DIGISTAT®
Smart Scheduler

DIGISTAT® Version 4.0

User Manual

DIG DD SSC IU 0002 ENG V01
30/06/2014

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SOFTWARE LICENSE

Your Licence Agreement – provided with the product - specifies the permitted and prohibited uses of the product.

WARNING

The information contained herein is subject to change without further notice. UMS holds the right to make changes to all described products in order to improve its functions and performance.

LICENSES AND REGISTERED TRADEMARKS

DIGISTAT® is produced by UMS srl
http://www.unitedms.com
DIGISTAT® is a Trademark of UMS srl
Information is accurate at the time of release.
All other trademarks are the property of their respective owners.

DIGISTAT® product is CE marked according to 93/42/CEE directive ("Medical devices") amended by the 2007/47/EC directive.

UMS is certified under the UNI EN ISO 9001:2008 and UNI CEI EN ISO 13485:2012 standards for software engineering, development, production, installation and assistance.

1. Contents

2. Using the manual

2.1. Aims

The effort which has gone into creating this manual aims to offer all the necessary information to guarantee a safe and correct use of the DIGISTAT® system and to allow the manufacturer identification. Furthermore this document aims to describe every single part of the system, it also intends to offer a reference guide to the user who wants to know how to perform a specific operation and a guide to the correct use of the system so that improper and potentially hazardous uses can be avoided.

The use of DIGISTAT® requires a basic knowledge of information systems concepts and procedures. The comprehension of this manual requires the same knowledge.

Always remember that DIGISTAT® systems are highly configurable, in order to satisfy the requirements of every user. This extreme flexibility makes a description of all the system's possibilities impossible. Hence the decision to describe a "probable", or "standard" configuration, so that we can explain what we feel to be the fundamental parts of the system, and their purposes. Consequently, the user may come across descriptions of pages and functions that are different in the configuration he is using.

To be more precise, the differences may concern

1) The appearance of the page (a page may appear different from that shown here).
2) The functions (certain operations may or may not be enabled).
3) The flow of use (certain procedures can be performed following a different sequence of pages and operations).

Care has been taken to highlight and emphasize this concept every time the configuration possibilities are such as to prevent a univocal description of the system operation.
Should you require more details regarding a specific configuration, please contact your system administrator or the UMS technical support service.
Remember that, by specific request, UMS is able to provide custom-made documentation for every specific type of procedure and/or configuration.
Please remember that DIGISTAT® must only be used by authorized and trained users, as specified in the "Intended users" paragraph.

2.2. Charcters used and terminology

The use of DIGISTAT® systems requires a basic knowledge of the most common IT terms and concepts. In the same way, the comprehension of this manual is subject to such knowledge. However, in order to improve access to the document and clarify the use of certain terms relating to the DIGISTAT® systems, we have included a glossary for quick (and obviously concise) reference for the clarification of terms (see Appendix A).

Remember that the use of DIGISTAT® systems must only be granted to professionally qualified and properly trained personnel.

When consulting the on-line version as opposed to the paper version, cross references in the document work like hypertextual links. This means that every time you come across the reference to a picture ("Fig 7", for example) or to a paragraph ("paragraph 5.4", for example), you can click the reference to directly access that particular figure or that particular paragraph.

Every time reference is made to a button, this is written in upper case and highlighted in grey. For example, in expressions like.

- Click the XYZ button,

XYZ is a button featured on the page being described.

The character ➢ is used to indicate an action which the user must perform to be able to carry out a perform a specific operation.

The character ● is used to indicate the different elements of a list.

2.3. Symbols

The following symbols are used in this manual.

Useful information

This symbol appears alongside additional information concerning the characteristics and use of DIGISTAT®. This may be explanatory examples, alternative procedures or any "extra" information considered useful to a better understanding of the product.

Caution!

The symbol is used to highlight information aimed at preventing improper use of the software or to draw attention to critical procedures which might cause risks. Consequently, it is necessary to pay extreme attention every time the symbol appears.

3. Introduction to DIGISTAT®

The DIGISTAT® clinical modules suite is an advanced patient data management software system that is designed specifically for use by clinicians, nurses and administrators.

The software package comprises a set of modules that can either work alone or be fully integrated to provide a complete patient data management solution.

From the Intensive Care Unit to the Ward, from the Operating Room to the Administrative Department, DIGISTAT® can be used in a wide range of environments.

DIGISTAT®'s modular architecture and extensive customization capabilities allow you to build your own patient data management system and to expand the system to meet your new demands, when required.

DIGISTAT® system can only be accessed by entering username and password. Every user is defined by a detailed profile, and can access only the allowed areas. A record of every action performed is automatically generated by the system.

3.1. Modular architecture

"Modular Architecture" means that different products (or modules) having particular goals can be implemented within the same software environment (DIGISTAT® in the present case) that is characterized by a determined graphic design, general goals and terms of use.
Different modules can be added in different times, and in a way that is agreed with the user. The resultant software suite fits to the specific user needs and can change in time, according to the possible changes in the user needs.

3.2. Intended use

The product "DIGISTAT®" is a medical device composed only by software that is licensed exclusively to create an electronic copy of certain patients' data and recording of the unit's activity in order to provide:

- electronic documentation of the activity in the unit;
- information on the use of human resources and materials;
- deferred statistics for quality control;
- support to the diagnostic and therapeutic activities, within the limits of what specified herein below;
- support to the management of alarm coming from the connected medical devices;
- display of information to remote users for non-clinical purposes.

"DIGISTAT®" is not aimed to administer or exchange energy to or from the human body or to transmit medicines, liquids or other substances to or from the human body.
"DIGISTAT®" is not aimed to allow direct diagnosis or monitoring of vital physiological processes (by way of example cardiac performance, respiration or activity of CNS) and therefore the therapeutic or diagnostic procedure or maneuver, if any, deemed necessary by the user, shall be performed by him/her solely as consequence of the direct examination and of the scientific correspondence of the specific case with the data obtained through the use of "DIGISTAT®".

Based on the above features, "DIGISTAT®", even if designed to provide the maximum reliability, cannot guarantee the perfect correspondence of the provided data, nor can it substitute the direct verification of the same by the user.
In any case, the product "DIGISTAT®" must be used in compliance with the safety procedures reported in the user manual accompanying the Product.

Always check that the information supplied is correct. It is complete and exclusive responsibility of the user to make correct use of the information supplied and check every time that they are correct.

"DIGISTAT®" can be used close to the patient and to the medical devices in order to speed up the data entry, to decrease the chances of errors and to allow the user to verify the correctness of the data through the immediate comparison with the actual data and activities.

When entering patient related data it is necessary to double-check that the patient identity, hospitalization department and bed displayed in DIGISTAT® are correct.
This is utterly important in case of critical actions as, for instance, drug administration.

The user must implement adequate procedures to guarantee that potential errors occurring in "DIGISTAT®" are promptly detected and corrected and do not constitute a risk to the patient and the operator.
These procedures depend on the configuration of the Product and the method of use preferred by the user.

Only printouts that are signed (with digital signature or autograph) by authorized physicians or medical operators shall be considered valid clinical documents. In signing the aforementioned printouts, the user certifies that he/she has checked the correctness and completeness of the data present in the document.
Only these signed documents are a valid source of information for diagnostic or therapeutic processes and/or procedures.

Only printouts signed by the authorized physicians or medical operators shall be considered valid clinical documents.

"DIGISTAT®" may provide, depending on the modules installed, access to information on drugs. This information is taken from official publications. It is responsibility of the user to periodically verify that this information is current and updated.

"DIGISTAT®**"** can be connected to other medical devices in order to import data therefrom but is not aimed to control, monitor or influence the performances of the medical devices with which it is connected.

The information displayed by "DIGISTAT®" is not meant to replace or replicate the original display of data, messages and alarms of the medical devices. "DIGISTAT®" is not intended to control, affect or modify the normal use of those devices.

"DIGISTAT®" does not substitute a "Nurse Call" system and it is not a "Distributed Alarm System" (as defined by the regulation EN 60601-1-8). Therefore, it must not be used in place of the direct monitoring of the alarms generated by the medical devices.

DIGISTAT® is not a "Distribuited Alarm System".

The minimum patient height is 20 cm.
The maximum patient height is 250 cm.
The minimum patient weight is 0,2 Kg.
The maximum patient weight is 250 Kg.

3.2.1. Intended users

"DIGISTAT®**"** must be used by properly trained physicians, nurses, administrative staff and technicians.
Use of the system must be granted, by means of specific configuration of the passwords and active surveillance, only to trained personnel in possession of the professional qualifications to correctly interpret the information supplied and to implement the appropriate safety procedures.

Use of the system must be granted only to professionally qualified and properly trained personnel.

Limited parts of the Product may be used by other categories of users for non-clinical purposes, to access a limited set of information and without the ability to alter existing information or enter new ones. For example patient's family member can access information of their relative.

3.2.2. Intended environment

The Product can be used inside medical facilities in intensive care units, wards, operating blocks, operating theatres and other departments.

"DIGISTAT®" is software-only medical device that can be run on a computer connected to the hospital local network and must be adeguately protected against cyber-attacks.

"DIGISTAT®" must be installed only on recommended PCs and/or operating systems.

DIGISTAT® must be installed only on recommended PCs and/or operating systems.

In using the Product, the user declares to have understood and accepted the characteristics, limits and responsibilities described in this user manual. Should the user consider any of these clauses to be unacceptable, he must stop using "DIGISTAT®" immediately and inform promptly the system administrator.

3.3. Manufacturer's responsibility

The CE seal is a safety warranty of the product introduced on the market.
UMS is responsible for the product's safety, reliability and performance only if:

- Use and maintenance comply with User Manual instructions;
- This Manual is stored in good conditions and all sections are readable;
- Configurations, changes and repairs are only performed by UMS authorized personnel;
- The Product's usage environment complies with safety regulations;
- The environment's wiring system is highly efficient and complies with related regulations.

> ***WARNING!***
>
> ***Should the supply cause the establishment of a "medical electrical system" through electrical and functional connection of devices, the hospital organization is in charge of the required safety verification and acceptance tests, even in case that UMS performed in whole or in part the wiring and the necessary connections.***

3.4. Product tracking

In order to ensure device tracking and on-going safety and efficiency checks on site,

in compliance with ISO 9001 and EN 13485 quality standards and European law on medical devices 93/42/EEC, amended by the directive 2007/47/EC,

the former owner is recommended to inform UMS, one of its branches or the nearest authorised dealer about any ownership transfer either by duly filling in the "Product Tracking Form" published in the final pages of the present document or by giving written notice with the same data requested in the abovementioned form.

Device data can be found in the product labelling (either paper label provided at installation time or "About box" displayed within the product – see paragraph 7.5.5).
In case of doubts/questions about product labelling and/or product identification please contact UMS technical assistance (for contacts see paragraph 6)

3.5. CE mark and regulation conformity

UMS DIGISTAT® product is CE marked according to 93/42/EEC directive ("Medical devices"), amended by the directive 2007/47/EC, and is therefore compliant with the EU basic safety standards there specified (received in Italy with Legislative Decree n. 37/2010 and subsequent variants and integrations.

UMS declines all responsibility for the consequences on the safety and efficiency of the device determined by technical repairs or maintenance not performed by its own Technical Service personnel or by UMS-authorized technicians.

The attention of the user and the legal representative of the health structure where the device is used is drawn to their responsibilities, in view of the legislation in force on the matter of safety in the workplace (Italian Legislative Decree no. 81 of 09/04/2008) and of on-site security for hazardous or potentially hazardous incidents.

The UMS Service is able to offer clients the support needed to maintain the long-term safety and efficiency of the devices supplied, guaranteeing the skill, instrumental equipment and spare parts required to guarantee full compliance of the devices with the original construction specifications over time.

3.6. Post-market surveillance

The CE marked device is subject to a post-market surveillance - which UMS, its distributors and dealers must provide for each marketed copy - concerning actual and potential risks, either for the patient or the User, during the Product's life cycle.
In case of deterioration of the device characteristics, poor performance or inadequate user instructions that have been or could be a hazard to either the patient or User' health or to environmental safety, the User must immediately give notice to either UMS, one of its branches or nearest authorised dealer.

The device details can be found on its labelling.

On reception of a user feedback UMS will immediately start the review and verification process and, when required, solve the reported non conformity.

3.7. Product life

The life time of the product does not depend on wearing or other factors that could compromise safety. It is influenced by the obsolescence of the hardware and software (PC and server) and is therefore assessed as 5 years from the date of the product's specific version release, period during which the manufacturer is committed in keeping technical documentation and providing technical support.

4. Software and hardware specifications

4.1. Bedside

4.1.1. Hardware

For bedside workstations, if a medical grade PANEL PC is required, UMS suggests the following solutions:

Recommended: ONYX 1721 2 Gb RAM (4GB suggested), 80GB HD
Recommended : AxiomTek MPC170-831 2 Gb RAM (4GB suggested), 80GB HD
Supported: POC 174 2 Gb RAM (4GB suggested), 80GB HD.

4.1.2. Operating System

Microsoft Corporation Windows 7 x86 Professional - Recommended.
Microsoft Corporation Windows XP x86 Professional with SP3 - Supported.

4.2. Central

4.2.1. Hardware

Recommended: DELL Optiplex 745 or above (Small Form Factor Chassis).

Hardware requirements:

- Intel® Celeron® processor with Intel® dual-core technology (or faster)
- Memory: 2 GB RAM (4 GB recommended)
- Hard Disk: at least 20 GB of available space
- Monitor: 1024 x 768 or higher (1280 x 1024 suggested, 65.000 colors minimum)
- Mouse or other compatible device
- Windows 7/XP compatible printer (optional)
- Ethernet interface 10/100 Mb/s (or higher)
- CD/DVD Drive (optional)

4.2.2. Operating System

Microsoft Corporation Windows 7 x86 Professional - Recommended.
Microsoft Corporation Windows XP x86 Professional - Supported.

4.3. Server

4.3.1. Hardware

Minimum hardware requirements:

- Intel® Pentium® processor with Intel® dual-core technology (or faster)
- Memory: 2 GB RAM (4 GB recommended)
- Hard Disk: at least 80 GB of available space
- Monitor: 1024 x 768 or higher (65.000 colors minimum)
- Mouse or other compatible device
- Windows compatible printer
- Ethernet interface 10/100 Mb/s (or higher)
- CD/DVD Drive

RECOMMENDED SERVER IN A CLUSTER ENVIRONMENT:

- 1 Blade center H or higher
- 2 Blades HS22 INTEL XEON 5400 or higher connected in failover cluster
- 1 SAN Ibm DS 4000 series or higher
- 2 switch Fiber Channel 4Gbit connected in failover to the SAN and with redundant1Gbit connection to the Network Fiber Channel.
- 8 gbyte Ram for each blade
- 100 GB reserved data area on the SAN

4.3.2. Operating System

Microsoft Windows Server 2008 R2 Standard/Enterprise Ed. with SP1 - Recommended.
Microsoft Corporation Windows Server 2008 – Supported.
Microsoft Windows 2003 Server - Supported.

4.3.3. System Software

Microsoft SQL Server 2008 R2 Standard/Enterprise Ed. - Recommended.
Microsoft SQL Server 2012 Standard/Enterprise Ed. - Supported.
Microsoft SQL Server 2008 Standard/Enterprise Ed. - Supported.
Microsoft SQL Server 2005 Standard/Enterprise Ed. - Supported.

WARNING!

The computers must comply with the regulations regarding the environment where they are installed. Check compliance with competent authorized personnel.

WARNING!

In compliance with on-going product improvement policies pursued by UMS, this User Manual's specifications can be changed at any moment. Please contact the Firm's authorized representative concerning market availability of the product range presented in this User Manual.

WARNING!

It is recommended to consult UMS srl before any Operating System or SQL Server update.

WARNING!

It is recommended to follow the manufacturer instructions for storage, transport, installation, maintenance and waste of third parties hardware. These procedures must be performed only by qualified and authorized personnel.

4.4. Local network features

This paragraph lists the features of the local network on which DIGISTAT® is installed in order to guarantee the system's full functionality.

- DIGISTAT® uses a TCP/IP traffic protocol.
- The LAN must not be congested and/or full loaded.
- DIGISTAT® requires at least a 100 Mbps LAN available to the end user. 1 Gbps backbones would be worthwhile.
- There must not be filters in the TCP/IP traffic between workstations, server and secondary devices.
- If the devices (server, workstations and secondary devices) are connected to different subnets there must be routing in these subnets.
- It is recommended to adopt redundancy strategies to ensure network service availability in case of malfunction.
- It is recommended to schedule together with UMS the maintenance calendar in order to let UMS efficiently support the healthcare structure in managing the possible disservices caused by maintenance activities.

ATTENTION!

If the network does not match the requested features, DIGISTAT® performance gradualòly deteriorates until timeout errors occur. The system may finally switch to "Recovery" mode.

4.4.1. DIGISTAT® impact on the hospital network

DIGISTAT® impacts the local network of the healthcare structure. This paragraph provides information on the traffic generated by DIGISTAT® on the network in order to make it possible for the structure to evaluate and analyse the risks related to the introduction of DIGISTAT®.

The bandwidth used by a DIGISTAT® system depends on many different factors. The most important are:

- Number of workstations,
- Number of workstations configured as central stations,
- Number and type of devices dedicated to data acquisition (either only or as well dedicated).
- Interfaces with external systems,
- DIGISTAT® configuration and mode of use.

In a configuration with 100 clients the following bandwidth occupation values can be indicatively predicted

Average: 0.8 – 6 Mbit/s

Pitch: 5 – 25 Mbit/s

5. Before starting

5.1. Installation and maintenance warnings

The following warnings provide important information on the correct installation and maintenance procedures of the DIGISTAT® product. They must be strictly respected.

DIGISTAT® must absolutely be installed and configured by specifically trained and authorized personnel. This includes UMS staff and any other person specifically trained and authorized by UMS. Similarly, maintenance interventions and repairs on DIGISTAT® must absolutely be performed according to the UMS company guidelines only by UMS personnel or other person specifically trained and authorized by UMS.

DIGISTAT® must absolutely be installed and configured by specifically trained and authorized personnel. This includes UMS staff and any other person specifically trained and authorized by UMS.

- Only use devices approved by UMS bearing the CE mark.
- Only use devices approved by UMS. It is not possible to install devices without proper training.
- Only use devices approved by UMS. There is a risk of injury to the patient and operators.
- Scrupulously observe the manufacturer's instructions for the hardware installation.
- Make provision for regular maintenance of the inner disk and checks on the operating system.
- The DIGISTAT® USB dongle must be stored and used in eligible environmental conditions (temperature, humidity, electromagnetic fields etc.), as specified by the dongle manufacturer. These conditions are equivalent to those required by common office electronic devices.
- Within "Patient Area" (see Fig 1) it is recommended to use washable waterproof devices.
- Within "Patient Area" (see Fig 1) it is recommended to use washable, sterilizable rubber keyboards and mouse devices. For "touch screens" capacitive technology (insensitive if used with gloves) is recommended because it discourages using gloves (sometimes contaminated).

5.2. Cleaning

Cleaning and disinfection procedures of hardware components must comply with the usual cleaning/disinfection procedures that the hospital adopts for all the hospital's assets (both fixed and moveable)

Check the suggested cleaning procedures in the manuals of the hardware products that accompany DIGISTAT®.

5.3. Precautions and warnings

To guarantee the reliability and security of the software during use, strictly observe the instructions given in this section of the manual.

5.3.1. Precautions

Place the PC in order to ensure adequate anterior and posterior ventilation. Failure to meet hardware ventilation requirements may cause equipment failure, thus jeopardizing patient data management system functions.

The holder of the hardware (individual, hospital or institution) and the user of the device and the software are personally responsible for ensuring that the devices follow a meticulous maintenance schedule to guarantee safety and efficiency and reduce the risk of malfunctioning and the occurrence of possible hazards to the patient and user.

5.3.2. Warnings

The device and software are destined for use only under the supervision of properly trained and authorized medical personnel.

- **Electrical safety**

The hardware devices used together with DIGISTAT® (PC, display, barcode reader, etc...) must comply with therelevant CE mark prescriptions, in particular with those indicated by the 2006/95/EC directive and subsequent amendments.

The device complies with the characteristics envisaged by the CE marking in accordance with directive 2006/95/EC and subsequent amendments.

The electrical devices installed within the Patient Area must have the same security level of an electromedical device.

It is moreover recommended to perform the relevant measurements on the leakage currents of the electro-medical system in use (PC, display and possible connected devices). The hospital structure is responsible for these measurements.

- **Patient Area**

The term "Patient Environment" means the space in which intentional or unintentional contact may take place between the patient and parts of the system (any device) or between the patient and other people who may come into contact with parts of the system (e.g., a physician who touches the patient and other devices at the same time). This definition applies when the patient's position is pre-determined: in other cases, all the possible positions of the patient must be taken into consideration.

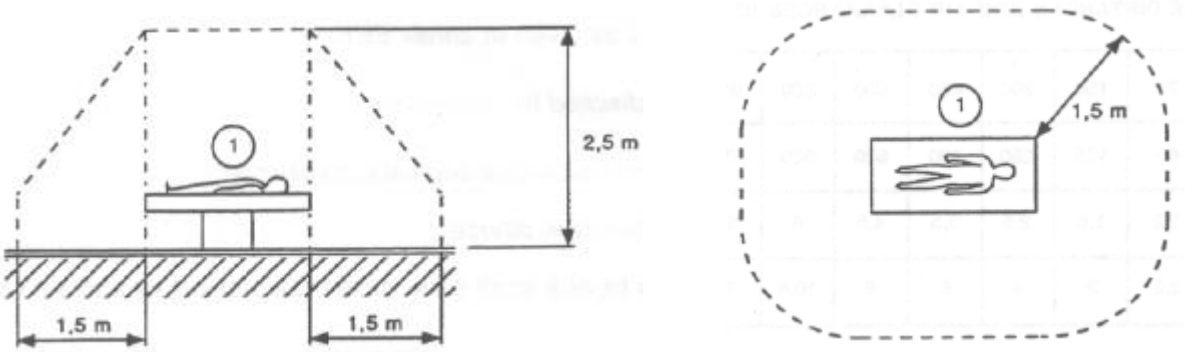


Fig 1 – Patient Area

It is the direct responsibility of the hardware licensee (individual, hospital or institution) to perform all the required measurements on the electrical safety of the electro-medical system in use (PC, display and other possible connected devices) considering the environment in which it is used.

WARNING!

Should the supply cause the establishment of a "medical electrical system" through electrical and functional connection of devices, the hospital organization is in charge of the required safety verification and acceptance tests, even in case that UMS performed in whole or in part the wiring and the necessary connections.

- **Electromagnetic compatibility**

The hardware devices used together with the DIGISTAT® system (PC, display, barcode reader, etc...) must comply with electromagnetic emission and immunity characteristics envisaged by the CE seal, in compliance with Directive 2004/108/EC and following amendments.

- **Devices eligibility**

It is mandatory to use devices that are suitable for the environment in which they are installed and used (meeting, for instance, the directives LVD 2006/95/EC, EMC 2004/108/EC, penetration by liquids, et al.).

5.4. Privacy Policy

The following precautions should be taken in order to protect the privacy of users and patients, and to ensure that personal data are processed by respecting data subjects' rights, fundamental freedoms and dignity, particularly with regard to confidentiality, personal identity and the right to personal data protection.

"Sensible data" are those personal data that reveal the race, the religious and/or philosophic beliefs, the personsal political opinions, the support to political parties and/or trade unions and/or associations and organizations having political, religious or philosophical aims. Moreover, "sensibile data" are those data providing information on the health conditions and/or the sexual life.

Please read the following precautions carefully and strictly observe them.

- The workstations must not be left unattended and accessible during work sessions. It is recommended to log out when leaving a workstation. See paragraph 7.2 for log out procedure.

- Sensible data saved in the system, as passwords or users' and patients' personal data, must be protected from possible unauthorized access attempts through adequate protection software (antivirus and firewall). It is the hospital structure responsibility to implement this software and keep them updated.

- The user is advised against the frequent use of the lock function (paragraph 6). Automatic log out allows to protect the system from unauthorized accesses.

5.4.1. User credentials features and use

This paragraph explains the user's DIGISTAT® credentials (username and password) features, use and update policy.

- Every precaution must be taken in order to keep personal username and password secret.

- Username and password must be kept private. Do not let anybody know your username and password.

- Each user can own one or more credentials to access the system (username and password). The same username and password must not be used by more than one user.

- Authorization profiles must be checked and renewed at least once a year.

- It is possible to group different authorization profiles considering the homogeneity of the users' tasks.

- When user accounts are created, it is recommended to always use a nominal identification. Generic users as, for instance, "ADMIN" or "NURSE" must be avoided. Every account must be used by one and only one user.

- Each user is characterized by a profile enabling him/her to access only the functionalities that are relevant for his/her working tasks. The system administrator must assign an appropriate user profile when creating the user account. The profile must be reviewed at least once a year. This revision can also be performed for classes of users. The user profile definition procedures are described in the DIGISTAT® configuration manual.

- Password must be at least 8 characters.

- The password must not refer directly to the user (containing, for instance, user's first name, family name, birthdate etc.).

- The password is given by the system administrator at user account creation time. It must be changed by the user at first access (see paragraph 7.5.4 for the password modification procedure).

- After that, the password must be changed at least every three months.

- If username and password are left unused for more than 6 months they must be disabled. Specific credentials, used for technical maintenance purposes, are an exception. See technical manual for the configuration of this feature.

- User credentials must also be disabled if the user is not qualified anymore for those credentials (it is the case, for instance, of a user who is transferred to another department or structure). A system administrator can manually enable/disable a user. The procedure is described in the DIGISTAT® configuration manual.

The following information is reserved to system administrators:

The password must match a regular expression defined in the DIGISTAT® configuration (default is ^.....* i.e. 8 characters). The password is assigned by the system administrator when a new account for a user is created. The system administrator can force the user to change the password at first access to choose a personal one. The password expires after a certain (configurable) period, after that period, the user must change the password. It is also possible (by configuration) to avoid password expiration.

See DIGISTAT®configuration manual for detailed information on user account creation procedures and password configuration.

5.4.2. System administrators

UMS technical staff, when performing installation, updates and/or technical assistance may have access to and deal with personal sensible data stored in the DIGISTAT® database.
UMS srl, for issues relating to management of personal sensible data, adopts procedures and working instructions complying with the current privacy regulation (D.Lgs 196/2003 of the 30th of June 2003).
In performing the abovementioned activities the UMS technical staff is configured as "System Administrator" for the DIGISTAT® system (see regulation of 25/11/2008 of the Privacy Guarantor on "System Administrators"). UMS staff performing this kind of procedures is appropriately trained on privacy issues and, in particular, in sensible data treatment issues.

In order to comply with the requests of the "System administrators" regulations, the responsible healthcare structure must:

- define nominal accesses;
- activate the access log both at operating system and at client and at server level;
- activate the access log to the database server Microsoft SQL Server (Audit Level);
- configure and manage all these logs to keep track of the accesses for at least one year.

5.4.3. System logs

DIGISTAT® records the system logs on the database. These logs are kept for a configurable period of time. Also, logs are kept for different times depending on their nature. Default times are:

- information logs are kept for 10 days;
- logs corresponding to warning messages are kept for 20 days;
- logs corresponding to alarm messages are kept for 30 days.

These times are configurable. See DIGISTAT® configuration manual for the configuration procedures.

5.5. Back up policy

It is recommended to regularly perform system backups.

The responsible healthcare structure using DIGISTAT® system must define a backup policy that best suits its data safety requirements.
UMS is available to help and support in implementing the chosen policy.

The responsible healthcare structure must ensure that backup files are stored in a way that makes them immediately available in case of need.

If data are stored on removable memory devices, the healthcare structure must protect these devices from unauthorized access. When these devices are not used anymore, they must be either definitively deleted or destroyed.

5.6. Out-of-order procedure

This paragraph describes the policy suggested by UMS in case a DIGISTAT® workstation gets out of order. The goal of the procedure here described is to minimize the time required to replace the out-of-order workstation with one properly working.
UMS suggests for this purpose to have at disposal, as substitute equipment, an additional PC on which DIGISTAT® is already installed.
In case of a DIGISTAT® workstation is out-of order, the substitute equipment can promptly replace the DIGISTAT® workstation.
Always remember that DIGISTAT® must only be installed by trained authorized personnel. This includes UMS staff and any other person specifically trained and explicitly authorized by UMS. Missing an explicit, direct authorization from UMS, the hospital staff is not authorized to perform installation procedures and/or to modify DIGISTAT® configuration.
The risk related to the DIGISTAT® workstation deactivation and substitution is that of associating the workstation with a wrong bed or room. This could lead to a "patient switch", which is an extremely hazardous condition.
The risk related to the substituion and/or reconfiguration of network equipment involved in the DIGISTAT® data acquisition (i.e port server, docking station, etc...) is that of assigning the acquired data to a wrong patient. The patient-acquired data relation is based on the IP address. Changing it could lead either to data flow interruption or, in severe cases, to assigning data to the wrong patient.

The out-of-order and replacement of a workstation is potentially hazardous. This is the reason why it must be, mandatorily, performed only by authorized and trained personnel.

The risk related to this procedure is that of associating a wrong bed or room to the workstation and create this way the possibility to select a wrong patient.

In case a DIGISTAT® workstation needs to be deactivated and replaced, the hospital staff must promptly call UMS (or authorized distributors) and request the execution of this task.
We suggest the hospital management (or anyone who is in charge) to define for this purpose a clear, univocal operating procedure and to share this procedure with all the staff members involved.

In order to speed up replacement times, we suggest to have at disposal one or more substitution equipment with all the necessary apllications already installed (OS, firewall, antivirus, RDP, ...) and with DIGISTAT® already installed, but disabled (i.e. not executable by a user without the assistance of an UMS technician).
In case of out of order of a DIGISTAT® workstation, the substitution equipment availability assures the minimization of restoration times (hardware substitution) an limits at the same time the risk of patient exchange.

In case of out of order of a DIGISTAT® workstation we suggest to adopt the following procedure if a "substitution equipment" is available: guasto

1) The hospital staff replaces the out of order PC with the "substitution equipment"
2) The hospital staff calls UMS and requests the "substitution equipment" activation

3) The UMS staff disables the out of order workstation and correctly configure the "substitution equipment"
4) The out of order PC is repaired and prepare d as "sustitution equipment"

The instruction on how to enable/disable and replace a DIGISTAT® workstation, reserved to system administrators, are in the DIGISTAT® configuration manual.

5.6.1. Reconfiguration/substitution of network equipment

In case it is necessary to either reconfigure or substitute a network device involved in the DIGISTAT® data acquisition, the hospital staff must promptly call UMS and schedule the substitution/reconfiguration procedure to allow UMS staff to either reconfigure DIGISTAT® as well or provide all the necessary information. It is recommended, for this purpose, to define a clear procedure and share it with all the involved personnel. Some general indications about this are in the DIGISTAT® configuration manual.

5.7. Preventive maintenance

It is suggested to perform the maintenance of DIGISTAT® system at least once a year. It must be considered, by the way, that maintenance frequency must be function of system complexity. In case of high complexity it is suggested to perform maintenances more often, up to twice a year.

This is the maintenence checklist:

Preparatory checks

- DIGISTAT® update necessity check.
- Check minimum requirements for a possible DIGISTAT® update (both HW and SW).
- Check the Server Service Pack version and state.
- Schedule the server/s restart to apply possible updates.
- Check the SQL Server Service Pack version and state.

```
SELECT SERVERPROPERTY('productversion'),
SERVERPROPERTY ('productlevel'),
SERVERPROPERTY ('edition')
```

- Schedule possible updates with the technical staff

Checks to be performed

Antivirus

- Check that an Antivirus Software is installed and updated (both the application and the virus list definition).
- If viruses are present, inform the competent technician and, if authorized, try to clean the PC.

Database

- Check that an effective DIGISTAT® database clean-up and back-up policy is configuraed.

- Check that the clean-up and back-up store procedures exist (UMSBackupComplete, UMSBackupDifferential, UMSCleanLog, UMSCleanDriver) and the related schedule.
- Check that back-up files exist (both full and differential).
- Check with the hospital technical department that back-up, configuration folders and data folders are correctly copied to another storage device.
- Restore a back-upped DB to verify its correctness.
- Delete the old back-up files (.bak) and the possible files that are not inherent to DIGISTAT® configuration on the network shared path.
- Check that the other jobs on SQL Agent or scheduled tasks (for instance those that are support to integration with third-parties systems) are present, and that their schedule is adequate.
- On SQL Agent check that the different JOBs are executed and that there are not hanging JOBs or JOBs in error.
- Check the SQL Server LOGs.
- Check the DB total size and the number of records in the main tables.
  Script for checking all the tables size:

```
USE [DATABASENAME]
GO

CREATE TABLE [#SpaceUsed]
(
    [name] [nvarchar](250) NULL,
    [rows] [nvarchar](250) NULL,
    [reserved] [nvarchar](250) NULL,
    [data] [nvarchar](250) NULL,
    [index_size] [nvarchar](250) NULL,
    [unused] [nvarchar](250) NULL
) ON [PRIMARY]

DECLARE @INS AS nvarchar(MAX)
SET @INS = '';

SELECT @INS = @INS + 'INSERT INTO #SpaceUsed exec sp_spaceused ''' +
TABLE_NAME + '''; '
FROM INFORMATION_SCHEMA.TABLES
WHERE TABLE_TYPE = 'BASE TABLE'
ORDER BY TABLE_NAME

EXEC (@INS);

SELECT *
FROM #SpaceUsed
ORDER BY CAST([rows] AS INT) DESC

DROP TABLE [#SpaceUsed]
```

Server

- Check the Windows™ server event log.
- Check the permissions on the shared folders (es: Backup folder).
- Useless files and directories clean up to free up space on server disk.
- Check the displays (if any) on the server rack and verify that there are neither visual nor sound alarms.
- Check that on the different disk units there is enough space available.

- Disk check with dedicated tools (checkdisk, defrag, etc.).
- In case there are disks in RAID, check the health conditions of the RAID unit on the RAID management software.
- Check the leds of the non-alarmed RAID units.
- If an UPS is connected, check its health conditions with its management software.
- In case of UPS schedule an electric interruption (an electric failure simulation) and check thet the server is configured ti perform a CLEAN shutdown.

Workstations

- Check if the Regional Settings on the workstations are coherent with the DIGISTAT® installation language.
- Check if every workstation has a default printer.

DIGISTAT®

- Check data presence (SELECT) Patient, Admission, Bed, Location tables and some random others.
- Check on the network table that no workstation has the ALL value in the "modules" field.
- Check and in case clean the service and/or UMS Gateway LOG.
- Check and in case clean the DAS LOGs for the Drivers (if enabled).
- Check that the privacy policy is respected as stated in this manual in paragraph 5.4.

Connection to devices

- Check the connections (cables and wiring system) with data data acquisition devices.

Instruction for use

- Chck that the user documentation in PDF format (PDF provided together with the product) is present on the server and is coherent with DIGISTAT® version.
- Check that the folder containing the user documentation in electronic format on the server is accessible to DIGISTAT® users.
- Check that the HELP button opens the user documentation.
- Check that all the other contents provided by UMS and integrated in the HELP of DIGISTAT® system are updated and coherent.

5.8. Compatible devices

Some DIGISTAT® modules work together with the medical devices connected to the patient (as, for instance, infusion pumps, blood-gas analyzers etc…).

The updated list of all the compatible devices can be found on the UMS website, at the following address

http://www.unitedms.com/ing/prodotto.asp?ID=9

It is possibile to make request of the updated list of those devices to UMS. Please use for this purpose the references (tel, e-mail, fax…) printed on the cover of this manual.

5.9. System unavailability

If during start up there are problems connecting to the server the system provides a specific information message (Fig 2).

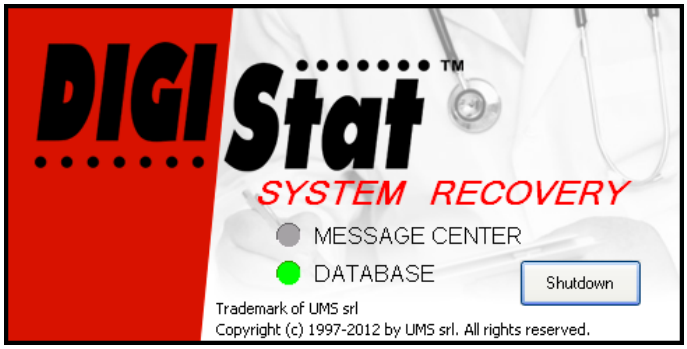


Fig 2

The connection problem is often automatically solved in a short time. If it does not happen it is necessary to contact the technical assistance (see paragraph 6 for the contacts list).

There are extrema cases, rare but possible, in which it is phisically impossible using the DIGISTAT® system (it is the case of natural disasters, or long black outs etc.).

It is responsibility of the healthcare structure using DIGISTAT® to define an emergency procedure to put into effect in those cases. This is necessary to

1) Make it possible for the departments to keep on working
2) Restore as soon as possible the system availability (back-up policy is part of this management. See paragraph 5.5).

WARNING!

It is responsibility of the healthcare structure using DIGISTAT® to define an emergency procedure to put into effect in case of system unavailability.

UMS offers full support for the definition of the above mentioned procedure.

See paragraph 6 for the contacts list.

6. Contacts

- **UMS srl - United Medical Software**

Via di Mucciana 19, 50026 San Casciano in Val di Pesa (FI)
Tel. (+39) 055 0512161
Fax (+39) 055 8290392

- **Technical assistance**

support@unitedms.com

800999715 (toll free, Italy only)

- **Sales and products information**

sales@unitedms.com

- **General info**

info@unitedms.com

7. “Control Bar” and DIGISTAT® environment

7.1. Introduction

This section of the manual describes the features and functionalities of the DIGISTAT® environment. Namely, here are described the functionalities of the system that are general and mainly independent from the specific modules installed.
Please remember that DIGISTAT® is a software environment that, depending on the modules that are actually implemented, can be used in different kinds of locations (as, for instance, intensive care, operating rooms, outpatients departments etc…) and for different goals.

7.1.1. Launching DIGISTAT®

To launch DIGISTAT®,

- double click the desktop icon (Fig 3).

Fig 3

The following splash-screen appears while the system is loading.

Fig 4

7.1.2. DIGISTAT® Work Area

The DIGISTAT® Work Area is defined and delimited by Control Bar, a tool that is common to all and every possible DIGISTAT® installation (Fig 5).
Control Bar manages the installed modules and systems, the patients and their data, the users and their permissions etc.

DIGISTAT® Control Bar is formed by a horizontal command bar (Fig 5 **A**), by a vertical selection bar on the left (Fig 5 **B**) and by a central Work Area. The different screens of the installed modules are displayed within the Work Area (Fig 5 **C**).

Fig 5 shows Control Bar with no module installed.

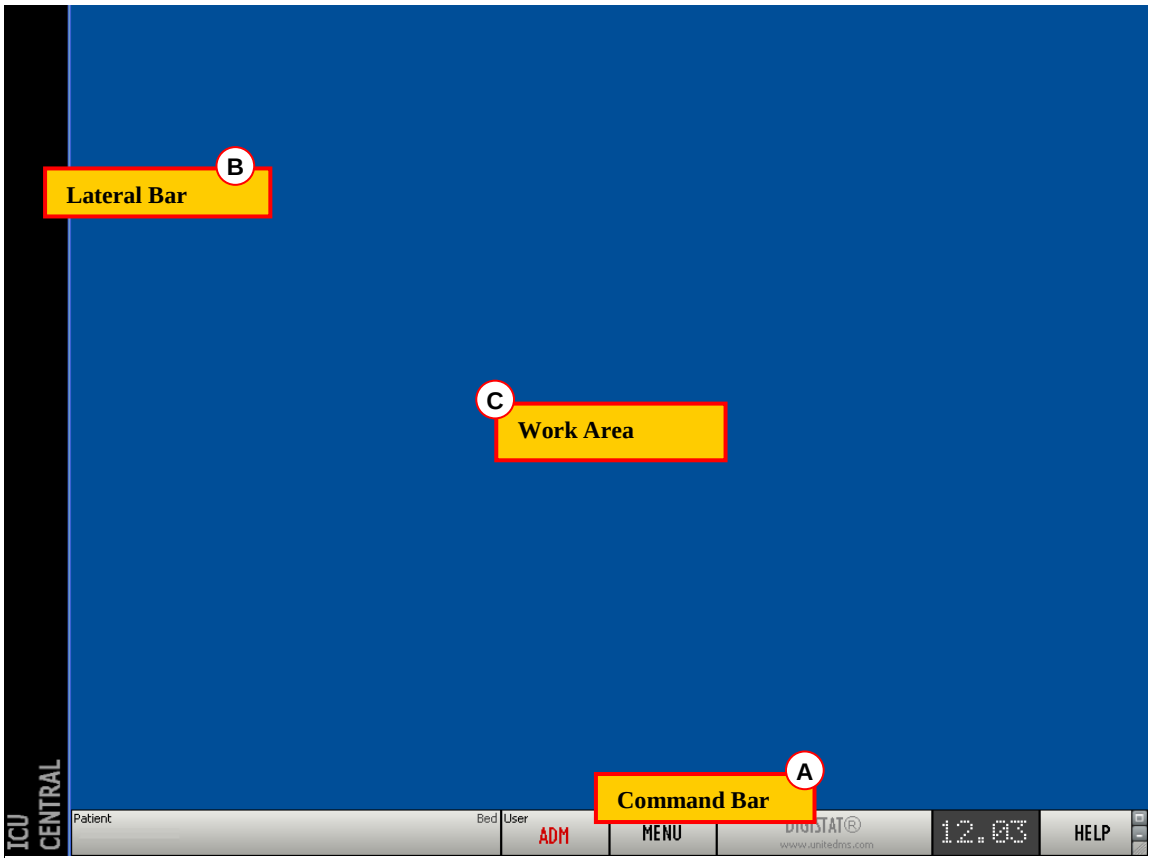


Fig 5 - Control Bar

The command bar (Fig 5 **A**) will be described in paragraph 7.1.3 (and subsequent).

The lateral bar displays the icons of the currently available modules. See, for instance, Fig 6, that refers to a configuration comprising the “Image Bank” and “Clinical Forms” modules.

Fig 6 - Two available modules

The module currently selected is highlighted (yellow).

7.1.3. Selecting a module

To select a module

- click the corresponding icon.

The icon will be highlighted and the module's functionalities will be displayed within the Work Area.

It is possibile to select a specific module only after the user log in (paragraph 7.2).

7.2. Accessing the system

The DIGISTAT® system must be accessed by entering the username and password ("Log in" procedure).
For this reason, at the beginning of every work session, it is necessary to click the USER button (Fig 7 **E**).

The following page appears.

