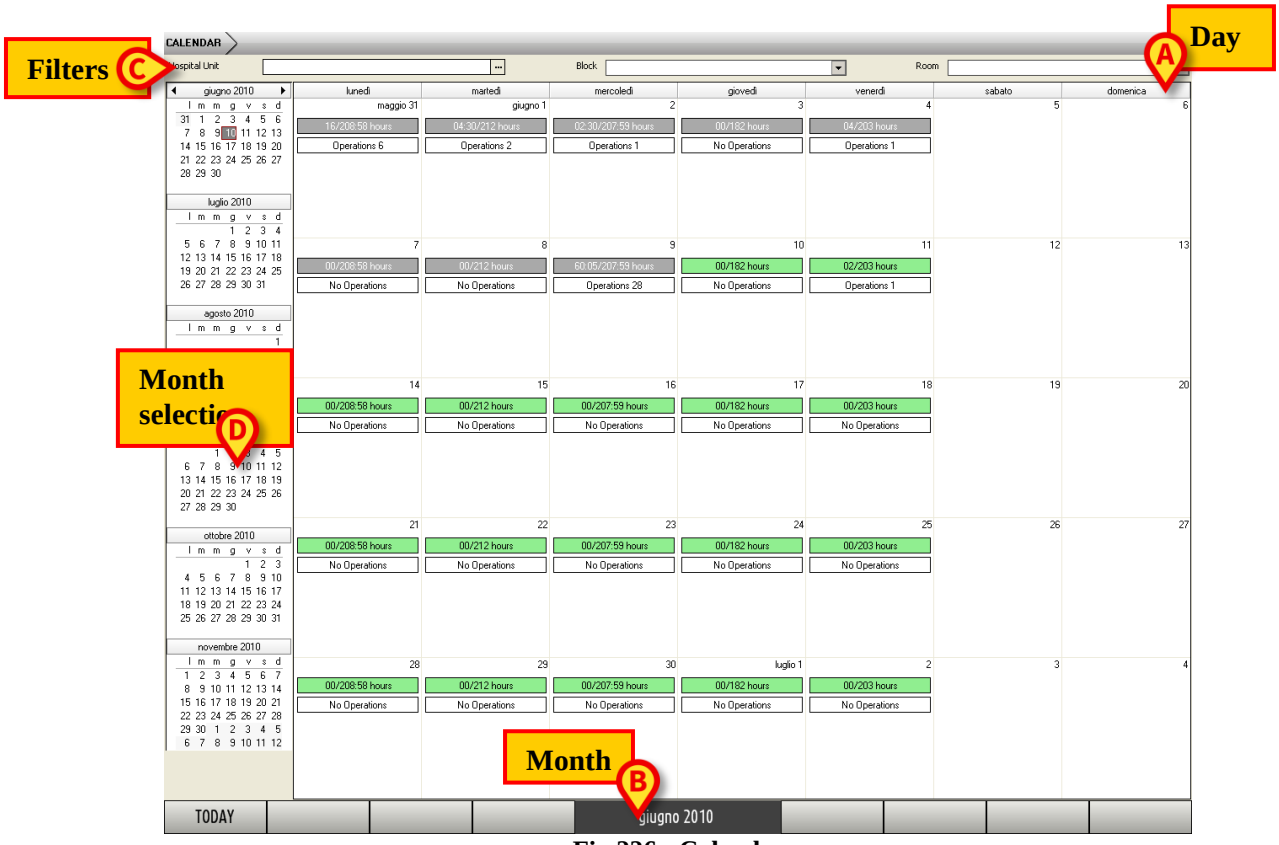


Fig 226 - Calendar

The central part of the page displays the calendar of the month you have decided to look at.

Every box represents an operating day (Fig 227).

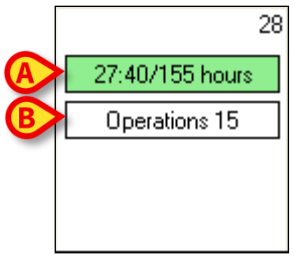


Fig 227 – Operating Day

The number in the top right corner of every box indicates the day to which the box refers.

The name of the day can be read on the bar at the top (Fig 226 **A**), the name of the month can be read on the central button of the control bar (Fig 226 **B**).

The box contains information on the scheduling of the operating rooms in the hospital units selected.

Every user, depending on his role and level of permissions, may display the situation only of the rooms for which he is responsible.

The square indicated in Fig 227 **A** indicates the number of hours allocated with respect to the total hours available. The box shows that, of the total 155 available for scheduling, 27 hours and 40 minutes are already allocated to operations.
The color green indicates that the day considered has time available for scheduling.
If the day of reference has passed, the square is gray.

The square highlighted in Fig 227 **B** indicates the number of operations scheduled for that day.

Click this box to open a window containing detailed information concerning the situation of every room (Fig 228).

Fig 228 – Information Window

The example shown in Fig 228 **A** informs us, for example, that room 7 of block BH05 has 1 operation reserved for the day selected (you can read the patient's name, the type of operation and the duration scheduled), that the total time available in this room is 480 minutes and that the time occupied by operations is 120 minutes.
Moving downwards, we find information on all the rooms managed by the user connected on the day selected. In Fig 228 **B** for example, we can see that room 8 of block BH05 has two operations scheduled, that the total time available is 480 minutes and that 420 minutes are occupied.

7.6.1. Selecting the month

The left side of the page makes it possible to select the month to display (Fig 226 **D**). This part of the screen displays 6 months. Click one of them to display it, enlarged, in the center of the page.

Fig 229

The arrows indicated in Fig 229 make it possible to display and select past months (left arrow) and future months (right arrow).
The month may also be selected by clicking the name of the month. A menu which makes it possible to directly select the month required opens (Fig 230).

Fig 230

Click the **Today** button in the bottom left corner of the command bar to return to display the current month.

7.6.2. Selection filters

The fields in the upper part of the “Calendar” page make it possible to select the Hospital Unit, Block or Room to which the data on screen are referring (Fig 226 **C,** Fig 231).

Fig 231

If any value is specified inside these fields the data displayed on screen are calculated only referring to the Hospital Unit, Block, Room specified.

7.7. Schedule with help

The schedule with help page (Calendar Schedule - Fig 232) makes it possible to schedule the operations selected using certain automatic calculation functions for the availability of the different rooms.

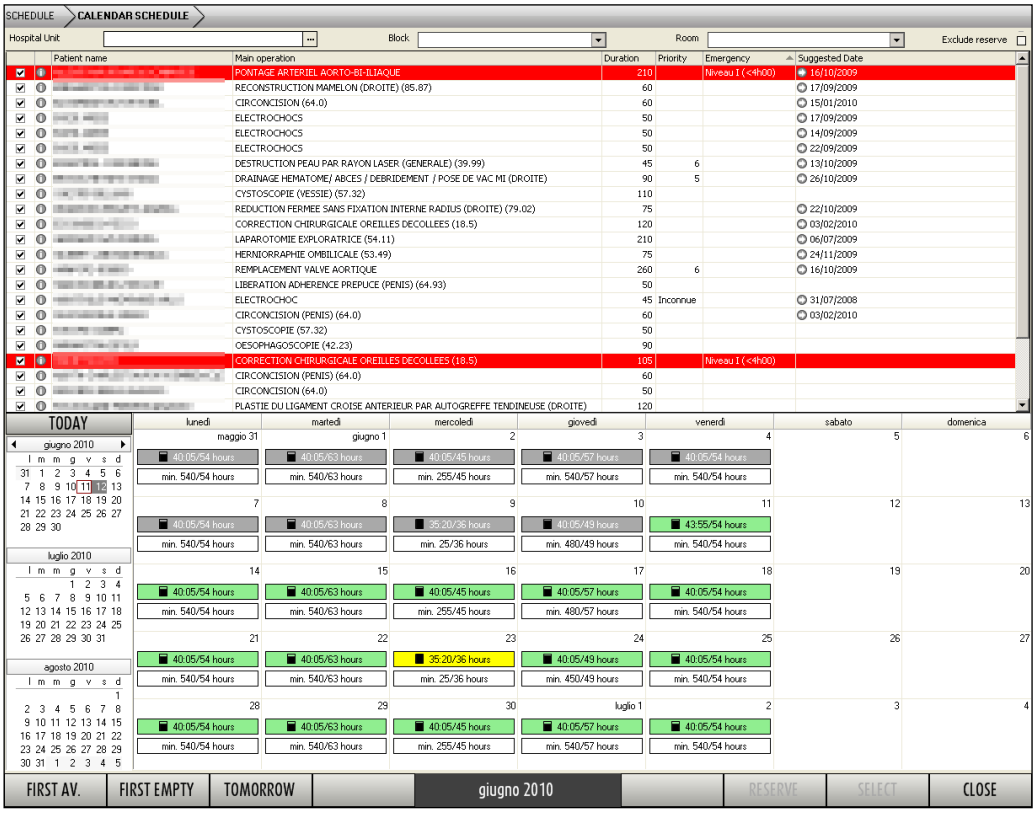


Fig 232 – Calendar Schedule

7.7.1. How to access the page

The calendar schedule page can be accessed from three different pages. These are:

1) the “Operation List” page;
2) the “Operation Record” page;

3) the “Scheduling” page.

7.7.1.1. Access from the “Operation List” page

On the “Operation List” page (Fig 46, paragraph 3),

- select the operations to schedule.
- Click the **Change** button on the command bar (Fig 233 **A**).

The menu shown in Fig 233 will open.

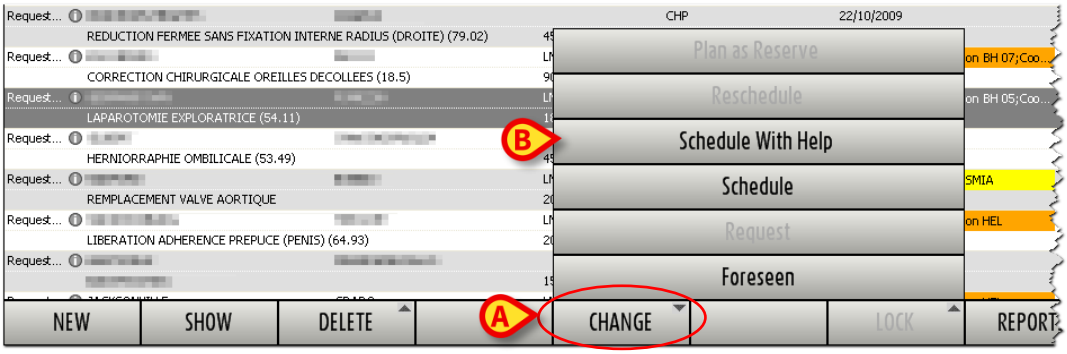


Fig 233

- Click the **Schedule with help** option (Fig 233 **B**).

The “Calendar schedule” screen will open (Fig 235). All and only the selected operations will be shown on this screen.

To select more than one operation at a time, you must click the lines corresponding to the operations to be selected, keeping the CTRL key on the keyboard pressed.

7.7.1.2. Access from the “Operation Record” page

- On the “Operation Record” page (Fig 51, paragraph 4).
- Click the **Edit** button on the command bar (Fig 234 **A**)

The screen turns to “edit” mode.

- Click the **Change** button on the command bar (Fig 234 **B**).

The menu shown in Fig 234 opens.