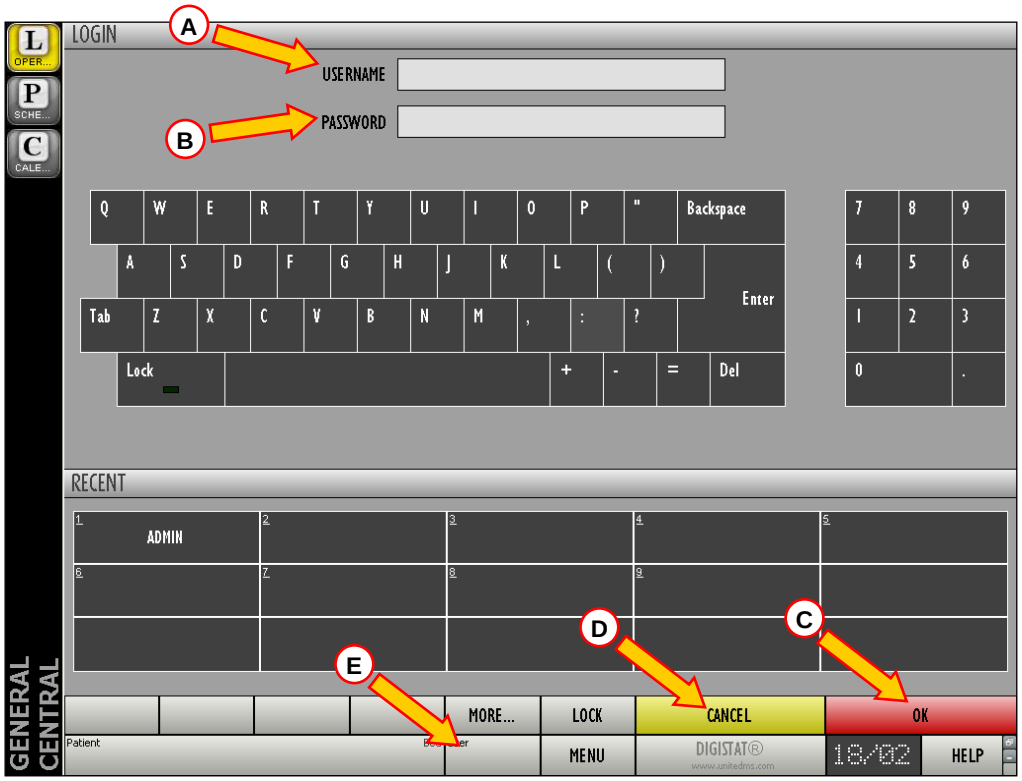


Fig 7 – Access to the system

To access the system,

- enter your username in the "Username" field (Fig 7 **A**).
- Enter your password in the "Password" field (Fig 7 **B**).
- Click the OK button (Fig 7 **C**).

The user is this way logged in. To cancel the operation

- click the CANCEL button (Fig 7 **D**).

The username and password are issued by the system administrator. If you do not have a username and a password you are not authorized to use the* DIGISTAT® *system.

You can enter your username and password either using the virtual keyboard displayed on screen (clicking the letters with the mouse or touching them if you are using a touch screen) or the workstation keyboard.

After accessing the system, an acronym corresponding to the logged user appears on the USER button on the control bar (the acronym is ADM in Fig 8 **A**).

Fig 8 – User connected

WARNING!

The user whose credentials are displayed on the USER button is responsible for all the actions performed on* DIGISTAT®*. It is strongly recommended to log out before leaving the* DIGISTAT® *workstation to avoid improper use of the system.

To log out, click the USER button during the work session. When this button is clicked the user is disconnected and the acronym of the user disappears from the button.

To log in again, click the USER button again. The page shown in Fig 7 will appear again.

WARNING!

DIGISTAT® does not support the Microsoft® Windows® "switch user" functionality. This means that, for instance, if

a) User 1 launches DIGISTAT®,
b) User 1 switches to User 2 without logging out User 1,
c) User 2 attempts to launch DIGISTAT® again,

then the second DIGISTAT® instance cannot be launched because the first one is still running.

7.2.1. Barcode log in

It is possible, if the functionality is implemented, to log in through barcode scanning.

To use this functionionality, when the system displays the login screen (Fig 7),

- scan the user's personal barcode.

Fig 9 - Barcode reader (example)

The user is immediately logged in.

Barcode technology is recommended when selecting an item. Scanning the item's barcode (as, for instance, the user's personal badge), instead of selecting it manually, helps the user to diminish selection errors.

7.2.2. Disabling the automatic log out

If the system remains idle for a certain length of time, the user is automatically disconnected (automatic log out). This length of time depends on a configuration parameter.

To stop this from happening it is necessary, when logging in, after username and password specification and before clicking OK, to

- click the LOCK button on the "Login" screen command bar (Fig 10 **A**)

Fig 10 – Control Bar

If the user is locked, the name of the user appears in red on the control bar (Fig 11).

Fig 11 – User Locked

The user is advised against the frequent use of the lock function. Automatic log out is implemented to protect the system from unauthorized accesses.

7.2.3. Recent users

The “Recent” area of the “Login” page (Fig 12 **A**) displays the names of users who have accessed the system recently.

Fig 12

The area is divided into rectangles. The names of the users who accessed the system recently appear inside the rectangles. When any of these rectangles is clicked, the “Username” field is automatically filled with the name appearing inside the rectangle.

7.2.4. How to use the “User List”

The MORE button on the control bar (Fig 13) makes it possible to display the complete list of possible users.

Fig 13 – Opening the “User List”

To display the “User List”,

- click the MORE button.

The following window appears (Fig 14).

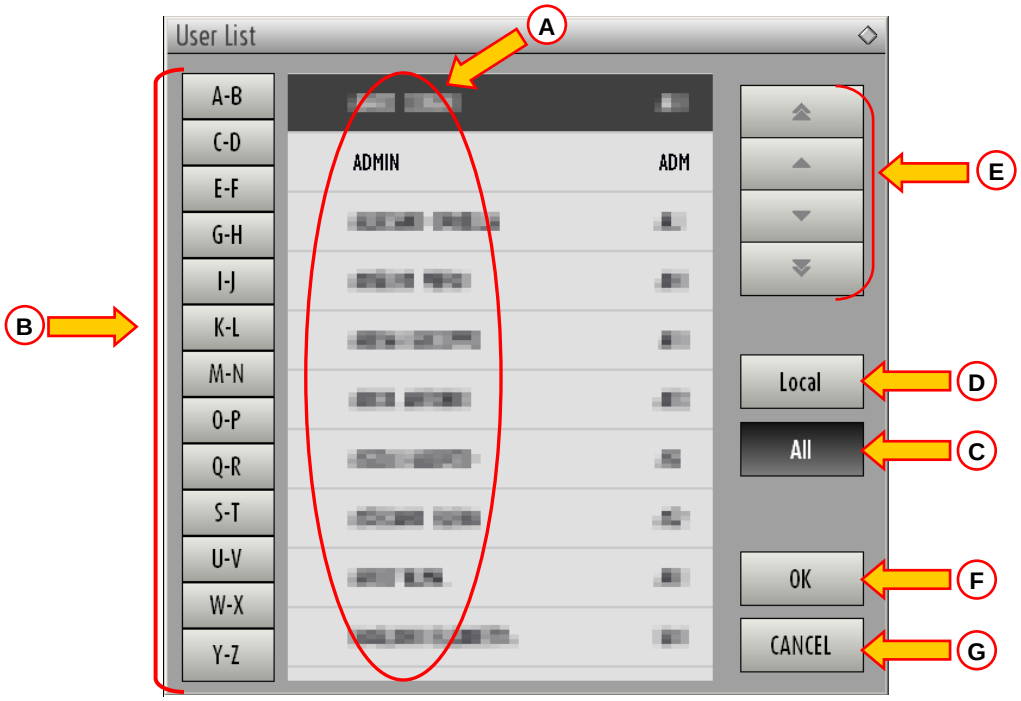


Fig 14 – User List

The window shown in Fig 14 can be used as an index book enabling to search and select a user in the list of all the possible users.

The central part of the window shows the names of possible users, in alphabetical order (Fig 14 **A**).

The letters on the left side of the window (Fig 14 **B**) work like an index and make it possible to see only the users whose names begin with a specific letter.

For example: click the C-D button to see the list of patients whose names begin with the letters C or D.

Use the ALL button (Fig 14 **C**) to see the list of all possible users.

Use the LOCAL button (Fig 14 **D**) to see the list of users relating to the specific workstation on which you are currently working.

Use the arrows on the right side of the window (Fig 14 **E**) to scroll up and down the list of users.

To select a user

- click the name of the user.

The name will be highlighted, then

- click the OK button (Fig 14 **F**).

Otherwise you can

- double-click the row displaying the name of the user.

After selection, the "User list" window closes and the name of the selected user appears in the "Username" field on the "Login" page (Fig 7 **A**).

Use the CANCEL button (Fig 14 **G**) to cancel the operation and close the "User list" window without selecting any user.

7.3. DIGISTAT® Control Bar

The control bar that appears in the lower part of the screen is common to all DIGISTAT® modules. Its main characteristics are listed below. If required, a more detailed explanation of its functionalities is provided in the following paragraphs.

Fig 15 - Control Bar

- The PATIENT button (Fig 15 **A**) will contain, after a patient has been selected, the patient's name and, if the patient has been admitted, his/her bed number.
- The USER button (Fig 15 **B**) shows the name of the user connected. See Fig 8.
- Use the MENU button (Fig 15 **C**) to open the following window (Fig 16).

Fig 16 – Main Menu

The buttons contained in this window give access to functionalities that will be described later.

- The display indicated in Fig 15 **D** alternately shows the current date and time.
- Use the HELP button (Fig 15 **E**) to access the on-line documentation available.
- The small buttons highlighted in Fig 15 **F** can be used to:
  1. minimize the DIGISTAT® window (button);
  2. select the full screen display mode (button);
  3. select the window display mode (button).

These three buttons are present only if enabled by configuration.

- The button quoting the DIGISTAT® brand name and the UMS srl web address (Fig 15 **G**) is used by the system to signal that there are alarms or warnings going on in one of the modules. This feature is explained in the context of the specific module.

7.3.1. How to read the "Patient" button

Patient selected

When a patient is selected, the PATIENT button displays the name of the selected patient (Fig 17 **A**). See the documentation of the specific modules for the patient selection procedure.

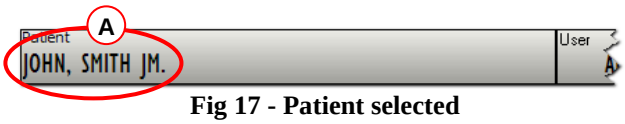


Fig 17 - Patient selected

Patient admitted

When a patient is admitted the PATIENT button displays, besides the patient name, the bed number and the name of the department where he/she is admitted (Fig 18).

Fig 18 - Patient Admitted

The department name and the bed number are black if the patient is located in a department associated to the workstation on which the user is working (see Fig 18).
The department name and the bed number are red if the patient is located in a department that was not associated to the workstation on which the user is working (Fig 19 - the workstation/department link depends on configuration choices).

Fig 19

Every workstation is associated by configuration to one or more departments. The user is allowed to perform certain specific actions only if the patient is admitted to one of the associated departments. The red colour in the PATIENT *button is used to advise the user that he/she is working with a patient that is outside the associated departments.*

The signal “Other location” (Fig 20) appears when,

Fig 20

at patient admission time, in the bed selection window (Fig 21), the user specified that the patient is not in one of the configured departments. The user therefore selected the “Other location” option in the window dispayed in Fig 21.

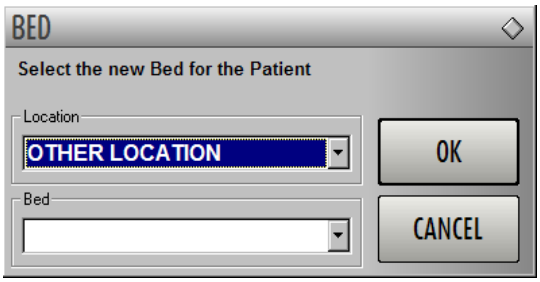


Fig 21 - Bed selection window

See the specific module’s documentation for the patient admission procedure.

Workstation locked to bed

When the icon is displayed alongside the patient name, it means that the workstation is locked to that specific bed, i.e. it only displays data relating to a single bed specified by configuration (Fig 22).

Fig 22

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 related procedures.

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.

WARNING!

When entering patient-relating data it is necessary to double-check that the patient identity, hospitalization department and bed displayed in DIGISTAT® match with the actual ones.
This is utterly important in case of critical actions as, for instance, drug administration.

7.4. Help

Click the HELP button on Control Bar (Fig 15 **E**) to access the on-line documentation available. The page shown in Fig 23 will open.

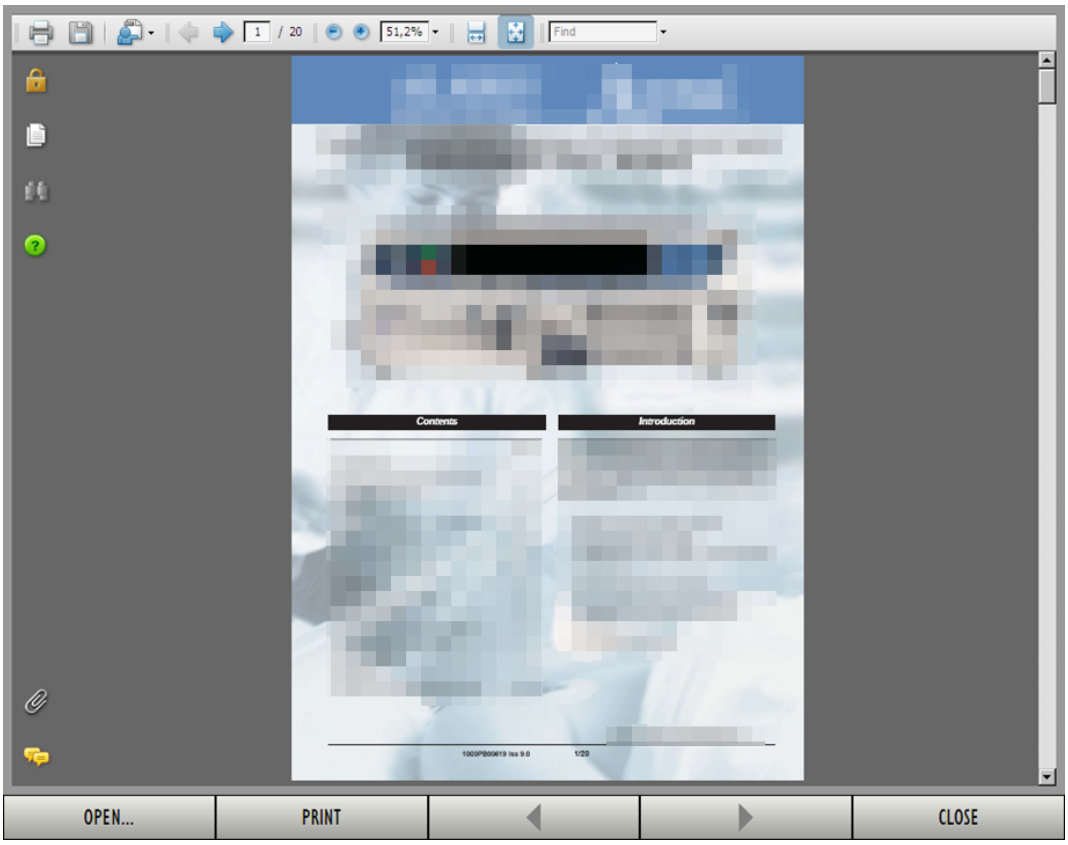


Fig 23

The command bar (Fig 24) offers some navigation possibilities.

Fig 24

- the OPEN... button makes it possible to open other documents (if the user has the required permissions);
- the PRINT button prints the currently displayed document;
- the and buttons display either the previous or the next page of the document;
- the CLOSE button closes the on-line help.

7.5. DIGISTAT® Main Menu

The MENU button placed on the DIGISTAT® Control Bar (Fig 25)

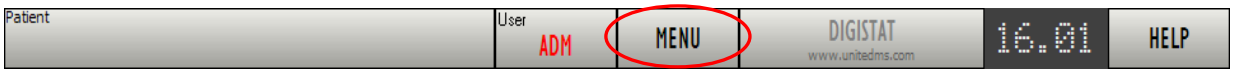


Fig 25

opens a menu containing several options (Fig 26).

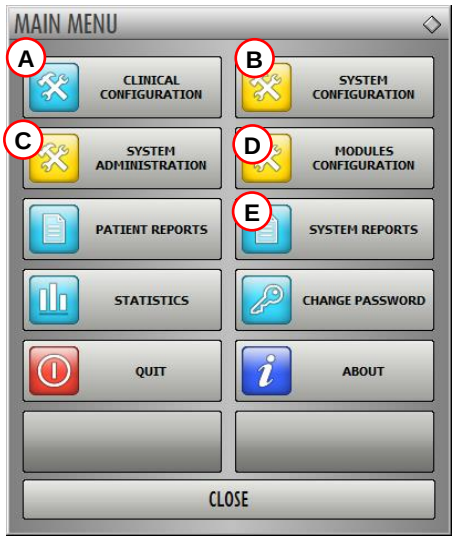
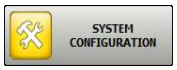


Fig 26 - Configuration functions

Each button on the menu accesses a specific set of functions.

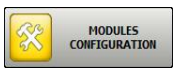
The procedures associated to the following buttons relate to system configuration and are therefore reserved to the system administrators.

- (Fig 26 **A**)



- (Fig 26 **B**)

- (Fig 26 **C**)



- (Fig 26 **D**)

- (Fig 26 **E**)

Contact your system administrator for the procedures associated to these buttons.

The other buttons, indicated in Fig 27, make it possible to access features and functions that some users can perform (according to their permission level). These will be described in the following paragraphs.

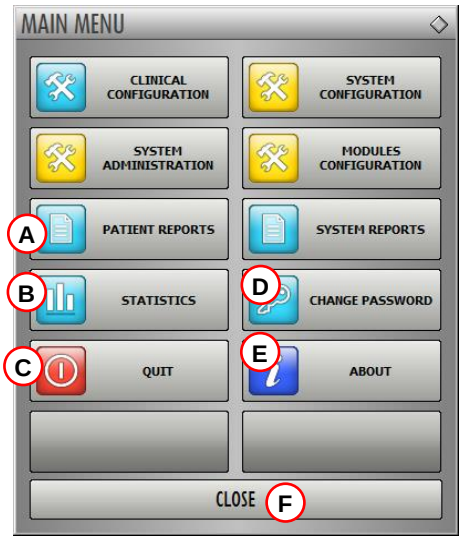


Fig 27 - Functions for the user

- (Fig 27 **A**, paragraph 7.5.1)

- (Fig 27 **B**, paragraph 7.5.3)

- (Fig 27 **C**, paragraph 7.5.6)

- (Fig 27 **D**, paragraph 7.5.4)

- (Fig 27 **E**, paragraph 7.5.5)

The CLOSE button (Fig 27 **F**) closes the “Main menu” window (Fig 27).

7.5.1. Patient reports

The “Patient reports” button - 

(Fig 27 **A**) - accesses a set of options enabling the user to print reports of different kinds for the selected patient.

The button opens a menu containing different options (Fig 28).

Fig 28 - Patient reports

The number and kind of available reports depend on the modules installed and the configuration in use. Therefore the number and kind of buttons on this menu (Fig 28) change according to the configuration in use.

7.5.2. Print reports

Use the buttons on the menu displayed in Fig 28 to access the system’s print functionalities.

The type and the contents of some reports are customizable. Please refer to the system administrators for any request regarding the print reports customization.

To print a patient report

- click one of the buttons on the menu (for example 

).

A print preview will open (Fig 29).

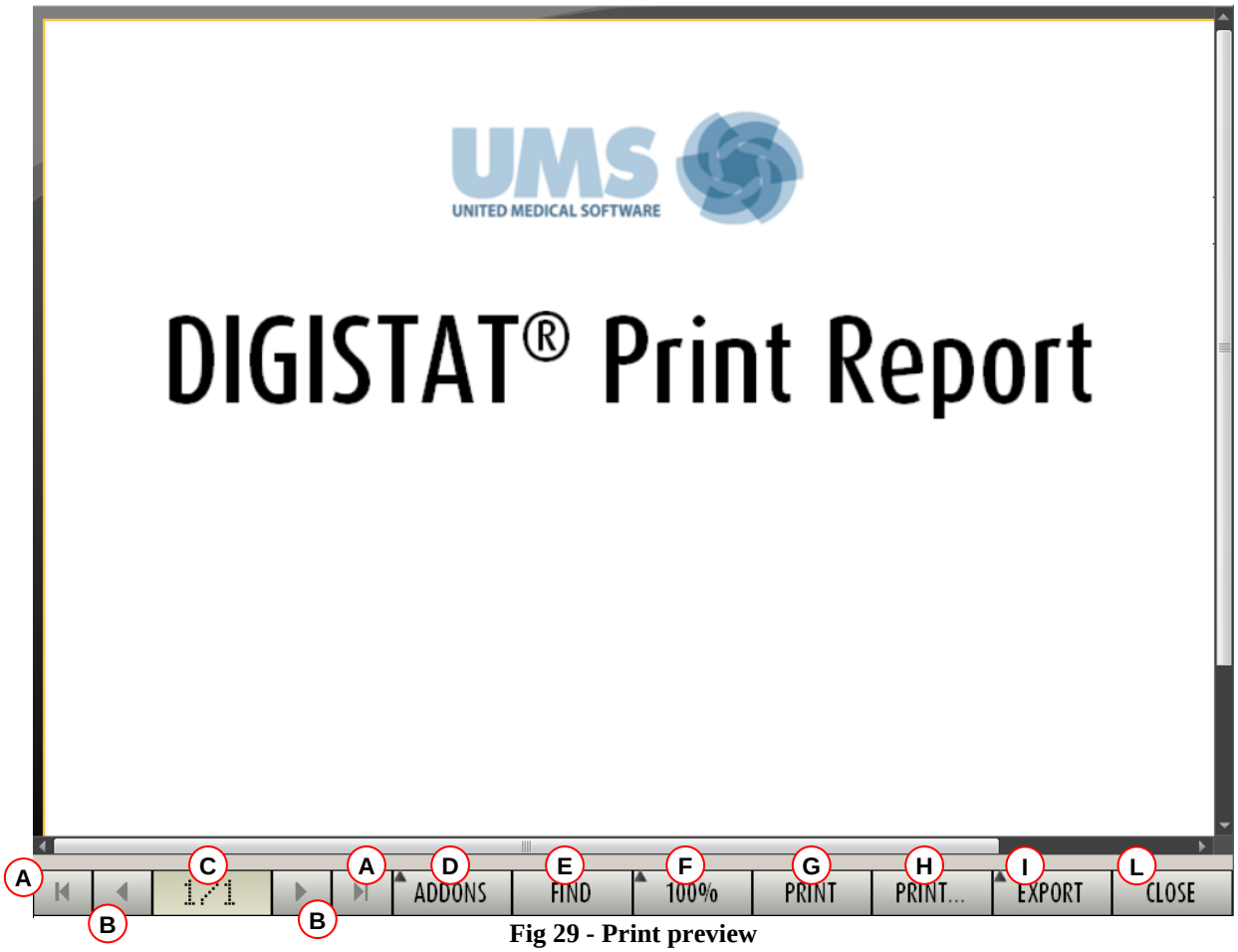


Fig 29 - Print preview

The buttons on the command bar of the "Print preview" screen make it possible to perform various actions, listed below.

A - Use the  and  buttons (Fig 29 **A**) to reach the beginning and the end of the document.

B - Use the  and  buttons (Fig 29 **B**) to go to the previous or the next page.

C - The display  (Fig 29 **C**) indicates the current page number.

D - The  button (Fig 29 **D**) activates the possible additional print management options (in this configuration the "Watermarks" option is available - see paragraph 7.5.2.1 for a description of these options).

E - The  button (Fig 29 **E**) makes it possible to search the displayed document. See paragraph 7.5.2.2 for more instructions.

F - The  button (Fig 29 **F**) is a zoom, making it possible to change the display mode. See paragraph 7.5.2.3 for more instructions.

G - Use the  button (Fig 29 **E**) to print the report.

H - Use the PRINT... button (Fig 29 **F**) to display the print options window (Fig 36). See paragraph 7.5.2.4 for a description of this window and the related procedures.

I - Use the EXPORT button (Fig 29 **G**) to export the document contents to different file extensions. See paragraph 7.5.2.5 for more instructions.

L - Use the CLOSE button (Fig 29 **H**) to close the "Print preview" screen.

7.5.2.1. Addons

The ADDONS button (Fig 29 **D**) activates the possible additional print management options.

To display the available options,

- Click the ADDONS button.

A menu opens upon it. In Fig 30 the "Watermark" option is available.

Fig 30

- Click the button corresponding to the functionality you want to activate.

Addons - Watermark

To add watermarks to the print report (either text or image),

- Click the MARK button.

The following window is displayed (Fig 31).

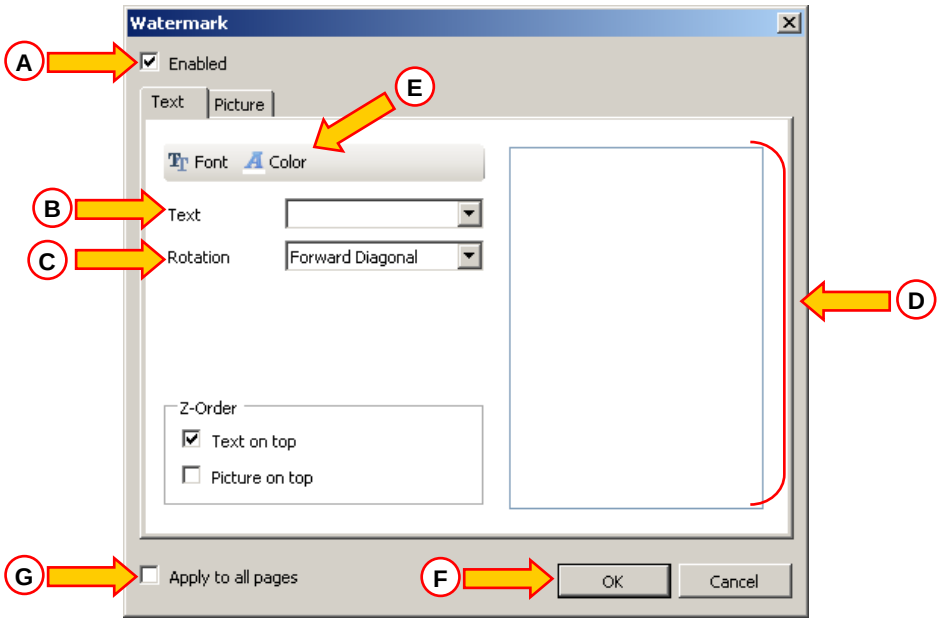


Fig 31

To add a textual watermark,

- Ensure that the "Enabled" checkbox is checked (Fig 31 **A**). If not, the window's contents cannot be edited.
- Insert the text in the "Text" field (Fig 31 **B**).
- Use the "Rotation" menu (Fig 31 **C**) to specify the watermark orientation (diagonal, horizontal, vertical).

A print preview is displayed in the area indicated in Fig 31 **D**.

- Use the buttons indicated in Fig 31 **E** to select the watermark font and color.
- Click the OK button (Fig 31 **F**).

The text is this way inserted as watermark.

If the "Apply to all pages" checkbox is selected (Fig 31 **G**) the watermark is applied to each page in the document, otherwise it is applied only to the current page.

To insert a picture as watermark

- Click the "Picture" tab indicated in Fig 32 **A**.

The following window is displayed (Fig 32).

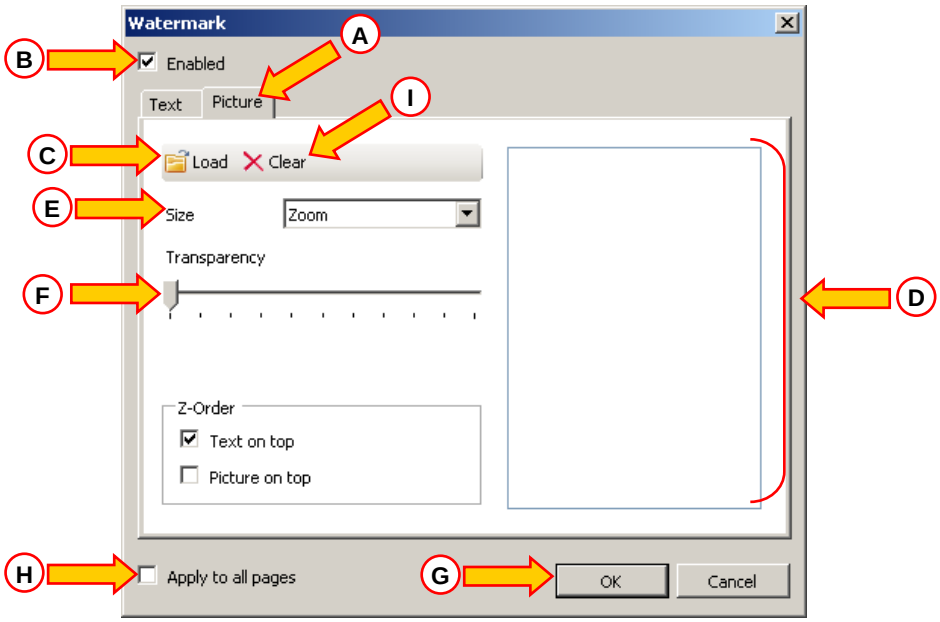


Fig 32

Follow these steps to insert an image as watermark,

- Ensure that the "Enabled" checkbox is checked (Fig 32 **B**). If not, the window's contents cannot be edited.
- Click the "Load" button indicated in Fig 32 **C**.

This opens the window making it possible to browse the computer contents.

- Search and select the image to be uploaded.

The image is displayed in the area indicated in Fig 32 **D**.

- Use the "Size" drop-down menu to set the size of the image (Fig 32 **E**).
- Use the "Transparency" cursor to set the transparency level of the watermark image (Fig 32 **F** - maximum transparency when the cursor is aon the left).
- Click the OK button (Fig 32 **G**).

The watermark image is this way inserted.

If the "Apply to all pages" checkbox is selected (Fig 32 **H**) the watermark is applied to each page in the document, otherwise it is applied only to the current page.

To delete an already selected image,

- Click the "Clear" button indicated in Fig 32 **I**.

7.5.2.2. Find

The FIND button (Fig 29 **E**) makes it possible to search the print report currently displayed.

To search the print report,

- Click the FIND button.

The following window opens (Fig 33).

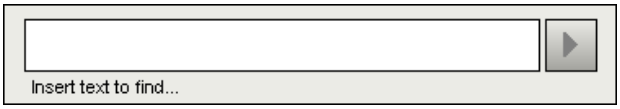


Fig 33

- Insert in the window the text to be found in the print report (Fig 34 **A**).

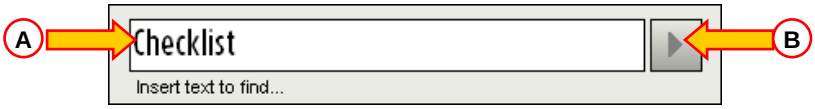


Fig 34

- Click the button (Fig 34 **B**).

The text specified, if found, will be highlighted in the print report.

- Click the button again to search for the following instances of the text.

7.5.2.3. Zoom

The 100% button (Fig 29 **F**) is a zoom, making it possible to change the display size and mode.

To change the display mode,

- click the 100% button. The following menu is displayed (Fig 35).

Fig 35

- Click the wanted option on the menu.

The page is displayed anccordingly. The mode currently selected is indicated on the button.

The following options are available:

the WIDTH button makes it possible to display the page using the full screen width;

the PAGE button displays the whole page;

the 200% button doubles the page size (200% zoom);

the 100% button displays the page in its actual size (100% zoom);

the 

area contains a cursor that can be used to zoom the page contents (left is zoom out, right is zoom in). The percentage value corresponding to the page size is displayed above the cursor. Values range from 100 to 200 %. The selected value is also displayed on the 100% button on the command bar after selection.

7.5.2.4. Print

The PRINT... button opens a window offering several print options.

- Click the PRINT... button (Fig 29 **H**) to display the print options window (Fig 36)

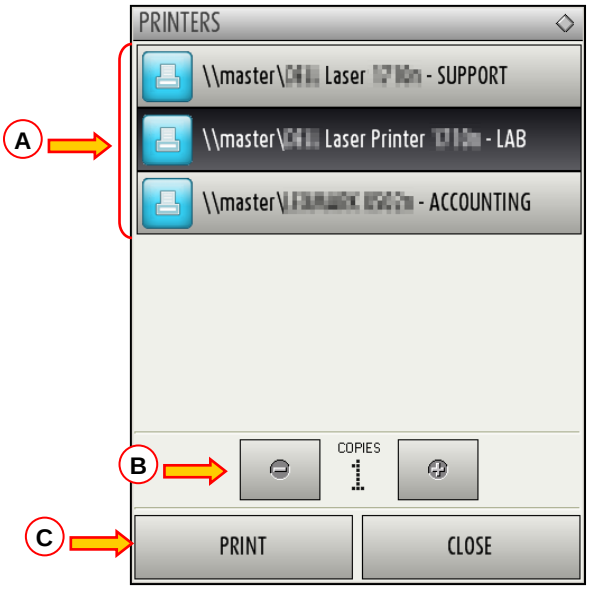


Fig 36

This window makes it possible to select the printer and the number of copies to be printed.

- Click the wanted option on the menu to select the printer (Fig 36 **A**).

- Use the  (one less copy) and the  (one more copy) buttons to specify the number of copies (Fig 36 **B**).

- Click the  button (Fig 36 **C**) to print the report.

7.5.2.5. Export

The  button (Fig 29 **I**) makes it possible to export the displayed document contents to different file extensions.

- Click the  button to display the following menu (Fig 37).

Fig 37

The menu displays all the extensions currently supported by the system in use.

- Click the option corresponding to the wanted extension.

The document is this way exported to the corresponding extension.

7.5.3. Statistics

The 

button on the main menu (Fig 38) makes it possible to access the system's statistical calculation tools.

Fig 38

The button opens another menu (Fig 39) that enables to access various distinct tools.
The type and number of accessible tools depend on the configuration in use and the specific modules installed.

These tools are mainly reserved to the system administrators. Please see the specific technical documentation for a description.

The "Query assistant" tool, which is accessible for users having specific permissions, is described in paragraph 7.5.3.1.

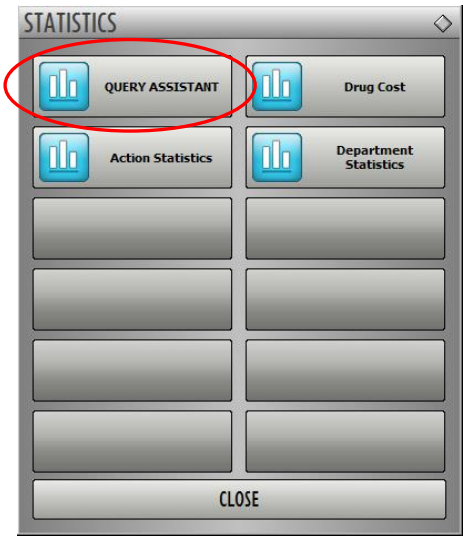


Fig 39

7.5.3.1. Query Assistant

The 

button (Fig 39) accesses a tool making it possible to create, save and execute queries on the DIGISTAT® database (Fig 40).

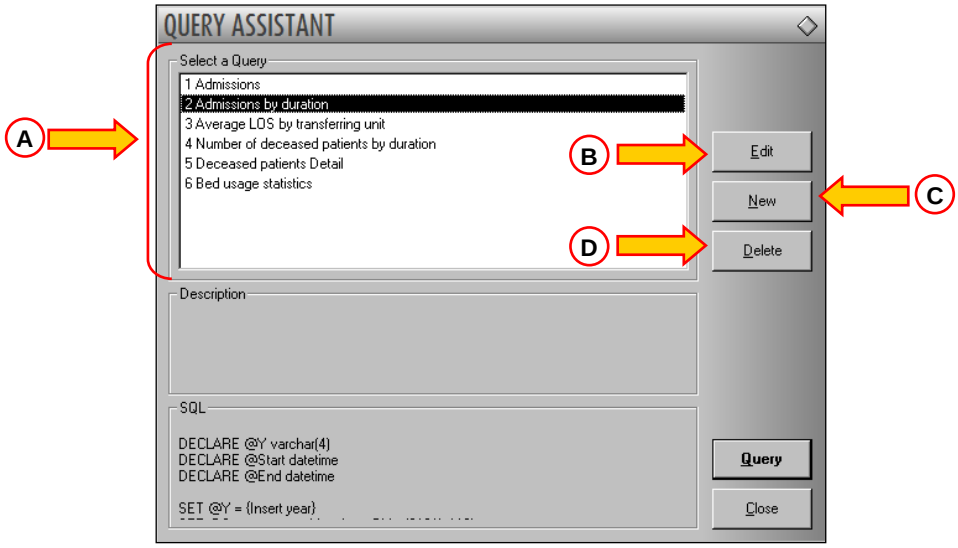


Fig 40 - Query Assistant

The user can select a query from a list of pre-defined queries, to execute it and display the results in a specific window.
The "Select a Query" area displays the list of all the pre-defined queries (Fig 40 **A**).

To run a query

- click the corresponding name on the list,

The name will be highlighted (Fig 41 **A**).

A textual description of the query is displayed in the "Description" area (Fig 41 **B**).
The "SQL" area (indicated in Fig 41 **C**) displays the content of the query in SQL language (Structured Query Language).

The "edit", "cancel" and "new" query options are reserved to the system administrators.

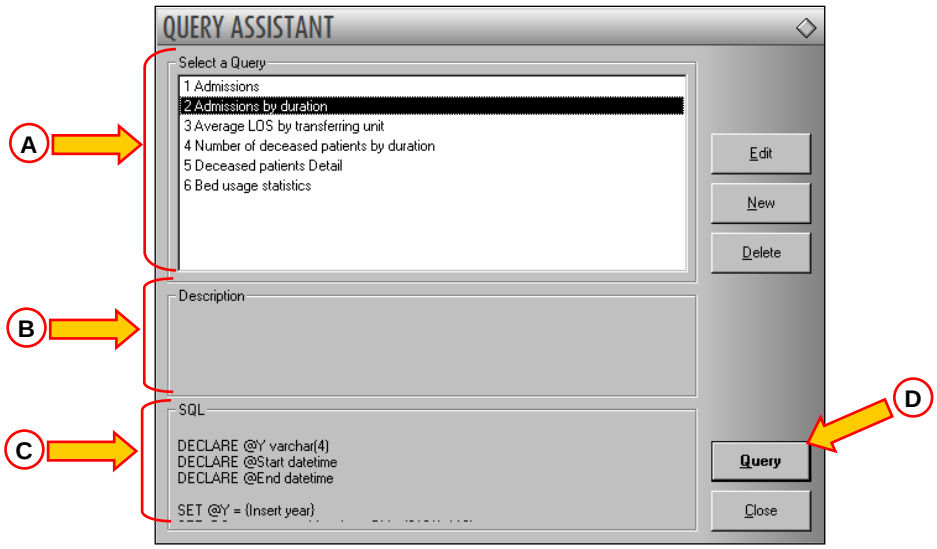


Fig 41 - Selected query

To run the query

- click the QUERY button (Fig 41 **D** - bottom-right).

The results are displayed in a new window, as a table (Fig 42).

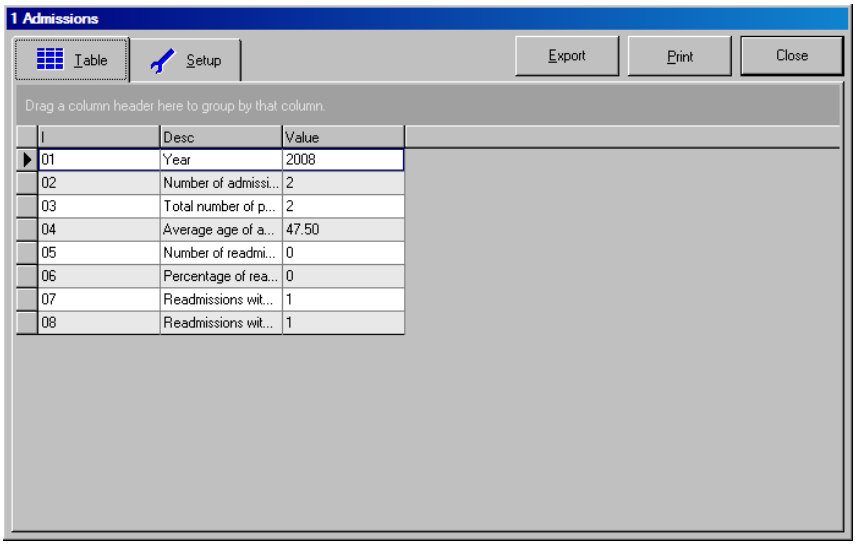


Fig 42 - Results

The EDIT button placed on the right of the "Query Assistant" window (Fig 40 **B**) makes it possible to edit an existing query.

The NEW button placed on the right of the "Query Assistant" window (Fig 40 **C**) makes it possible to create a new query.

The DELETE button placed on the right of the "Query Assistant" window (Fig 40 **D**) makes it possible to cancel an existing query.

7.5.4. Change password

The 

button on the DIGISTAT® main menu (Fig 43 **A**) opens a window making it possible to change the password of the user currently logged to the system.

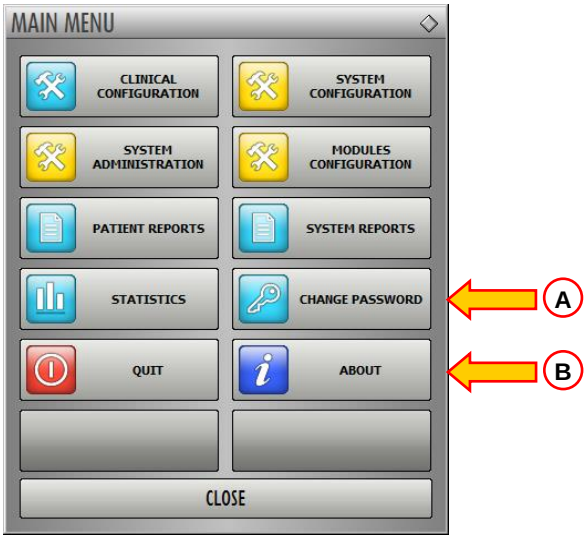


Fig 43

To change the user password

- click the 

button (Fig 43 A).

The "Change password" window will open.

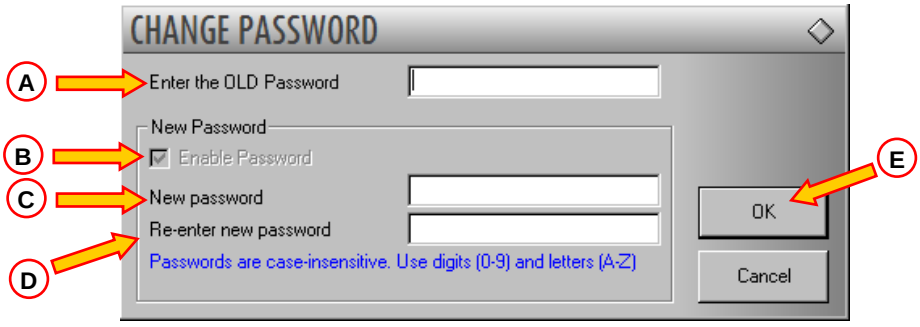


Fig 44 - Change password

- Type the current password in the "Enter the OLD password" field (Fig 44 **A**).
- Verify that the "Enable password" checkbox (Fig 44 **B**) is selected.
- Type the new password in the field indicated in Fig 44 **C**.
- Type again the new password in the field "Re-emter new password" (Fig 44 **D**).
- Click the OK button (Fig 44 **E**).

The passwords <u>are not</u> sensibile to uppercase and lowercase. The passwords can only be formed by numbers (0 to 9) and letters (A-Z).

7.5.5. About DIGISTAT®

The 

button on the DIGISTAT® main menu (Fig 43 **B**) displays a window containing information on the DIGISTAT® version installed and the related licences (Fig 45).

Fig 45

7.5.6. Quit DIGISTAT®

The 

button on the DIGISTAT® main menu (Fig 47 **A**) makes it possible to quit the DIGISTAT® environment.

To quit DIGISTAT®

- click the MENU button on the control bar (Fig 46).

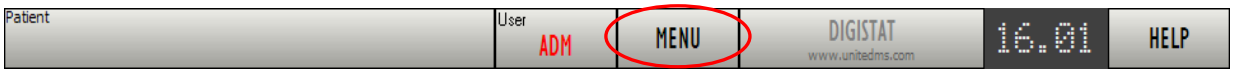


Fig 46

The DIGISTAT® main menu will open (Fig 47).

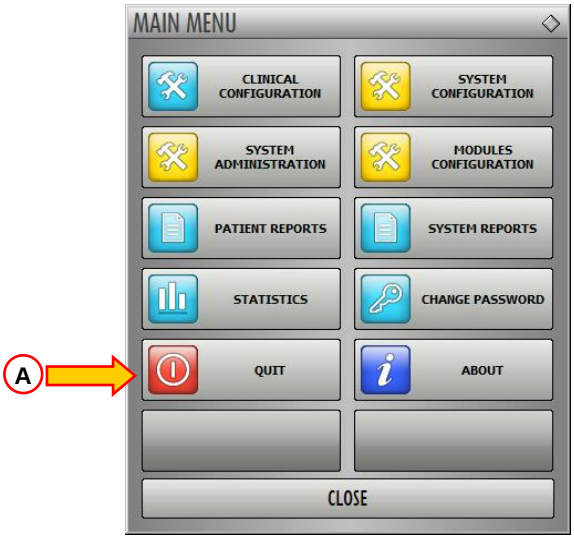


Fig 47 - Main menu

- Click the QUIT button (Fig 47 **A**).

Another menu is displayed (Fig 48).

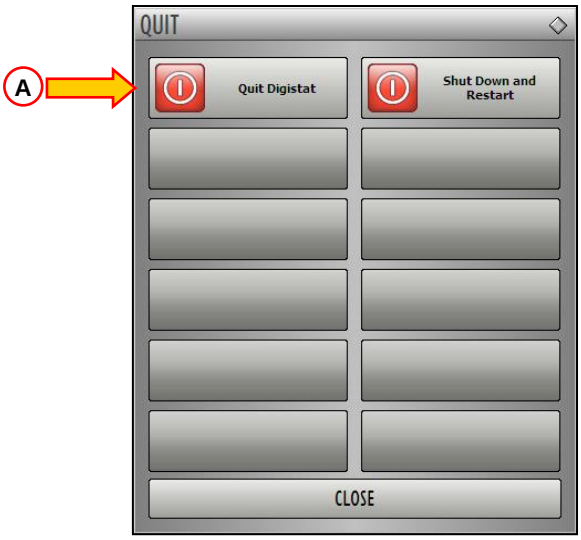


Fig 48

- Click the QUIT button again (Fig 48 **A**).

A confirmation is requested (Fig 49).

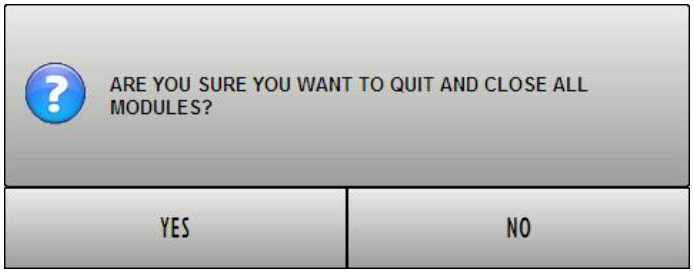


Fig 49

- Click YES to exit DIGISTAT®.

A user must have the required permissions level to exit DIGISTAT®.

7.6. Side toolbar

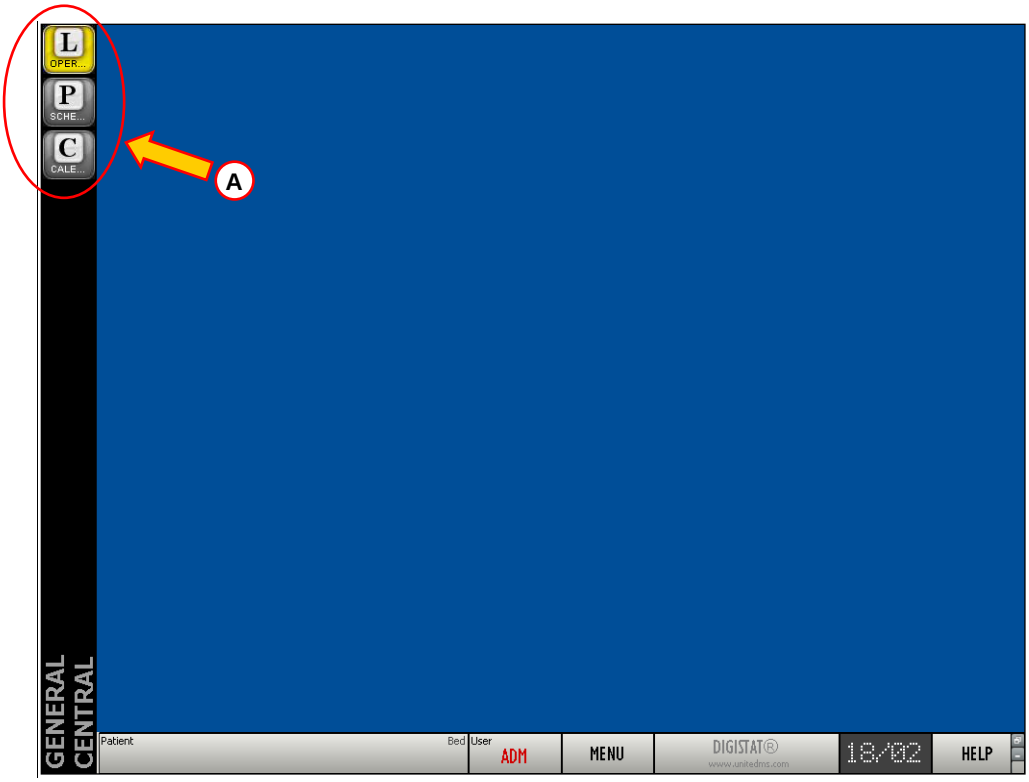


Fig 50- Side Toolbar

When the system is operating, the icons relating to the installed modules are displayed on the side toolbar on the left of the screen (Fig 50 **A**, Fig 51).

Fig 51 – Module icons

The icons on the side toolbar represent the available modules.

To activate one of the system modules

- click the corresponding icon on the side toolbar (Fig 51).

The icon corresponding to the currently selected module is highlighted yellow  .

7.7. Warning messages

Different types of pop-up windows are used throughout the DIGISTAT® environment to provide information or warnings regarding the correct use of the software. Also, when a critical operation is being performed, they are used to request confirmation of the operation.

The possible messages are communicated by 4 different types of window, here explained.

1) Timer window with single option (Fig 52).

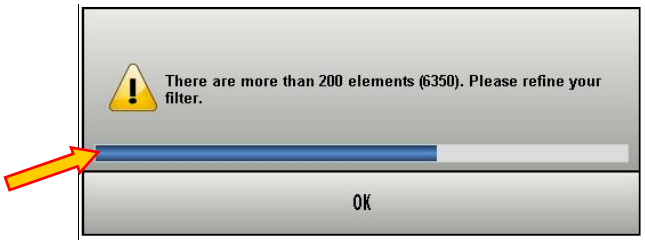


Fig 52 – Timer window with single option

This type of window is generally used to issue warnings or error messages to the user. The bar indicated in Fig 52 is a timer indicating how much time the window remains on screen. The blue part of the bar gets shorter as time goes by.
When the blue part reaches the left side of the bar the window disappears.
To make the window disappear immediately, click the OK button.

2) Timer window with double choice (YES or NO - Fig 53).

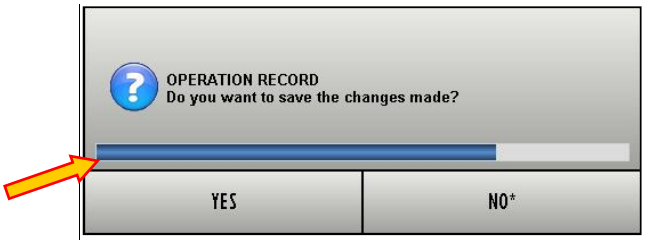


Fig 53 – Timer window with Yes/No choice

This window offers two options, usually related to an action which has just been performed. Click the YES button to perform the action, click the NO button to cancel the action.
The bar indicated in Fig 53 is a timer. The blue part of the bar gets shorter as time goes by.
When the blue part reaches the left side of the bar the window disappears. When this happens the system automatically makes a choice depending on the type of question and the context in which the message appears.

3) Window without timer with double choice (YES or NO - Fig 54).

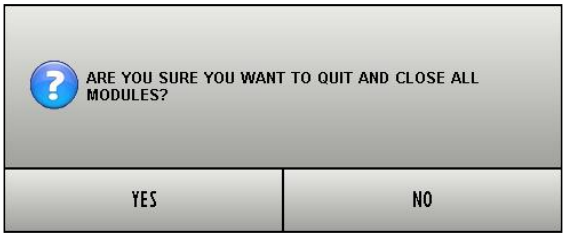


Fig 54 – Window without timer with double choice

The window shown in Fig 54, as the previous one, requires a choice between the options YES and NO in relation to an operation which has just been performed. Click the YES button to perform the action, click the NO button to cancel the action. This type of window has no timer and remains on screen until a choice is made.

4) Window without timer with single option (Fig 55)

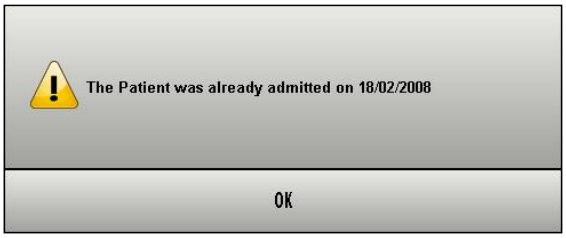


Fig 55 – Window without timer with single option

The window shown in Fig 55 provides information regarding a procedure error. No timer here, the kind of information provided requires a reading confirmation from the user (click OK).

The presence or absence of the timer in a window depends on the context it appears in. Certain messages only make sense momentarily and with reference to the operation the user is performing. These messages have a timer and disappear after a certain time.
Other messages must be received by anyone using the system, even after some time, and require a reading confirmation. These messages have no timer.

The messages provided by the DIGISTAT® environment are complete and comprehensible. There is no need to refer to special codes in order to understand them. In case of unclear messages, please inform your UMS referent as soon as possible, for reporting and clarity improvement purposes.

8. DIGISTAT® “Smart Scheduler”

8.1. 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.

8.2. 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 13.2).

- 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 14.5.5.

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".

8.3. 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 56, for instance, shows a situation in which, after a level 1 lock (Fig 56 **A**), the following options are enabled:

lock level 2;

lock level 3;

unlock level 1 (Fig 56 **B**).

The other options are disabled.

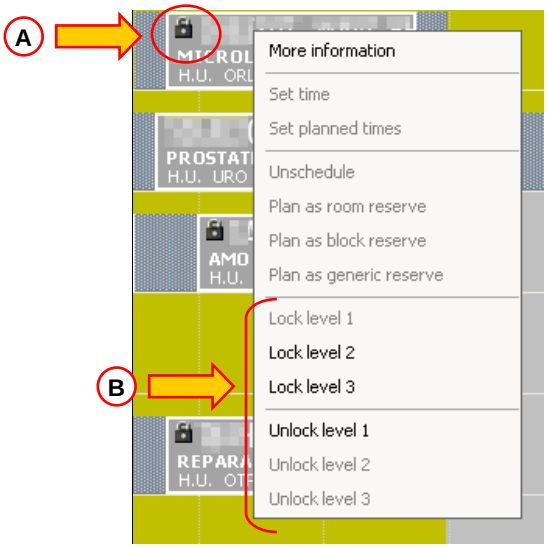


Fig 56 - Lock/Unlock operation options

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.

9. 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 10.
- **Schedule** - makes it possible to actually schedule the operations and to display the rooms schedule and availability. This module is described in paragraph 14.
- **Calendar** - provides a global view of the rooms availability in time. This module is described in paragraph 14.6.
- **Staff Management** – makes it possible to manage the operating staff. This module is described in paragraph 15.

10. Operation list

To access the “Operation List” module

- Click the corresponding icon 

on the lateral bar.

Fig 57

The following screen will open (Fig 58)

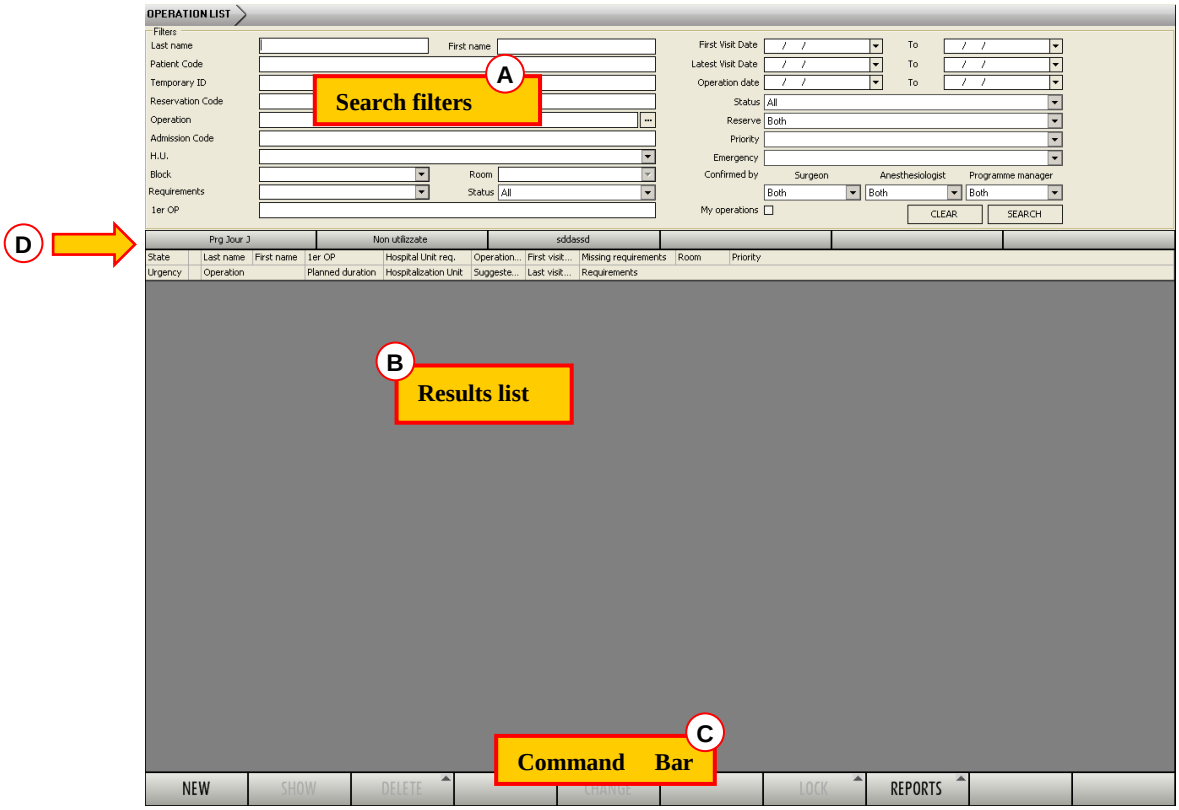


Fig 58 - Operation list

The screen is formed by four main areas:

1) The search filters - The area indicated in Fig 58 **A** contains the search fields that can be used to filter the list of operations. This area is described in paragraph 10.1.1.

2) The results area - The area indicated in Fig 58 **B** displays the search results after the search is performed. This area is described in paragraph 10.2. Each result refers to one of the operations recorded in the system.

3) The command bar - The command bar (Fig 58 **C**) contains a series of buttons making it possible to perform specific procedures. See paragraph 10.3 for a description of these procedures.

4) Pre-defined searches - The buttons indicated in Fig 58 **D** can be used to launch pre-defined searches that were previously recorded by the user. This functionality is described in paragraph 10.1.3.

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

10.1. How to search for an operation

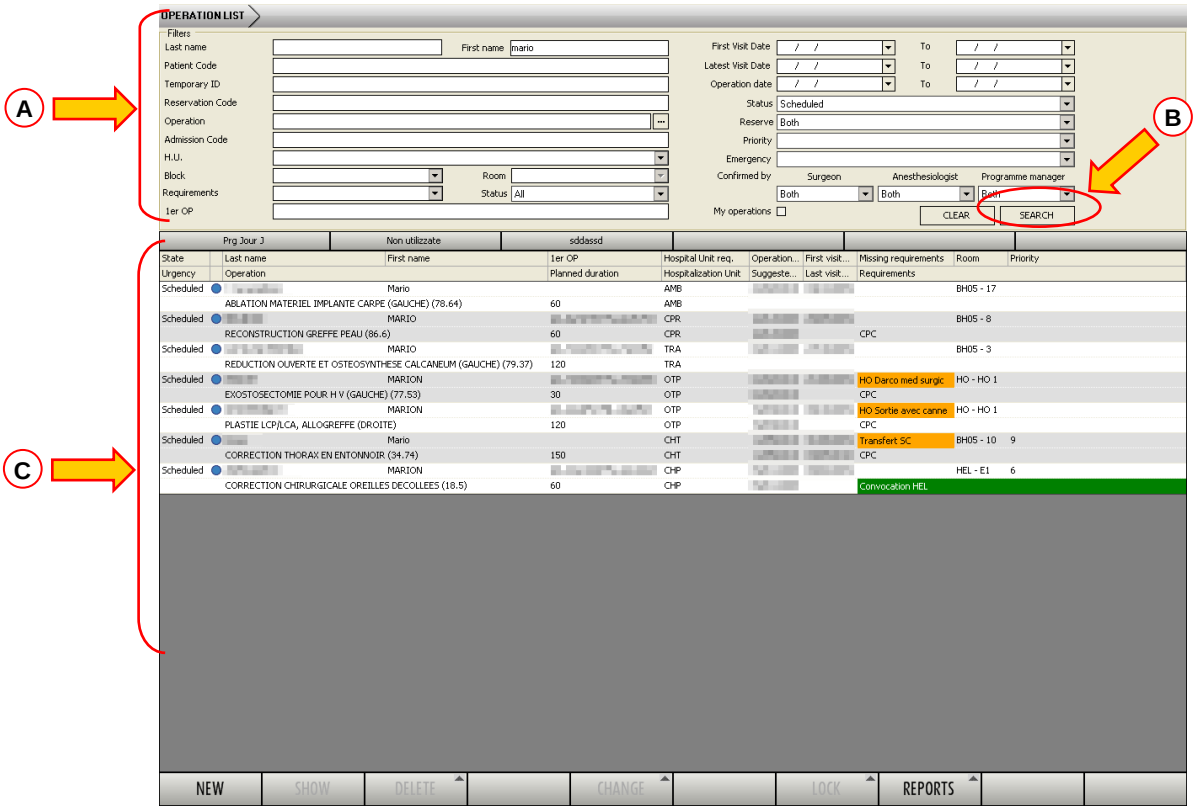


Fig 59 – Operation search

To search for an operation

- Insert the available operation data in the search field (In Fig 59 **A** we are searching for an operation in "Scheduled" state with "Mario" as patient's name).
- Click the SEARCH button indicated in Fig 59 **B**.

The list of operations corresponding to the specified values will appear (Fig 59 **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 60).

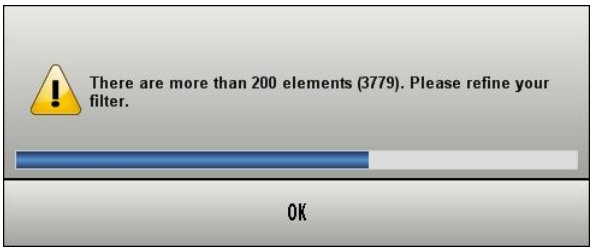


Fig 60

10.1.1. 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 10.3.1.1 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 61).

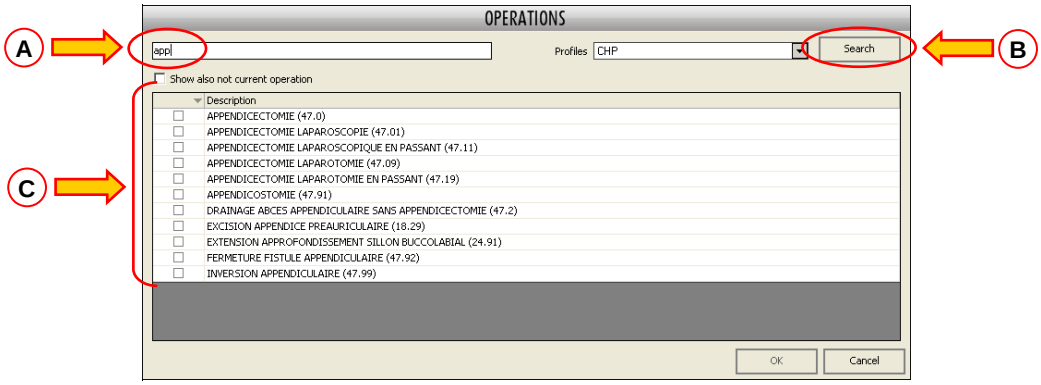


Fig 61 - Operation selection

To use this window

- insert the operation name (or part of it), in the field indicated in Fig 61 **A**.
- Click the SEARCH button indicated in Fig 61 **B**.
- The list of operations whose names contain the inserted characters will appear (Fig 61 **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 62 **A**) opens a drop down menu listing all the possible hospital units.

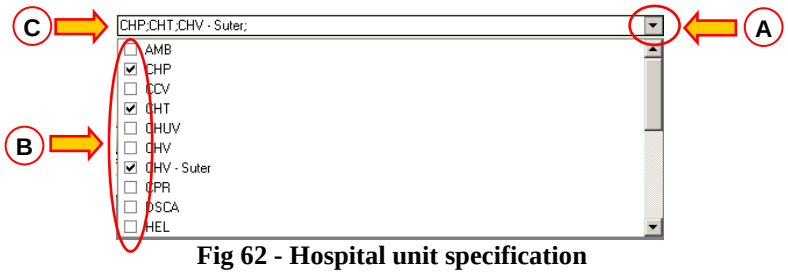


Fig 62 - Hospital unit specification

- Click the box/es placed near the name of the relevant hospital unit/s (Fig 62 **B**).

The box will be selected.

The names of the selected units will appear in the field (Fig 62 **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 13.3 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 14.5.5 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 13.2.19 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 63 related to the “Status” field.

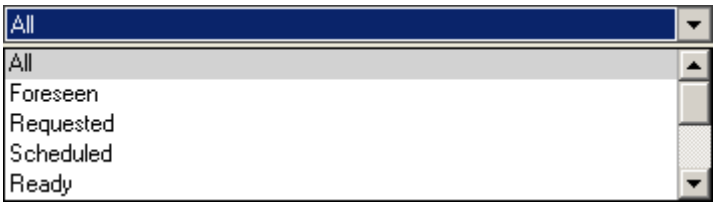


Fig 63 – State selection window

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

10.1.2. 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 64)

Fig 64

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 64).

Use the arrows indicated in Fig 64 **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.

10.1.3. Pre-defined searches

The bar that divides the upper and lower parts of the page Fig 65 is made up of buttons that can be configured to perform pre-defined searches.

Fig 65 – 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 65 **A**).
- Right click.

The following window will open.

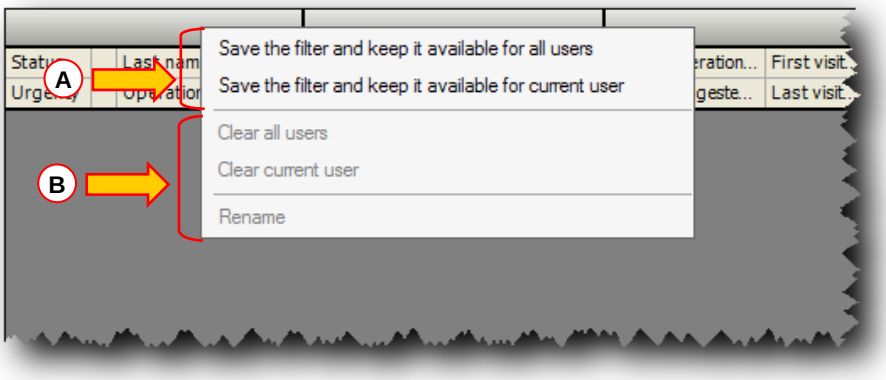


Fig 66 – Setting a pre-defined search

- Click the first or second option (Fig 66 **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 67).

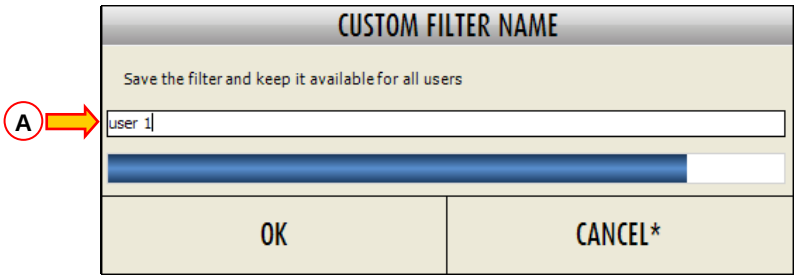


Fig 67 – Name search

- Enter the name you wish to assign to the pre-defined search (Fig 67 **A**).
- Click the OK button.

The name assigned to the search will appear on the chosen button (Fig 68).

Fig 68 – 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 66 **B**).

To change the name of a stored search, simply click “Rename” (Fig 66 **B**).

10.2. Search results

The results of the search are shown in the lower part of the page Fig 69).

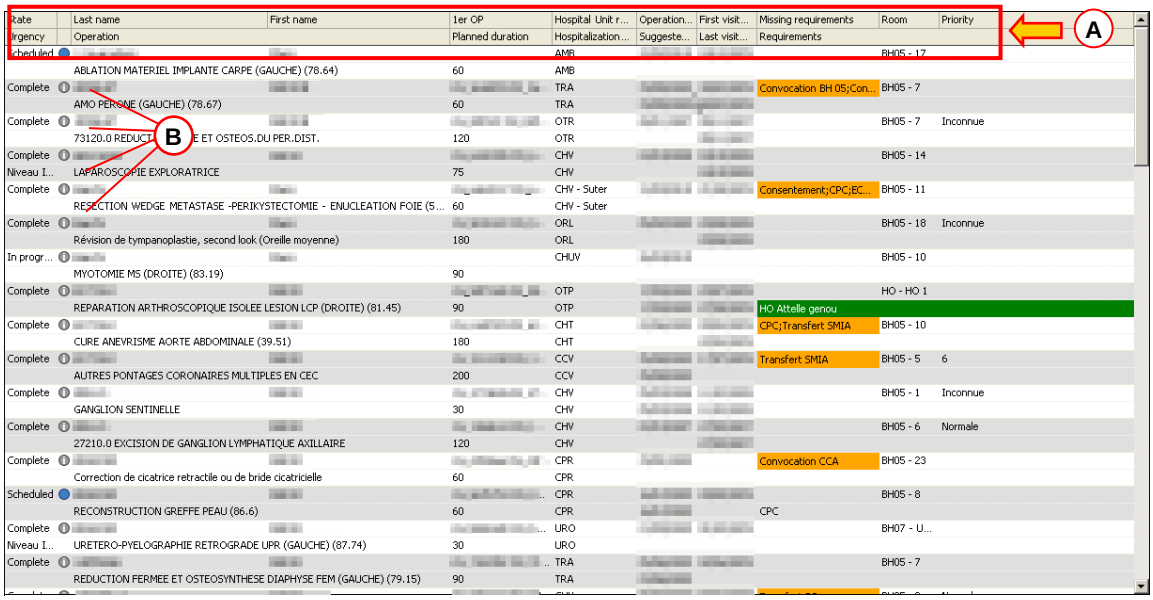


Fig 69 – Search results

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 69 **A**, Fig 70).

Fig 70 – Results structure

The information contained in every result, starting from the box in the top left corner of Fig 70, 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 10.2.1 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 10.2.1 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 71).

Fig 71

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 72).

Fig 72

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 70 can be clicked to display the results in the preferred order.

Click the ⓘ icon present on every row (Fig 73),

Fig 73

to open a window containing the main data relating to the operation (Fig 74).

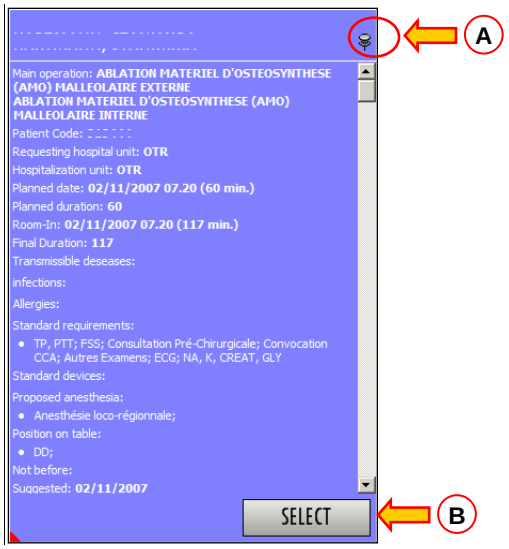


Fig 74 – "Operation data" window

Click the SELECT button in the window (Fig 74 **B**) to access the "Operation Record" relating to the operation (Fig 106, paragraph 11).

The window disappears automatically as soon as the mouse is moved; click the "thumbtack" in the top right corner of the window (Fig 74 **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 8.3 for an explanation of the "lock/unlock operation" functionalities in the Smart Scheduler system.

10.2.1. 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 75

The "Missing requirements" box (Fig 75 **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 75 **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 176, see paragraph 13.3).

The colors have the following meanings.

If the area is highlighted red (Fig 76), at least one of the requirements is missing because the procurement procedure has failed (e.g. failed test or consent denied).

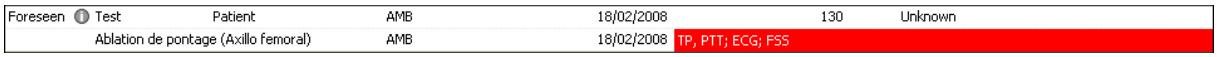


Fig 76 - Patient requirements color code -1

If the area is highlighted orange (Fig 77), 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).

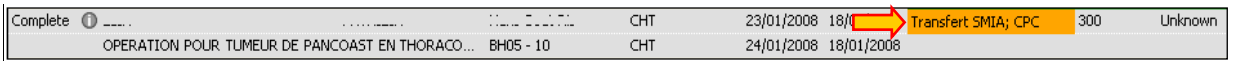


Fig 77 – Patient requirements color code -2

If the area is highlighted green (Fig 78), 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 78 – Patient requirements color code -3

If the area is not highlighted (Fig 79), the patient is waiting for the necessary documentation.

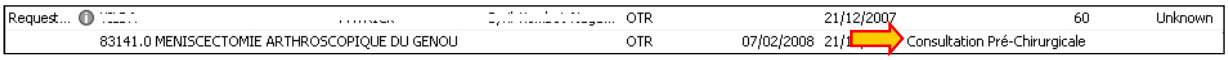


Fig 79 - Patient requirements color code - 4

10.2.2. 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 80).

Fig 80 – Room reserve

Block reserves are identified by the icon (Fig 81).

Fig 81 – Block reserve

Generic reserves are identified by the icon (Fig 82).

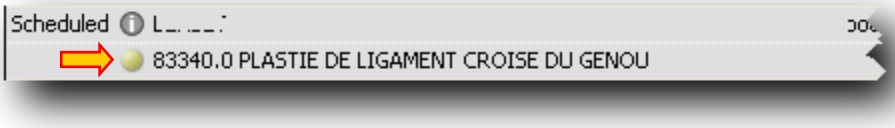


Fig 82 – Generic reserve

10.3. 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 83). This paragraph lists briefly the functions of the different buttons. They will be described in detail in the indicated paragraphs.

Fig 83 - Command bar

NEW — Use this button to create a new operation. See paragraph 10.3.1 for the procedure.

SHOW — Use this button to display the data of an existing operation. See paragraph 10.3.2 for the procedure.

DELETE — Use this button to cancel or annul an existing operation. See paragraph 10.3.3 for the procedure.

CHANGE — Use this button to change the operation state. See paragraph 10.3.4 for the procedure.

LOCK

Use this button to lock/unlock a scheduled operation. See paragraph 10.3.5 for the lock/unlock procedure when used on the "Operation list" screen.

REPORTS

Use this button to create the appropriate print reports. See paragraph 10.3.6 for the procedure.

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).

10.3.1. 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 84).

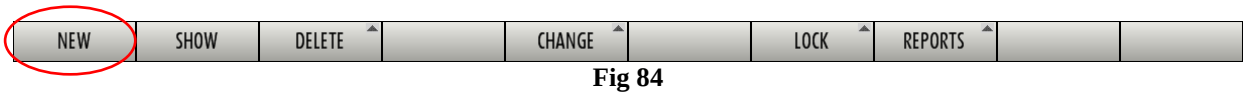


Fig 84

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 85). The patient data will appear in the relevant fields (Fig 85 **A**).

The “Operation Record” screen is described in paragraph 11.

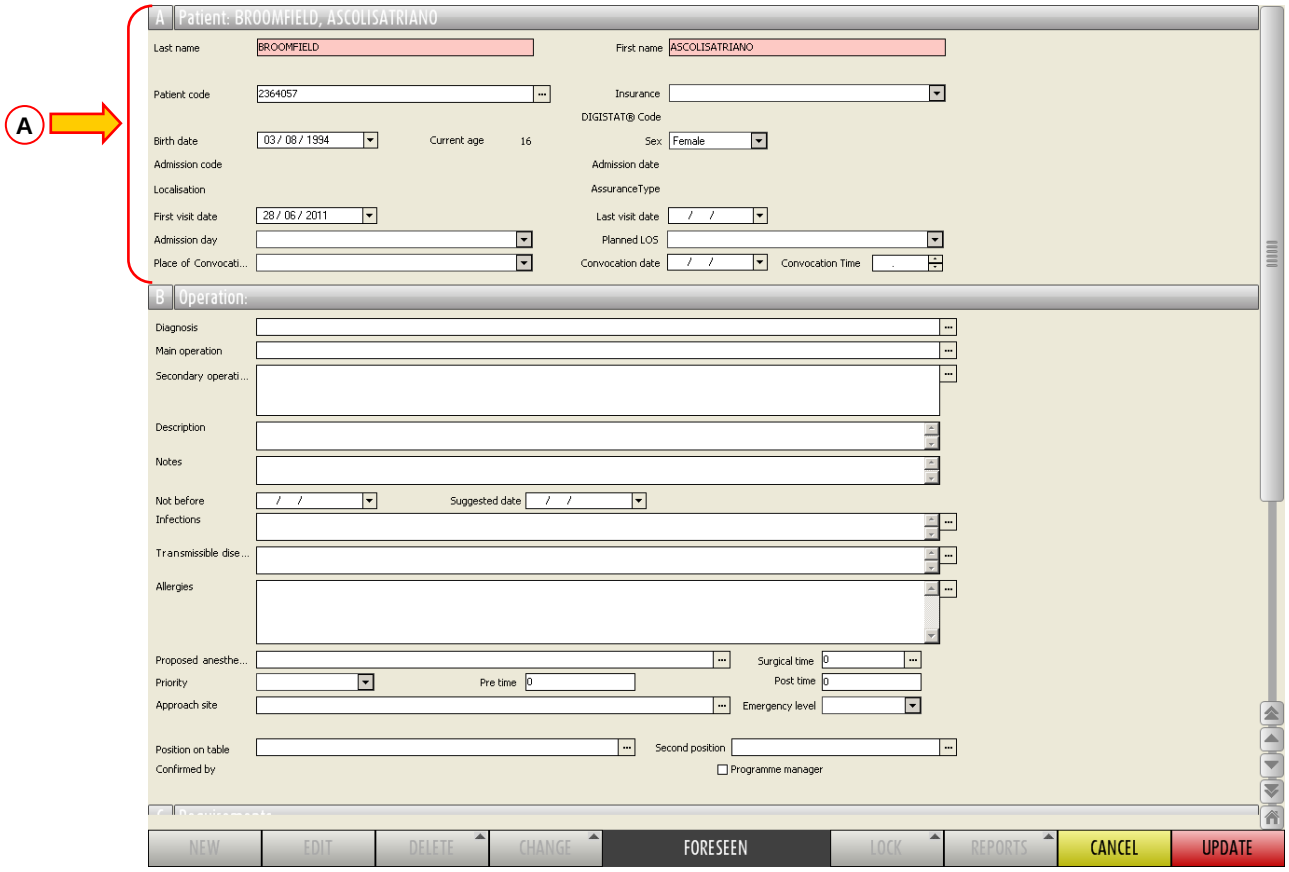


Fig 85 – Operation record

- Fill the operation record with all the relevant data. See paragraph 11 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 8.2 for a description of the operation states managed by the “Smart Scheduler” system.*

10.3.1.1. 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 84).

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 86).

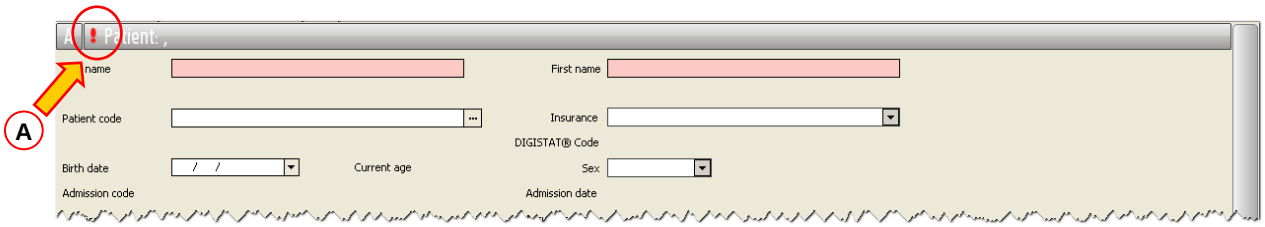


Fig 86 – Operation record with provisional data

- 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 86 **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 87).

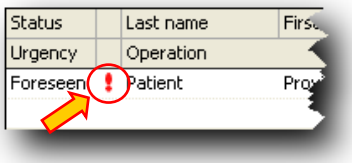


Fig 87

The exclamation mark on this page can be clicked to display the window containing the main information on the operation (Fig 88).

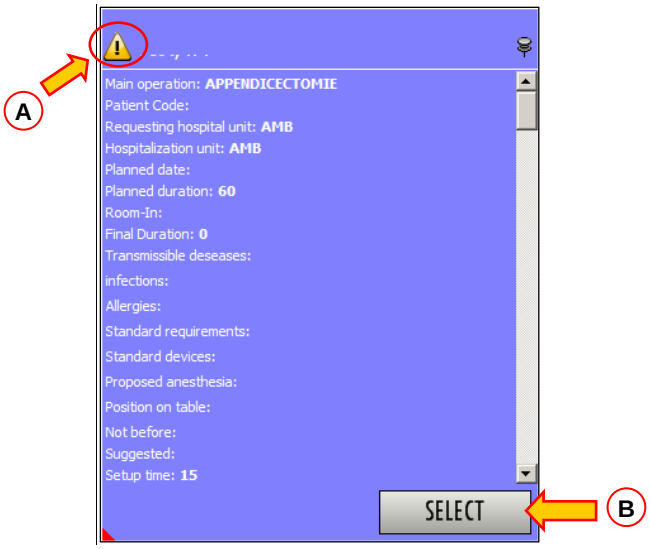


Fig 88

The icon highlighted in Fig 88 **A** indicates that the information window refers to an intervention with provisional data.

Click the SELECT button in the window (Fig 88 **B**) to access the "Operation Record" screen relating to the operation (Fig 106)

The window disappears if clicked again.

10.3.1.2. 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 58).
- Click the EDIT button (Fig 89).

Fig 89 - "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 90), or the PATIENT button on Control Bar (Fig 91).

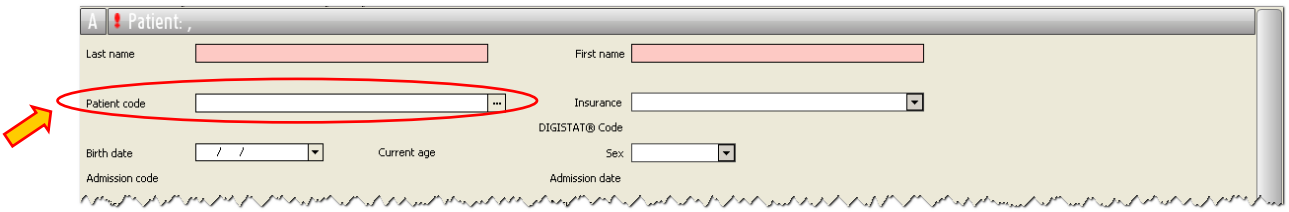


Fig 90

Fig 91

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 106 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.

10.3.2. How to display an “Operation record”

To display a specific record, on the “Operation list” screen (Fig 92),

➢ search for the wanted record using the procedures described in paragraph 10.1.

The corresponding row will appear on screen.

➢ Click the row.

The row will be highlighted (Fig 92 **A**).