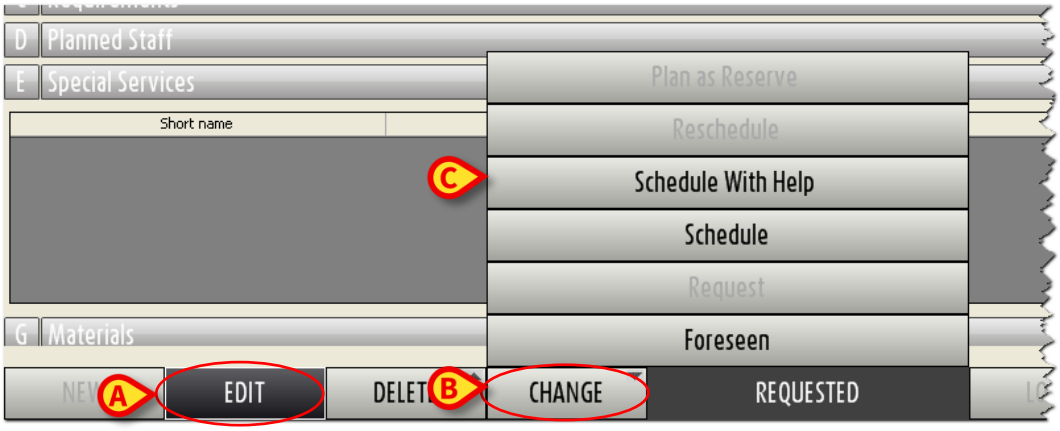


Fig 234

- Click the "Schedule with help" option (Fig 234 **C**).

This accesses the "Schedule with help" page (Fig 235). Only the operation referred to by the initial "Operation Record" page will be shown on this page.

7.7.1.3. Access from the "Scheduling" page

On the "Scheduling" page (Fig 173, paragraph 7).

- Click the **Sched. Help** button on the command bar.

This accesses the "Schedule with help" page (Fig 235). All the operations listed on the initial "Scheduling" page in the "Operation to schedule" area will be shown on this page.

7.7.2. Page description

The “Schedule with Help” page is made up of 5 areas.

1) The “Hospital Unit”, “Block” and “Room” selection filters (Fig 235 **A**).
2) The month selection area (Fig 235 **B**).
3) The area containing the list of operations (Fig 235 **C**).
4) The central area, the calendar of the month selected (Fig 235 **D**).
5) The command bar (Fig 235 **E**).

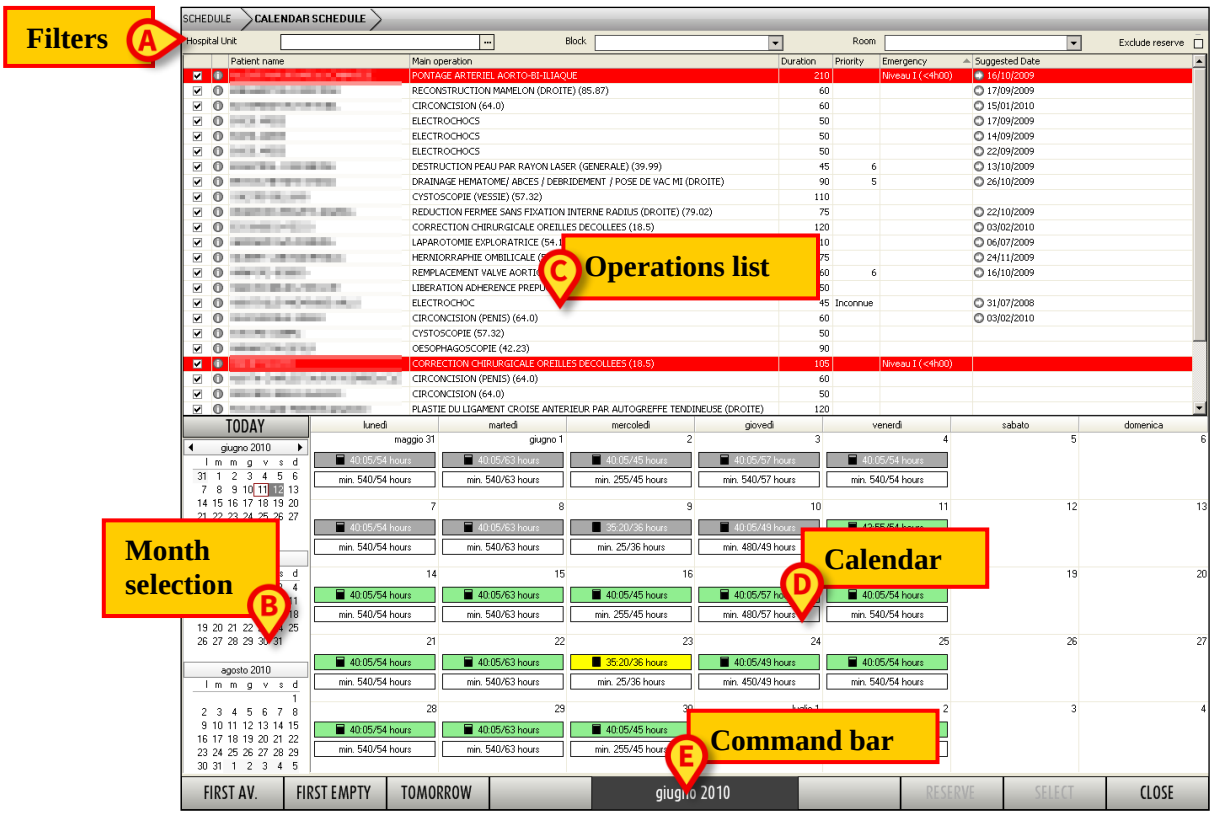
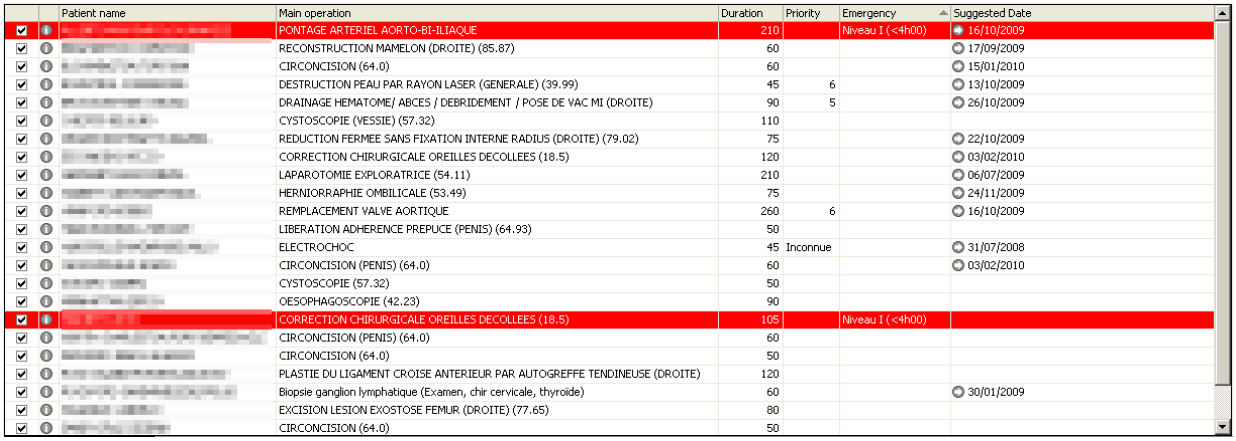


Fig 235

The characteristics and operation of areas **A** (selection filters) and **B** (month selection) are the same as those described in paragraph 7.6 for the “Calendar” page. See this paragraph for their description.

7.7.2.1. The list of operations



	Patient name	Main operation	Duration	Priority	Emergency	Suggested Date
☑	[redacted]	PONTAGE ARTERIEL AORTO-BI-ILIAQUE	210		Niveau I (<4h00)	16/10/2009
☑	[redacted]	RECONSTRUCTION MAMELON (DROITE) (85.87)	60			17/09/2009
☑	[redacted]	CIRCONCISION (64.0)	60			15/01/2010
☑	[redacted]	DESTRUCTION PEAU PAR RAYON LASER (GENERALE) (39.99)	45	6		13/10/2009
☑	[redacted]	DRAINAGE HEMATOME/ ABCES / DEBRIDEMENT / POSE DE VAC MI (DROITE)	90	5		26/10/2009
☑	[redacted]	CYSTOSCOPIE (VESSIE) (57.32)	110			
☑	[redacted]	REDUCTION FERMEE SANS FIXATION INTERNE RADIUS (DROITE) (79.02)	75			22/10/2009
☑	[redacted]	CORRECTION CHIRURGICALE OREILLES DECOLLEES (18.5)	120			03/02/2010
☑	[redacted]	LAPAROTOMIE EXPLORATRICE (54.11)	210			06/07/2009
☑	[redacted]	HERNIORRAPHIE OMBILICALE (53.49)	75			24/11/2009
☑	[redacted]	REMPLACEMENT VALVE AORTIQUE	260	6		16/10/2009
☑	[redacted]	LIBERATION ADHERENCE PREPUCE (PENIS) (64.93)	50			
☑	[redacted]	ELECTROCHOC	45	Inconnue		31/07/2008
☑	[redacted]	CIRCONCISION (PENIS) (64.0)	60			03/02/2010
☑	[redacted]	CYSTOSCOPIE (57.32)	50			
☑	[redacted]	OESOPHAGOSCOPIE (42.23)	90			
☑	[redacted]	CORRECTION CHIRURGICALE OREILLES DECOLLEES (18.5)	105		Niveau I (<4h00)	
☑	[redacted]	CIRCONCISION (PENIS) (64.0)	60			
☑	[redacted]	CIRCONCISION (64.0)	50			
☑	[redacted]	PLASTIE DU LIGAMENT CROISE ANTERIEUR PAR AUTOGREFFE TENDINEUSE (DROITE)	120			
☑	[redacted]	Biopsie ganglion lymphatique (Examen, chir cervicale, thyroïde)	60			30/01/2009
☑	[redacted]	EXCISION LESION EXOSTOSE FEMUR (DROITE) (77.65)	80			
☑	[redacted]	CIRCONCISION (64.0)	50			

Fig 236 – List of operations

The table shown contains the list of operations to be scheduled using the functions of the schedule with help.
Every line corresponds to an operation.

The columns contain, in this order:

- the selection boxes.

The schedule with help functions are active only for the operations selected. Therefore, you can choose the operations on the list for which you wish to use the schedule with help functions by selecting or deselecting the box corresponding to the operation.

- The information icon .

Click this icon to display a window summarizing the information available on the operation (Fig 237).

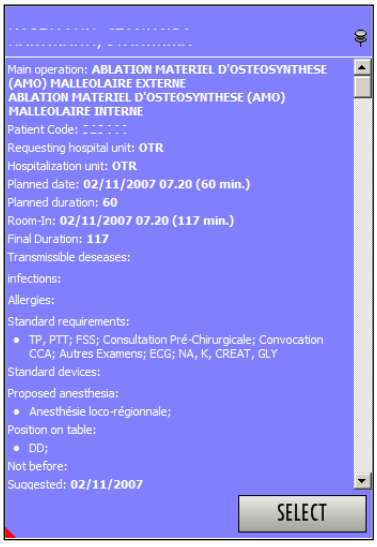


Fig 237 – Operation data

Click the **Select** button in the window to access the "Operation Record" page relating to the operation clicked (Fig 51).

- The name of the patient to be operated on.
- The operation.
- The scheduled duration.
- The degree of priority of the operation.

The operations scheduled as "Emergencies" are highlighted red.

- The date suggested for the operation (if indicated on the "Operation Record" page - Fig 51).

Click the icon alongside the suggested date to highlight the corresponding day in blue on the calendar (Fig 238 **A**). In this way you can immediately check the availability of time on the day suggested for a specific operation.