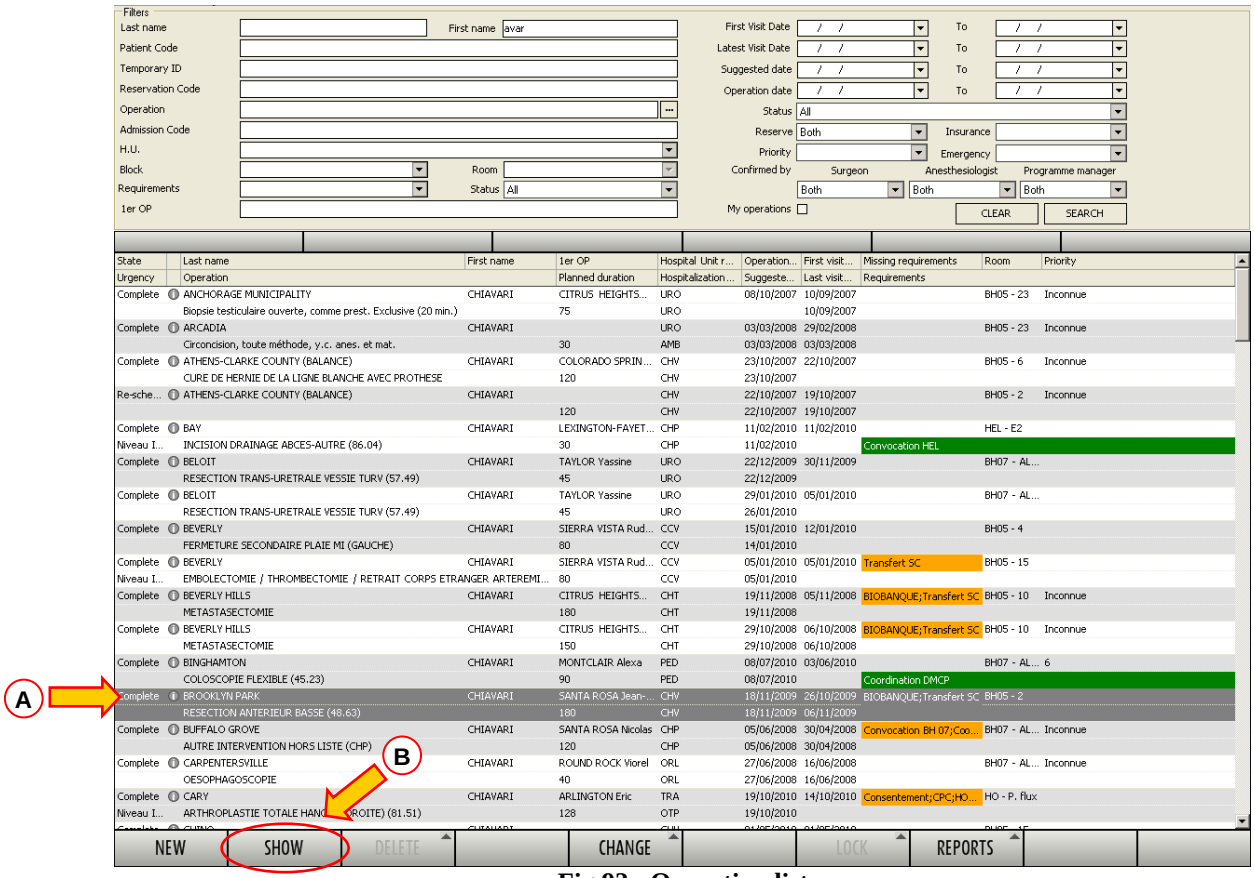


Fig 92 - Operation list

- click the SHOW button on the command bar (Fig 92 **B**).

The corresponding “Operation record” will open (Fig 93).

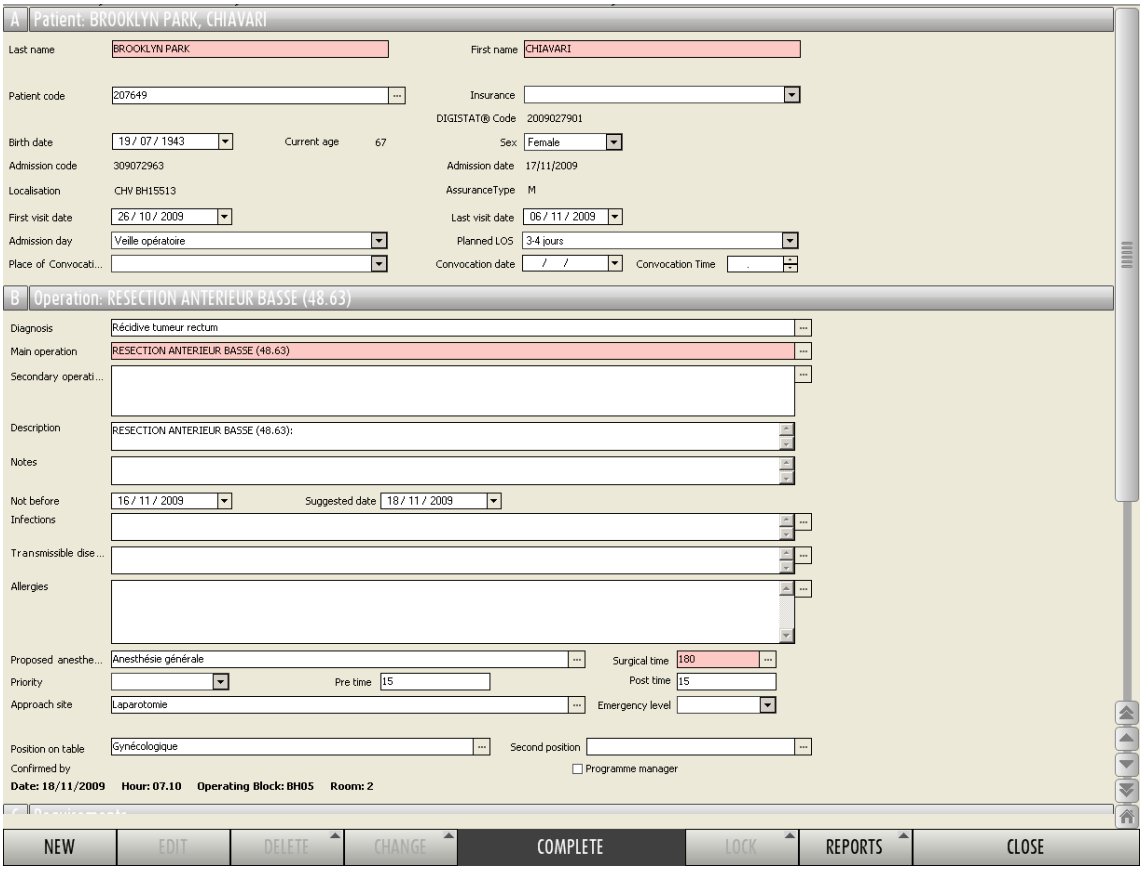


Fig 93 - Operation Record

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

10.3.3. How to either delete or annul an operation

To either delete or annul an operation record, on the "Operation list" screen (Fig 94),

- search for the wanted record using the procedures described in paragraph 10.1.

The corresponding row is displayed.

- Click the row.

The row is this way highlighted (Fig 94 **A**).

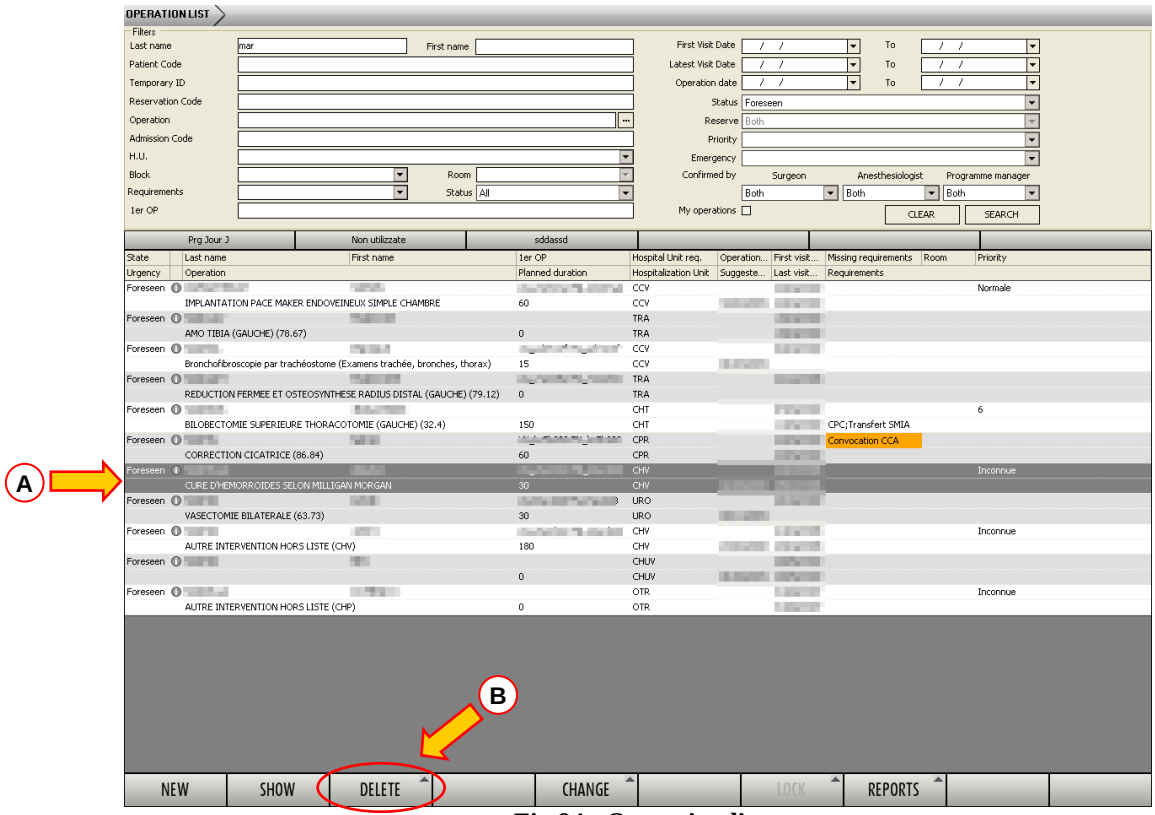


Fig 94 - Operation list

- Click the DELETE button (Fig 94 **B**).

A menu containing two options opens (Fig 95).

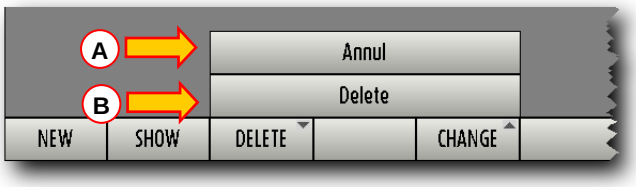


Fig 95

Annul - Use the "Annul" option (Fig 95 **A**) to annul the selected operation.

After clicking on "Annul" the following window opens, requesting to specify the annulment reason (Fig 96).

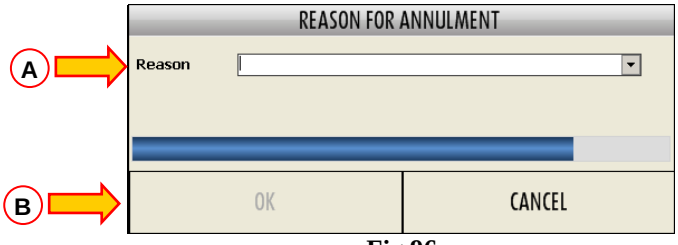


Fig 96

- Enter the reason for annulment in the "Reason" field (Fig 96 **A**).

- Click OK to annul the operation (Fig 96 **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 95 **B**) to delete the operation highlighted.

After clicking on "Delete" the following window opens, requesting to specify the deletion reason (Fig 97).

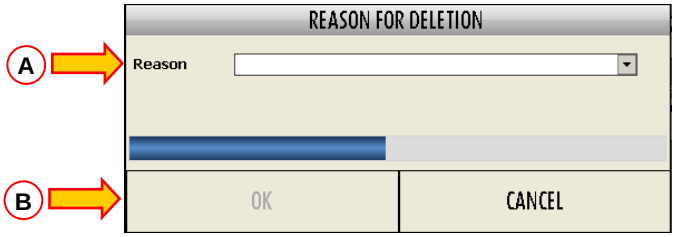


Fig 97

- Enter the reason for deletion in the "Reason" field (Fig 97 **A**).

- Click OK to delete the operation (Fig 97 **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.

10.3.4. 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 10.1.

The corresponding row will appear on screen.

- Click the row.

The row will be highlighted (Fig 98 **A**).

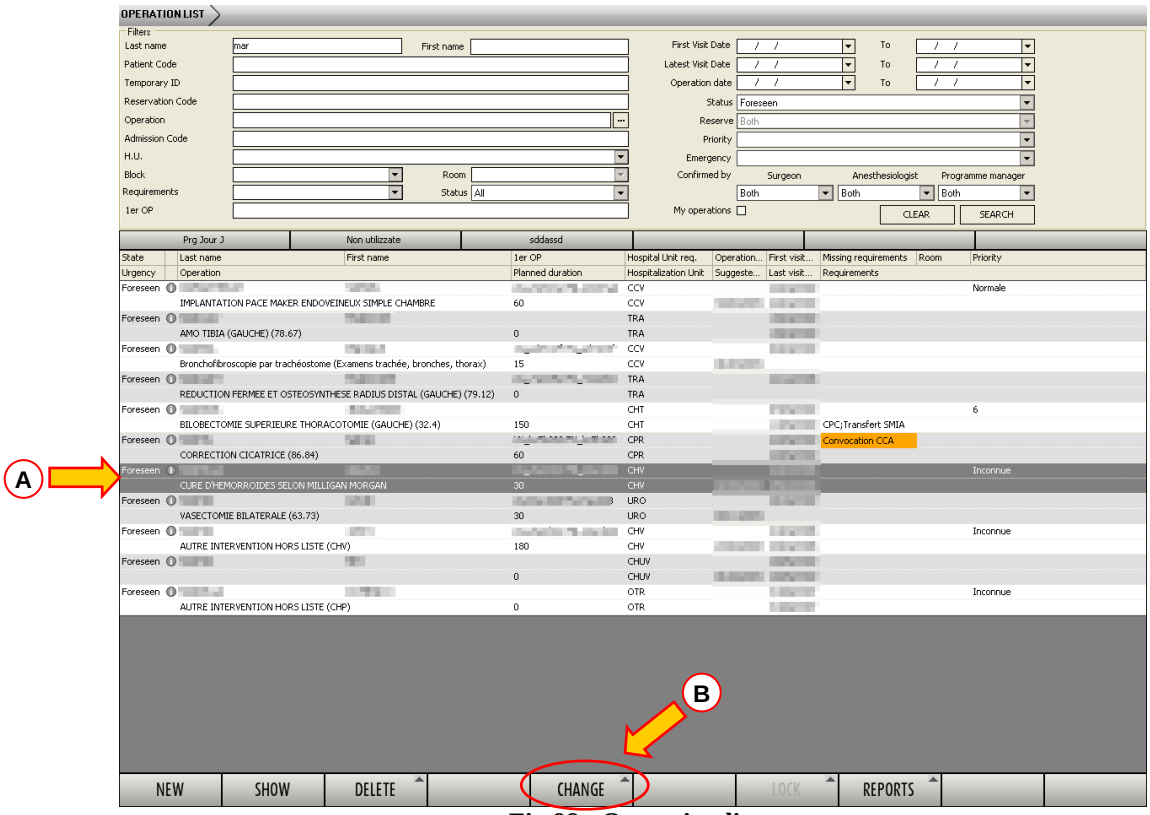


Fig 98 - Operation list

- Click the CHANGE button (Fig 98 **B**).

The menu shown in Fig 99 will open.

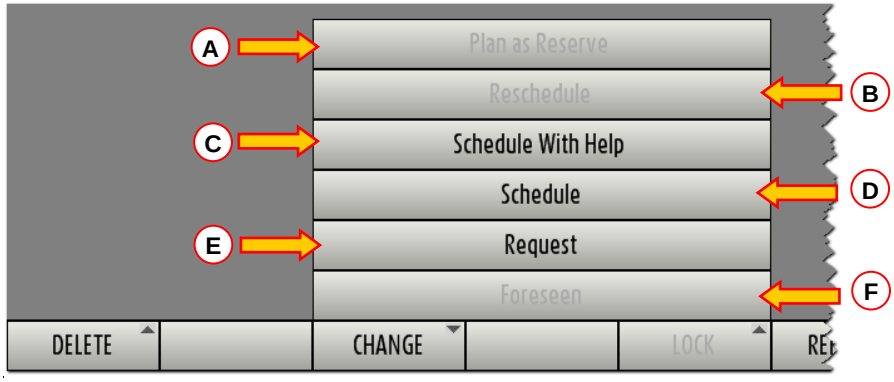


Fig 99 – "Change" button

On the menu shown in Fig 99 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 99 **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 106).
After clicking this option the system requests to specify the date and the block of the operation. The window shown in Fig 100 appears.

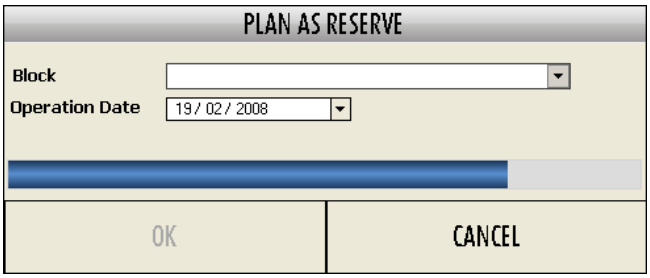


Fig 100

- 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 14.5.5 for an explanation of the meaning of "reserve" in the Smart Scheduler System

- Reschedule (Fig 99 **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 14.5.3.

- Schedule with help (Fig 99 **C)**

The "Schedule with help" option enables to access the "Shedule with help" screen to schedule the selected operation (Fig 287, see paragraph 14.7).

- Schedule (Fig 99 **D)**

The "Schedule" option enables to access the "Schedule" screen to schedule the operation (Fig 228, paragraph 14).

- Request (Fig 99 **E)**

The "Request" option changes the operation state to "Requested". See paragraph 8.2 for the explanation of "Operation state".

- Foreseen (Fig 99 **F)**

The "Foreseen" option changes the operation state to "Foreseen". See paragraph 8.2 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 *pressed on the workstation keyboard.All the clicked rows will be highlighted.*

10.3.5. 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 10.1.

The corresponding row will appear on screen.

- Click the corresponding row.

The row will be highlighted (Fig 101 **A**).

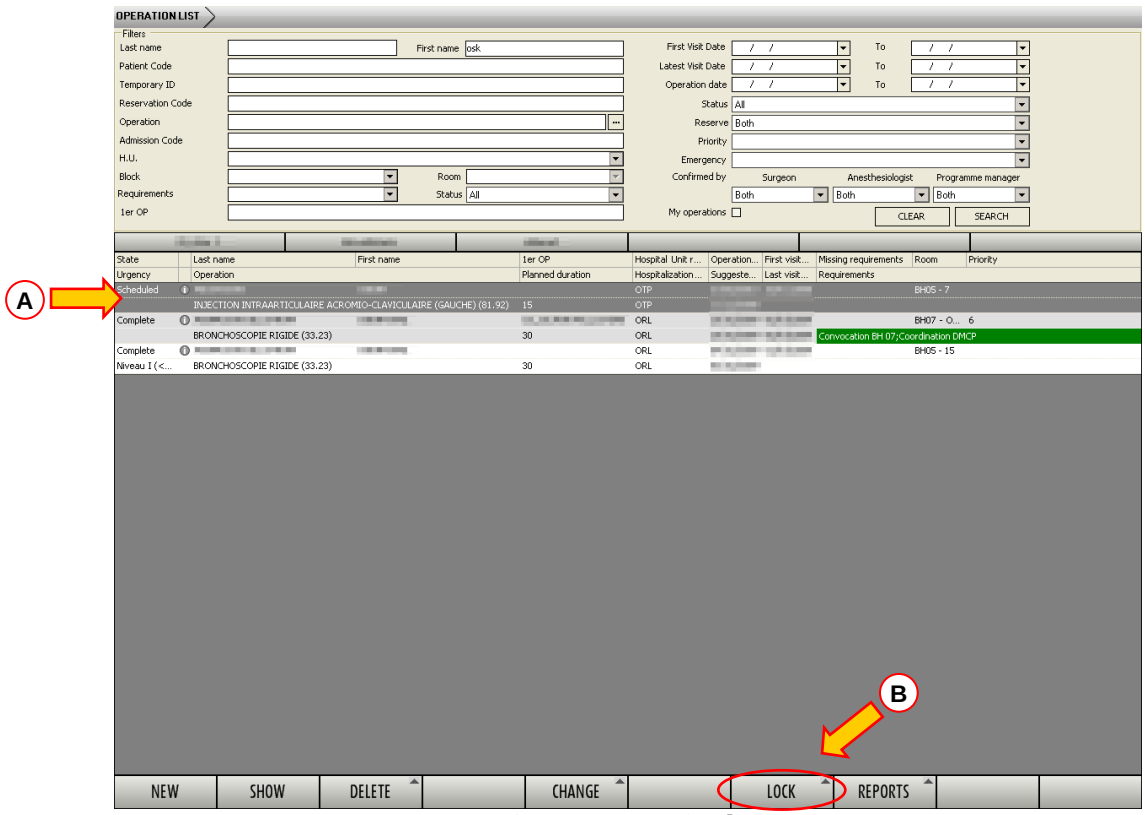


Fig 101 - Operation list

- Click the LOCK button (Fig 101 **B**).

The following menu will open (Fig 102).

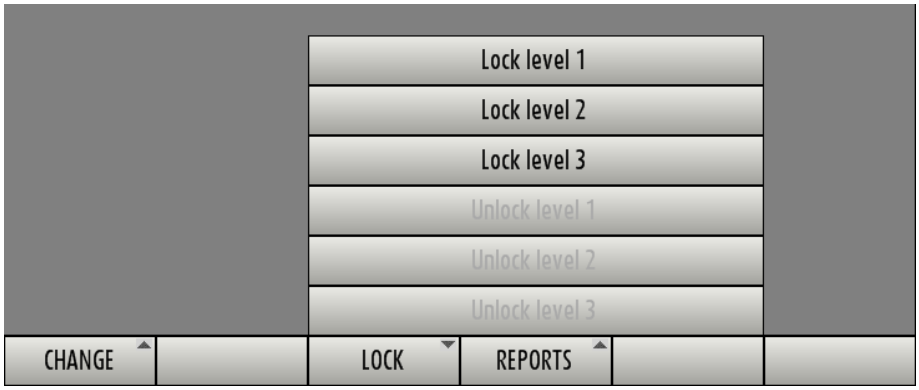


Fig 102 - Lock/Unlock operation

Three lock levels are possible in the configuration here explained (Fig 102).
See paragraph 8.3 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 102, for example, the user has the possibility to lock level 1, 2, 3 an unlocked operation (Fig 101 **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 103).

Fig 103 - 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 104).*

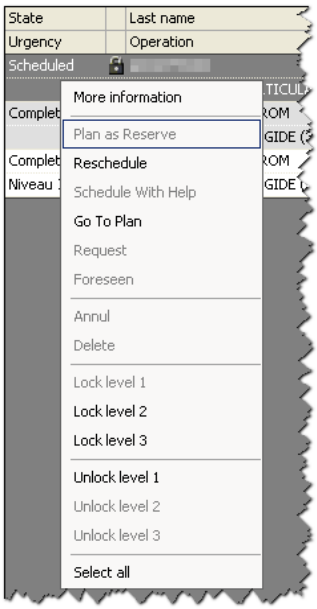


Fig 104

The "More information" option on the menu displays the window seen in Fig 74.

10.3.6. 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 105 – 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. See paragraph 7.5.2 for the system's print functionalities.

11. Operation Record: main features

The “Operation Record” (Fig 106) page contains all the available data of an operation.

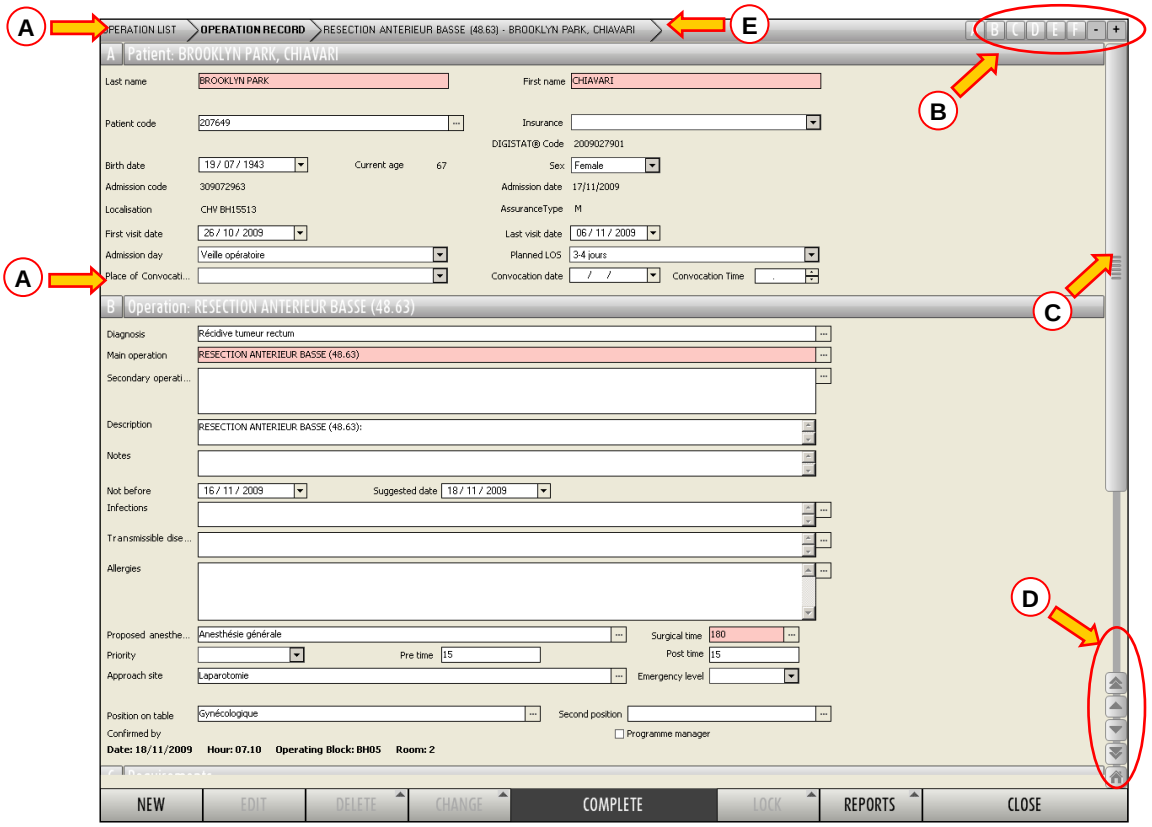


Fig 106 – Operation Record

11.1. 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 106 **A**).

Click on one of the bars to close or open the section below (Fig 107).

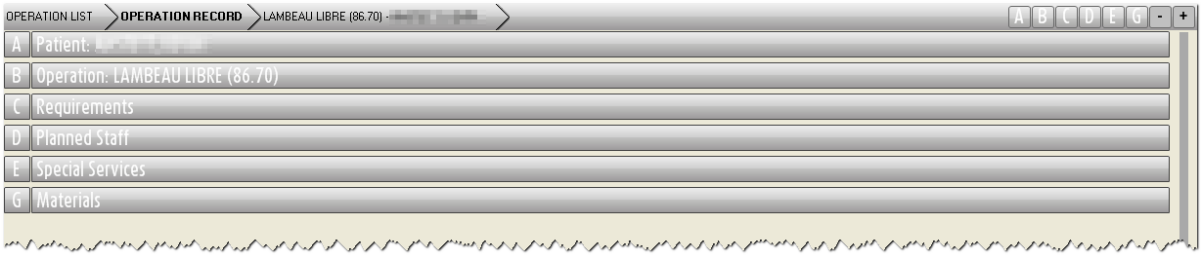


Fig 107 – “Closed” sections

Fig 107 shows a page where all the sections have been closed.

Click the bar again to reopen the section below (Fig 108).

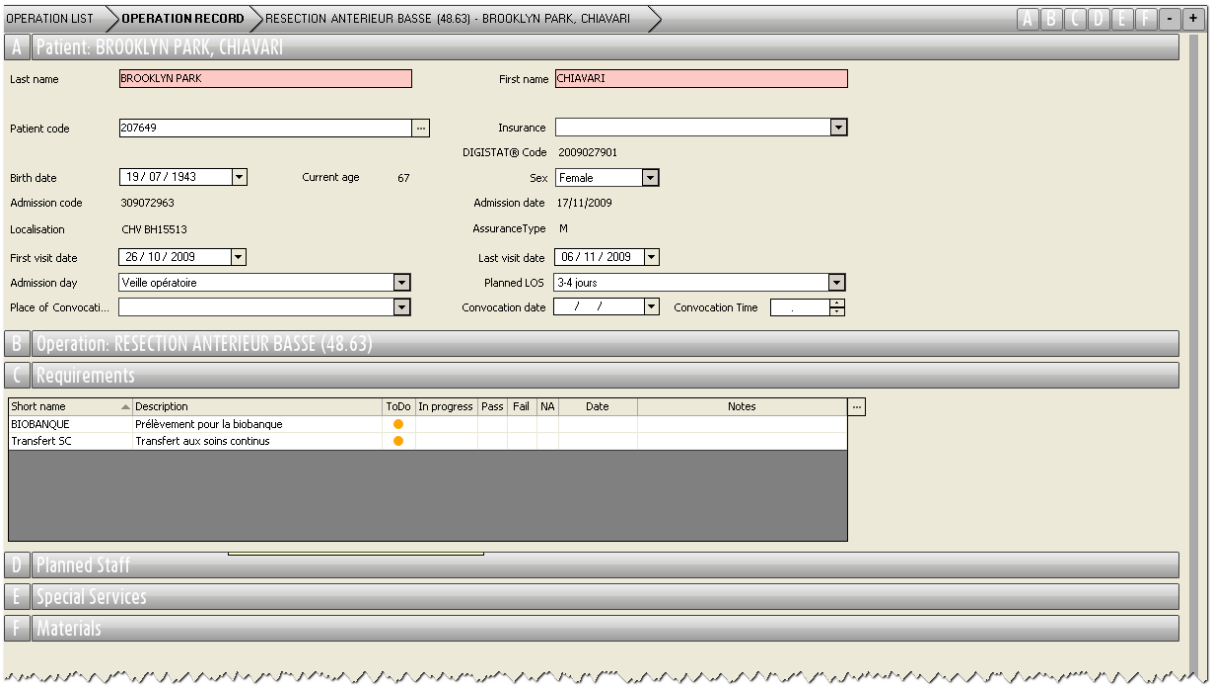


Fig 108 – “Patient” and “Requirements” areas

Fig 108 shows a page where only the “Patient” and “Requirements” sections have been reopened.

The buttons in the top right corner of the page (Fig 106 **B**, Fig 109) make it possible to directly access the different sections.

Fig 109

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 106 **C**).

The arrow buttons in the bottom right corner perform the same function (Fig 106 **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 106 **E**, Fig 110).

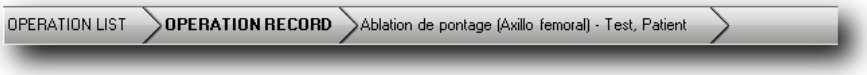


Fig 110 – Navigation Bar

Fig 110 indicates we passed from the "Operation List" page to the "Operation Record" page of the patient and operation specified.

12. Operation Record: procedures and functionalities

The page control bar (Fig 106 , Fig 111) contains various buttons which make it possible to perform various operations.

Fig 111 – "Operation Record" command bar

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

NEW — Click this button to create a new operation record. See paragraph 10.3.1 for the related procedures.

EDIT — Click this button to edit the data displayed on screen. After clicking the EDIT button the operation record turns to "edit" mode. See paragraph 12.1.

DELETE — Click this button to either delete or annul an existing operation. See paragraph 12.2.

CHANGE — Click this button to change the operation state. See paragraph 12.3.

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

LOCK — Click this button to either lock or unlock a planned operation. See paragraph 12.4.

REPORTS — Click this button to create different kinds of print reports. See paragraph 12.5

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

12.1. How to edit the "Operation Record"

The EDIT button (Fig 112) makes it possible to edit the page.

Fig 112 – 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 113).

Fig 113 – Command bar in "Edit" mode

In Fig 113 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 111.

12.2. Deleting/annulling an operation record

The DELETE button opens a menu containing two options (Fig 114).

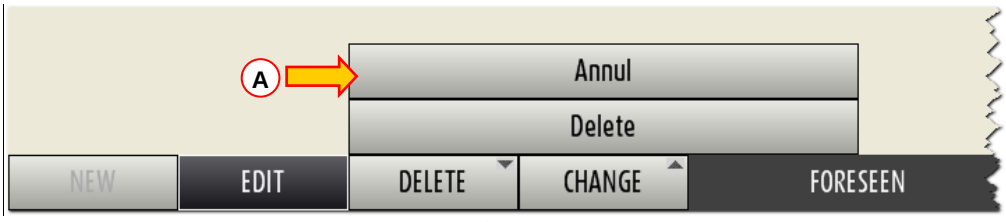


Fig 114

Annul - Use the "Annul" option (Fig 114 **A**) to annul the operation.

After clicking on “Annul” the following window opens, requesting to specify the annulment reason (Fig 115).

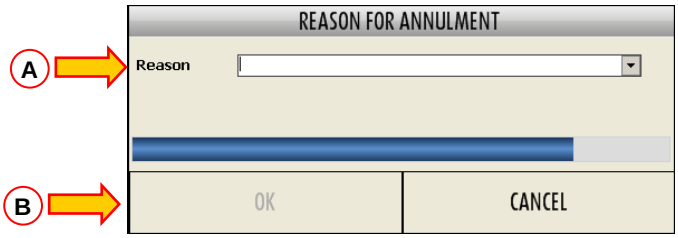


Fig 115

- Enter the reason for annulment in the “Reason” field (Fig 115 **A**).
- Click OK to annul the operation (Fig 115 **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 114 **B**) to delete the operation.

After clicking on “Delete” the following window opens, requesting to specify the deletion reason (Fig 116).

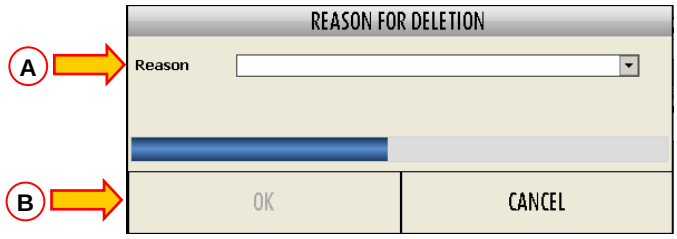


Fig 116

- Enter the reason for deletion in the “Reason” field (Fig 116 **A**).
- Click OK to delete the operation (Fig 116 **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.

12.3. 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 117).

Fig 117 – Operation record command bar

The screen turns to "edit" mode. The command bar changes in the way shown in Fig 118.

Fig 118 – Command bar in "Edit" mode

- Click the CHANGE button

The menu shown in Fig 119 opens.

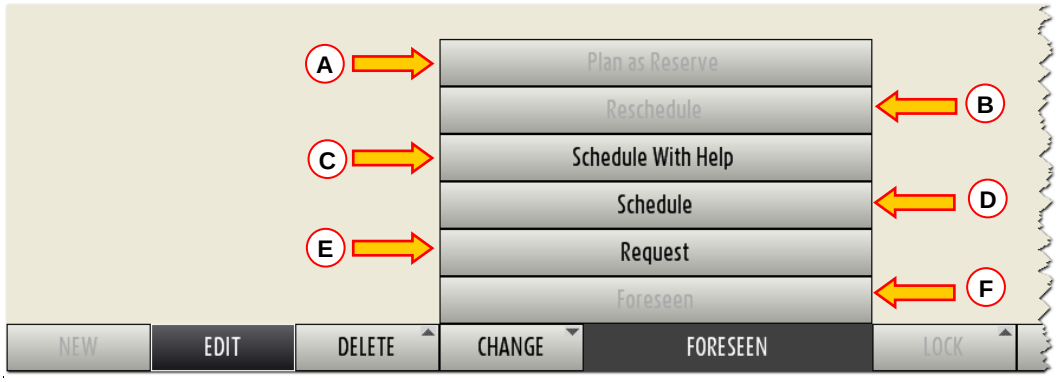


Fig 119 – "Change" button

On the menu shown in Fig 119 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 119 **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 169).
After clicking this option the system requests to specify the date and the block of the operation. The window shown in Fig 120 appears.

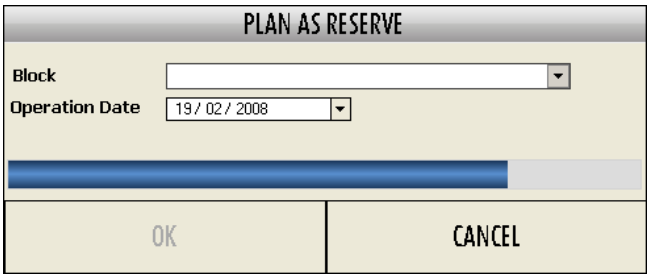


Fig 120

- 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 14.5.5 for an explanation of the meaning of the term "reserve" in the Smart Scheduler System

- Reschedule (Fig 119 **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 14.5.3.

- Schedule with help (Fig 119 **C)**

The "Schedule with help" option enables to access the "Shedule with help" screen to schedule the selected operation (Fig 287, see paragraph 14.7).

- Schedule (Fig 119 **D)**

The "Schedule" option enables to access the "Schedule" screen, making this way possible to schedule the operation (Fig 228, paragraph 14).

- Request (Fig 119 **E)**

The "Request" option changes the operation state to "Requested". See paragraph 8.2 for the description of the "Operation states".

- Foreseen (Fig 119 **F)**

The "Foreseen" option changes the operation state to "Foreseen". See paragraph 8.2 for the description of the "Operation states".

12.4. Locking/Unlocking the operation

The 

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 121).

Fig 121 – Operation record command bar

The screen turns to "edit" mode. The command bar changes in the way shown in Fig 122.

Fig 122 – Command bar in "Edit" mode

- Click the LOCK button (Fig 122).

The following menu opens (Fig 123).

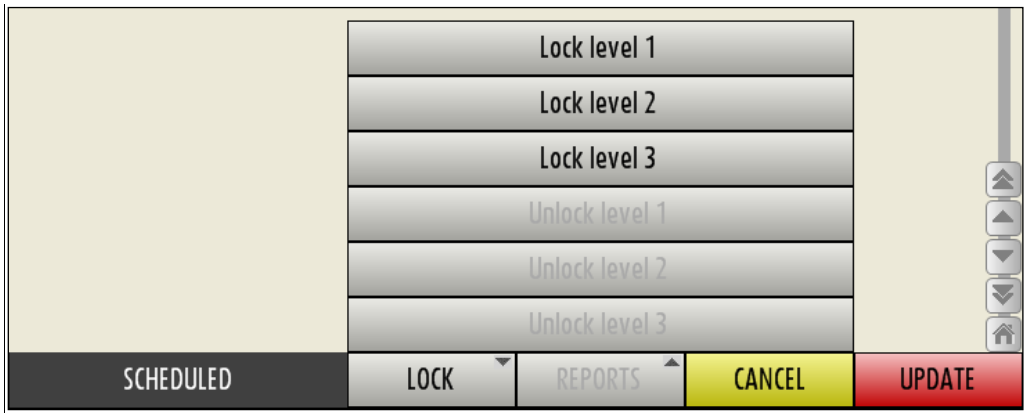


Fig 123 - Lock/Unlock operation

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 123 refers to a configuration enabling three lock levels. See paragraph 8.3 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 123, 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 124).

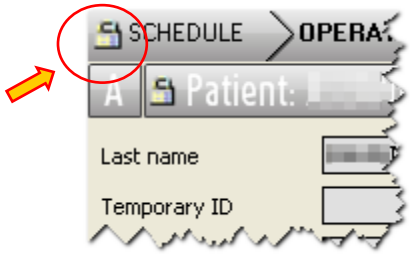


Fig 124 - Locked operation (Operation record screen)

12.5. 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 125 – Operation record command bar

To create the document

- Click the REPORTS button (Fig 125).

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

- Click the wanted option.

A print preview is displayed. See paragraph 7.5.2 for the system's print functionalities.

13. 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.

13.1. The “Patient” area

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

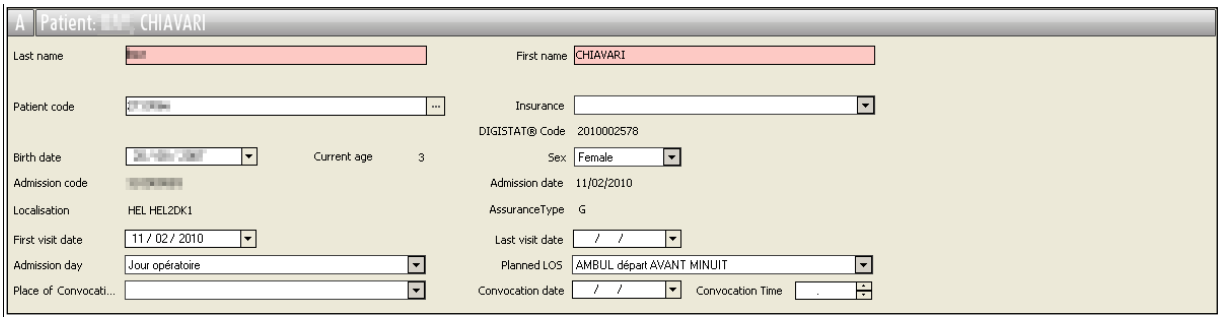


Fig 126 – The “Patient” area

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 128)*

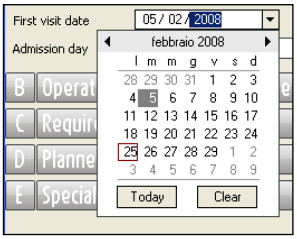


Fig 127 – Digital calendar

To enter the date, simply click the day required. The corresponding date will automatically appear in the field. Paragraph 10.1.2 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.*

13.2. The “Operation” area

The “Operation” area displays the information concerning the operation to be performed (Fig 128).

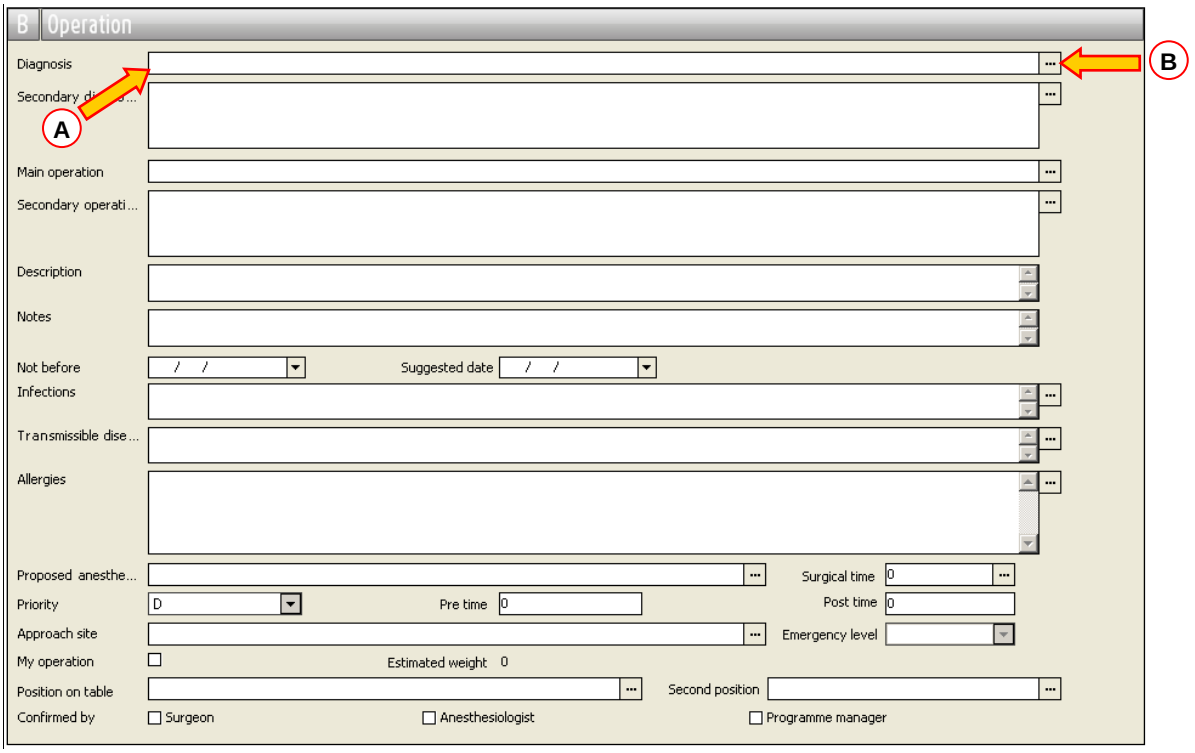


Fig 128 – “Operation” Area

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

13.2.1. 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.

13.2.1.1. 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.

13.2.1.2. 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 128 **B**).

The following window opens (Fig 129).

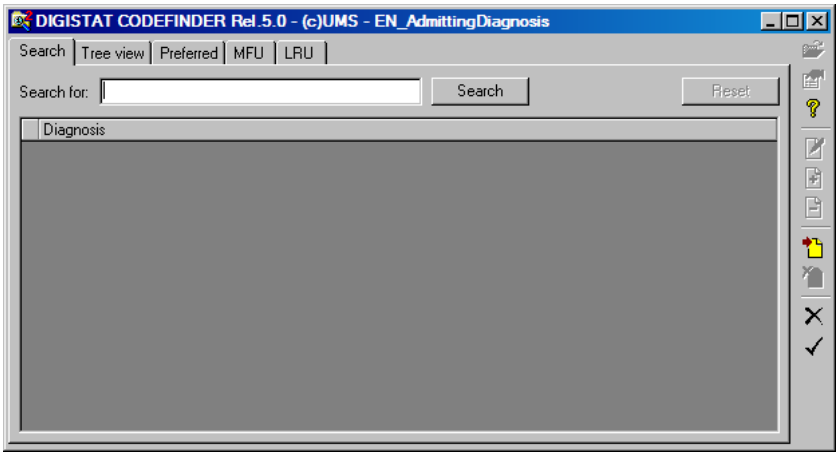


Fig 129 - Codefinder

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.

13.2.1.3. 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 128 **A**).

Otherwise

- click the [...] button placed alongside the "Diagnosis" field (Fig 128 **B**).

In both cases the "Diagnosis" window is displayed (Fig 130).

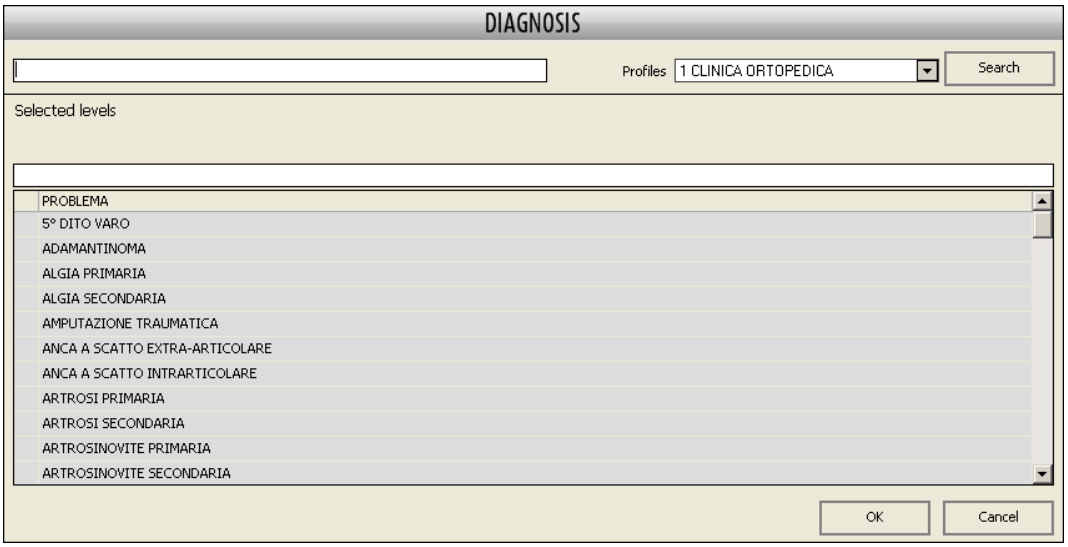


Fig 130

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

13.2.1.4. 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.

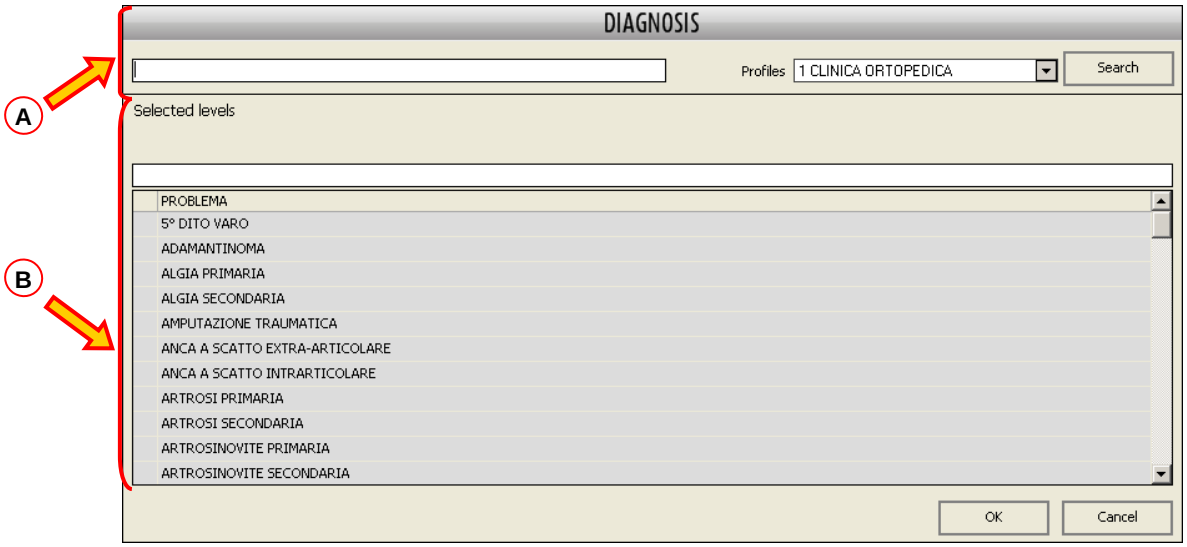


Fig 131

1) Search by name

The upper part of the window (indicated in Fig 131 **A** and displayed in Fig 132) can be used to search the diagnosis by name.

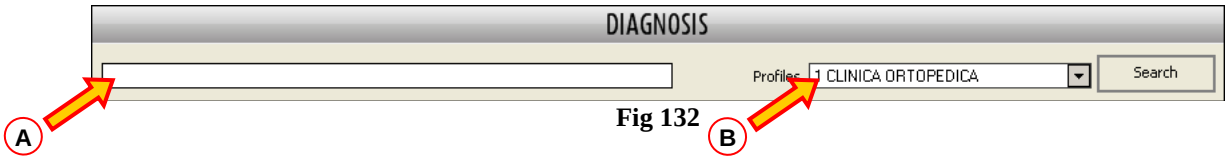


Fig 132

There are two fields in this area. The field on the left (Fig 132 **A**) makes it possible to specify the name (or part of it) of the wanted diagnosis; the field on the right (Fig 132 **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 133 **A**.

2. Either wait for the system to automatically search, or click the Search button (Fig 133 **B**).

All the diagnosis whose name contains the typed charcters are displayed (Fig 133 **C**).

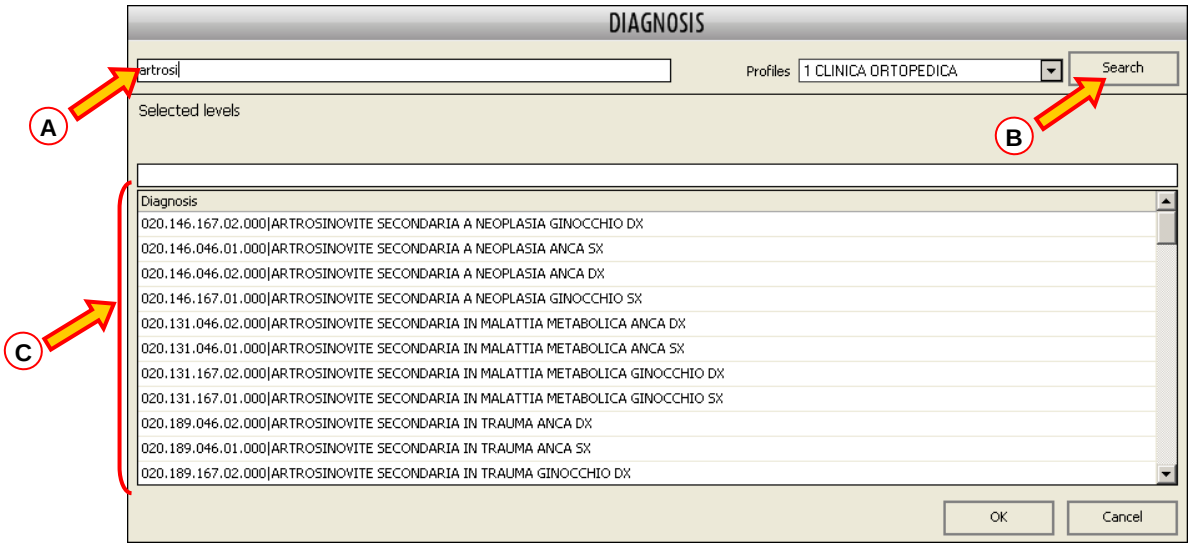


Fig 133

3. Double click the row containing the relevant diagnosis.

The diagnosis is this way inserted in the “Operation record”, in the “Operation” area (Fig 134).

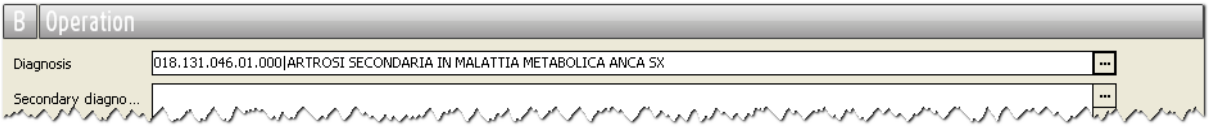


Fig 134

4. Click the UPDATE button on the command bar.

2) Search by structured levels

The lower part of the window (indicated in Fig 131 **B** and enlarged in Fig 135) can be used to search the diagnosis by selecting successive levels on a tree-structure.

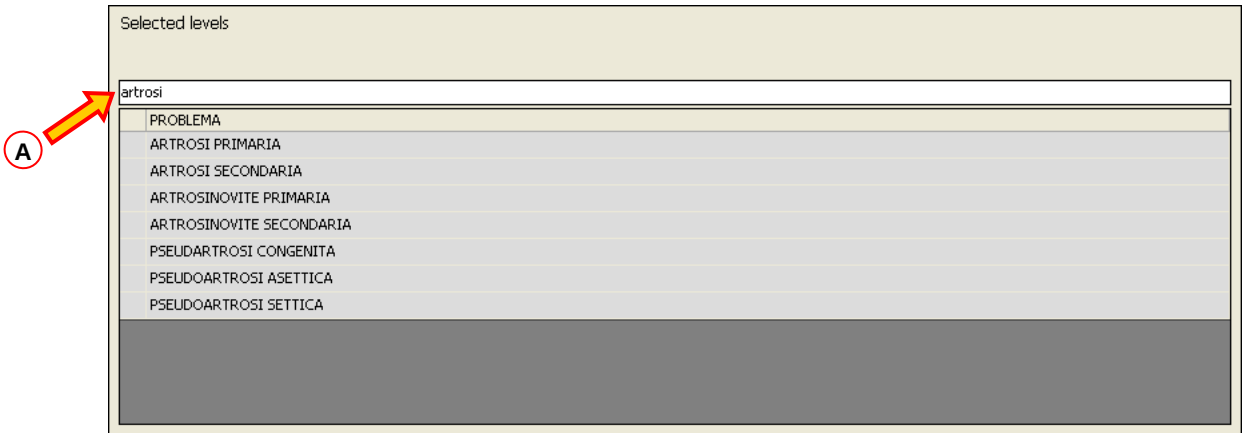


Fig 135

The first level concerns the diagnosis' general area of reference. The filter indicated in Fig 135 **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 136).

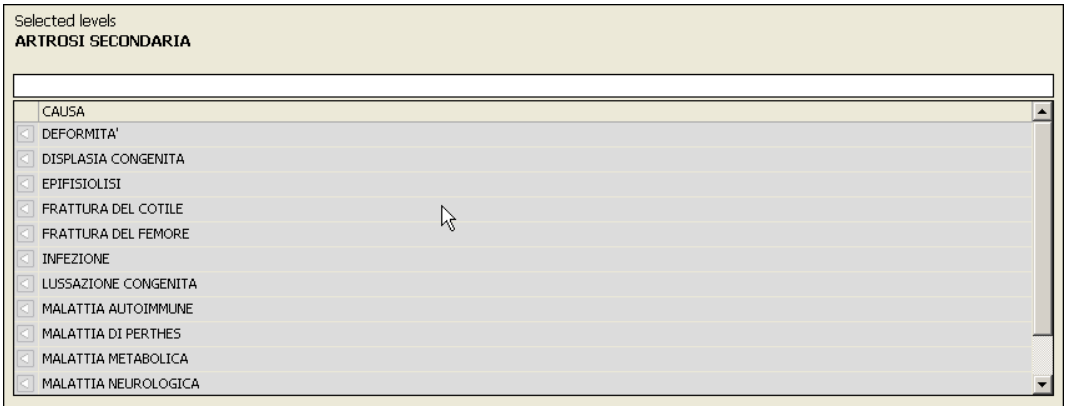


Fig 136

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

The next level is displayed, making it possible to indicate the site (Fig 137).

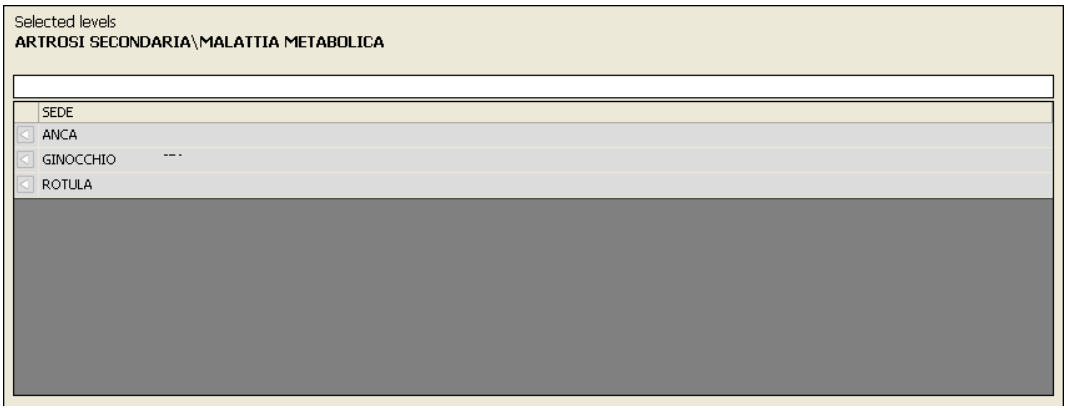


Fig 137

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

The next level is displayed, making it possible to indicate the side (Fig 138).

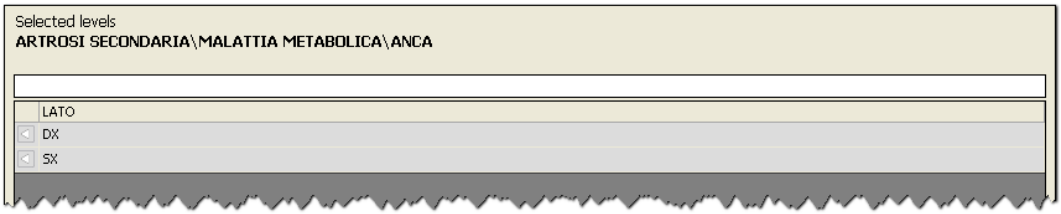


Fig 138

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 139).

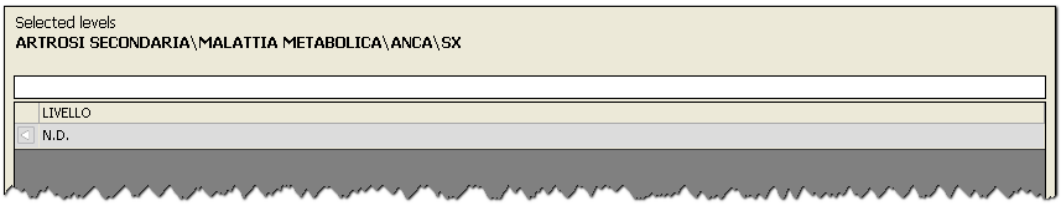


Fig 139

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 140).

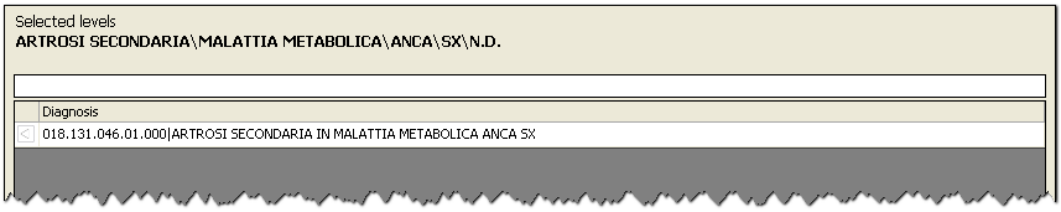


Fig 140

6. Double click the diagnosis. The diagnosis is this way inserted in the "Operation record", in the "Operation" area (Fig 141).

Fig 141

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 142 **A**). The chosen path is indicated in the "Selected levels" area (Fig 142 **B**).

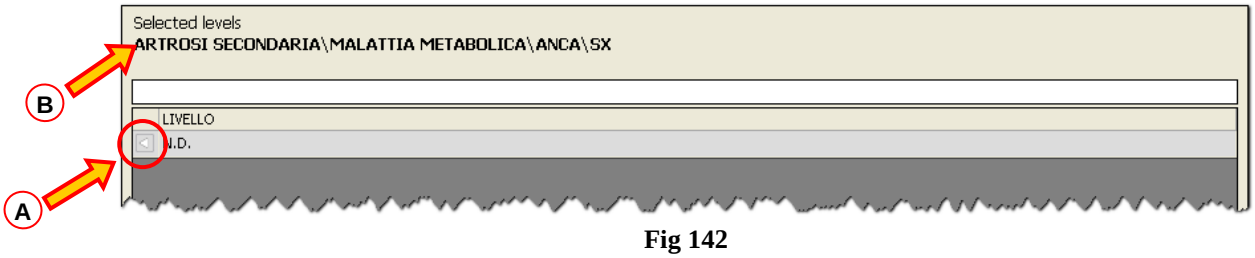


Fig 142

13.2.2. Secondary diagnosis

If the diagnosis selection modality is the one described in paragraph 13.2.1.4 (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 143 **A**).

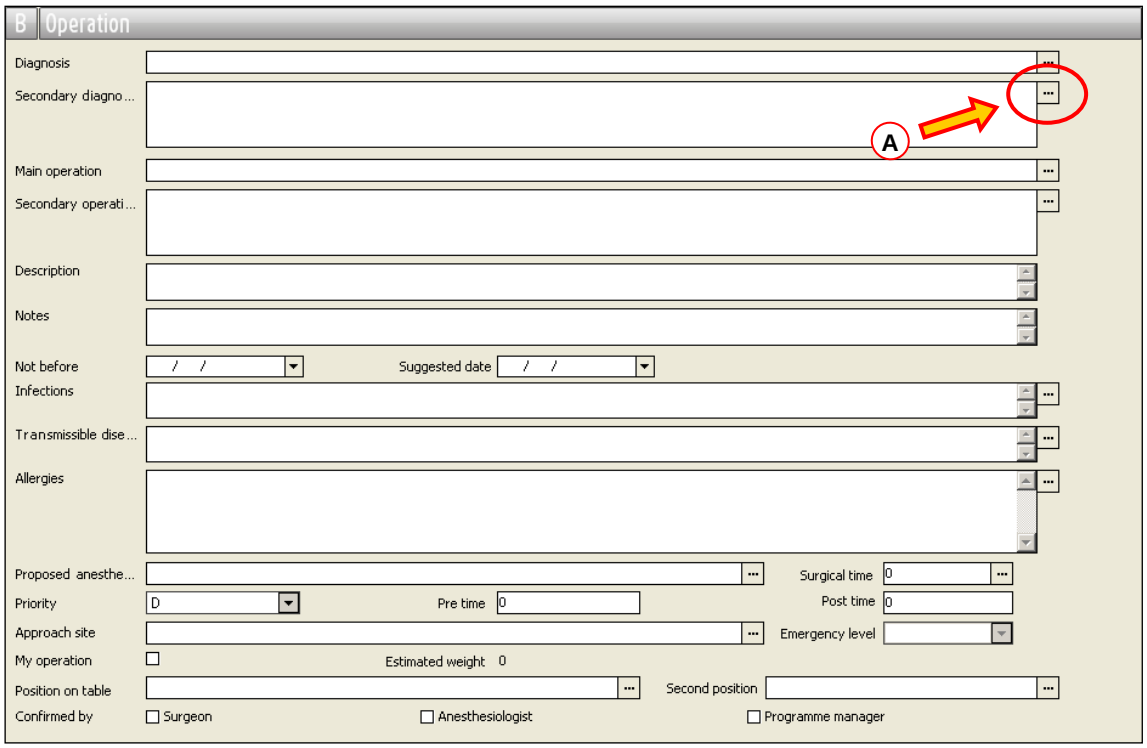


Fig 143

The following window opens (Fig 144).

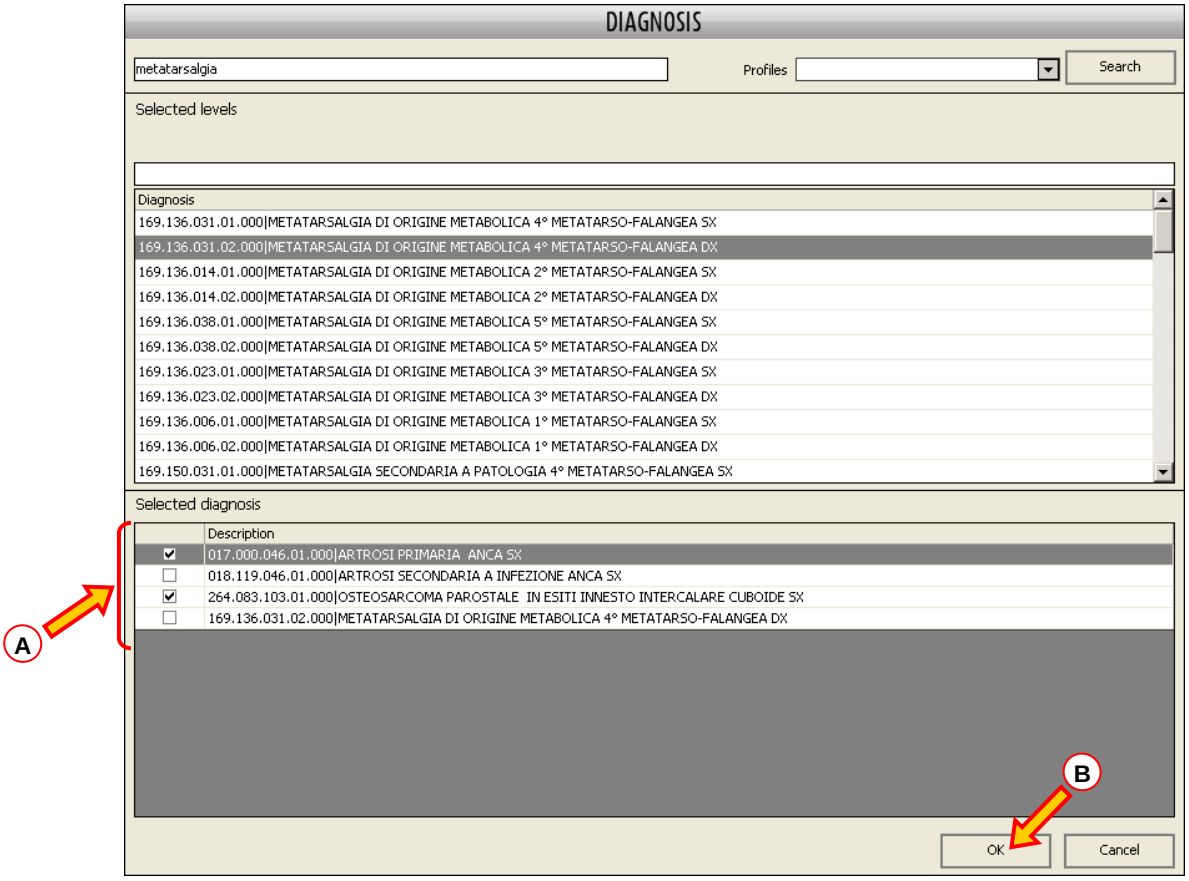


Fig 144

The procedures relating to the secondary diagnosis specification are similar to those relating to the main diagnosis specification. Therefore, see paragraph 13.2.1 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 144 **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 144 **B**).

All the "checked" diagnosis are this way inserted on the "Operation record" (Fig 145).

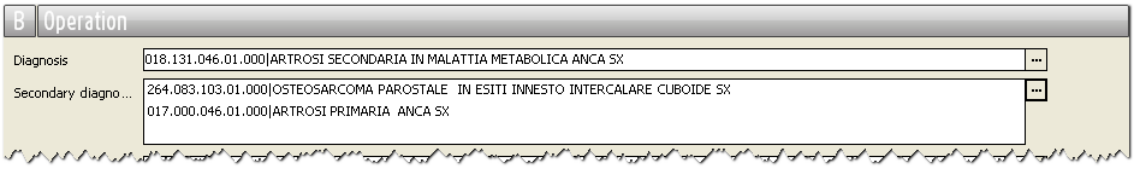


Fig 145

3. Click the UPDATE button on the command bar.

13.2.3. 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 128 **A**).

Otherwise

- click the ... button next to the field (Fig 128 **B**).

The "Operations" window opens (Fig 146).

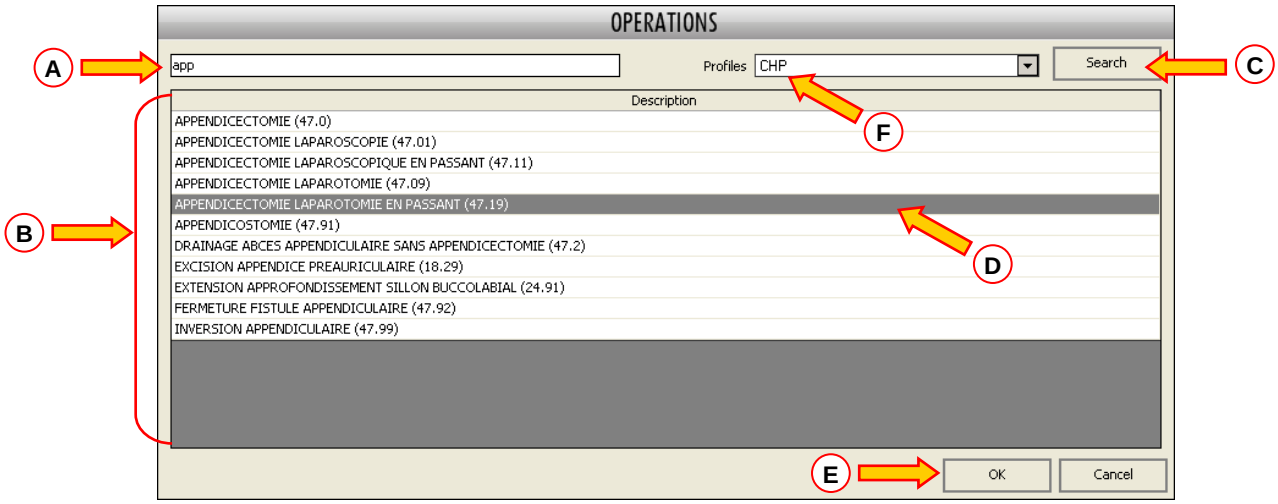


Fig 146 – Operation Selection

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 146 **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 146 **B**).

If only one or two letters are entered and you wish to proceed with the search, you must click the Search button (Fig 146 **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 146 **D**).

- Then click the OK button (Fig 146 **E**).

The operation selected appears inside the "Main operation" field of the "Operation Record" page (Fig 147). This result is also obtained by double clicking the name of the operation to be entered.

Fig 147

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

The “profiles” field (Fig 146 **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 148). 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.

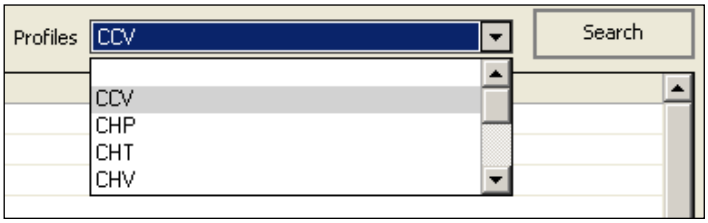


Fig 148 – Profile Selection

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 128 **A**)

or

- Click the ... button next to the field (Fig 128 **B**).

The “Operations” window opens (Fig 146).

- 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 147).

- Click the UPDATE button on the command bar to save the data.

13.2.3.1. 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 149).

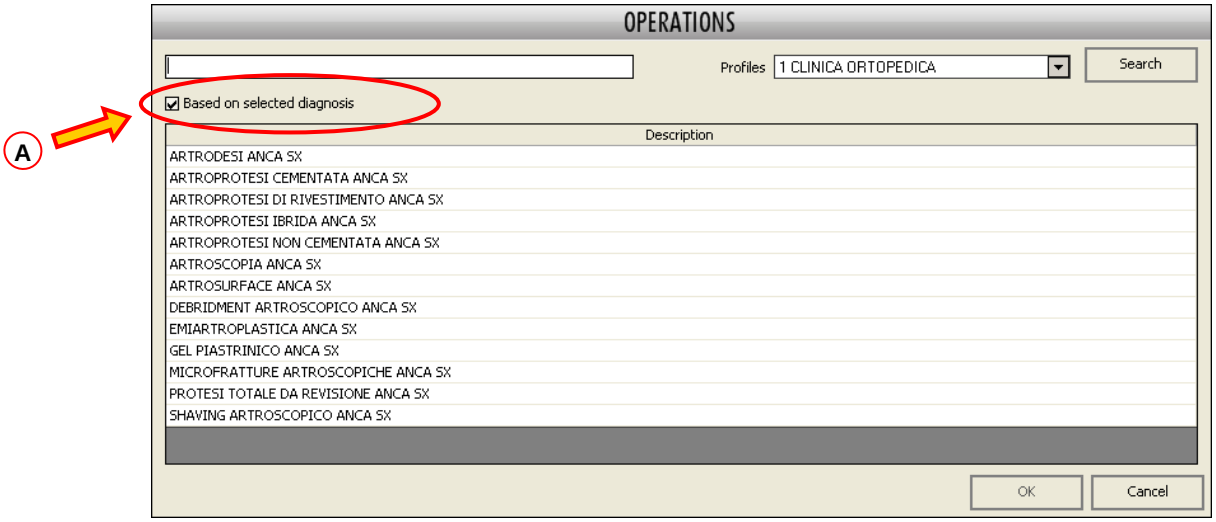


Fig 149

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 13.2.1.4. In this case the main operation selection can be performed only after diagnosis has been selected.

13.2.4. Secondary operations

The “Secondary operations” field (Fig 150) 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.

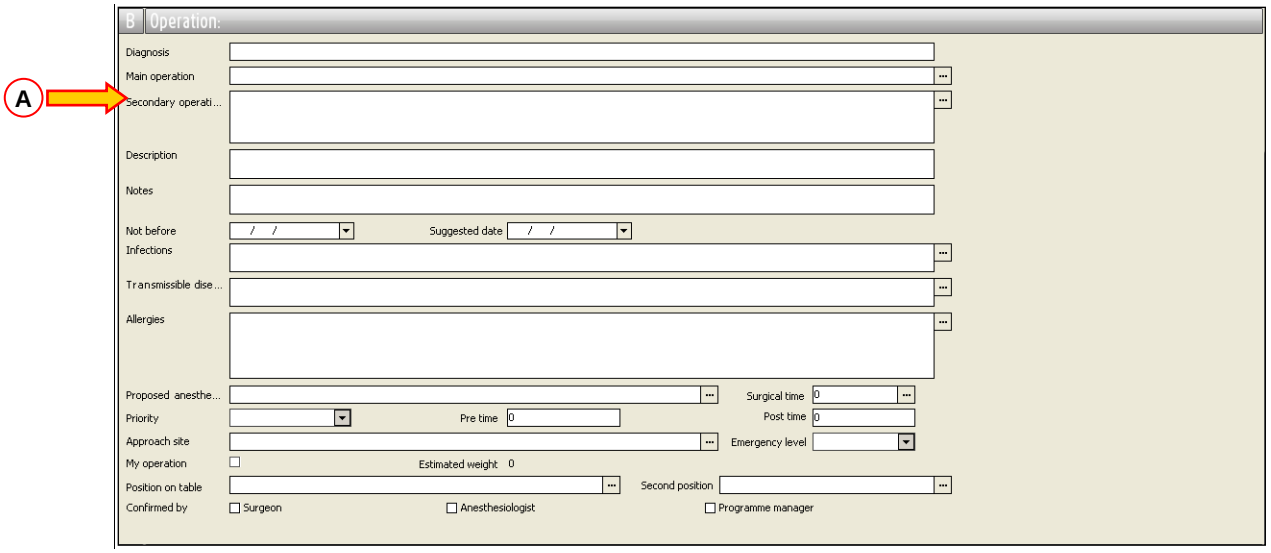


Fig 150 – “Operation” Area

The function of this field is exactly the same as that of the “Main operation” field and describred in paragraph 13.2.3.

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 151).

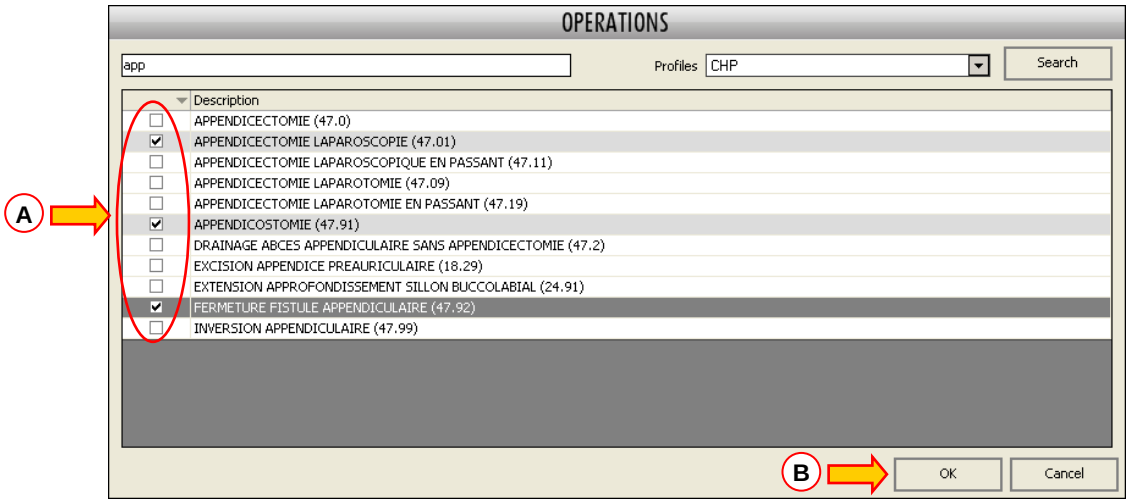


Fig 151 – Other Operations

The window shown in Fig 151 offers the chance to select and enter more than one operation at the same time.

Then click the OK button (Fig 151 **B**) to enter all the operations selected in the "Secondary operations" field of the "Operation Record" page.

13.2.5. 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.

13.2.6. 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.

13.2.7. 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.

13.2.8. 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.*

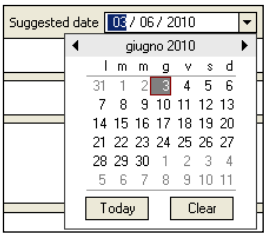


Fig 152 – Digital calendar

To enter the date simply click the day required. The corresponding date will automatically appear in the field. Paragraph 10.1.2 describes the digital calendar in detail.

13.2.9. Infections

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

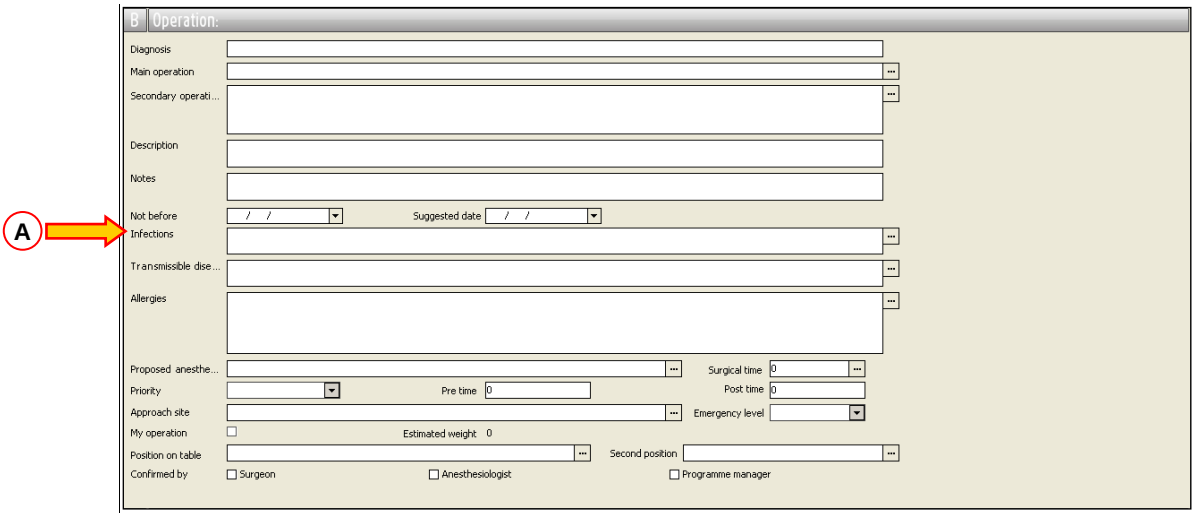


Fig 153 – "Operation" Area

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 154).

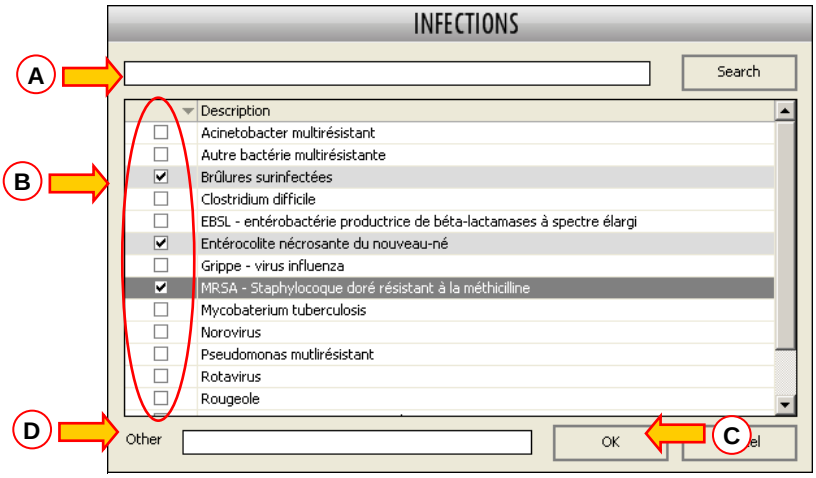


Fig 154 – Specify Infections

- Search, if necessary, the wanted item using the search field on the window (Fig 154 **A**).
- Click the checkbox corresponding to the infections that must be specified (Fig 154 **B**).

Multiple selection is possible.

- Click the OK button (Fig 154 **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 154 **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 155). The actual duration is specified by configuration.