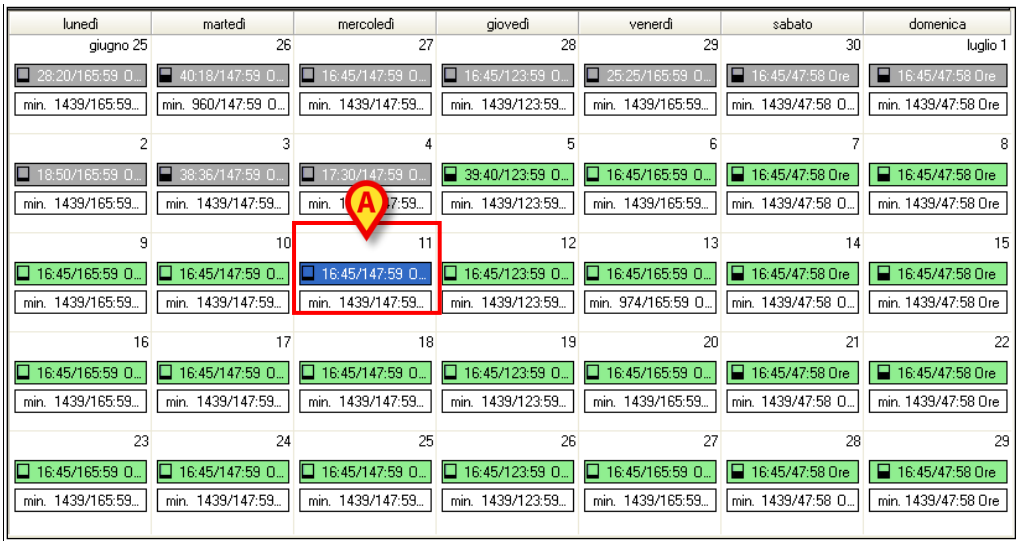


Fig 238 – Suggested date

7.7.2.2. The calendar of the selected month

The central part of the page shows, in a calendar form, the information on the availability of time in the operating rooms managed by the connected user (Fig 239).

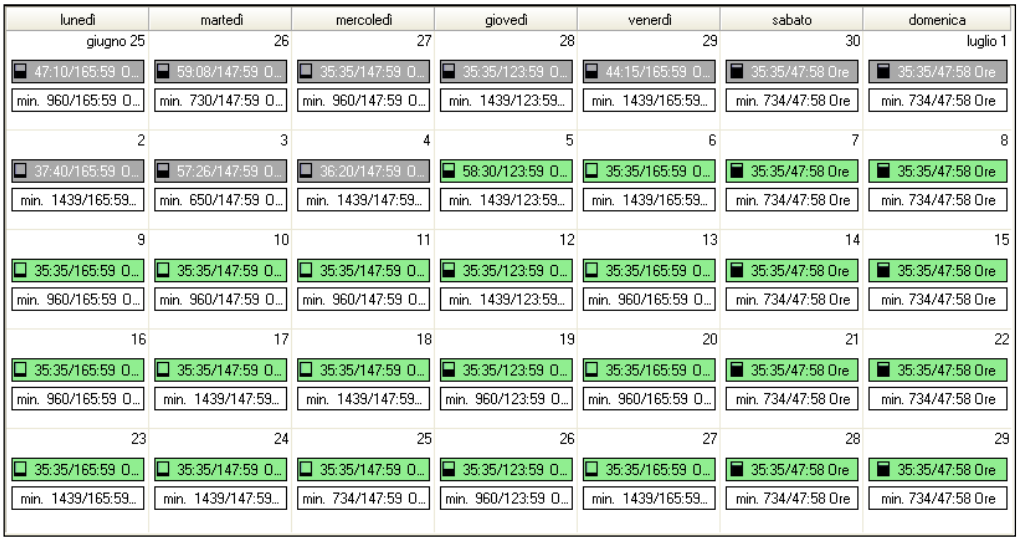


Fig 239 – Month selected

Every box corresponds to an operating day (Fig 240).

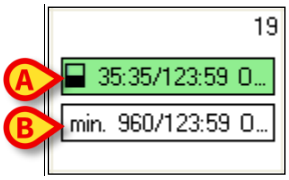


Fig 240 – Operating day

The upper box (Fig 240 **B**) indicates how much time, of the total time available that day, is already reserved for operations.

The ▬ icon indicates that, for the day in question, the time occupied by operations is less than 50% of the total time.

6 possible icons of this type may occupy the same position.

- ☐ means that the total time is all available.
- ▬ means that the time occupied by operations is less than 25% of the total time.
- ▬ means that the time occupied by operations is less than 50% of the total time.
- ▬ means that the time occupied by operations is less than 75% of the total time.
- ▬ means that the time occupied by operations is less than 90% of the total time.
- ■ means that the time is all occupied by operations.

The same information is contained in detail in text form alongside the icon. In the example shown in Fig 240, the time available is 35 hours and 35 minutes out of a total 123 hours and 59 minutes.

The green color of the box means that every operation selected on the list of operations (Fig 236) can be planned on that day.

The box in question can appear in yellow (Fig 241).

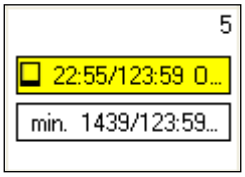


Fig 241

The color yellow means that at least one of the operations (but not all of the operations) selected on the list of operations (Fig 236) can be planned on that day.

The box can appear in red (Fig 242).

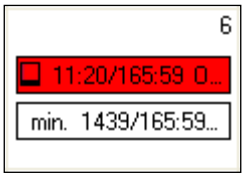


Fig 242

The color red means that none of the operations selected on the list of operations (Fig 236) can be planned on that day.

When the box appears in gray, the day in question is in the past. Therefore it is not possible to perform any operation on that day (Fig 243).

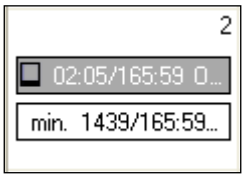


Fig 243

The lower box (Fig 240 **B**) indicates the longest range of time available in all the rooms managed by the user connected. This range is indicated in minutes to enable immediate comparison with the scheduled duration of the different operations (also indicated in minutes). The example shown in Fig 240 **B** indicates that the longest range of time that day in 960 minutes. Any operation with a scheduled duration of less than 960 minutes can therefore be scheduled on that day.

Click one of the operations selected on the list of operations to obtain additional information.

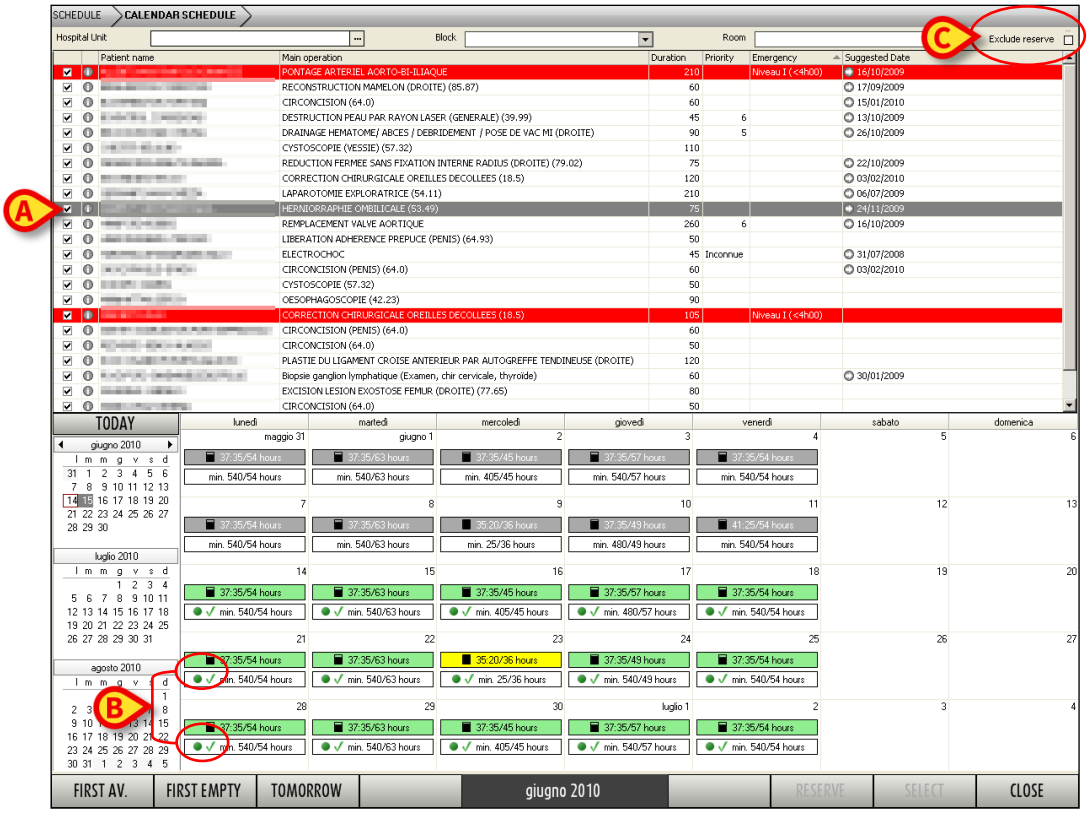


Fig 244 – Selecting an operation

The operation clicked appears highlighted (Fig 244 **A**) and new icons appear inside the boxes indicating the various days (Fig 244 **B**, Fig 245).

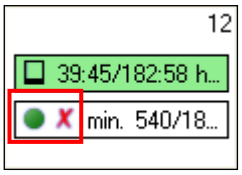


Fig 245

The ● icon means that the operation highlighted can be planned on that day.

The ● icon means that the operation highlighted cannot be planned on that day.

The ✓ icon means that there has been a crosscheck with other IT systems and that there is no overlap of reservations for that patient on that day (the patient could, for example, have arranged a test or check-up for the same day).

The ✗ icon may mean two things: 1) that there has been no crosscheck with other IT systems and that there is no data regarding possible overlapped reservations; 2) that there is an overlap of reservations for that patient on that day.

Click the lower portion of every box (Fig 240 **B**) to open a window containing detailed information on the situation of every room in the day corresponding to the box.

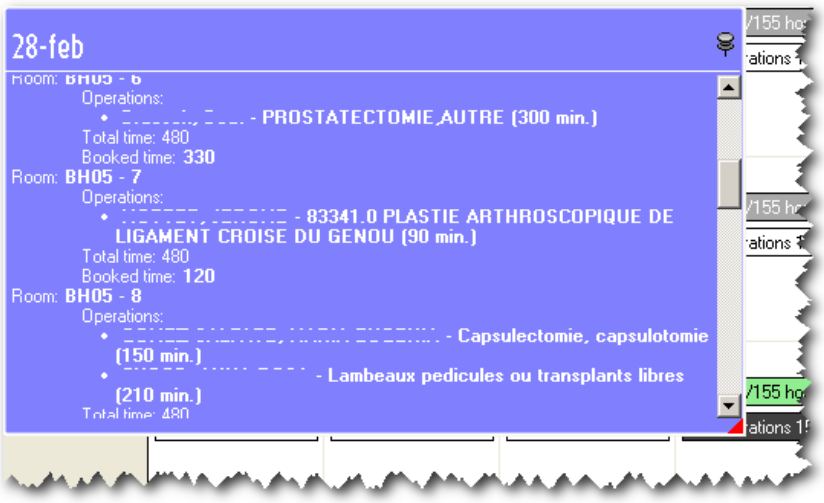


Fig 246 – Day Details

The example shown in Fig 246 informs us, for example, that room 7 of block BH05 has 1 operations scheduled (you can read the patient's name, the type of operation and the duration), that the total time available in this room is 480 minutes and that the time occupied by operations is 120 minutes.
Moving downwards, you will find information on all the rooms managed by the user connected. Once again in Fig 246 you can see, for example, that two operations are scheduled in room 8 of block BH05, that the total time available in this room is 480 minutes and that the time occupied by operations is 360 minutes.