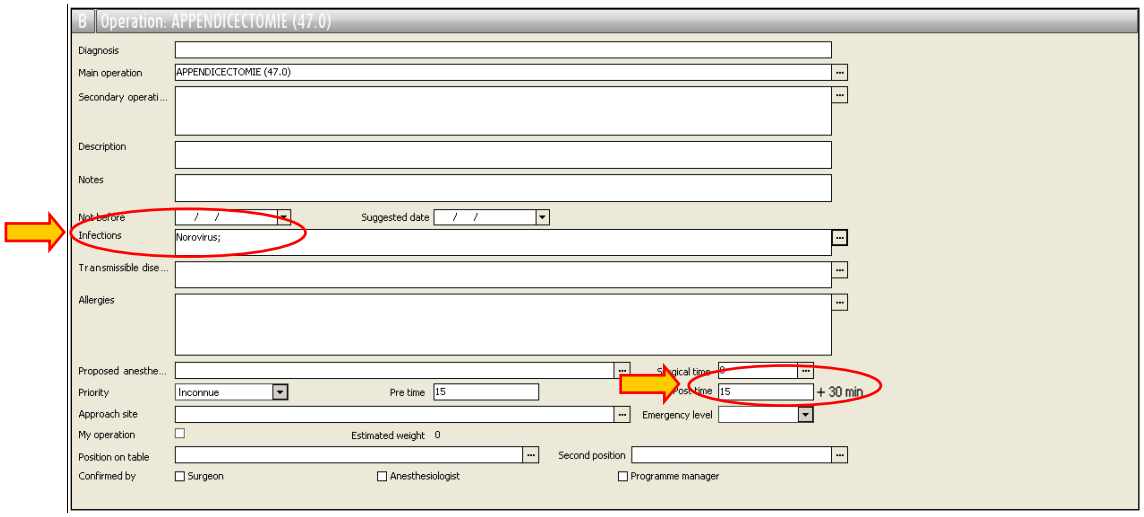


Fig 155 – Infection in progress and cleaning times

13.2.10. Transmissible diseases

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

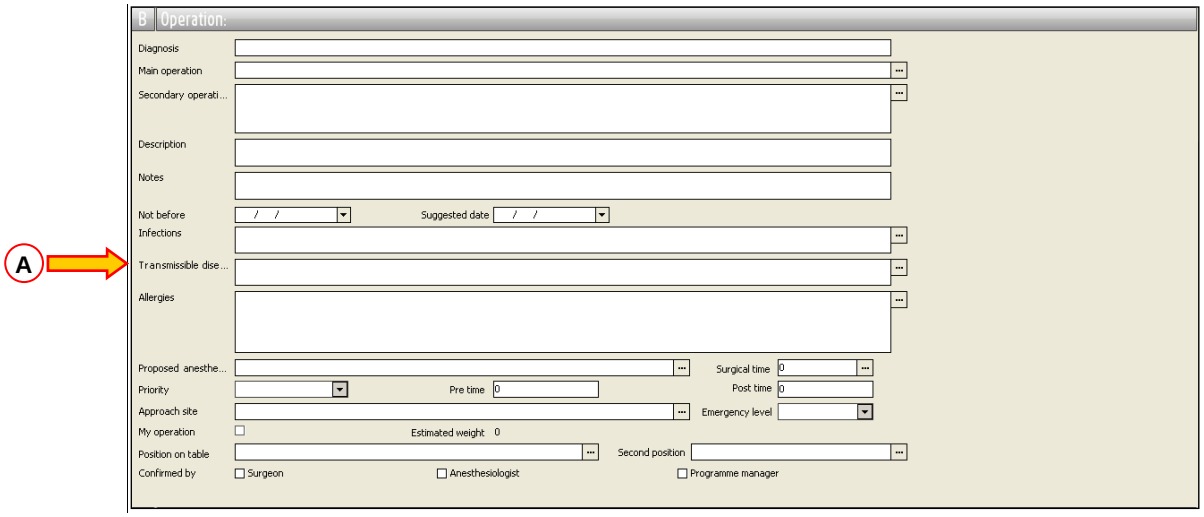


Fig 156 – “Operation” Area

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 157).

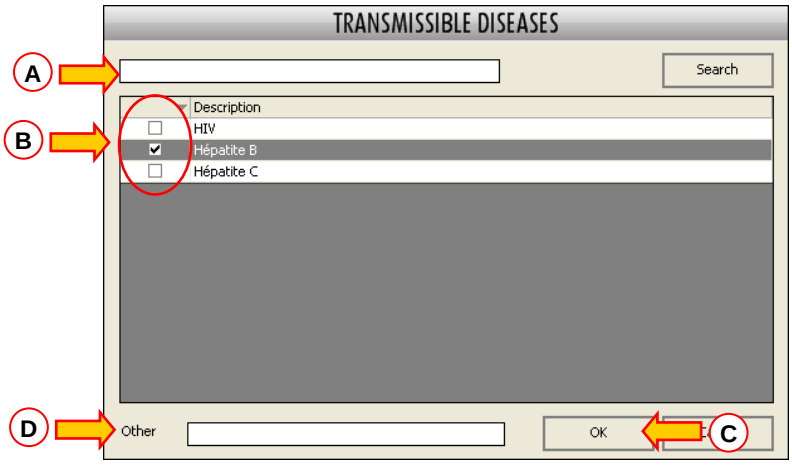


Fig 157 – Specify transmissible diseases

- Search, if necessary, the wanted item using the search field on the window (Fig 157 **A**).
- Click the checkbox corresponding to the diseases that must be specified (Fig 157 **B**).

Multiple selection is possible.

- Click the OK button (Fig 157 **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 157 **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 appears inside 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 155). The actual duration is specified by configuration.

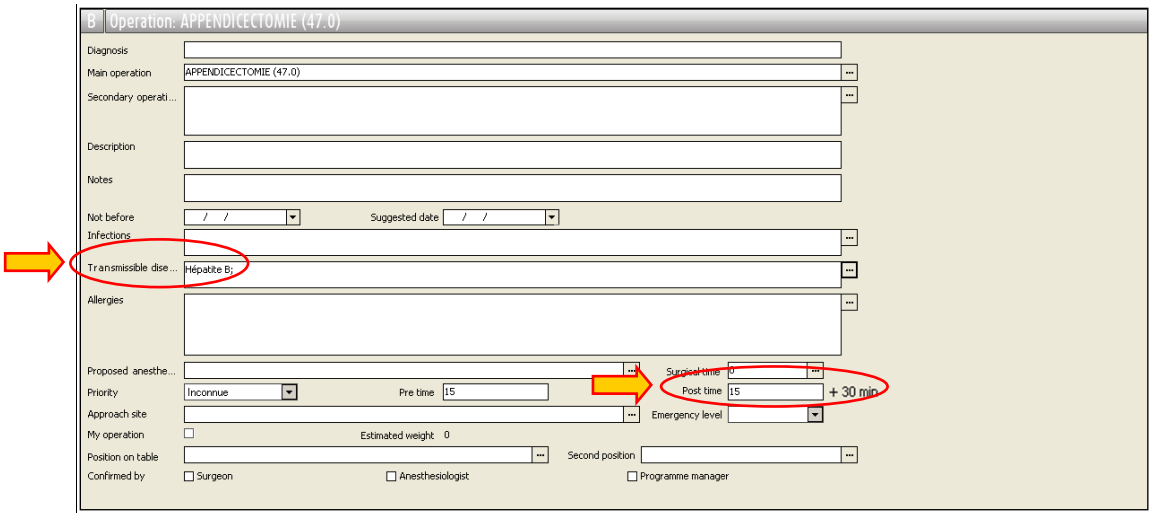


Fig 158 – Transmissible diseases and cleaning times

13.2.11. Allergies

The “Allergies” field (Fig 159 **A**) makes it possible to specify any allergies suffered by the patient.

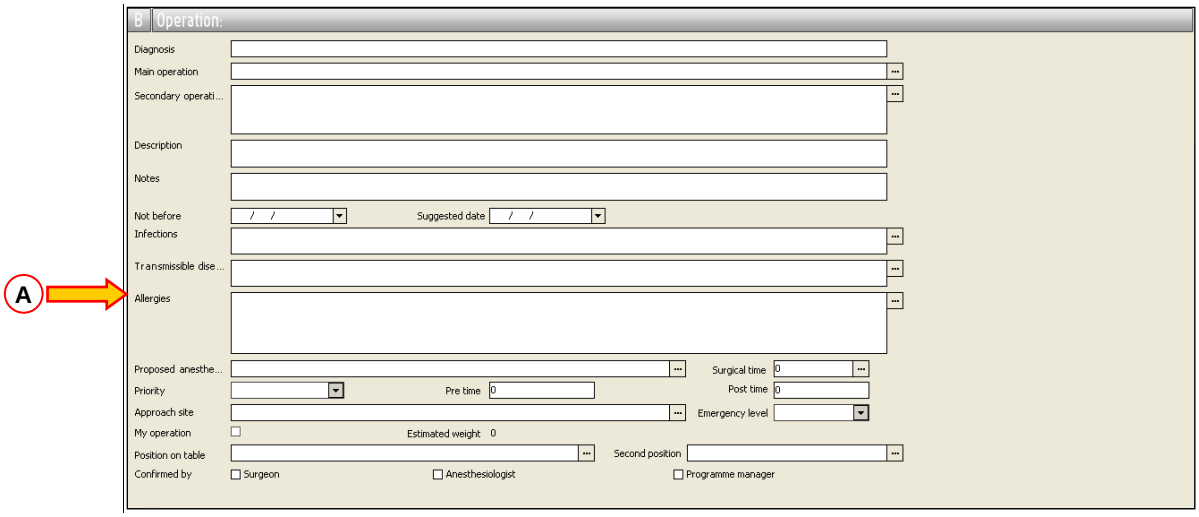


Fig 159 – “Operation” Area

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 appears (Fig 160).

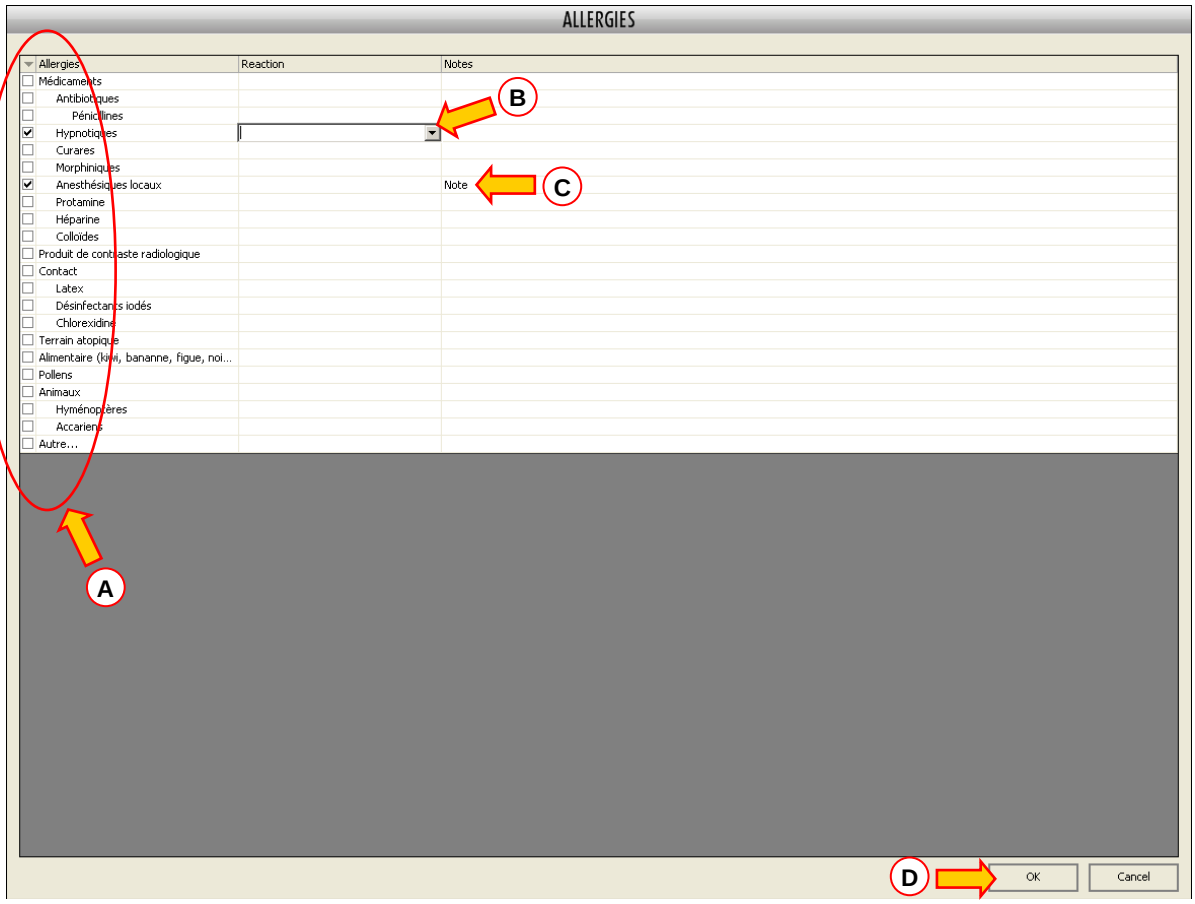


Fig 160 – Specify Allergies

To specify an allergy,

- click the box alongside the name of the allergy selected (Fig 160 **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 160 **B**).

Click the "note" column for the allergy selected to enter any notes concerning the allergy selected (Fig 160 **C**).

- Click the OK button (Fig 160 **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 161).

Fig 161 – Allergy Notes

13.2.12. Proposed Anesthesia

The “Proposed Anesthesia” field (Fig 162 **A**) makes it possible to specify the type of anesthesia proposed for the operation.

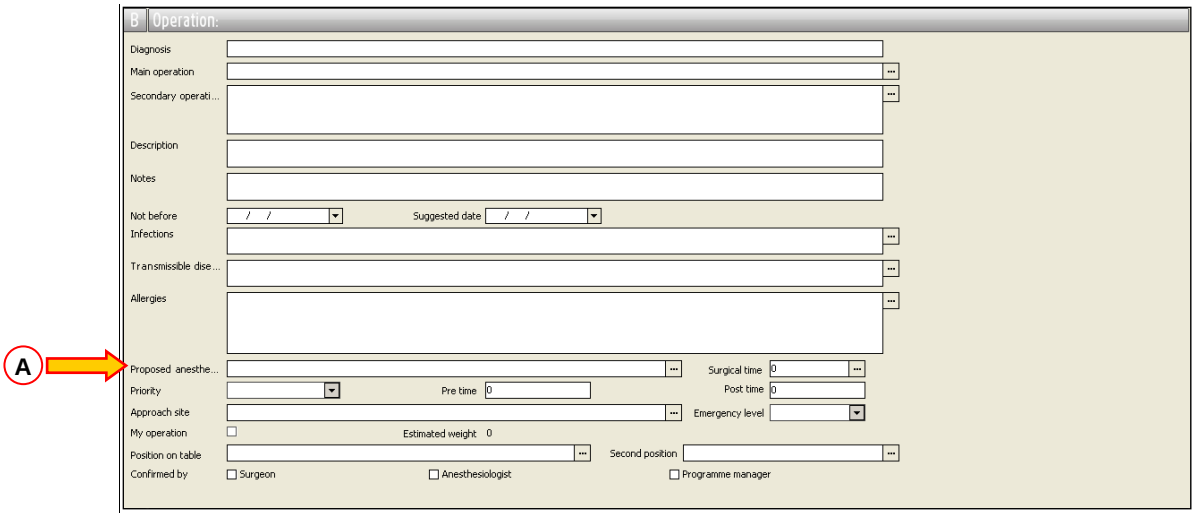


Fig 162 – “Operation” Area

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 appears (Fig 163).

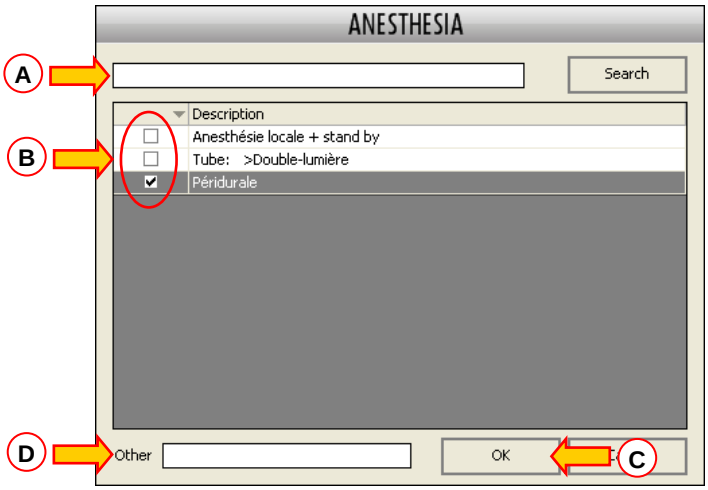


Fig 163 – Specify Anesthesia

- Search, if necessary, the wanted item using the search field on the window (Fig 163 **A**).

- Click the checkbox corresponding to the anesthesia that must be specified (Fig 163 **B**).

Multiple selection is possible.

- Click the OK button (Fig 163 **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 163 **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.

13.2.13. Surgical time

The "Surgical time" field (Fig 164 **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".

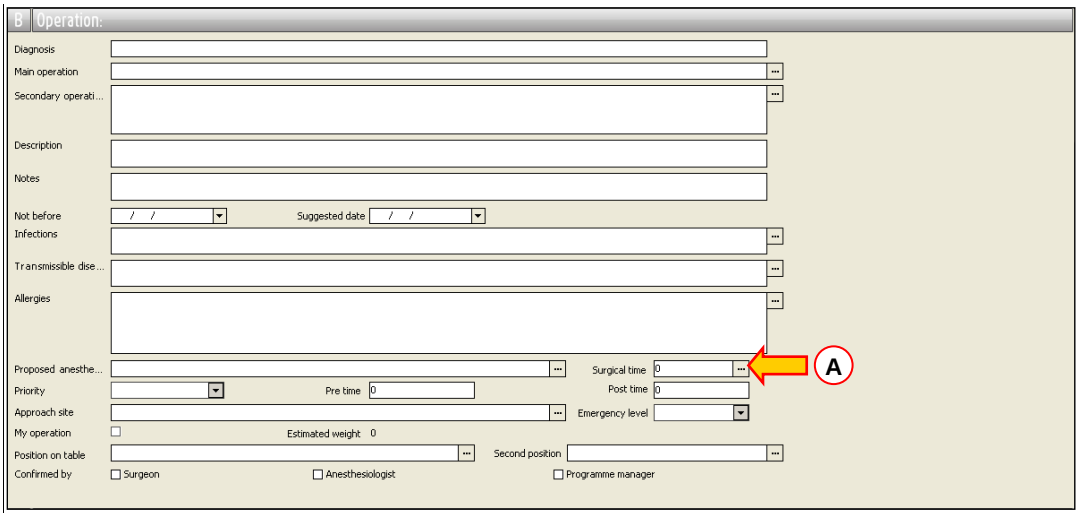


Fig 164 – "Operation" area

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 165).

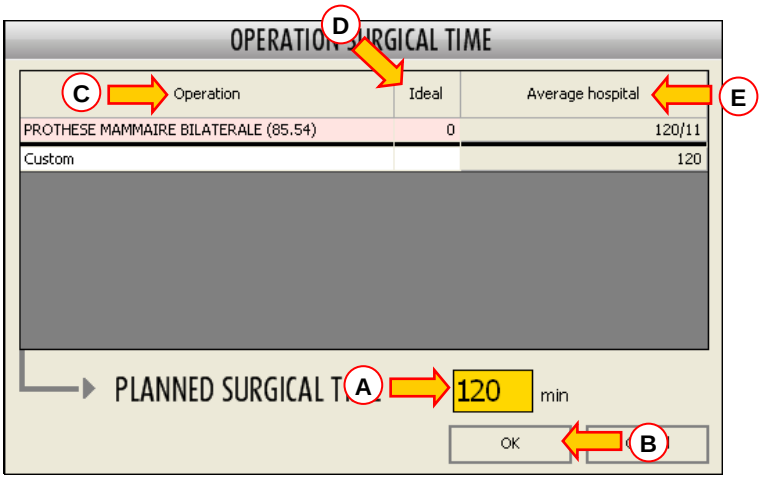


Fig 165 – Expected surgical time specification

- Insert the value (in minutes) in the field indicated in Fig 165 **A**.
- Click the [OK] button (Fig 165 **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 165 **C**) displays the envisaged operation name.

The “Ideal” column (Fig 165 **D**) displays the optimal duration for that kind of operation.

The “Average hospital” column (Fig 165 **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 14, the operations are displayed as boxes (Fig 234) and the length of the boxes is proportional to the duration of the operation.

13.2.14. 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 166):

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

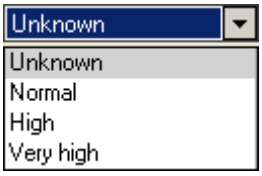


Fig 166 - Priority

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.

13.2.15. 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 14) as a gray portion (see Fig 237). In the configuration here described the default pre surgical time is 15 minutes.

13.2.16. 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 14) as a grey portion (see Fig 237).

13.2.17. Approach site

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

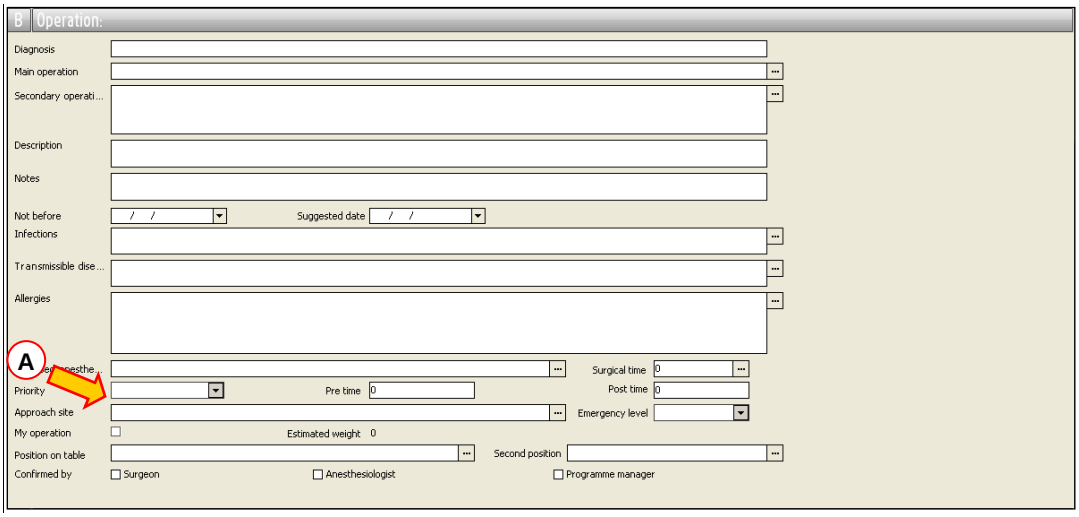


Fig 167 – “Operation” area

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 168).

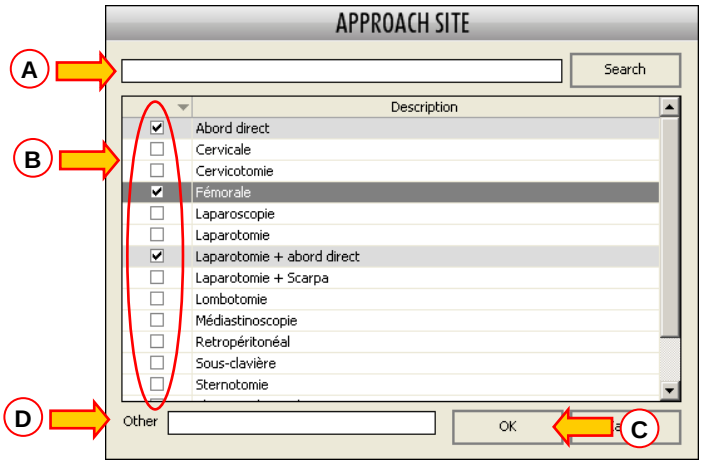


Fig 168 – Approach site

- Search, if necessary, the wanted item using the search field on the window (Fig 168 **A**).

- Click the checkbox corresponding to the approach that must be specified (Fig 168 **B**).

Multiple selection is possible.

- Click the OK button (Fig 168 **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 168 **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.

13.2.18. Emergency level

The "Emergency level" field (Fig 170 **A**) makes it possible to specify the urgency of an operation.

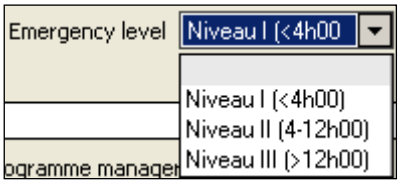


Fig 169

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 170 **B**). See paragraph 14.5.5 for an explanation of the meaning of "reserve" in the Smart Scheduler system.

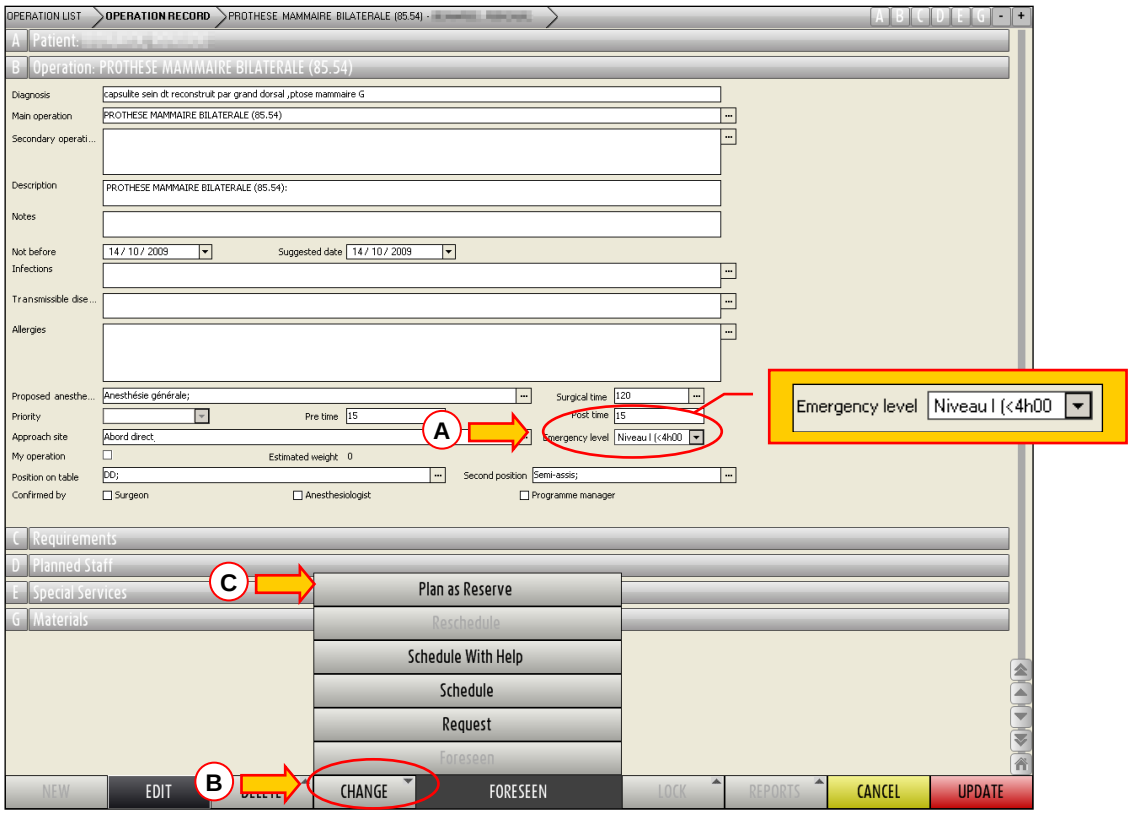


Fig 170

To plan the operation as reserve

- Click the CHANGE button on the command bar (Fig 170 **B**).

The menu shown in Fig 170 will open

- click the "Plan as reserve" option (Fig 170 **C**).

The window shown in Fig 171 will open.

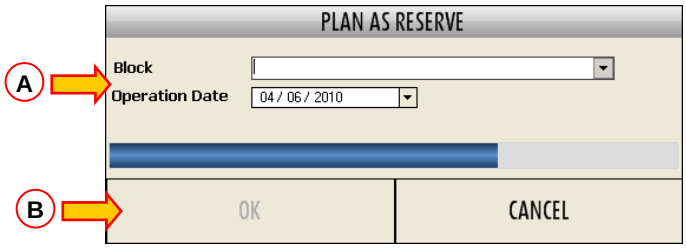


Fig 171

- Specify the operating block and the operation date in the appropriate fields (Fig 171 **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 172). See paragraph 14 for the scheduling procedure.

Fig 172

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.

13.2.19. 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 10.1.1). 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.

13.2.20. 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 13.1

13.2.21. Position on the operating table

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

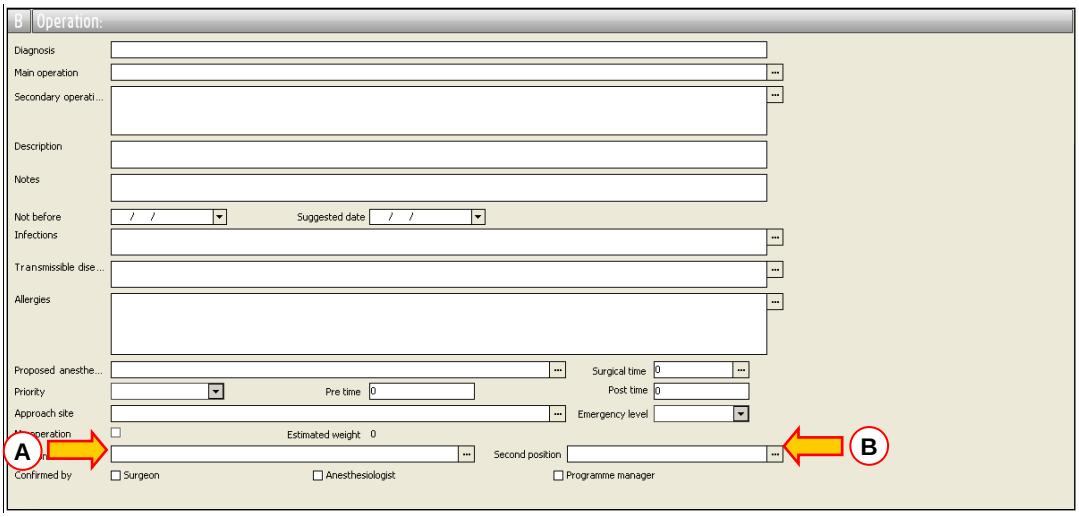


Fig 173 – "Operation" area

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 174).

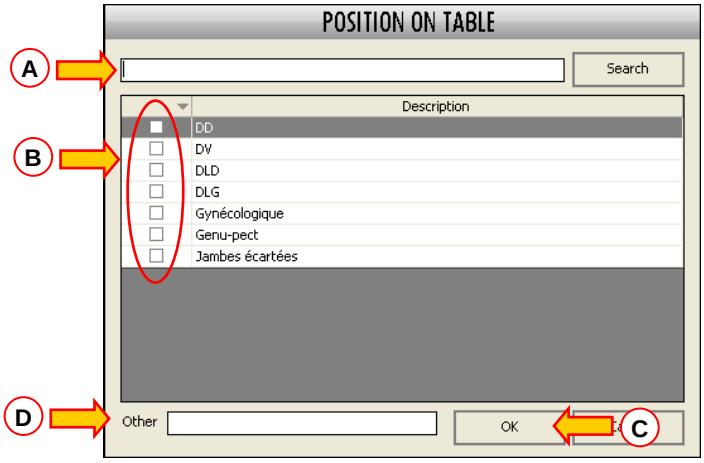


Fig 174 – Position on Table

- Search, if necessary, the wanted item using the search field on the window (Fig 174 **A**).
- Click the checkbox corresponding to the position that must be specified (Fig 174 **B**).

Multiple selection is possible.

- Click the OK button (Fig 174 **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 174 **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.

13.2.22. 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 13.2.21 for the "Position on table" specification.

13.2.23. 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.

13.2.24. Operation schedule summary

After the operation has been scheduled, the "operation" area shows, at the bottom, the date, time, room and block established (Fig 175).

Fig 175

13.3. 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 176).

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).

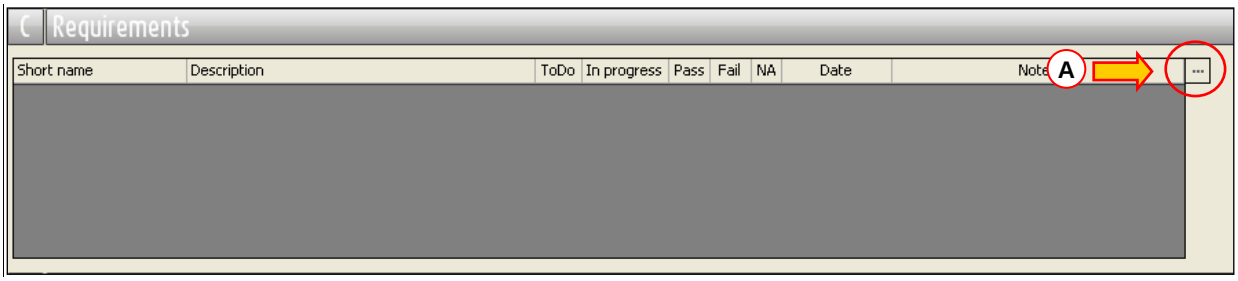


Fig 176 – “Requirements” Area

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 176 **A**).

The following window opens.

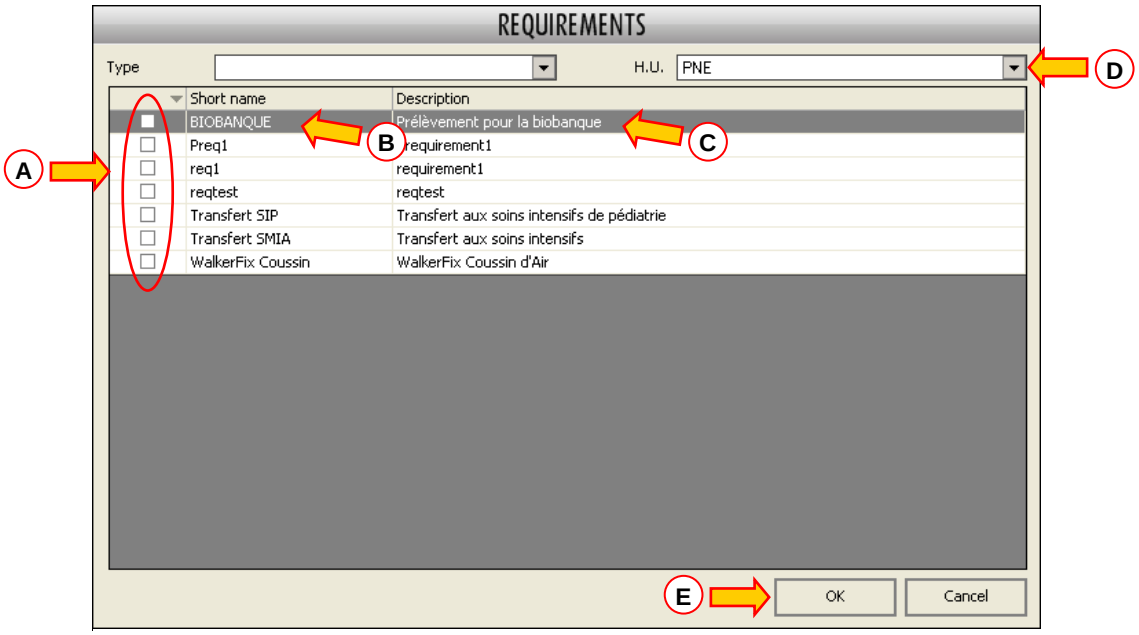


Fig 177 – Enter Requirement

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 177 **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 177 **B**). The third column contains a more detailed description of the requirement in question (Fig 177 **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 177 **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 177 **A**).
- Click the OK button (Fig 177 **E**).

The requirements selected appear on the "Operation Record" page (Fig 178).

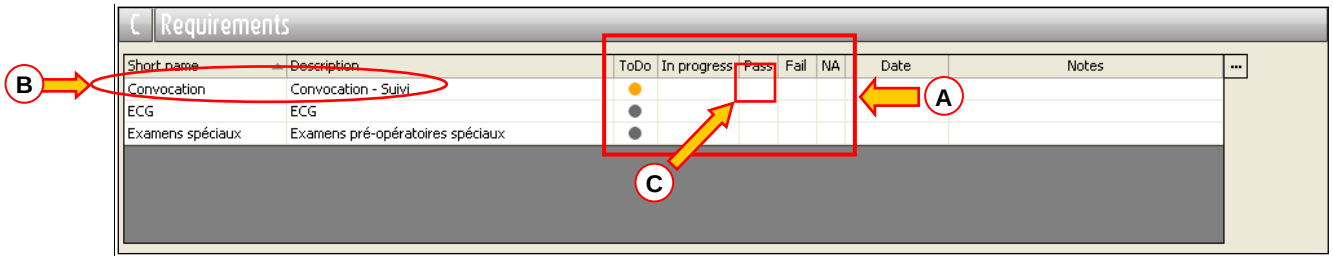


Fig 178 – Requirements Table

The "Requirements" table (Fig 178) 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 178 **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 8.2 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 178 **B**) has been obtained, simply click the box indicated in Fig 178 **C**.
The table will change as shown below.

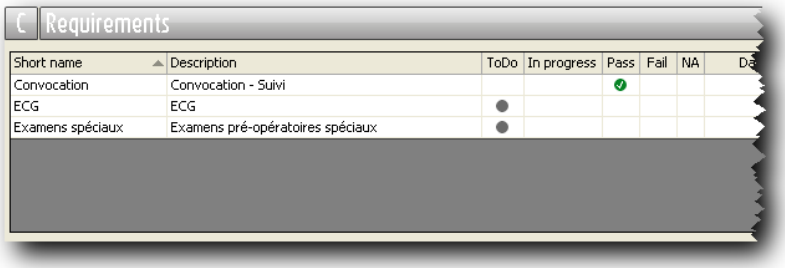


Fig 179 – Requirement Obtained

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 180.

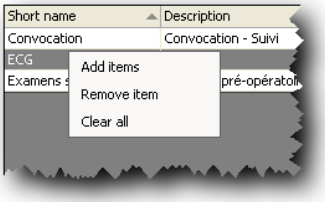


Fig 180

Click “Add items” to open the window shown in Fig 177 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 181).

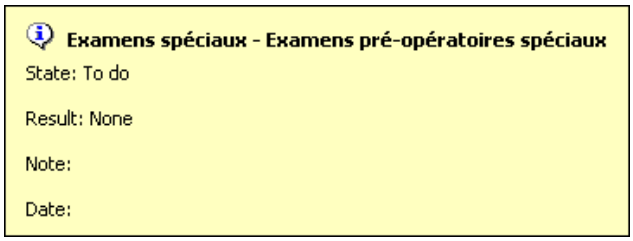


Fig 181 – Requirement information

13.4. The “Planned staff” area

The “Planned Staff” area” (Fig 182) 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).

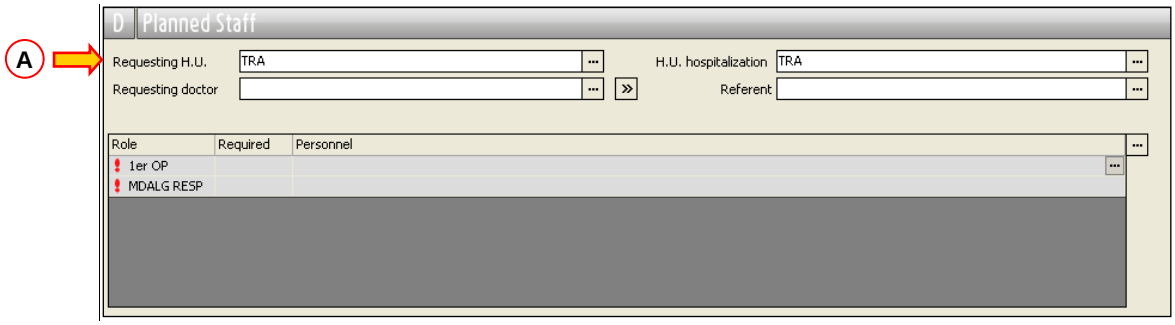


Fig 182 – Planned Staff

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 182 **A**).

Or

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

The following window opens (Fig 183).

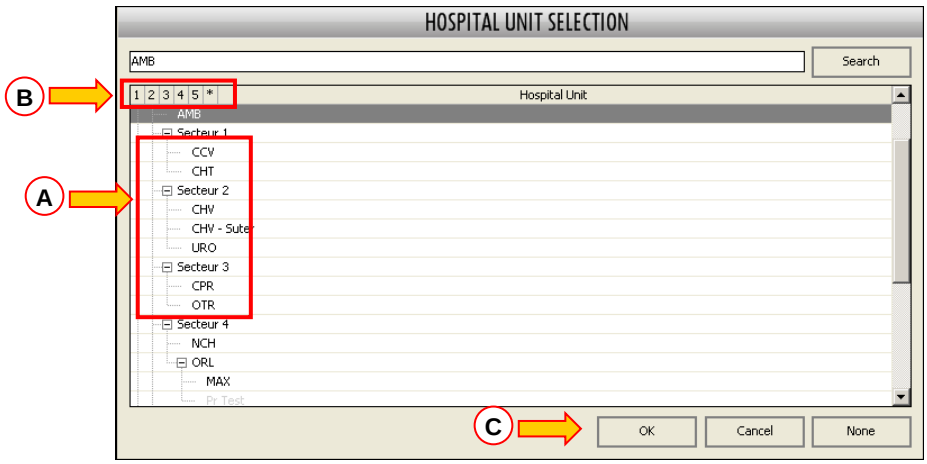


Fig 183 – Hospital unit selection

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 183 **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 183 **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 183 **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 184 **A**) then click the [Search] button (Fig 184 **B**).

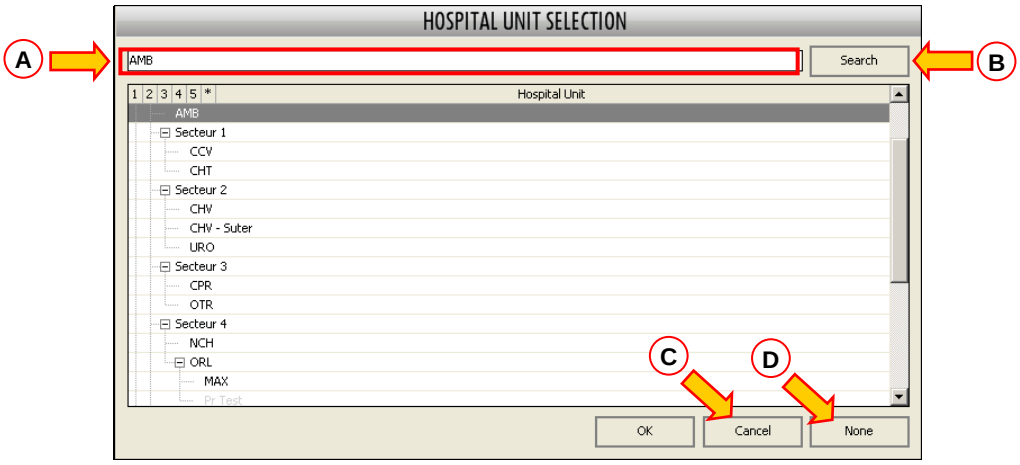


Fig 184 – Hospital unit selection

The Cancel button (Fig 184 **C**) makes it possible to close the window without making any changes.

The None button (Fig 184 **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.

13.4.1. Selecting the hospitalization unit

The field shown in Fig 185 **A** makes it possible to specify the location where the patient will be hospitalized.

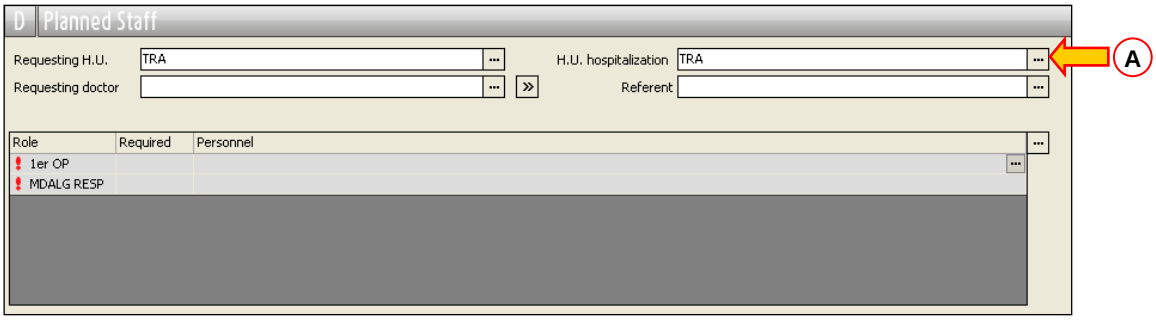


Fig 185

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 183 and Fig 184 opens. See the previous paragraph for the selection procedure.

13.4.2. Selecting the requesting doctor

The field shown in Fig 186 **A** makes it possible to specify the name of the doctor requesting the operation.

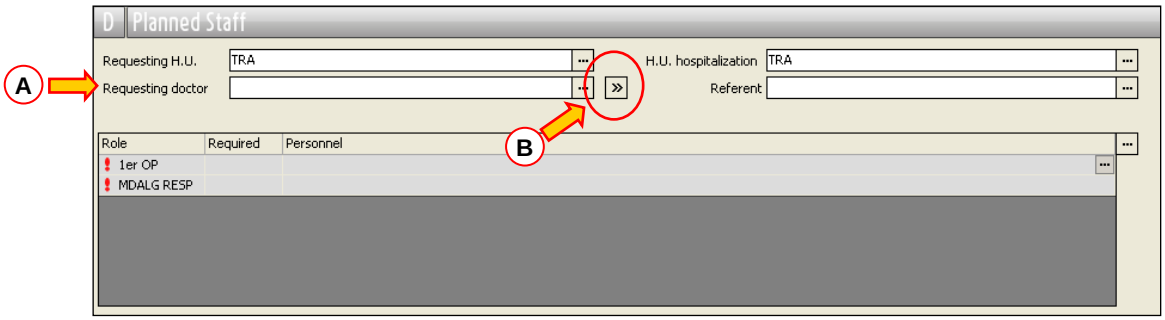


Fig 186

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 187).

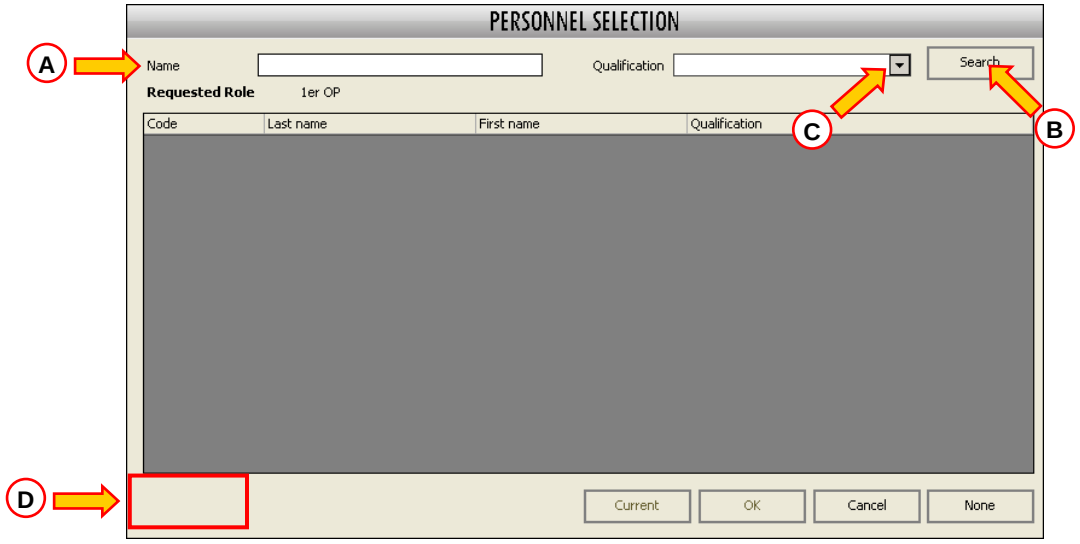


Fig 187 – Select the requesting surgeon

To search for the name, enter the name (or part of it) of the person being searched for in the “Name” field (Fig 187 **A**) then click the Search button (Fig 187 **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 187 **C** to open a menu containing the possible options (Fig 188 **A**). Select one of these options to display only the names of the people with the qualification specified.

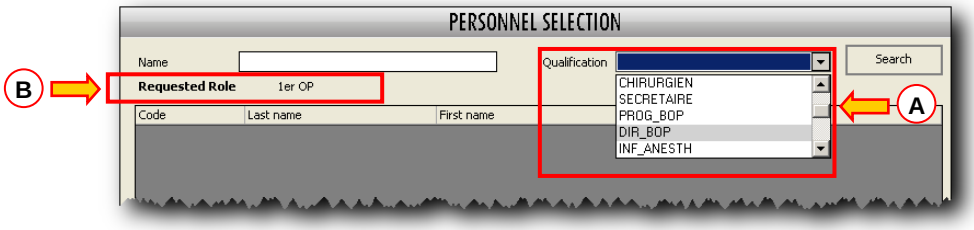


Fig 188 – Selection by Qualification

The “requested role” area (Fig 188 **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 187 **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 186 **B** and Fig 189 **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 189 **B**).

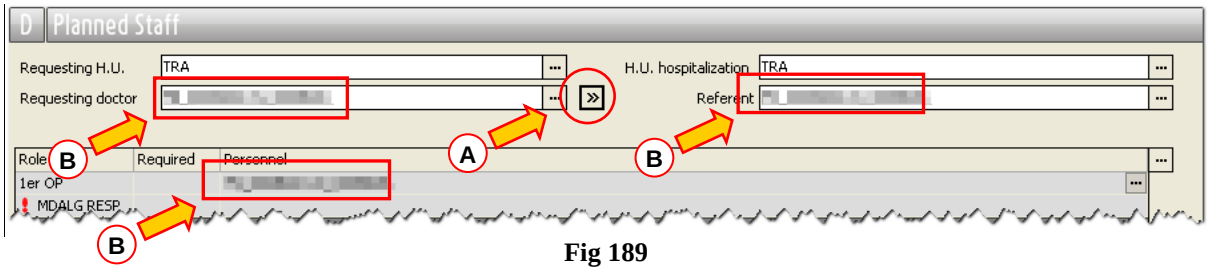


Fig 189

13.4.3. Referent doctor

The "Referent" field indicates the name of the person who is the direct referent for the patient in question (Fig 190 **A**).

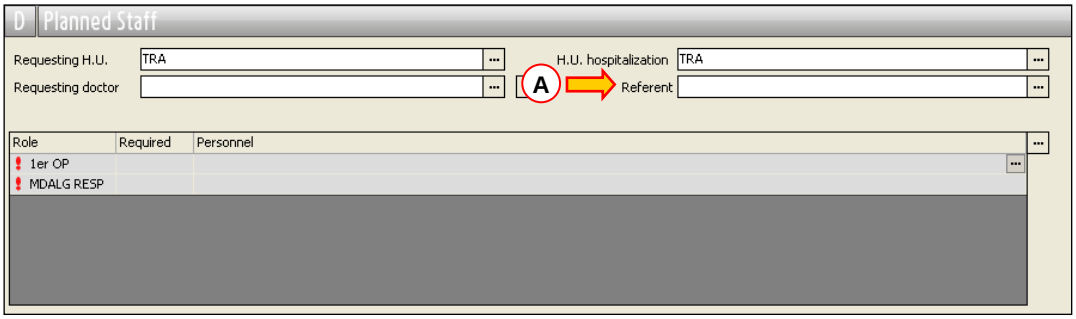


Fig 190

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 191).

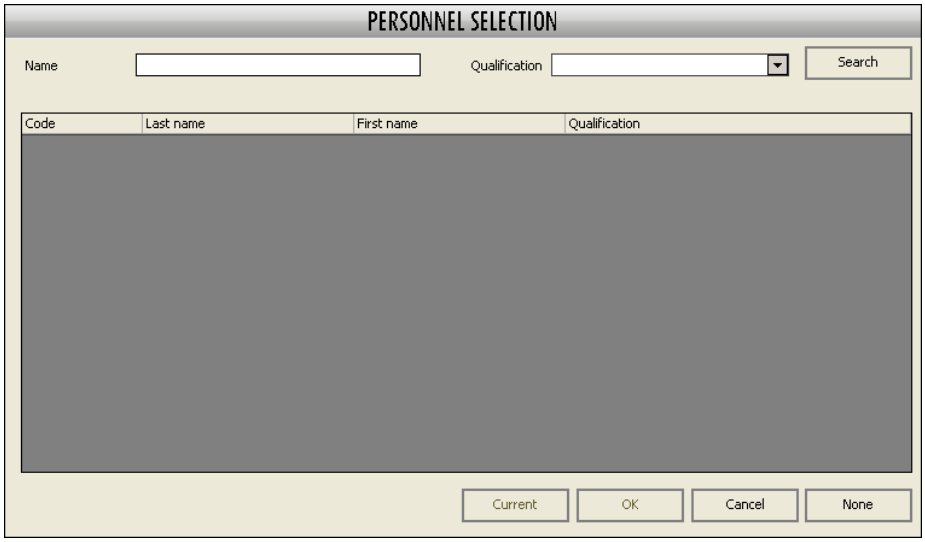


Fig 191 – Select the referent doctor

The function of this window is the same as that of the window shown in Fig 187, 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 188 **B**).

13.4.4. 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.

13.4.5. The “Planned Staff” table

The “Planned Staff” table makes it possible to specify ad/or request the staff to perform the operation (Fig 192 **A**).

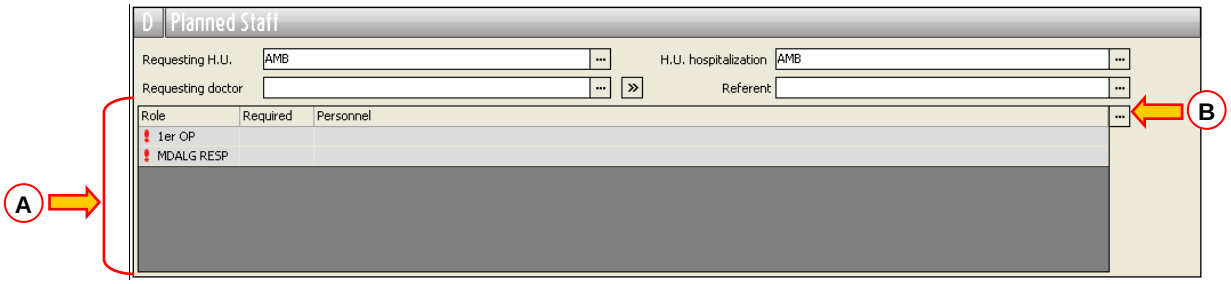


Fig 192 – Room staff selection

Before making any selection, the area contains the list of roles indispensable to the operation. In Fig 192 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 192 **B**).

The following window opens (Fig 193).

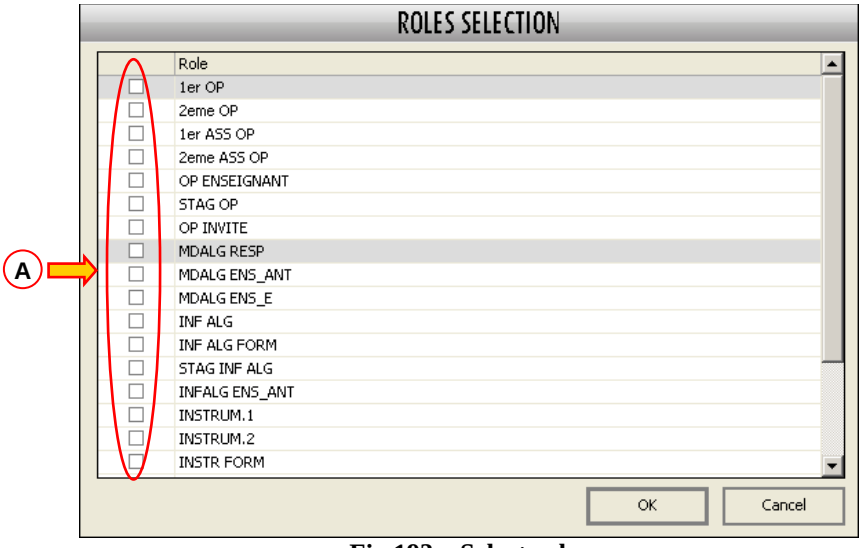


Fig 193 – Select roles

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 193 **A**).

To select the roles

- Click the checkbox corresponding to the role required.

The corresponding role appears as selected (Fig 194 **A**).

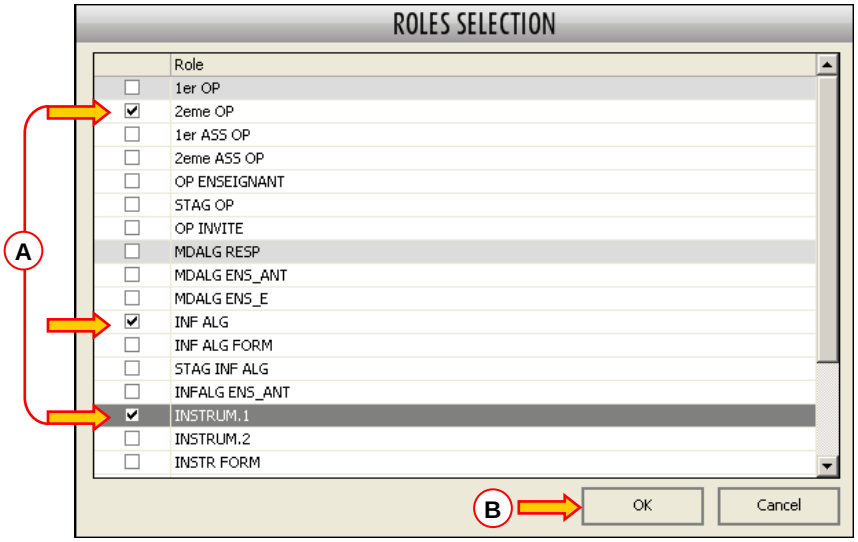


Fig 194 – Selected roles

- Click the OK button (Fig 194 **B**).

The list of roles selected appears in the "Planned Staff" table (Fig 195).

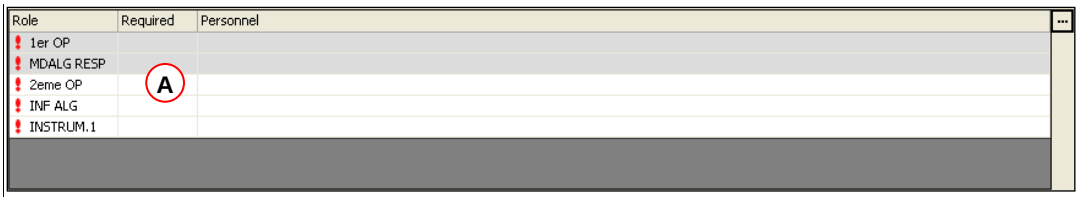


Fig 195 – Selected staff

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 195 **A**). The list of roles changes as shown in Fig 196.

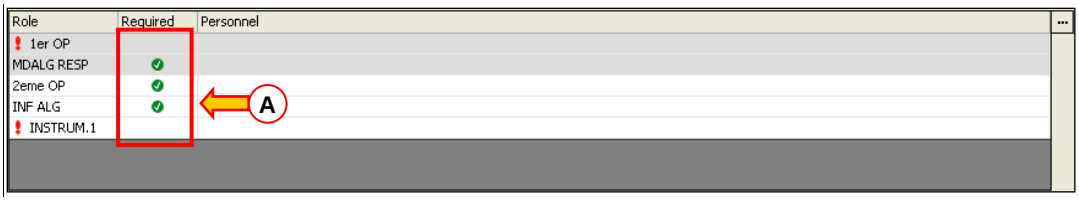


Fig 196 – Requested staff

The ✓ icon alongside the role means that any person qualified for that role is acceptable (Fig 196 **A**).

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

The following window appears (Fig 197).

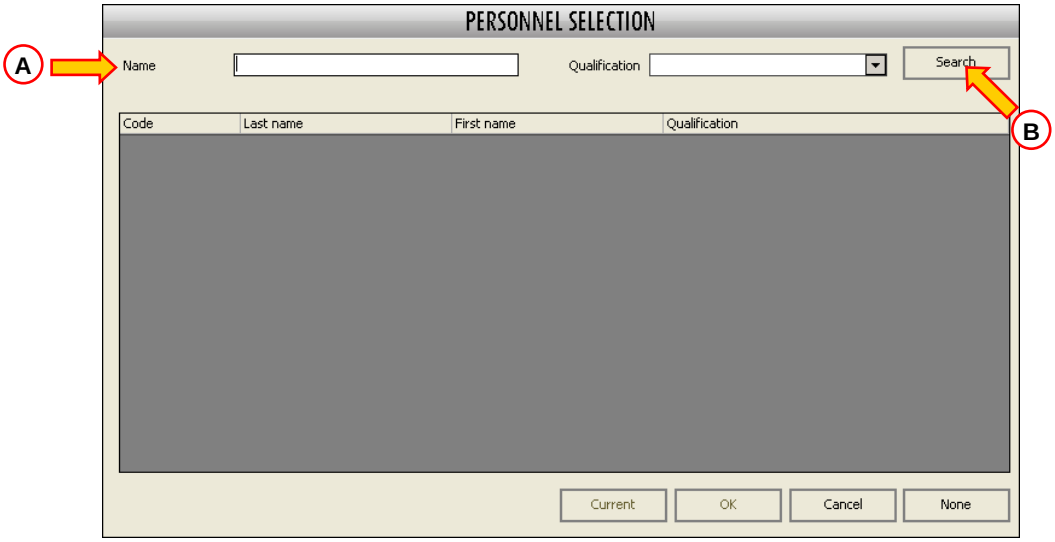


Fig 197 – Select room staff

To search for a specific person type his/her name (or part of it) in the "Name" field (Fig 197 **A**) and then click the Search button (Fig 197 **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 198).

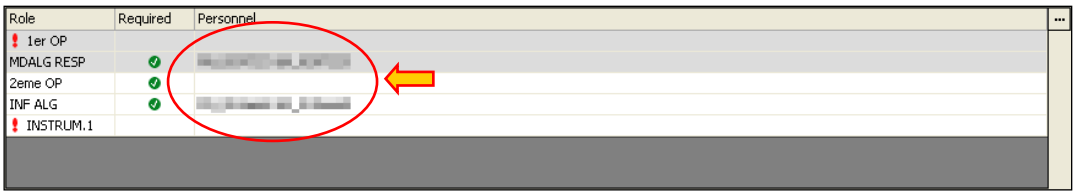


Fig 198 – Selected staff

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 199.

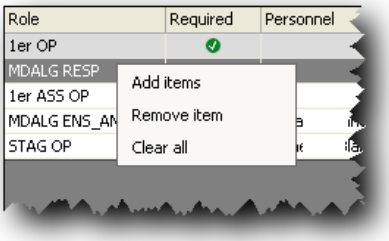


Fig 199

Click “Add items” to open the window shown in Fig 194, 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 15.

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.

13.5. The “Special Services” area

The “Special Services” area (Fig 200) makes it possible to specify any room devices required for the operation.

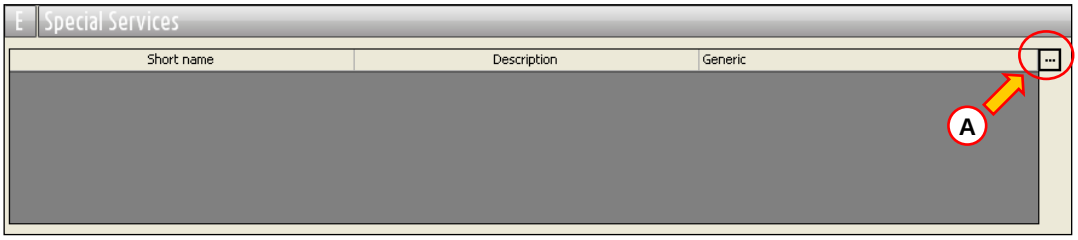


Fig 200 – The “Special Services” area

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 200 **A**).

The following window opens (Fig 201).

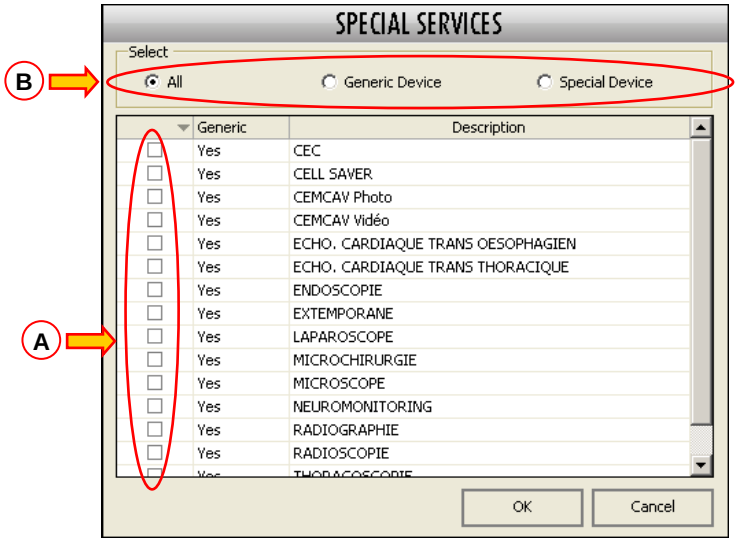


Fig 201 – Add devices

The window contains the list of all possible devices. There is a selection box alongside every device (Fig 201 **A**).

To select a device

- click the checkbox corresponding to the device required.

The box will be selected (Fig 202 **A**).

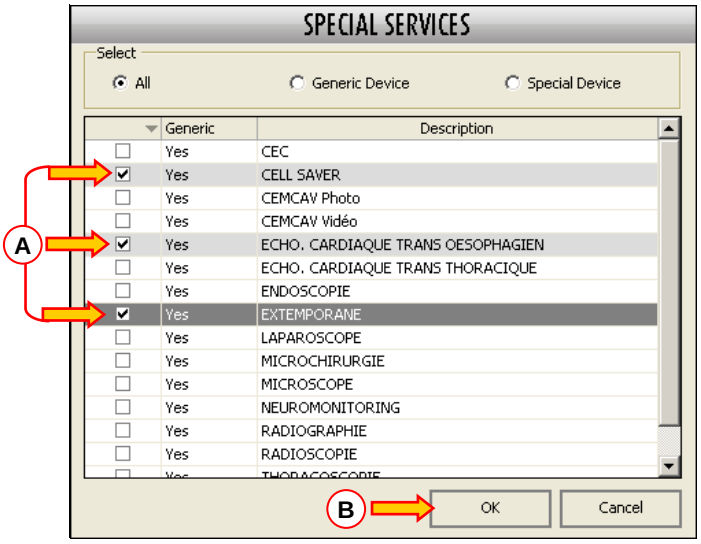
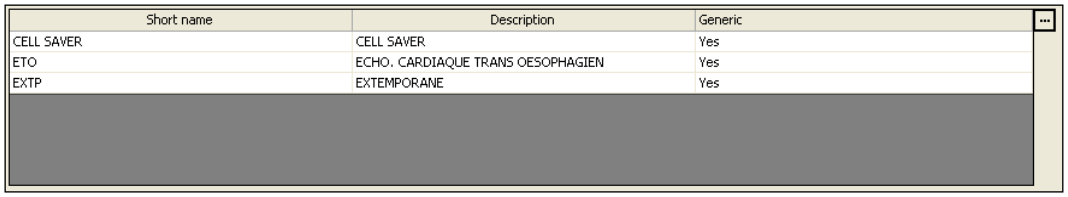


Fig 202 – Devices selected

- Click the OK button (Fig 202 **B**)

The list of devices selected appears in the "Special Services" table of the "Operation Record" page (Fig 203).



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

Fig 203 – 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 201 **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 14.2.1 and Fig 234).

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 204.

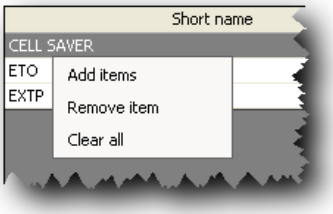


Fig 204

Click “Add items” to open the window shown in Fig 202 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.

13.6. The “Materials” area

The “Materials” area makes it possible to schedule the required room materials (Fig 205).

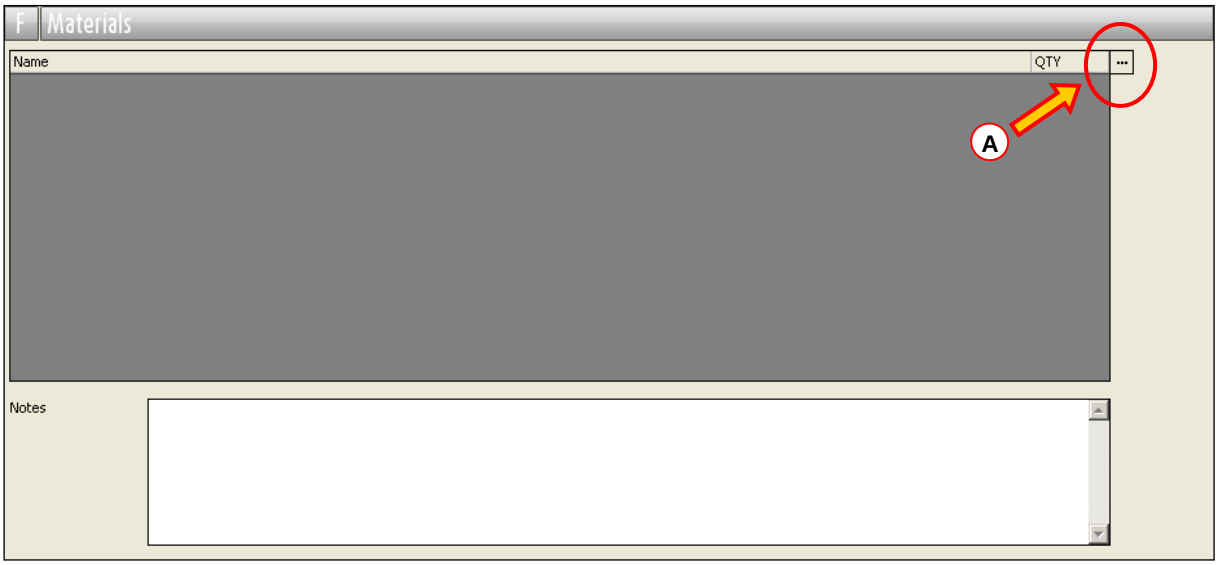


Fig 205

To schedule the room materials

1. Click the EDIT button on the command bar.
2. Click the ... button placed alongside the “Materials” area (Fig 205 **A**).

The following window is displayed (Fig 206).

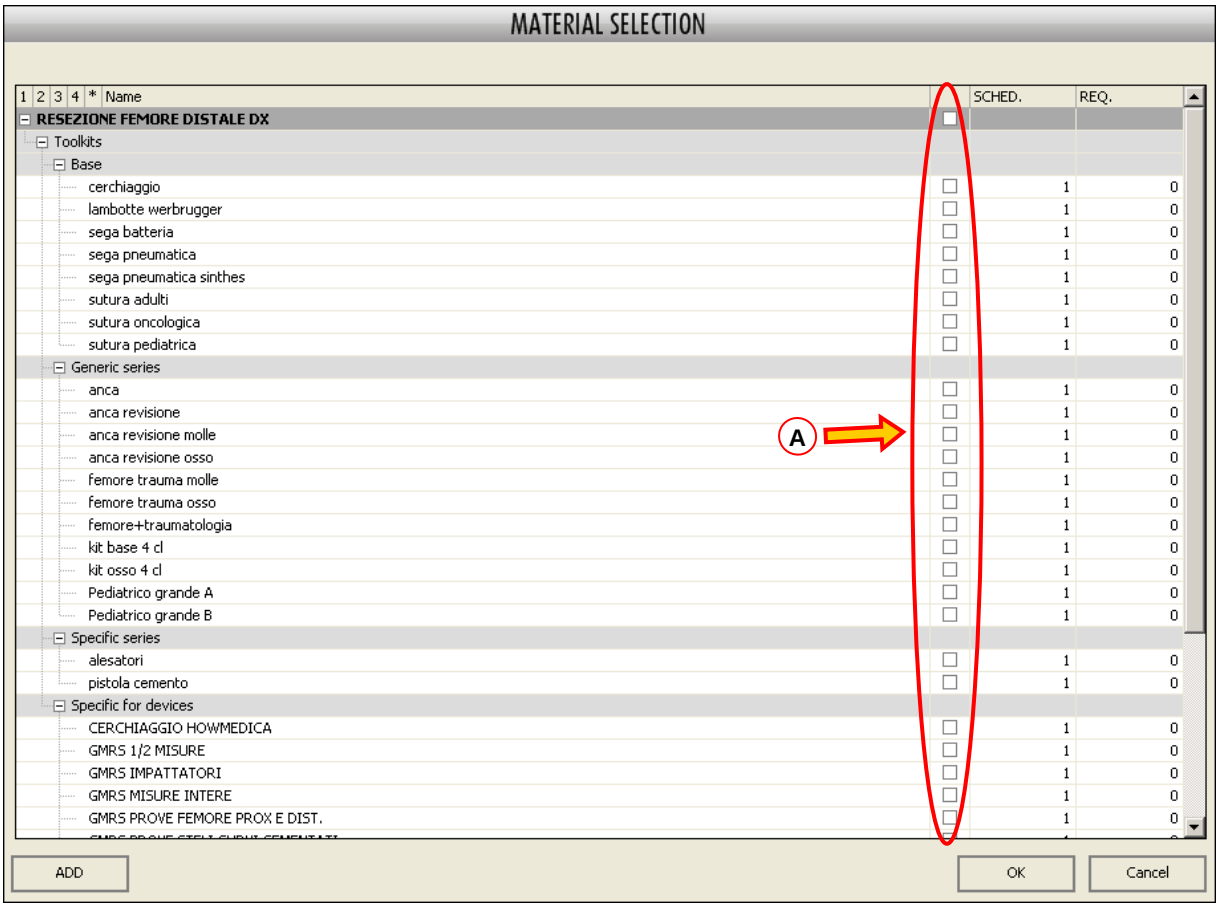


Fig 206

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 13.6.1.

3. Click the checkbox corresponding to the resources to be planned (Fig 206 **A**).

The box is this way checked (Fig 207 **A**).

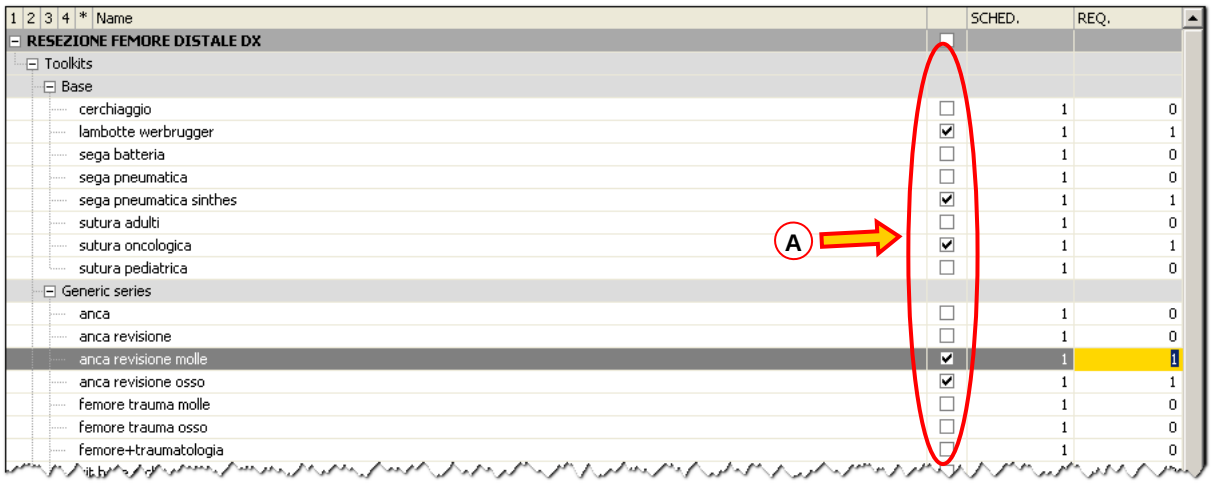


Fig 207

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

The required quantity is indicated in the last column on the right (Fig 207 **B**). 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.

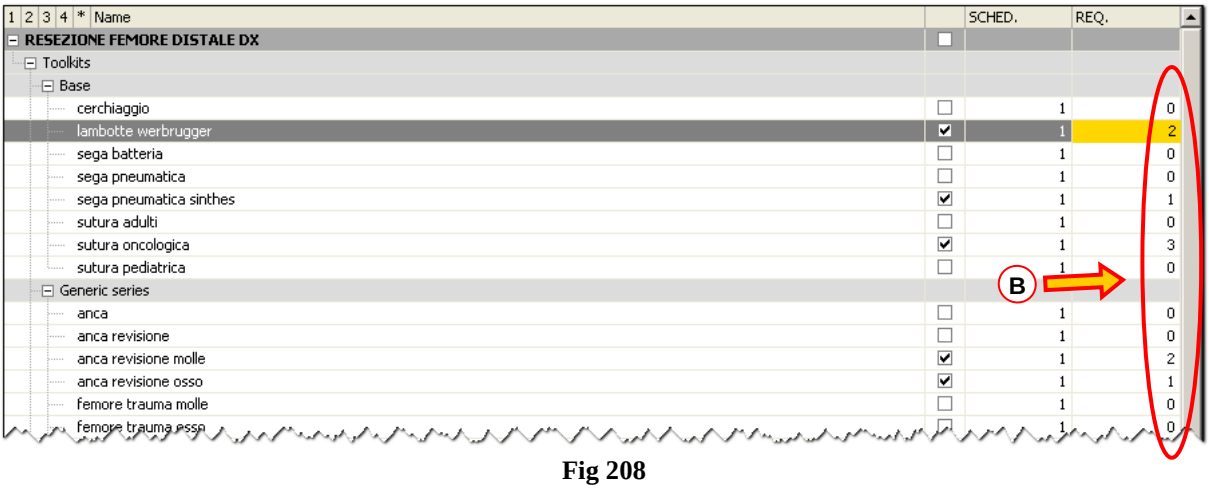


Fig 208

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 209).

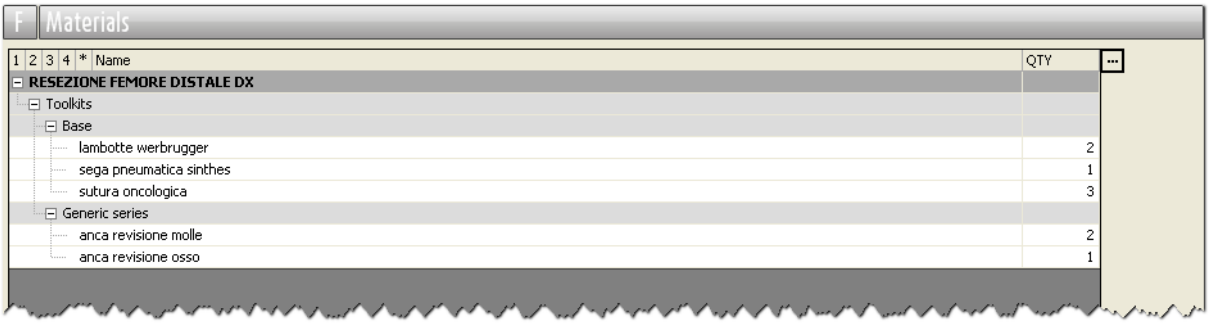


Fig 209

6. Click the UPDATE button on the command bar.

13.6.1. 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 210 **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 210 **B**). The first one, when clicked, hides the node; the second one displays it.

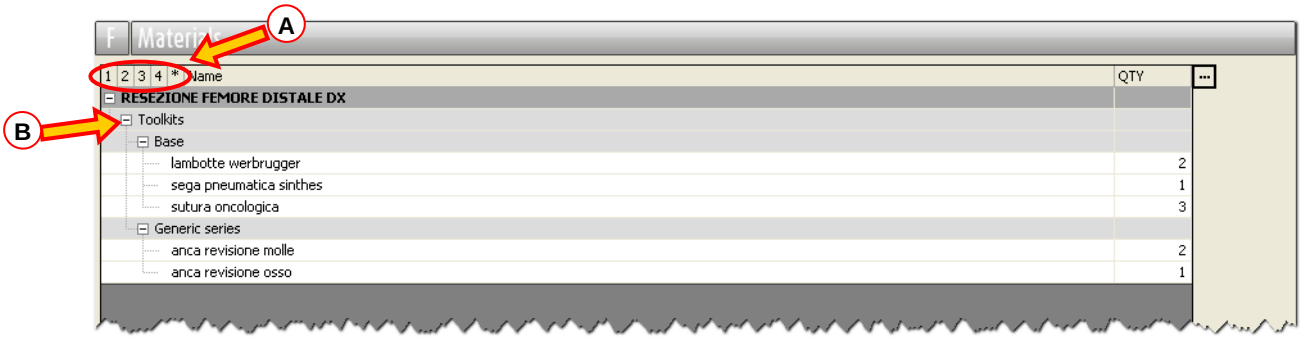


Fig 210

The first level represents the main operation (Fig 211).

Fig 211

Either kit, toolkits, series or single resources can be represented in the second level (Fig 212).

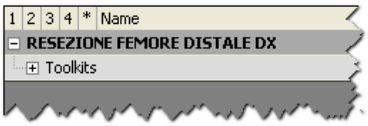


Fig 212

The kind of kit, series, toolkit or resource is specified in the third level (Fig 213).

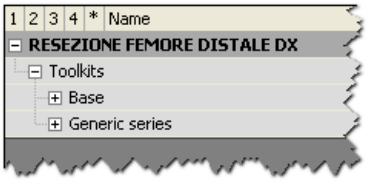


Fig 213

The fourth level lists the single resources (Fig 214).

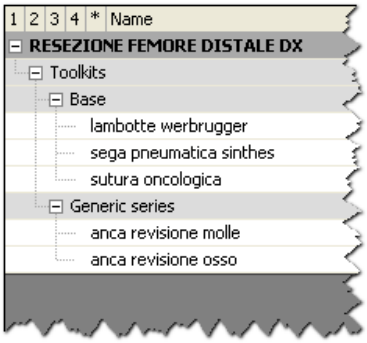


Fig 214

13.6.2. 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 215),

1. Click the checkbox placed on the row corresponding to the main operation name (Fig 215 **A**).

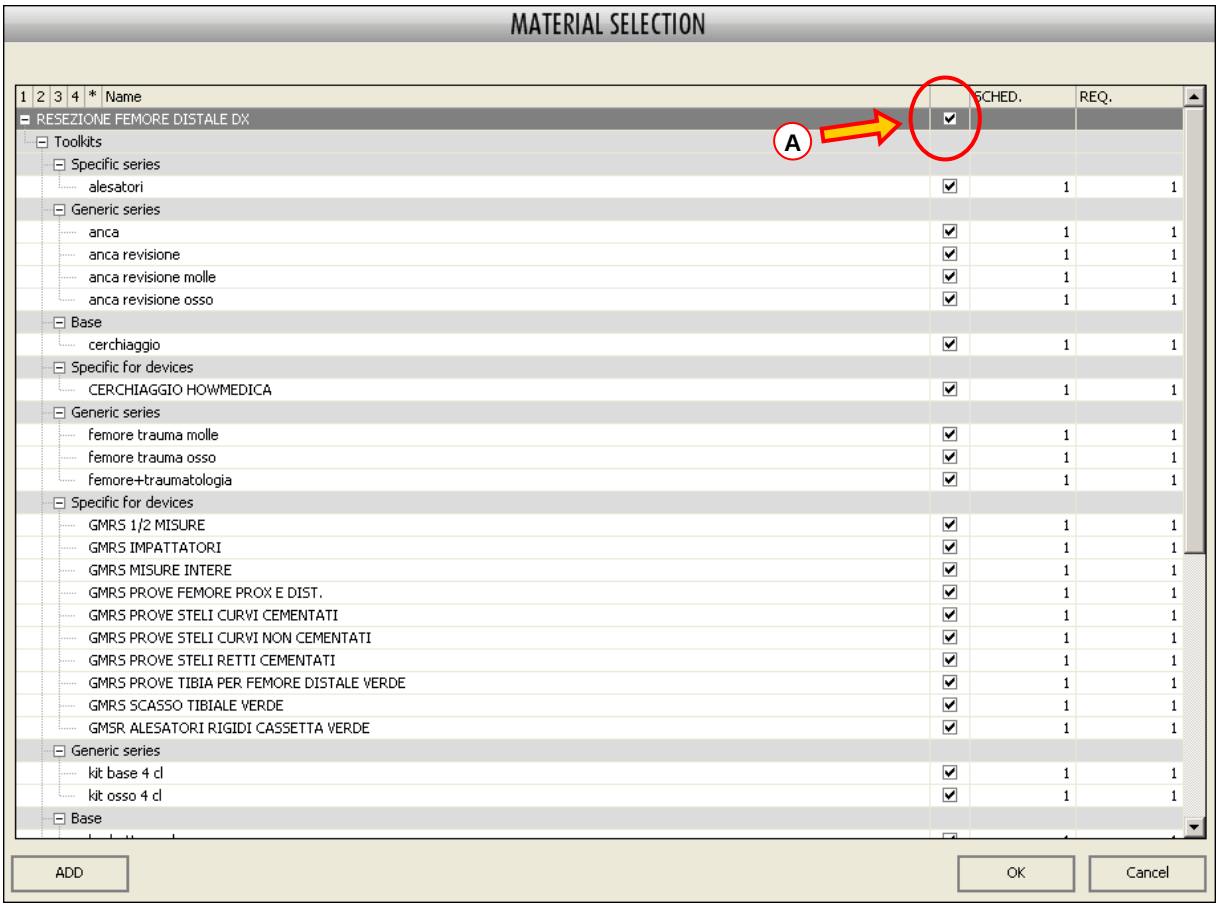


Fig 215

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 216).