The "exclude reserves" checkbox indicated in Fig 244 **C** can be used to exclude the room, block or generic reserves from the calculation of available hours and minutes (see paragraph 7.5.5 for an explanation of the concept of "reserve"). By default, when the system calculates the times, it considers reserves as operations to be calculated. Select the "exclude reserves" checkbox to exclude the reserves from the time calculation. A room reserve, for example, with a scheduled duration of 100 minutes, will implicate a subtraction of 100 minutes from the time available in the room in which it has been scheduled. Select the "exclude reserves" checkbox to prevent subtraction of these 100 minutes.

To select one of the calendar days, simply click the corresponding box. The day selected appears highlighted in dark gray. Day 28 is selected in Fig 247.

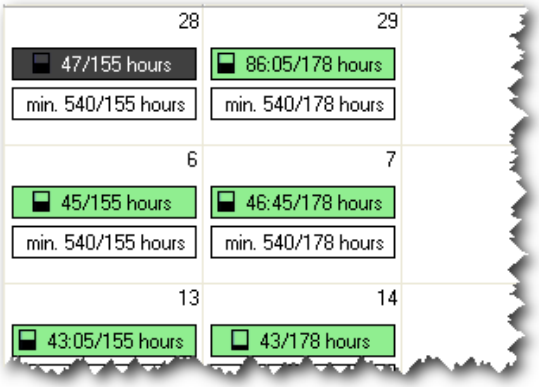


Fig 247 – Day Selected

7.7.2.3. Example: how to schedule an operation

Below there is an example of one of the possible ways of using the schedule with help page. To keep things simple we have selected just one operation. The procedure however is the same for multiple selections.

To plan an operation using the “Schedule with help” functionalities

- Access the “Schedule with help” window (Fig 232 – Calendar Schedule) so that the operation appears in the list of operations - Fig 236 - (see paragraph 7.7.1 for instructions).
- Click inside the corresponding checkbox to select the operation.

The boxes indicating the various days will be colored depending on whether or not it is possible to schedule the operation (green if it fits, red if it doesn’t - Fig 239).

- Select the most suitable of the green boxes.
- Click the box to select it.

The box will be highlighted (Fig 247).

- Click the **Select** button on the command bar.

The scheduling page opens (Fig 173) for the day selected and with only the operation selected in the “Operations to schedule” area.

- Enter the operation in the scheduling grid according to the procedure described in paragraph 7.5.

7.7.3. The command bar of the “Calendar schedule” screen

The control bar of the schedule with help page contains various button to perform different operations (Fig 248).

Fig 248

The functions of the different buttons are briefly listed in this paragraph and, when necessary, described in detail in the paragraphs indicated.

This button makes it possible to automatically select the first day available for the scheduling of the operations selected. When you press the button, the system automatically selects the first day on which it is possible to enter a specific operation. See paragraph 7.7.3.1 for the detailed procedure.

This button makes it possible to automatically select the first completely free day. When you press the button, the system selects the first day with no scheduled operations. See paragraph 7.7.3.2 for the detailed procedure.

This button makes it possible to automatically select the day following the current day.

The box in the middle of the command bar shows the name of the month currently displayed.

This button makes it possible to enter the operations selected in the schedule of any operating day as a generic reserve. See paragraph 7.7.3.3 for the detailed procedure.

This button makes it possible to access the scheduling page related to the day selected (Fig 173)

This button closes the “Calendar schedule” screen.

7.7.3.1. First available day

The **First Av.** button (Fig 249) makes it possible to automatically select the first day available for the scheduling of the operations selected. When you press the button, the system automatically selects the first day on which it is possible to enter a specific operation.

Fig 249 - “Calendar schedule” command bar

To use this function, you must

- click the box corresponding to the operation (or operations) to be scheduled (Fig 250).

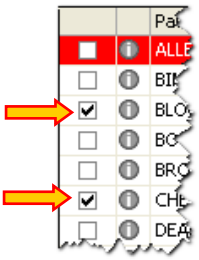


Fig 250

- Click the **First Av.** button on the command bar (Fig 250 **A**).

The first day containing at least one empty slot is highlighted on the calendar.

- Click the **Select** button on the command bar (Fig 250 **B**).

The scheduling page for the day chosen and the operation selected opens (Fig 173).

7.7.3.2. First empty day

The **First Empty** button (Fig 251 **A**) makes it possible to automatically select the first completely free day. When you press the button, the system selects the first day with no scheduled operations.

Fig 251 - "Calendar schedule" command bar

To use this function, you must

- click the box corresponding to the operation (or operations) to be scheduled (Fig 252).

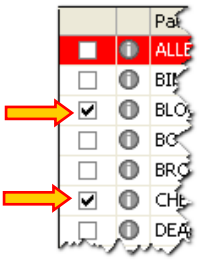


Fig 252

- Click the **First Empty** button on the command bar (Fig 251 **A**).

The first completely free day is highlighted on the calendar.

- Click the **Select** button on the command bar (Fig 251 **B**).

The scheduling page for the day chosen and the operation selected opens (Fig 173)

7.7.3.3. Create a generic reserve

The **Reserve** button (Fig 253 **A**) makes it possible to enter the operations selected in the schedule of any operating day as a generic reserve (see paragraph 7.5.5 for an explanation of the concept of "reserve").

Fig 253 - "Calendar schedule" command bar

To use this function, you must

- click the box corresponding to the operation (or operations) to be scheduled as reserve (Fig 254).

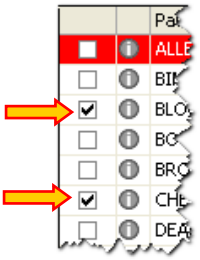


Fig 254

- Click the box corresponding to the day on which you wish to enter the reserve.

The box appears highlighted (Fig 255).

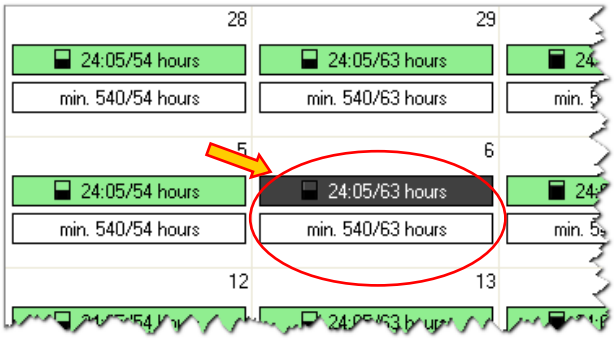


Fig 255

- Click the **Reserve** button (Fig 253).

A window requesting confirmation of the operation opens (Fig 256).

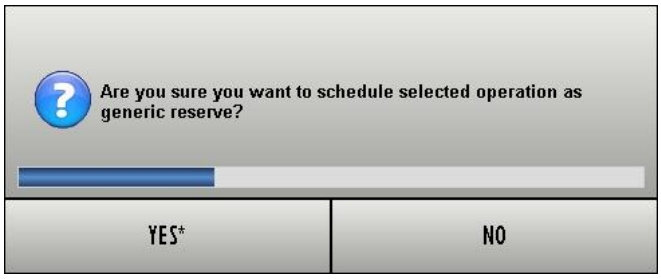


Fig 256

- Click **Yes** to schedule the operation as a reserve.

The operation selected disappears from the list of operations to schedule and appears as a generic reserve on the day chosen.

The functions performed by the **Reserve** *and* **Select** *buttons can also be performed by right clicking. After selecting an operation, right click the box corresponding to the day required to open a window containing the two options, "Reserve" and "Select"(*Fig 257*).*

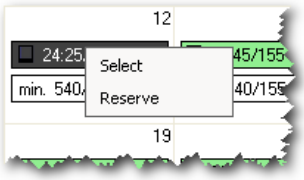


Fig 257

8. Room staff management

The “Staff management” module makes it possible to manage the planned staff of the operations. The module implements scheduling functionalities that are specific for the staff management. To access this module

- Click the corresponding icon - - on the lateral bar (Fig 258)

Fig 258

The “Staff Management” screen will open (Fig 259).

Staff can be also scheduled, with different procedures, on the “Operation Record” screen. The relating procedures are described in paragraph 6.4.

A “System Option”has been defined in order to avoid conflicts between the staff planned on the “Operation Record” and the staff planned on the “Staff management” module (described in this paragraph).

This “System Option”, named **DisablePlannedStaffEditingOnOperationRecord**, *if activated, enables staff editing on the “Operation Record” only if the operation is either in “Foreseen” or “Requested” state. The staff of the planned operations (“Planned” state) is only managed on the “Staff management” module.*

To activate the system option set its Value=Yes.

If the operation data are changed while the staff is being edited, after the Update the system informs the user with a specific message. This message makes it possible to print a report containing the list of all the operations whose data changed.

This message is generated only once. It will not later be possible to print the list again.

The information that, if edited, triggers the message is: Operation status, Planned date, Planned time, Planned duration, Main operation, Planned Room, Planned Block.

8.1. Staff Management

The "Staff Management" screen (Fig 259) makes it possible to manage the operating staff for the planned operations.

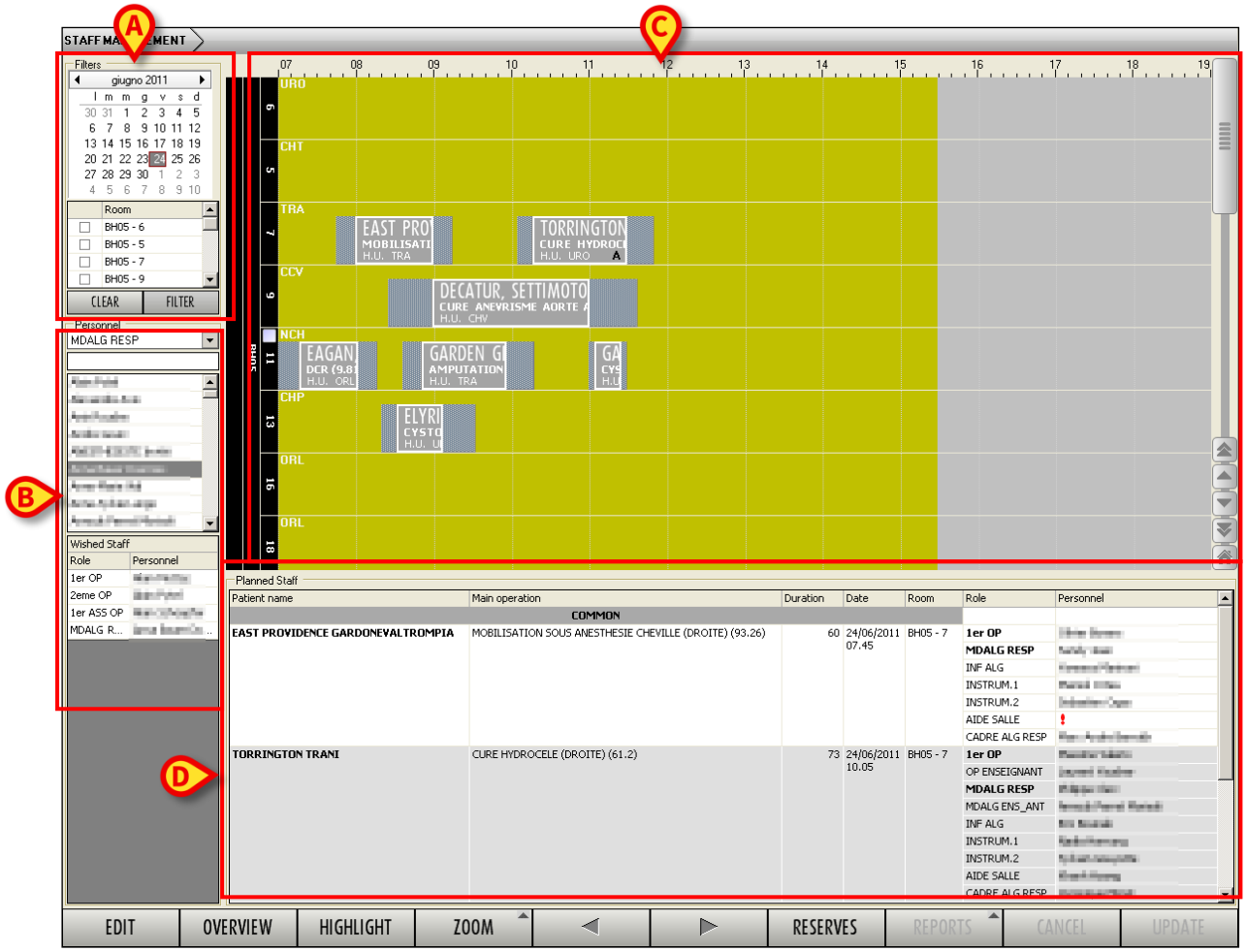


Fig 259

The screen is formed of four areas:

- The search filters area (Fig 259 **A**).
- The personnel editing tools panel (Fig 259 **B**).
- The area displaying either the operations plan or the reserves list (Fig 259 **C**).
- The area named "Planned Staff area" dedicated to show the planned staff (Fig 259 **D**).

These four areas are described in the following paragraphs.

8.1.1. Search filters

The search filters (Fig 259 **A**, Fig 260) make it possible to decide which operations are displayed in the "Planned operations" area (described in paragraph 8.1.3) by selecting the operation date and room.

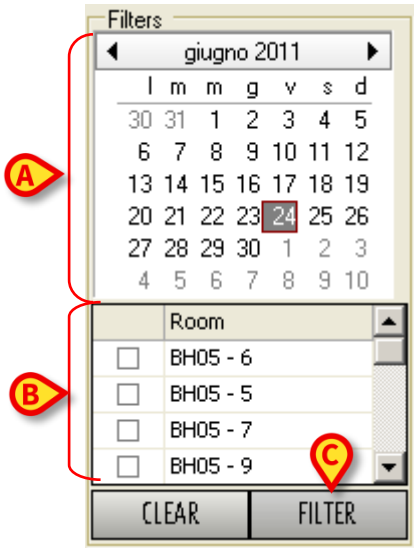


Fig 260

To display the operations planned for a specific date

- Click the cell corresponding to the wanted day on the calendar indicated in Fig 260 **A**.
- Click the **Filter** button (Fig 260 **C**).

The operations planned for the selected day will be displayed.

Multiple days selection is possible (maximum 5 days) by keeping the mouse button clicked while selecting the corresponding cells. The day after present day is selected by default.

The display the operations planned for a specific room

- Select the checkbox corresponding to the room in the area indicated in Fig 260 **B**.
- Click the **Filter** button (Fig 260 **C**).

Only the operations planned for the selected rooms are this way displayed. Multiple room selection is possible.

8.1.2. Personnel editing tools

The personnel editing tools, shown in Fig 261, make it possible to search and select the staff members in order to associate (or dissociate) them to one or more operations. The room staff can be here defined as a team and later associated (the whole staff) to one or more operations.

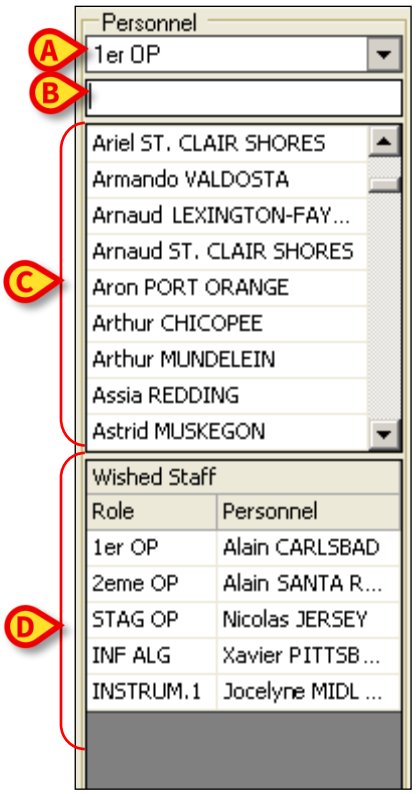


Fig 261

The panel shown in the figure is formed of four tools.

- **Role filter** (Fig 261 **A**) – this field makes it possible to specify the wanted role. Only the staff members enabled to cover that role are displayed in the personnel table (Fig 261 **C**).
- **Name filter** (Fig 261 **B**) - this field makes it possible to specify the name of the wanted staff member. After three characters are typed, the list displays only the members whose names match the inserted characters.
- **Personnel table** (Fig 261 **C**) – This table lists on one column the staff members according to what was specified in the fields described above (name and role).
- **Wished Staff** (Fig 261 **D**) – This grid must be filled by the user with the names of the staff members required for an operation. The "Wished staff" area makes it possible to define the whole staff for one or more operations as an "operating team" that can be later associated to the specific operations. To add a staff member to the "Wished staff", drag the name of the person to be added from the personnel table and drop it on the "Wished staff" area. See paragraph 8.2.2 for the detailed procedure.

8.1.3. "Planned operations" area

The area shown in Fig 259 **C** and Fig 262 provides a view of the operating plan. The plan has the same structure and features of the "Operating Plan" described in chapter 7. See this chapter for a detailed description.

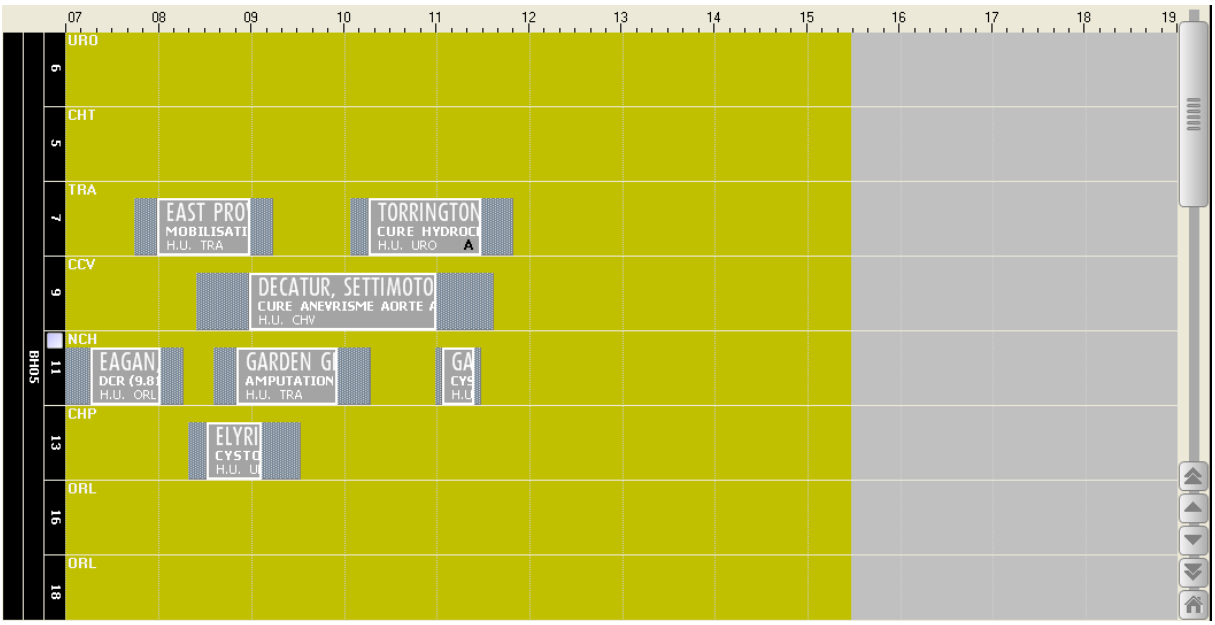


Fig 262

Scheduling functionalities are here disabled. The only possible action is the operation selection.

To select an operation

- click the **Edit** button on the command bar.
- Click the rectangles corresponding to the operations to be selected.

The selected operation appears white with black borders (see Fig 263).

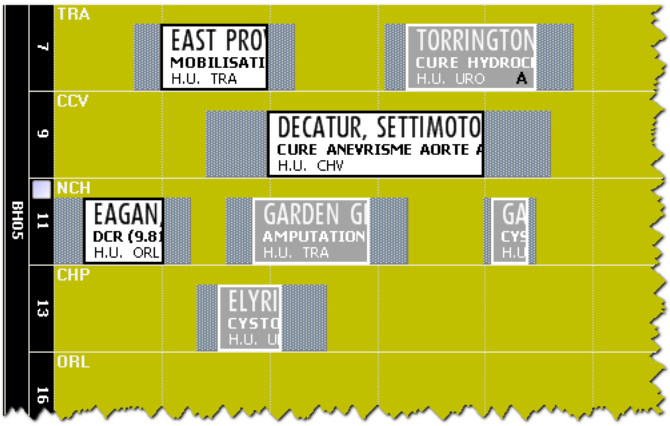


Fig 263

The selection of one or more operations displays the details of the selected operations in the "Planned staff" area (Fig 259 **D**, Fig 265). Most important, the details relating to the planned staff of the selected operations are displayed in the "Planned Staff" area. By default, if no operation is selected, the details of all the planned operations are displayed in the "Planned staff" area.

8.1.3.1. "Reserves" display

The "Planned operations" area (Fig 262) is also used to display the list of "Reserves" (see paragraph 7.5.5 for an explanation of the "Reserve" concept).

To display the “Reserves” list

- Click the **Reserves** button on the command bar (Fig 264 **A**).

The list of “Reserves” will be displayed (Fig 264 **B**).

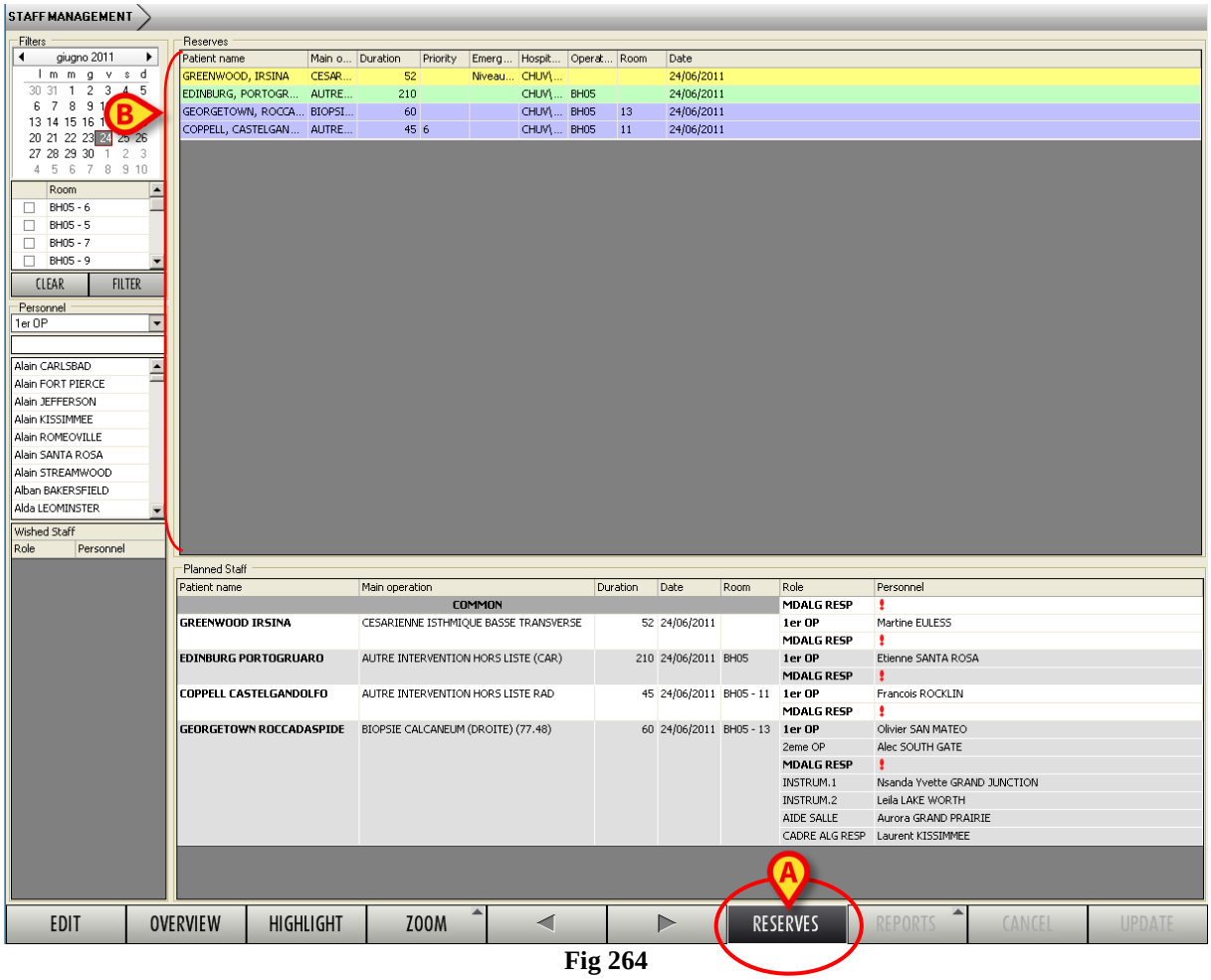


Fig 264

Each row in the “Reserves” list corresponds to an operation. For each operation the following information is provided:

- Patient name
- Operation
- Planned duration
- Priority
- Emergency level
- Requesting Hospital Unit
- Planned block
- Planned room
- Planned date

To select a “Reserve”

- click the **Edit** button on the command bar.
- Click the row corresponding to the “Reserve” to be selected.

To select multiple “Reserves”, keep the “Ctrl” button on the workstation keyboard pressed while clicking on the different rows.

The selection of one or more “Reserves” displays the details of the selected operations in the “Planned staff” area (Fig 259 **D**, Fig 265). Most important, the details relating to the planned staff of the selected operations are displayed in the “Planned Staff” area. By default, if no “Reserve” is selected, the details of all the “Reserves” are displayed in the “Planned staff” area.

8.1.4. “Planned staff” area

The area shown in Fig 265 and Fig 259 **D** displays, alongside the operation’s main data, detailed information on the staff planned for the operations selected in the “Planned operations” area (Fig 262). If no operation is selected in the “Planned operations” area, the data relating to all the planned operations are displayed.

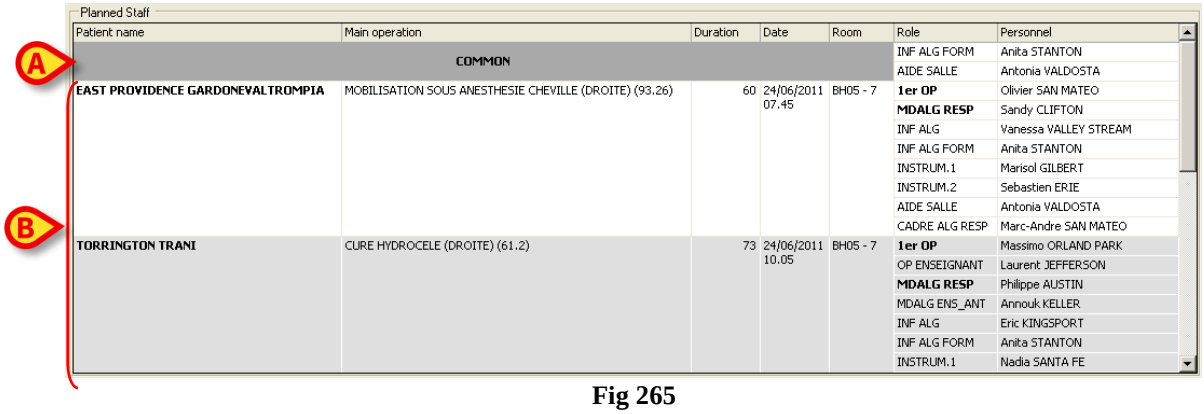


Fig 265

The operations are displayed on a grid. The first row, indicated in Fig 265 **A** and enlarged in Fig 266, named “Common”, shows the (possible) staff members that are common to all the selected operations. The “Common” row is therefore displayed only if more than one operation is selected (or no operation is selected).

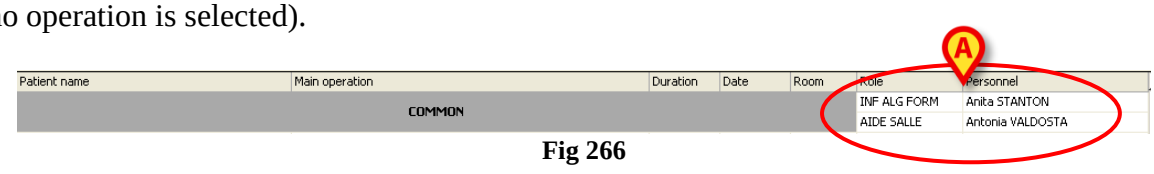


Fig 266

For each staff member the role and the name are indicated (Fig 266 A).

The ✓ icon displayed instead of the name (no name) of the staff member indicates that every person enabled to cover the specified role is suitable for the operation.

The ! icon displayed instead of the name of the staff member indicates that the specific role is required but no information was provided regarding the person’s name.

If the ✓ icon is displayed alongside the name it means that only that specific person is suitable for the operation.

The rows placed below the “Common” row (Fig 265 **B**, Fig 267) indicate the selected operations. The operation main data are here provided (patient name, planned operation, planned date and time, planned duration and planned room) alongside the detailed planned staff.

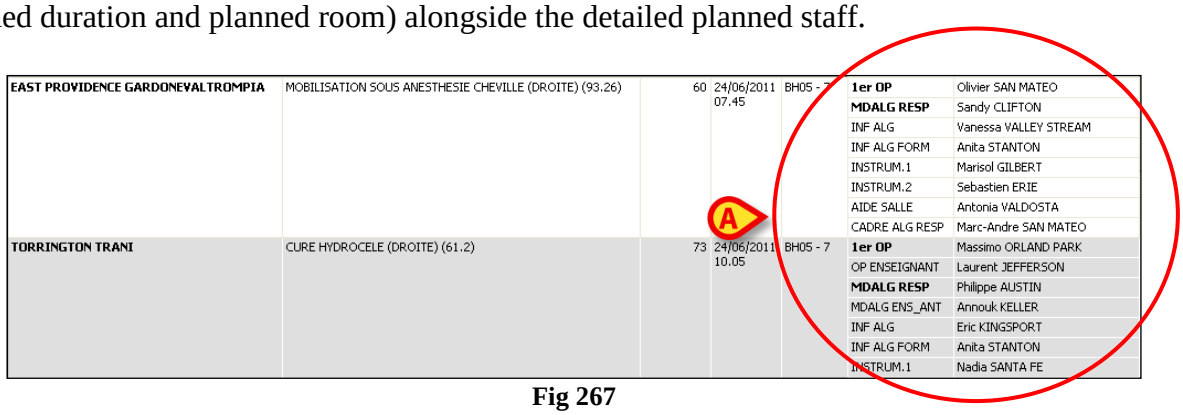


Fig 267

The name and the role of each staff member are displayed (Fig 267 A). If an operation requires the same role more than once, various rows are displayed, referring to the same role.

8.1.5. Highlight functionality

The **Highlight** button on the command bar makes it possible to highlight the name of a selected staff member in the “Planned staff” area. A user can activate this functionality to immediately know for which operations a determined person is a staff member.
To activate the functionality

- Click the person’s name either on the “Personnel” table or on the “Wished staff” area (Fig 268 **A**).

- Click the **Highlight** button (Fig 268 **B**).

The person’s name will be highlighted in the “Planned staff” area (Fig 268 **C**).
Also, the corresponding operation boxes are highlighted on the “Plan” (Fig 268 **D**).

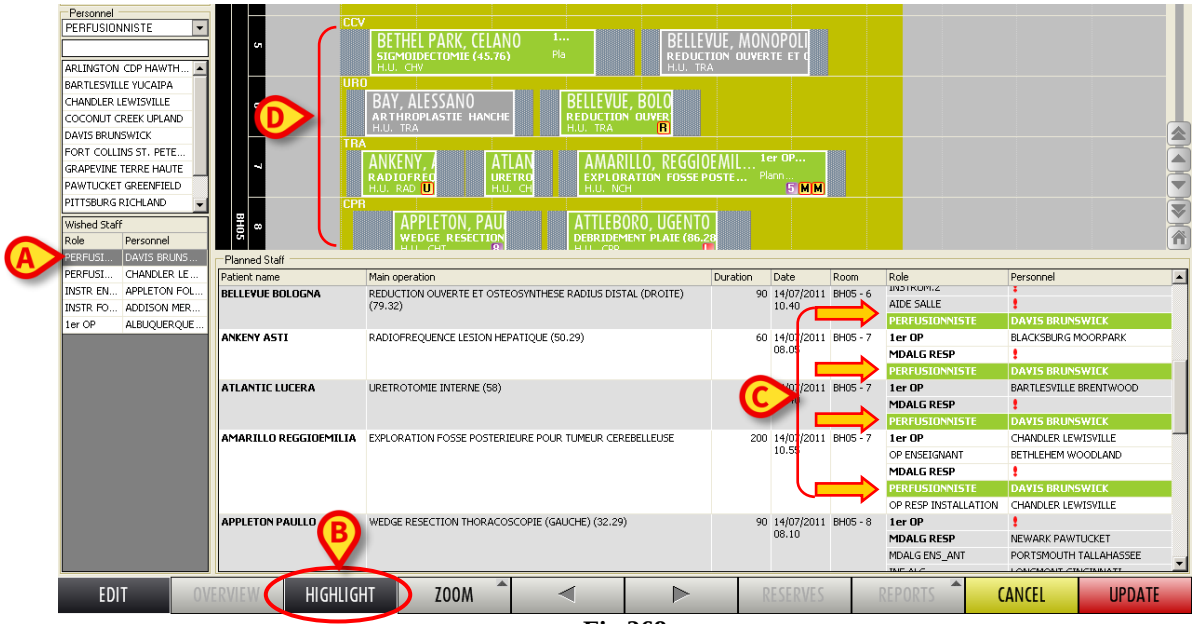


Fig 268

If the person's name was originally selected on the "Personnel" table, then it is highlighted not considering the role.
If it was originally selected on the "Wished Staff" area, then it is highlighted only in the operations for which it is associated with the specified role.

If the staff member name is clicked on the "Planned staff" area then the corresponding operation box is highlighted on the Plan.

You can also click the "Wished Staff" bar (Fig 269) to highlight all the wished staff members at once. In this case all their operations will be highlighted.

Fig 269

The "Highlight" functionality can also be used as a filter for the "Staff overview" screen (see paragraph 8.3). I.e. if the "Highlight" functionality is activated and the **Overview** button is clicked, then the displayed "Staff overview" screen shows only the operations for which the selected staff members are scheduled.

8.2. Staff management procedures

This paragraph describes the procedures that can be performed on the “Staff management” module, making it possible to manage the operating staff.

8.2.1. Possible destinations indication

Basically, the staff management procedures are performed using the drag and drop functionality. That is, the various items on screen can be dragged from one position and dropped onto another for staff management purposes (described later in the specific paragraphs).
In order to facilitate the procedures, every time a “draggable” item is clicked, the system indicates the possible destinations with a blue border. See for instance Fig 270, in which the “Personnel Table” and “Wished Staff” area are bordered (on the right).

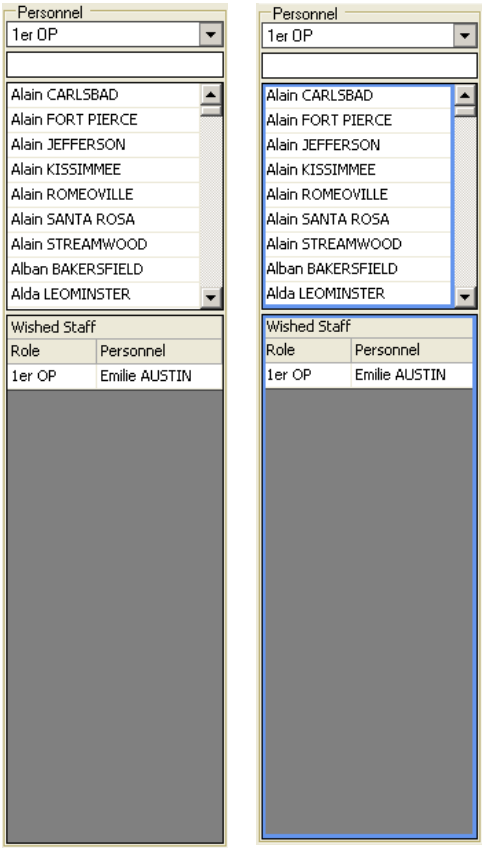


Fig 270

8.2.2. Adding a staff member to the “Wished staff”

The “Wished staff” area (Fig 271 **B**) makes it possible to define the whole staff for one or more operations as an “operating team” that can be later associated to the specific operations.

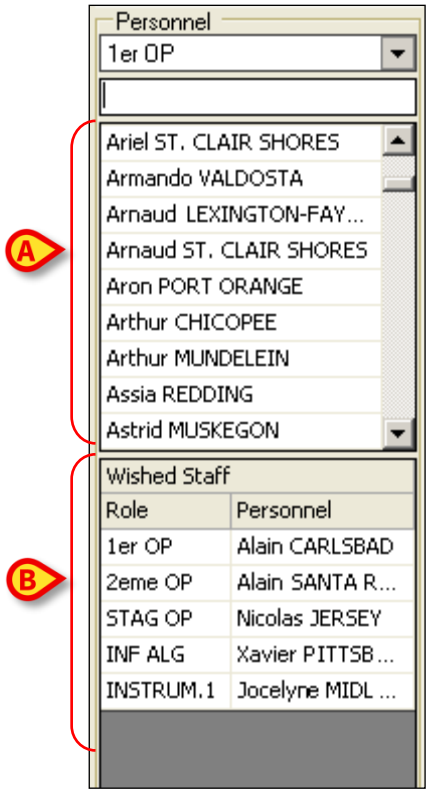


Fig 271

There are two ways to add a staff member to the “Wished staff”. In both cases, first of all, click the **Edit** button on the command bar, then

1) First way: click the row corresponding to the wanted member on the “Personnel table” (Fig 271 **A**).

   Drag the row onto the “Wished Staff” area (drag from Fig 271 **A** and drop onto Fig 271 **B**).

2) Second way: right-click on the row corresponding to the wanted staff member on the “Personnel table”.

   A contextual “Add to wished staff” option is displayed (Fig 272).

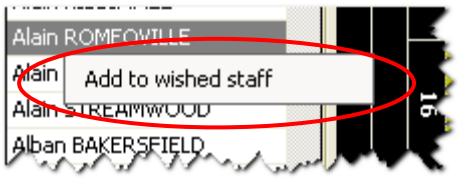


Fig 272

   Click the “Add to wished staff” option.

In both cases the name of the staff member is displayed on the “Wished staff” area.

It is also possible to add a staff member by selecting him/her from the planned staff of an existing operation. Again, there are two ways to do that:

1) First way: click the row corresponding to the wanted staff member selecting it in the “Planned staff” area (Fig 273 **A**). Drag the item onto the “Wished staff” area (Fig 273 **B**).

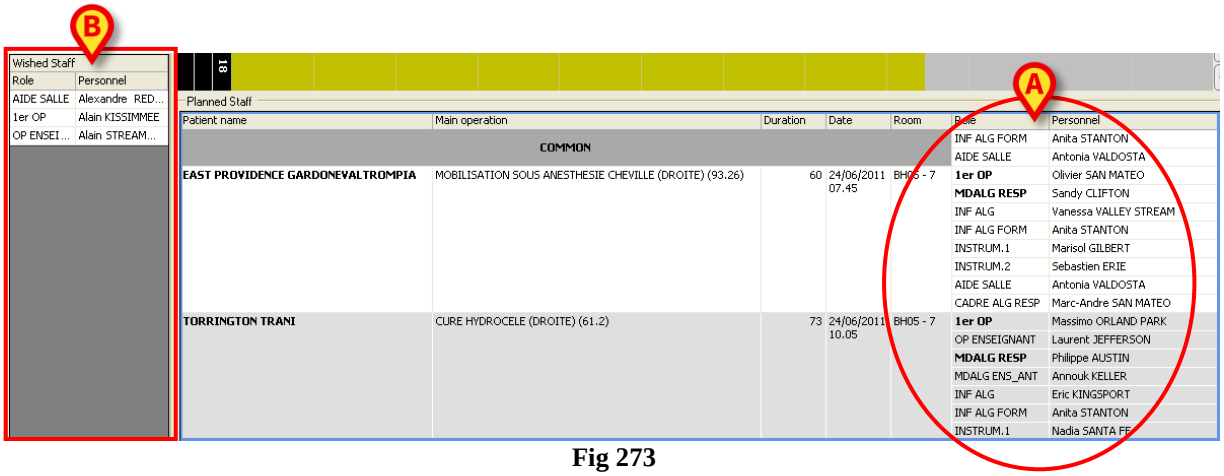


Fig 273

2) Second way: right-click on the row corresponding to the wanted staff member on the “Planned staff” area.

   A contextual menu opens (Fig 274)

Fig 274

   Click, on the menu, the “Add to wished staff” option.

In both cases the name of the staff member is displayed on the “Wished staff” area.

At the end of each procedure, in order to save the changes made,

- click the **Update** button.

8.2.3. Remove a staff member from the “Wished Staff” area

There are two ways to remove a member from the wished staff. In both cases, first of all, click the **Edit** button on the command bar, then

1) First way: click the row corresponding to the member to remove on the “Wished Staff” area. Drag the row onto the “Personnel table” area (drag from Fig 271 **B** and drop onto Fig 271 **A**).

2) Second way: right-click on the row corresponding to the staff member to be removed on the “Wished saff” area.

   A contextual menu opens (Fig 275).

Fig 275

   Click, on the menu, the “Remove from wished staff” option.

   Click the **Update** button.

In both cases the name of the staff member is removed from the “Wished staff” area.

Also, it is possible to remove the whole staff using the “Remove all” option on the same contextual menu.

8.2.4. Creating a “Wished staff” from the planned staff of an existing operation

To add the already existing staff of a planned operation to the “Wished staff” area

- Click the **Edit** button on the command bar.
- Click, on the “Planned staff” area, the operation whose staff must be added to the “Wished staff”.

The row corresponding to the operation is highlighted (Fig 276 **A**).

- Drag the item to the “Wished staff” area (Fig 276 **B**).

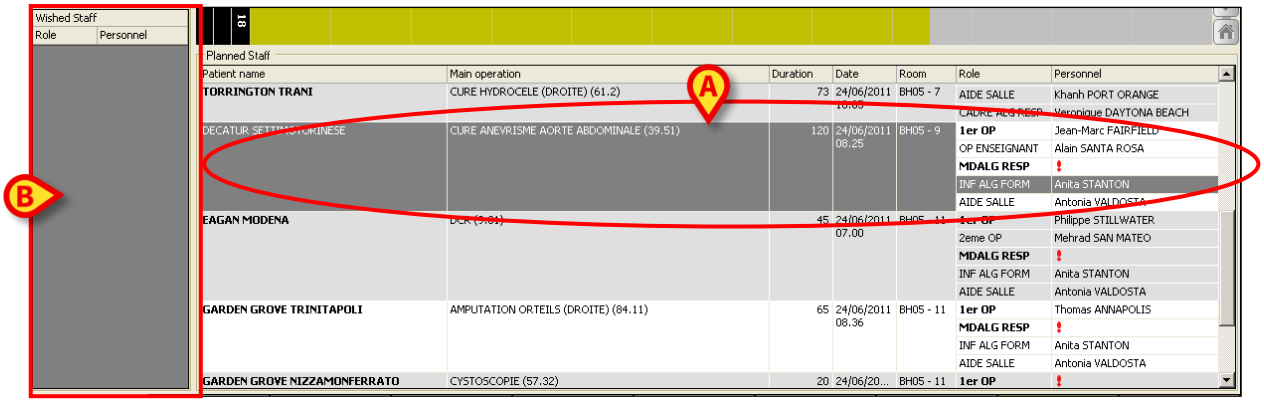


Fig 276

- Click the **Update** button.

All the staff members of the selected operation are this way added to the wished staff.

8.2.5. Associating a staff member to one or more operations

To associate a staff member to one or more operations

- Click the **Edit** button on the command bar.
- Use the filters described in paragraph 8.1.1 to search for the person to be associated to the operating staff.
- Drag the person's name onto the "Planned staff" area.

If the name is dragged onto the area relating to a specific operation, the staff member is associated only to that operation. If the name is dragged onto the "Common" area, the staff member is associated to all the selected (and therefore displayed) operations.

- Click the **Update** button.

8.2.6. Associating the whole staff to one or more operations

To associate the whole operating staff to one or more operations

- Click the **Edit** button on the command bar.
- Use the procedures described in paragraph 8.2.2 to define the operating staff.
- Click the "Wished staff" bar (Fig 277 **A**) and drag it onto the "Planned Staff" area (Fig 277 **B**).

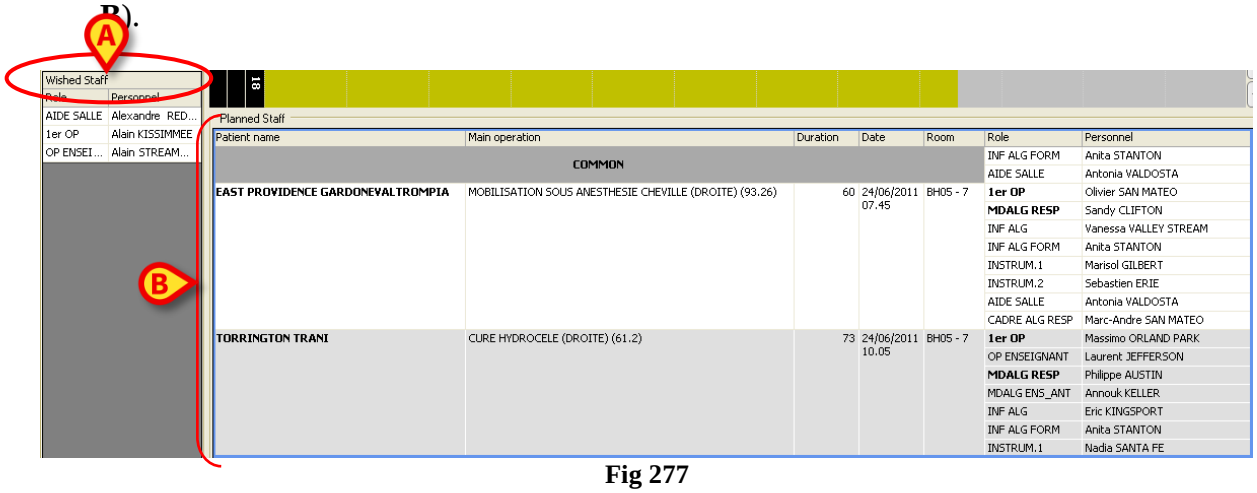


Fig 277

If the bar is dragged onto the area relating to a specific operation, the whole staff previously defined is associated only to that operation. If the bar is dragged onto the "Common" area, the whole staff is associated to all the selected (and therefore displayed) operations.

- Click the **Update** button.

8.2.7. Removing a staff member

To remove a planned staff member either from a specific operation or from the “Common” list

- Click the **Edit** button on the command bar.
- Click, on the planned staff grid (Fig 278 **A**), the row corresponding to the staff member to be removed.
- Drag the item onto the Personnel Table (Fig 278 **B**).

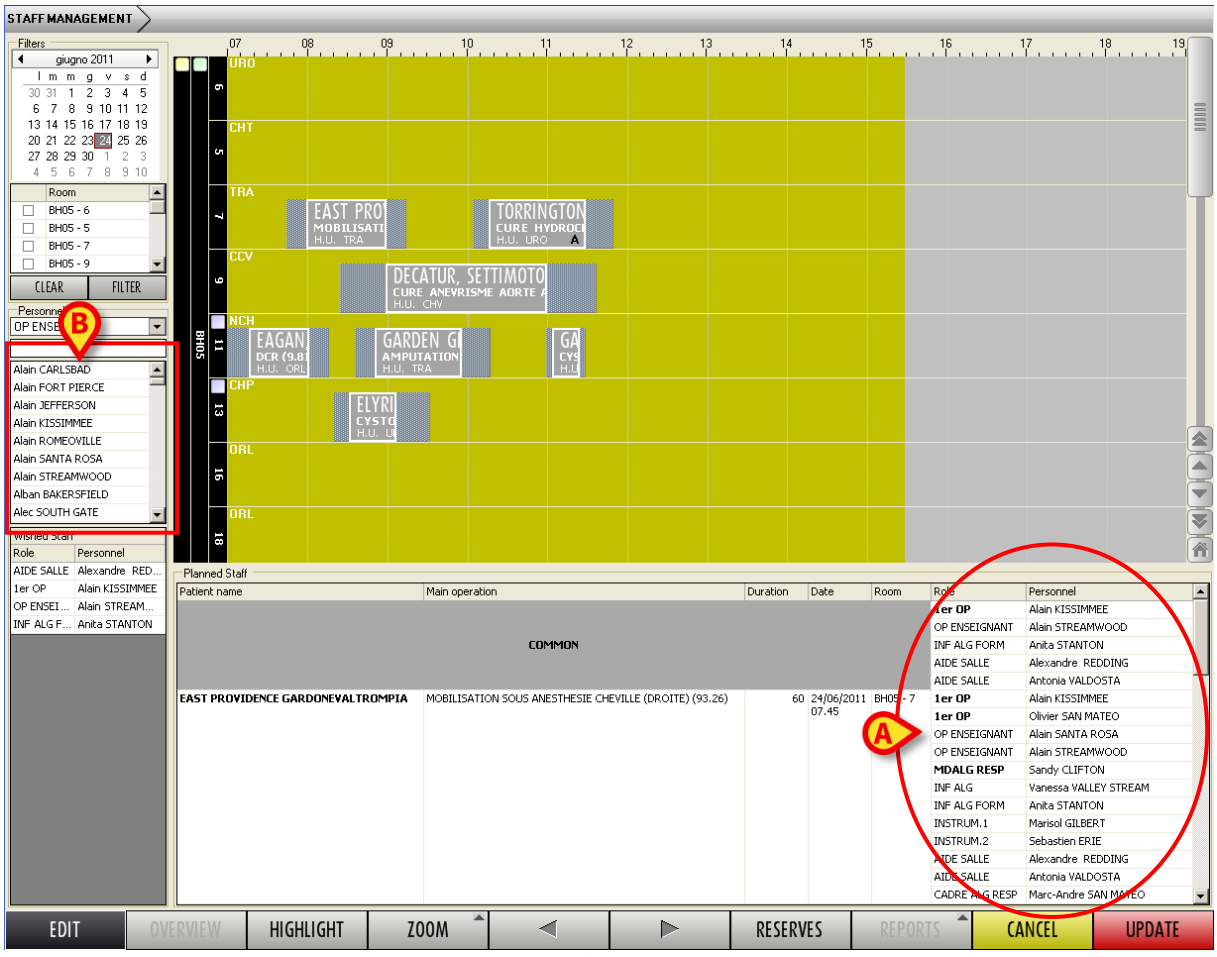


Fig 278

- Click the **Update** button.

The staff member is this way removed either from the specific operation or from all the selected operations.

It is otherwise possible to right-click the staff member name on the planned staff grid.

A contextual menu is displayed (Fig 279).

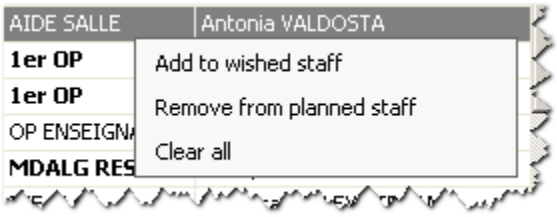


Fig 279

Three options are here available:

- Click the "Add to wished staff" option to add the selected person to "Wished staff" area (Fig 273 **B**). **Note: this option does not remove the staff member from the planned staff, it only adds him/her to the wished staff.**

- Click the "Remove from planned staff" option to remove the selected member from the planned staff.

- Click the "Clear all" option to remove the whole staff from the planned staff.

8.3. Staff overview

A specific screen displays a general overview of the staff schedule.

To access that screen

- Click the **Overview** button on the command bar.

The following screen is displayed (Fig 280).

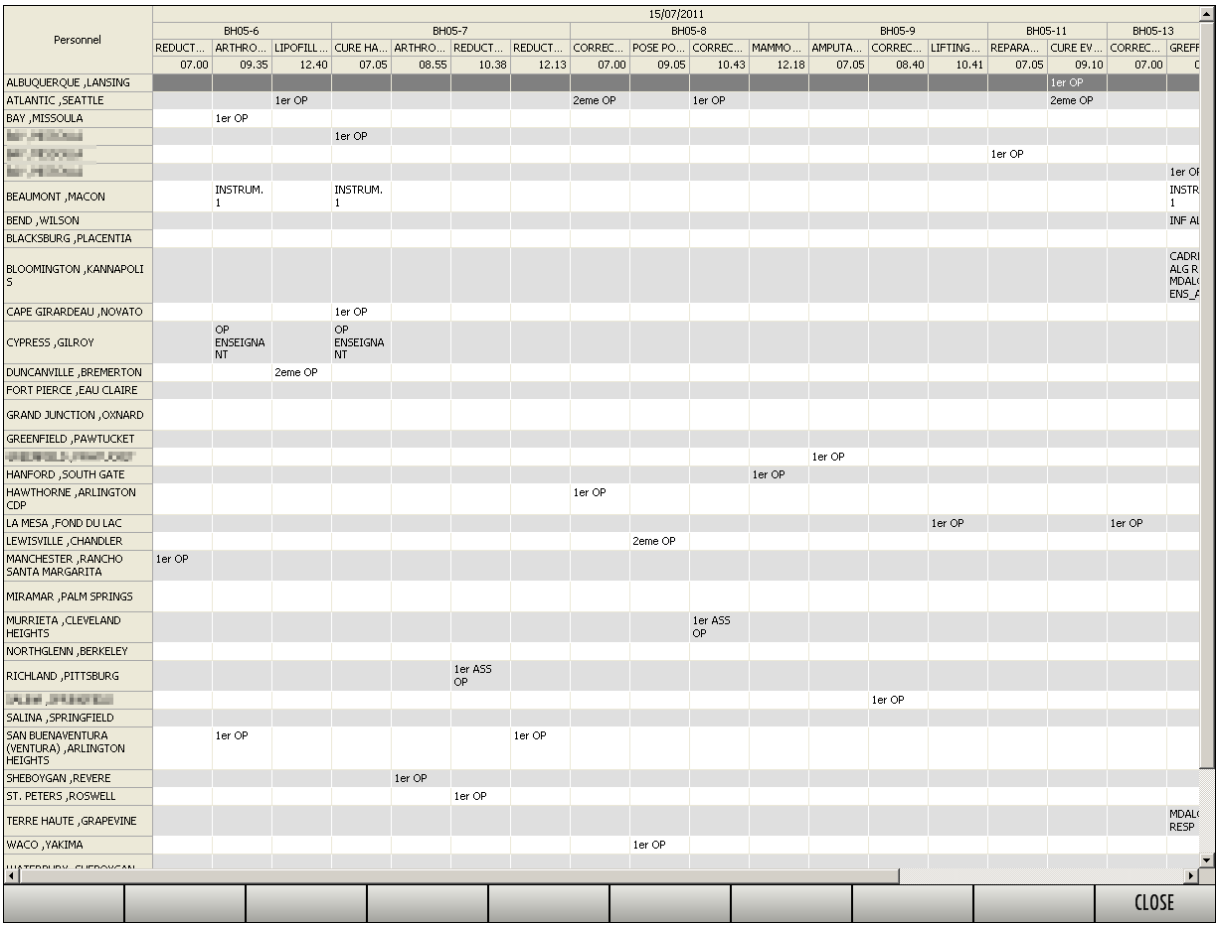


Fig 280

Each row on this screen represents a staff member; each column represents an operation.
The cell corresponding to the place where a certain staff member and a certain operation meet displays the role that the staff member covers for that specific operation. See, for instance, Fig 281 **A**, indicating that the staff member "Bay Missoula" is first operator in the operation "Arthrodese…" scheduled in room 6 of block BH05 at 9:35.

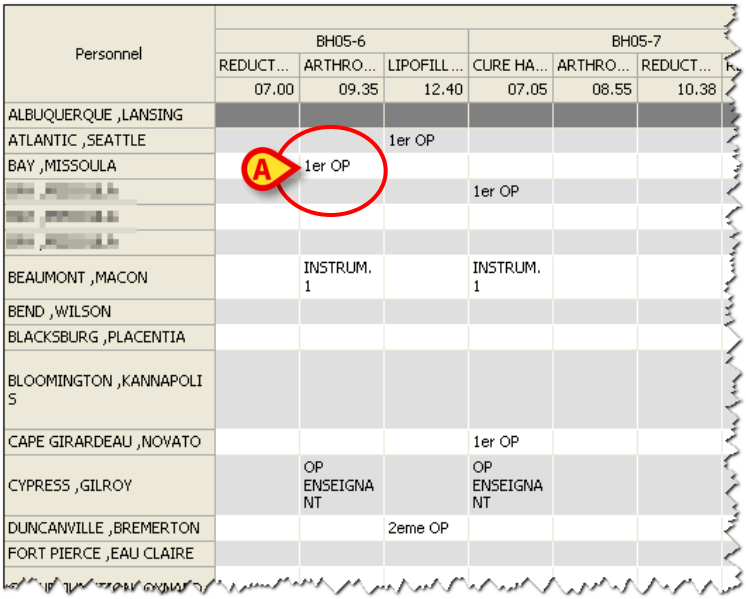


Fig 281

The operations are ordered by date and time and the grouped by block and room. A heading placed on top indicates the operation's scheduled time, date and place.

The "Highlight" functionality can be activated to display, on the "Staff Overview" screen, only a selected subset of staff members and their operations. I.e. if, on the "Staff management" screen (Fig 278) one or more staff members are highlighted, the "Staff Overview" screen displays only the operations scheduled for the highlighted staff members. See paragraph 8.1.5 for more information on this functionality.

9. Contacts

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