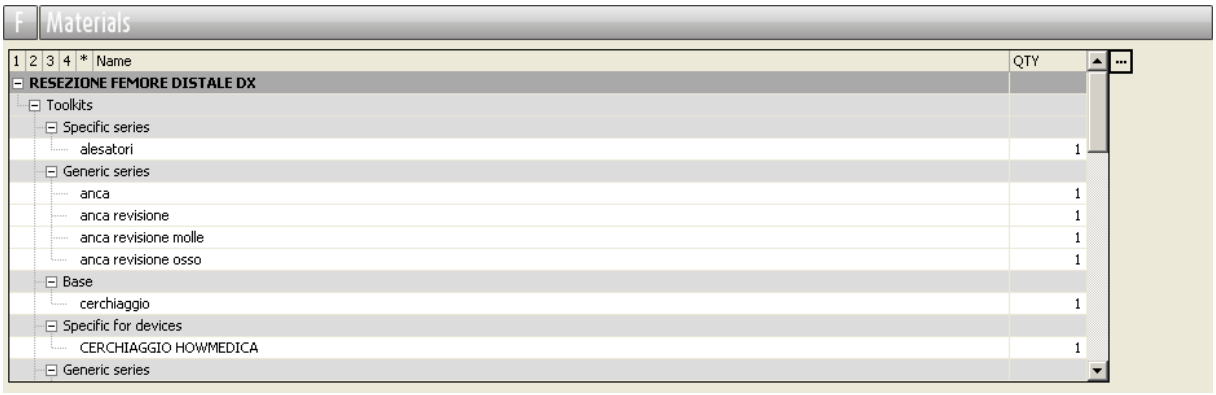


Fig 216

13.6.3. 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 217),

1. Click the ADD button (Fig 217 **A**).

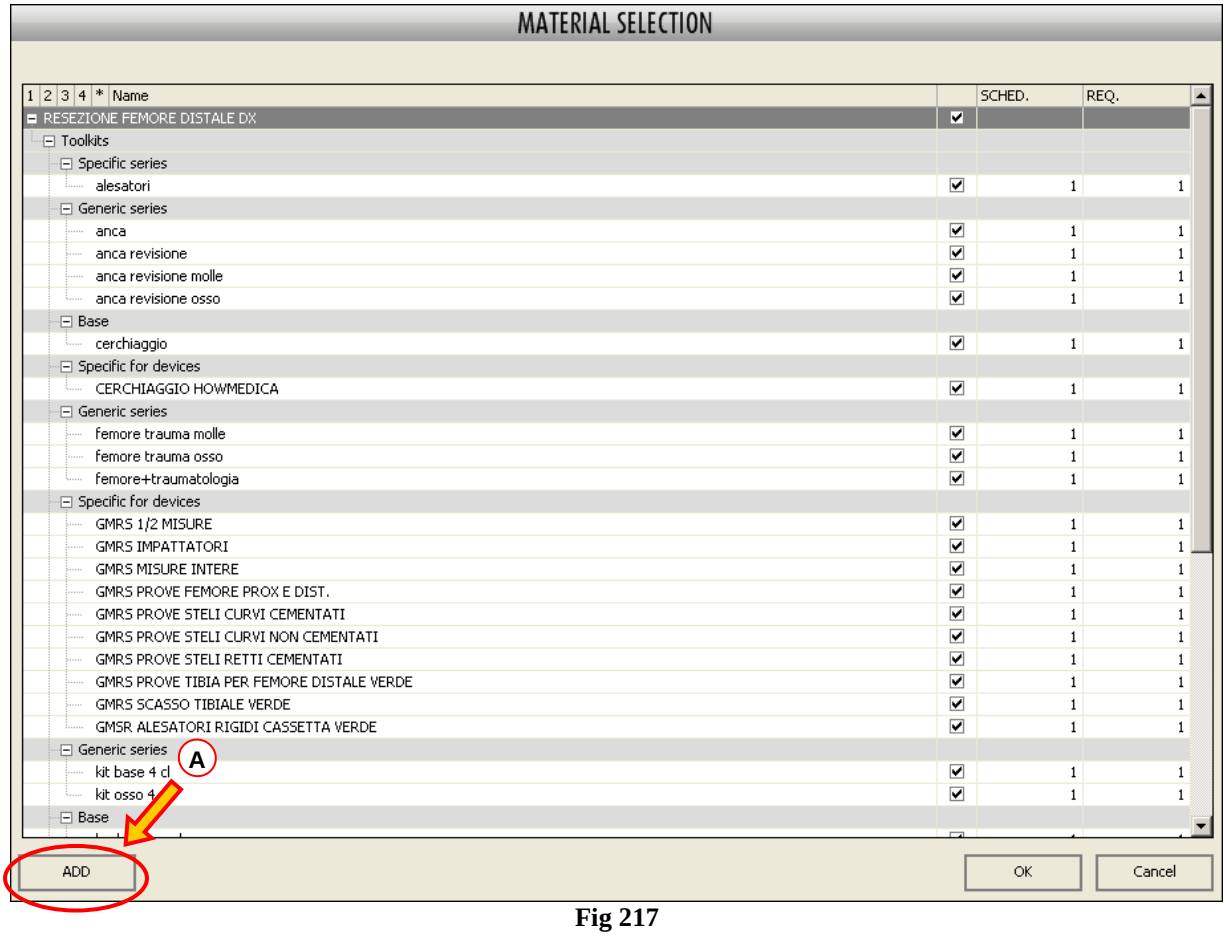


Fig 217

The following window opens (Fig 218).

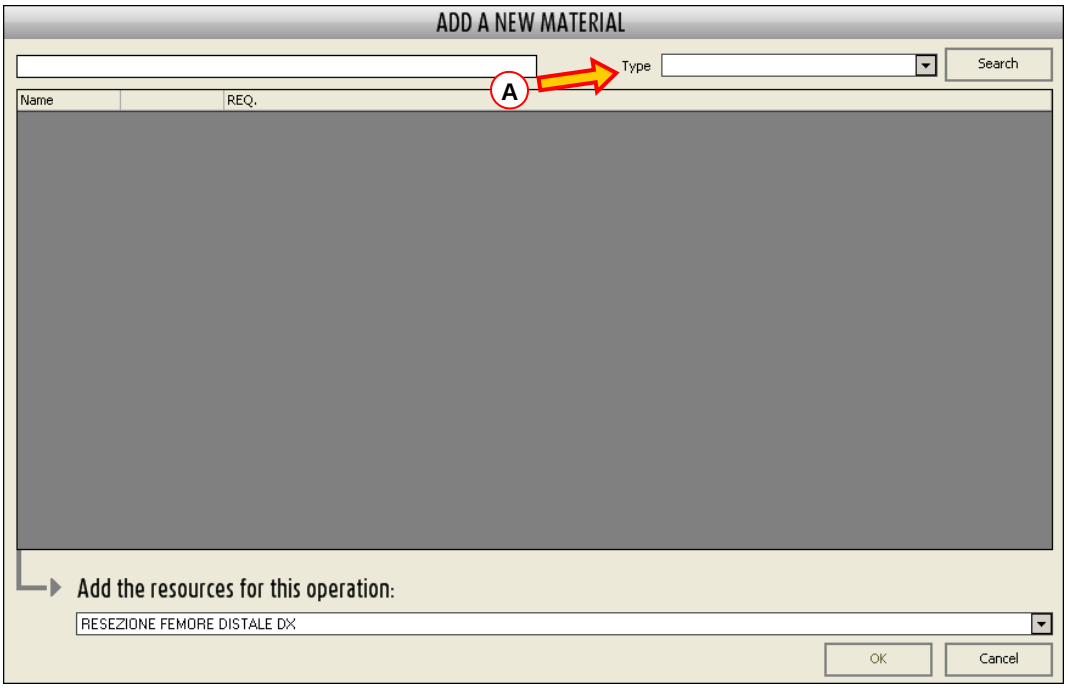


Fig 218

2. Use the drop down menu indicated in Fig 218 **A** and enlarged in Fig 219 to indicate the kind of material to insert.

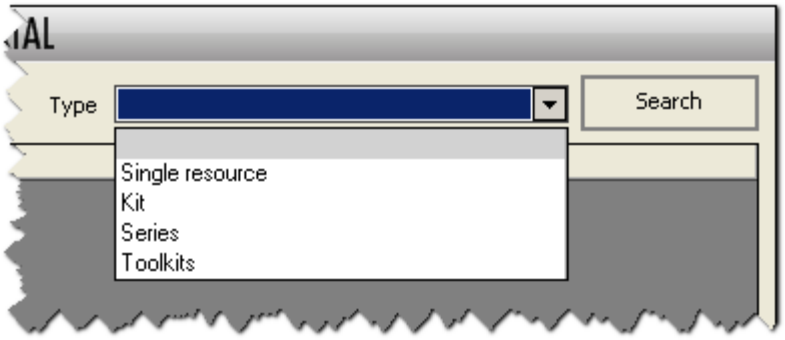


Fig 219

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 220 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.

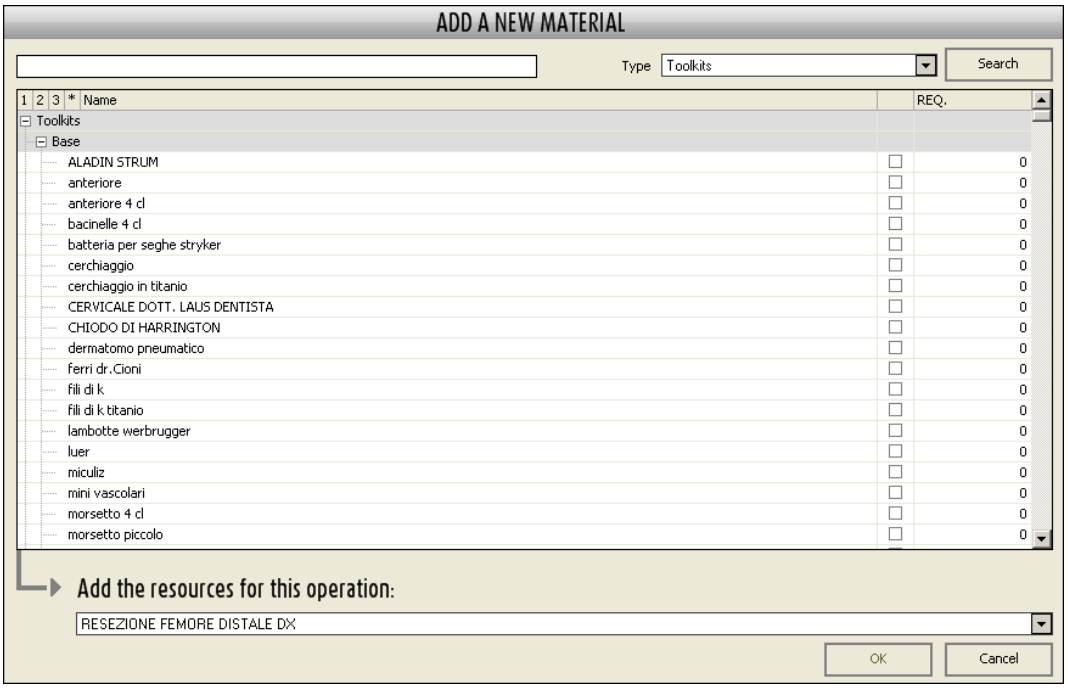


Fig 220

3. Insert the name (or part of the name) of the wanted toolkit in the field indicated in Fig 221 **A**.

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

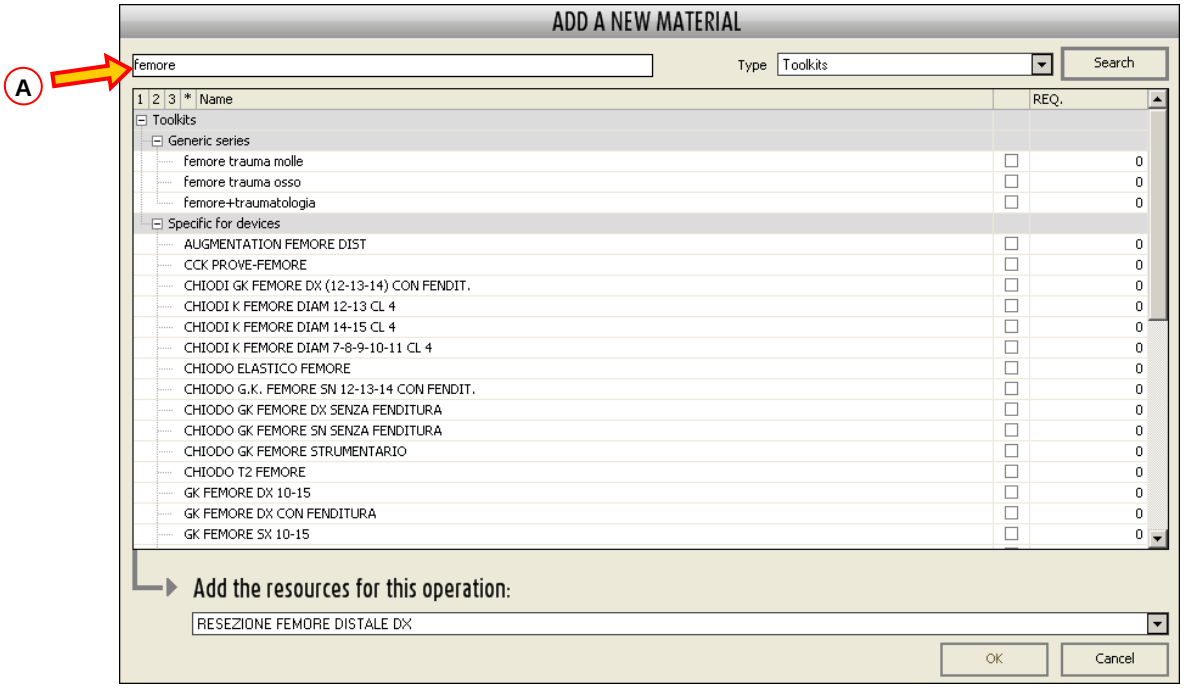


Fig 221

4. Click the checkbox corresponding to the toolkit (or toolkits) to be scheduled (Fig 222).

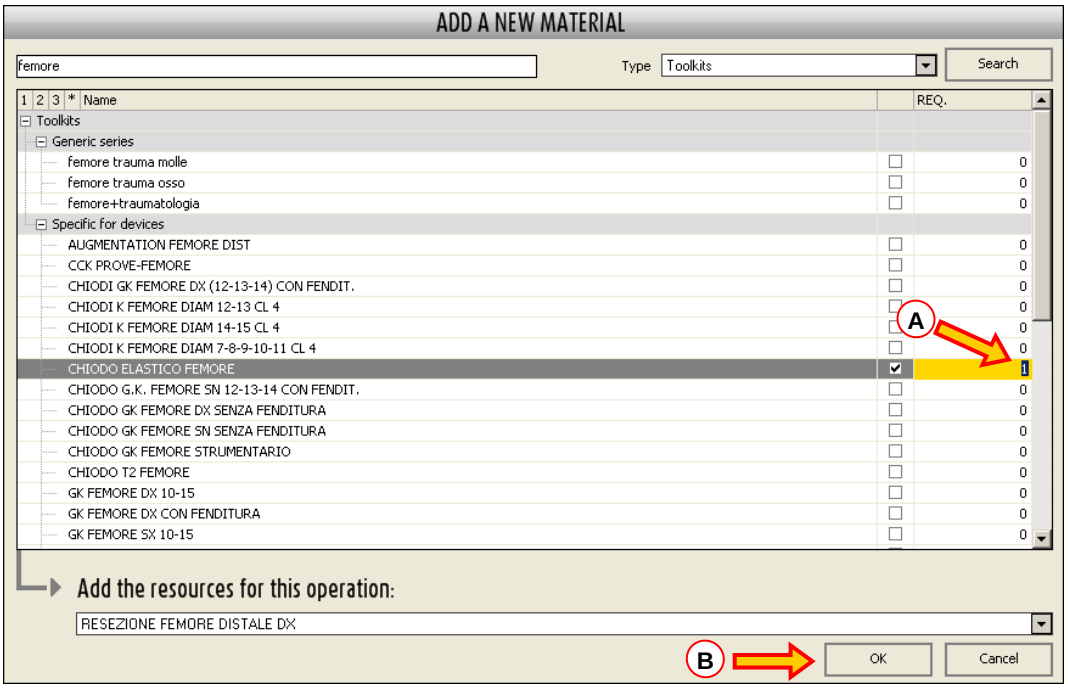


Fig 222

5. Specify the required quantity on the cell indicated in Fig 222 **A**. The default quantity is 1.

6. Click the OK button (Fig 222 **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 223 **A**).

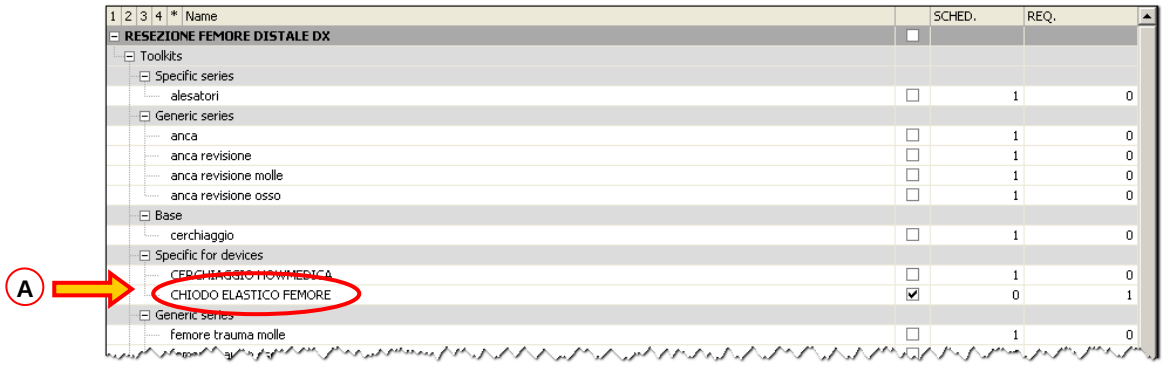


Fig 223

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

7. Schedule the selected materials using the procedure described in paragraph 13.6.

13.6.4. How to add a note

The “Notes” field placed in the “Materials” area of the “Operation record” (Fig 224 **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 224

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 225).

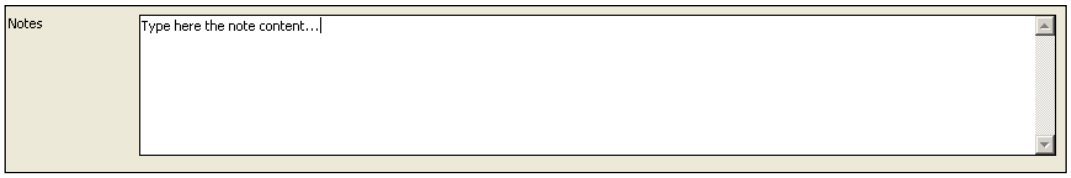


Fig 225

4. Click the UPDATE button on the command bar.

14. 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.

14.1. How to access the scheduling page

To access the “Schedule” module main page

- Click the corresponding icon 

on the lateral bar (Fig 226).

Fig 226

Otherwise you can use the menu activated by the 

button on the command bar of the “Operation list” and “Operation record” screens (Fig 227 **A**)

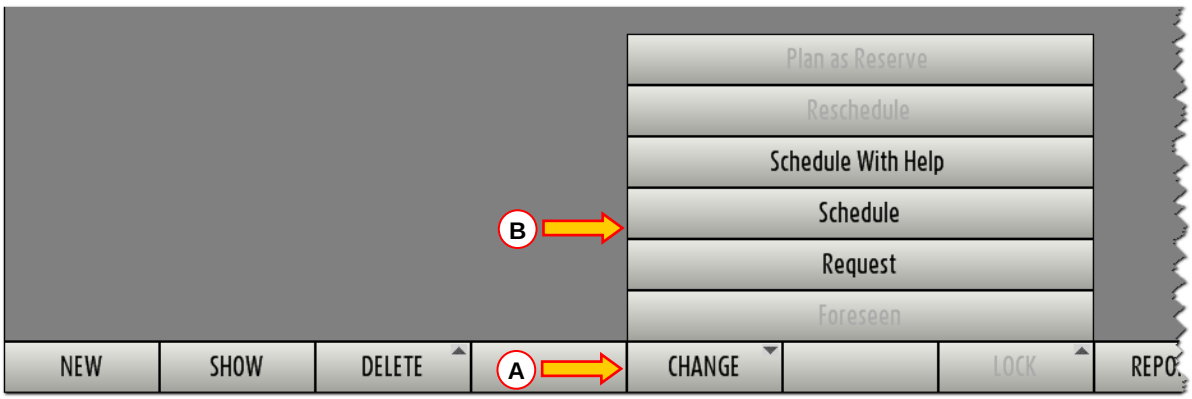


Fig 227

- Click, when enabled, the “Schedule” option (Fig 227 **B**).

The screen shown in Fig 228 will open.

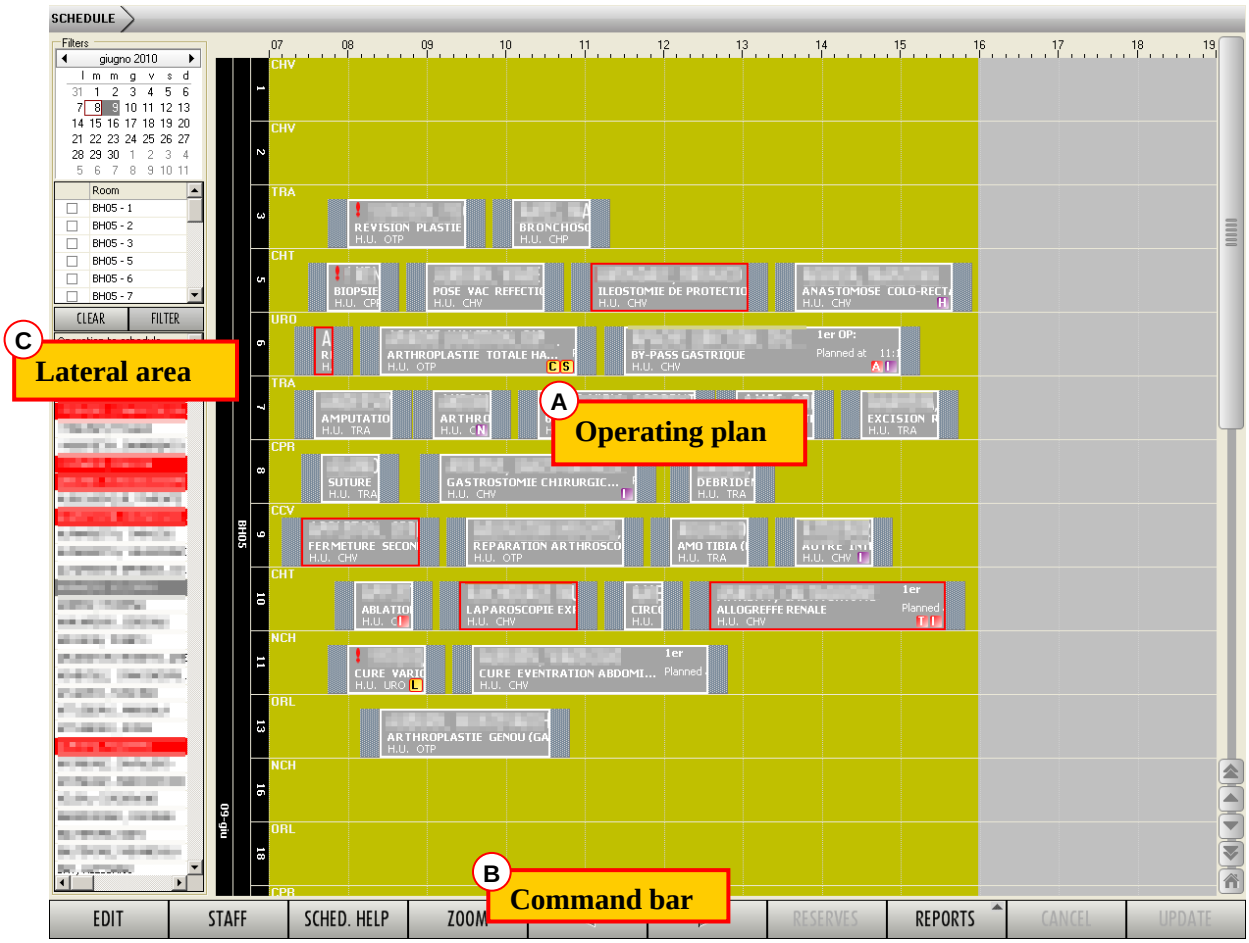


Fig 228 – Scheduling Page

This screen is formed of three areas.

1) The central part of the screen represents in a graphic form the operations schedule (Fig 228 **A** - see paragraph 14.2 for the description).

2) The command bar contains the function-button making it possible to perform different procedures (Fig 228 **B** - see paragraph 14.4 for a description).

3) The lateral area contains several tools making it possible to operate on the screen contents (Fig 228 **C** - see paragraph 14.3 for a description).

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

14.2. 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 228 **A**).

Every line represents the day of an operating room. Fig 229 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 229 **A**).

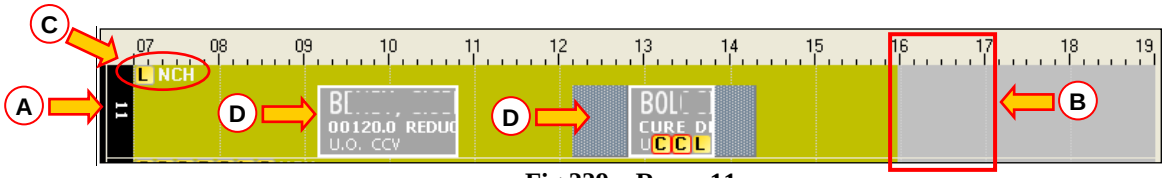


Fig 229 – Room 11

Every box represents a time of day. Fig 229 **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 229 is open from 7:00 to 16:00.

The letters highlighted in Fig 229 **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 230).

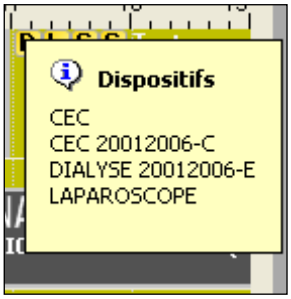


Fig 230 – Devices list

The gray rectangles highlighted in Fig 229 **D** represent the operations scheduled.

The various rooms are grouped into surgical blocks.

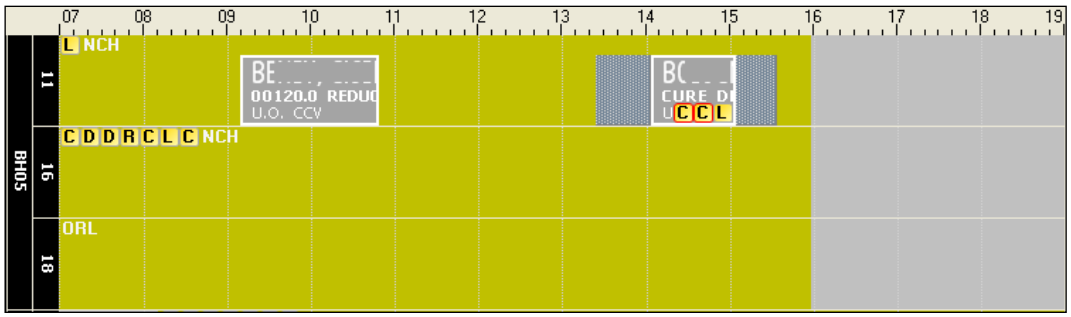


Fig 231 – Block BH05

In Fig 231, rooms 11, 16 and 18 are in block BH05.

The various blocks displayed make up the operating day.

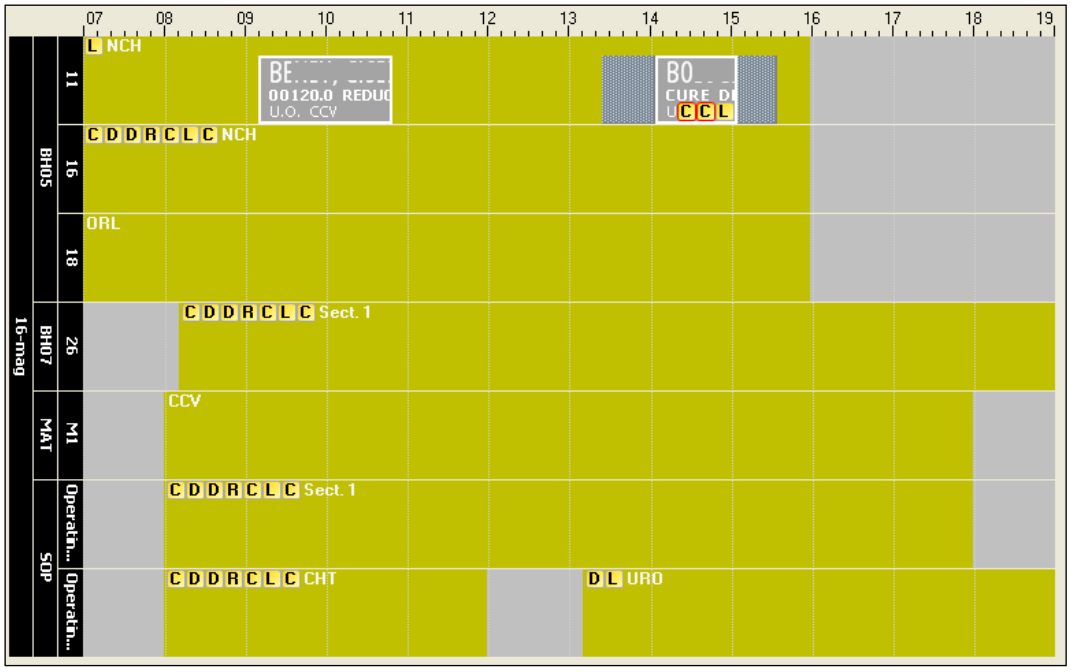


Fig 232 – Day 16/05

Fig 232 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 233 **A**).

Fig 233 – 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).

14.2.1. The graphic representation of the operation

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

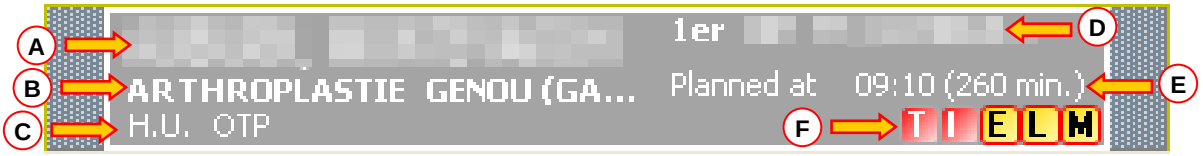


Fig 234 - Operation

The rectangle contains a variety of information.

- The name of the patient (Fig 234 **A**).
- The type of operation (Fig 234 **B**).
- The requesting hospital unit (Fig 234 **C**).
- The name (if indicated) of the first operator (Fig 234 **D**).
- The scheduled start time and duration of the operation (Fig 234 **E**).
- The devices required for the operation, the transmissible diseases, the allergies, the infections and the priority of the operation (Fig 234 **F**, Fig 235).

Fig 235 – 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 13.2.7).

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.

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 10.3.1.1).

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 8.3 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.

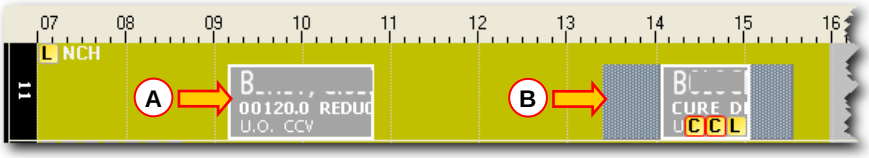


Fig 236 – Position of operations in the grid

The operation shown in Fig 236 **A** is scheduled for room 11, at 09:10 and should end at 10:50.

The operation shown in Fig 236 **B** is scheduled for room 11, at 14:00 and should end at 15:00

The dark gray areas indicated in Fig 237 represent the pre-surgical time (left) and post-surgical time (right) indicated on the “Operating record” screen. See paragraphs 13.2.15 and 13.2.16.

Fig 237

Click the operation rectangles to display a window containing a summary of the information available on the operation (Fig 238).

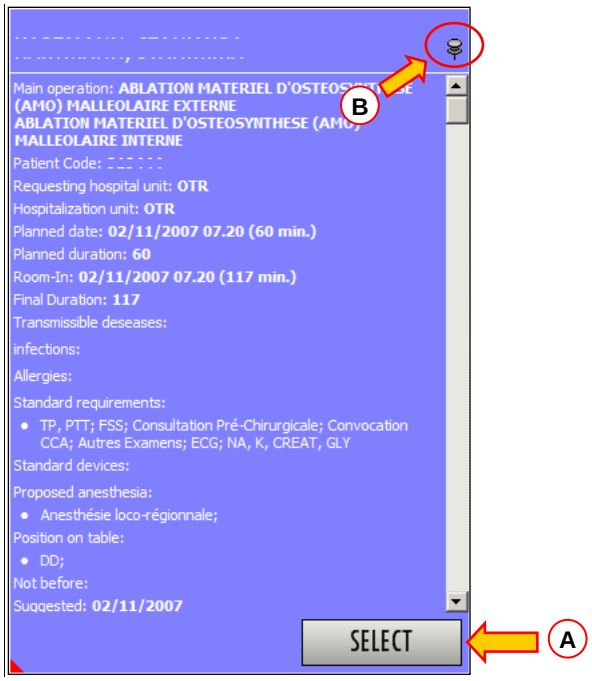


Fig 238 – Operation data

Click the SELECT button in the window (Fig 238 **A**) to access the "Operation Record" page relating to the operation clicked (Fig 106).

The window disappears automatically when you move the mouse.
To "fix it" to the page, click the thumbtack in the window (Fig 238 **B**).

14.2.1.1. Operation schedule direct editing

Right click the operation rectangles to open a menu making it possible to directly edit the operation schedule (Fig 239).

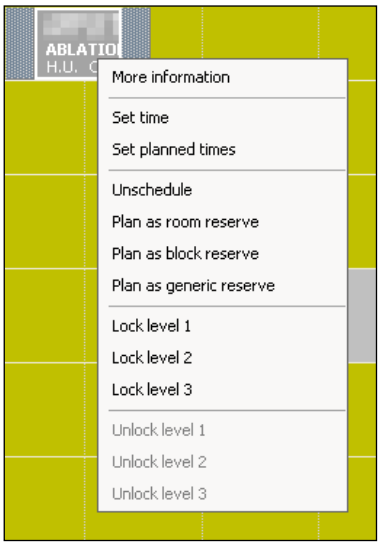


Fig 239

The functions described here are schedule changes and are only enabled after pressing the EDIT *button (see paragraph 14.5).*

- The “More information” option opens the window shown in Fig 238.
- The “Set time” options displays a window in which you can enter a new start time scheduled for the operation (Fig 240).

Fig 240 – 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 241).

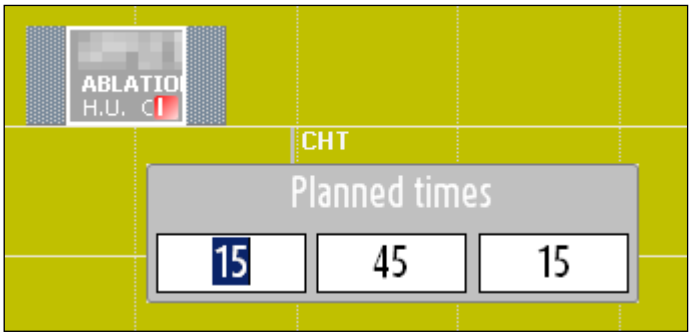


Fig 241 – Set planned times

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 14.5 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 14.5.5 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 14.5.5 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 14.5.5 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 8.3 for an explanation of the lock/unlock functionalities.

14.2.2. Color of boxes and operation state

In the Smart Scheduler system, the operation boxes corresponding to operations in "Scheduled" state are light gray (Fig 242).

Fig 242 – Smart Scheduler operation box

The emergencies are red circled on the planning grid (Fig 243).

Fig 243 - Emergency

The Smart Scheduler system manages an operation in three states (see paragraph 8.2). 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 244).

Fig 244 – Operation state: “Ready”

The “In progress” state is characterized by the color cyan (Fig 245).

Fig 245 – Operation state: “In progress”

The “Completed” state is characterized by the color dark gray (Fig 246).

Fig 246 – 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 247).

Fig 247 – 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 14.5 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.

14.3. The lateral area

The left side of the scheduling page (Fig 228 **C**, Fig 248) is divided in three areas.

- a date filter (Fig 248 **A**),
- a block and room filter (Fig 248 **B**),
- a table containing the list of all the operation in "Requested" state, ready to be scheduled (Fig 248 **C**).

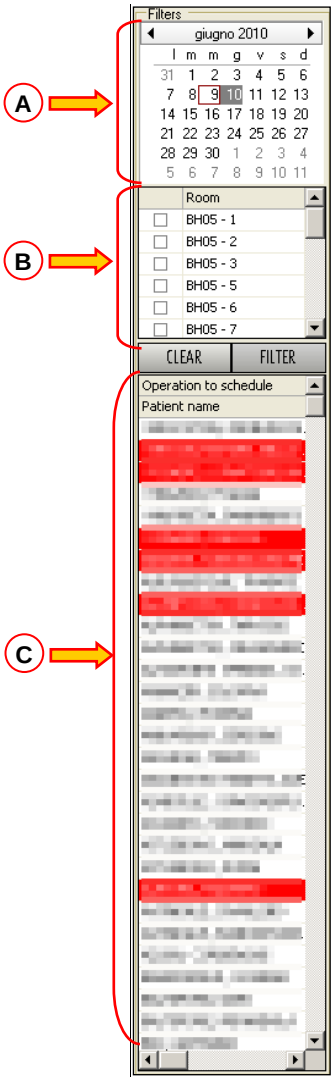


Fig 248 – Lateral area

14.3.1. Date filter

The calendar indicated in Fig 248 **A** and Fig 249 makes it possible to select the day displayed on screen.

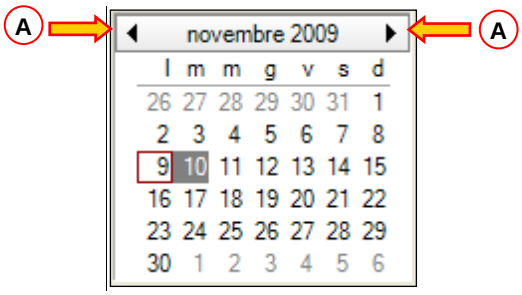


Fig 249 - Calendar

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 249 **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 250 – 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.

14.3.2. Room filter

The “room” area makes it possible to display only the rooms selected (Fig 248 **B**, Fig 251).

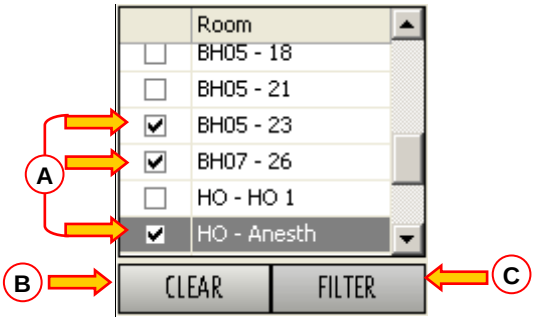


Fig 251 – Room Selection

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 251 **A**).

- Click the FILTER button (Fig 251 **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.

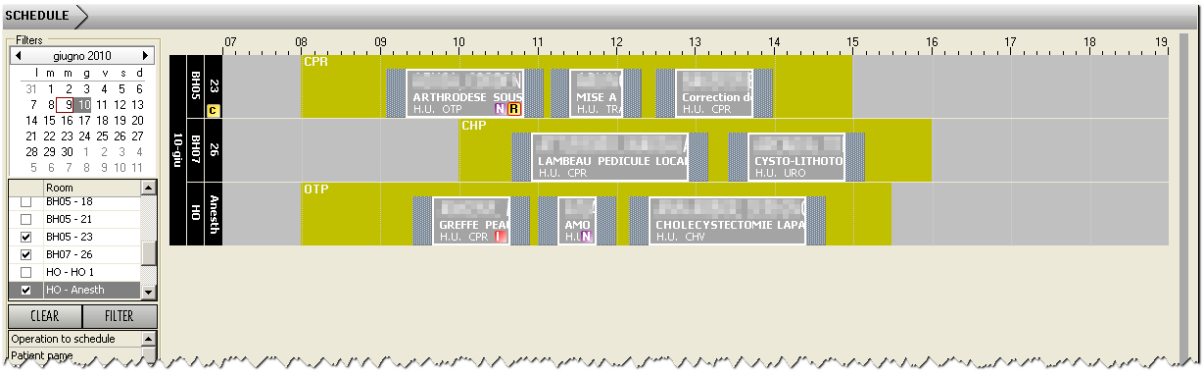


Fig 252 – Three rooms selected

To go back to displaying all the rooms

- Click the CLEAR button (Fig 251 **B**).

The rooms previously selected are deselected.

- Click the FILTER button (Fig 251 **C**)

The grid containing all the rooms will be displayed again.

14.3.3. Operations to schedule

The "Operations to schedule" contains the list of operations still to be scheduled (Fig 248 **C**, Fig 253). 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 253 – 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 253 **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 254).

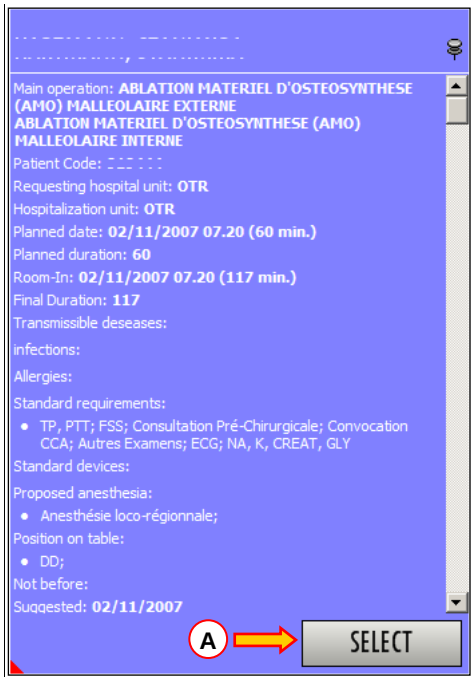


Fig 254 – Operation Data

Click the SELECT button in the window (Fig 254 **A**) to access the "Operation Record" screen relating to the operation clicked (Fig 106).

When you are in "edit" mode, i.e., when the EDIT button is pressed, to display this information window you must right click the line corresponding to the operation.
A window like that shown in Fig 254 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 14.5 for the description of the scheduling procedures.

14.4. The command bar of the scheduling page

The control bar on the page (Fig 255) 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 255 – Command bar of the "Schedule" screen

This button makes it possible to schedule the operations. See paragraph 14.4.1 for the detailed procedure.

This button makes it possible to display detailed information on the room staff scheduled for the operations. See paragraph 14.4.2.

This button makes it possible to access the "Schedule with help" functionalities (Fig 287). See paragraph 14.7.

This button makes it possible to change the way the sheduling grid is displayed. See paragraph 14.4.3.

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 14.4.4.

This button makes it possible to create various kinds of print reports. See paragraph 14.4.5.

14.4.1. How to edit the operations schedule

The 

button on the command bar (Fig 256) makes it possible to change the operations schedule.

Fig 256 – Command bar of the "Schedule" screen

Before making any changes to the schedule, it is necessary to click the 

button.

After clicking this button, the control bar changes appearance and looks like the one shown in Fig 257.

Fig 257 – "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 14.5.

14.4.2. How to display information on the operating staff

The STAFF button (Fig 258) makes it possible to access a page containing all the information on the room staff requested for the scheduled operations (Fig 259).

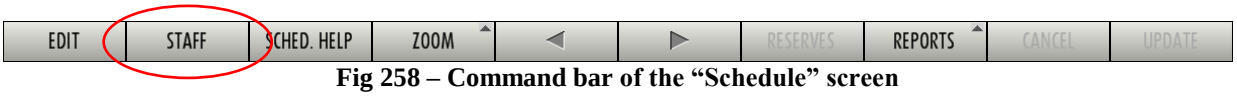


Fig 258 – Command bar of the "Schedule" screen

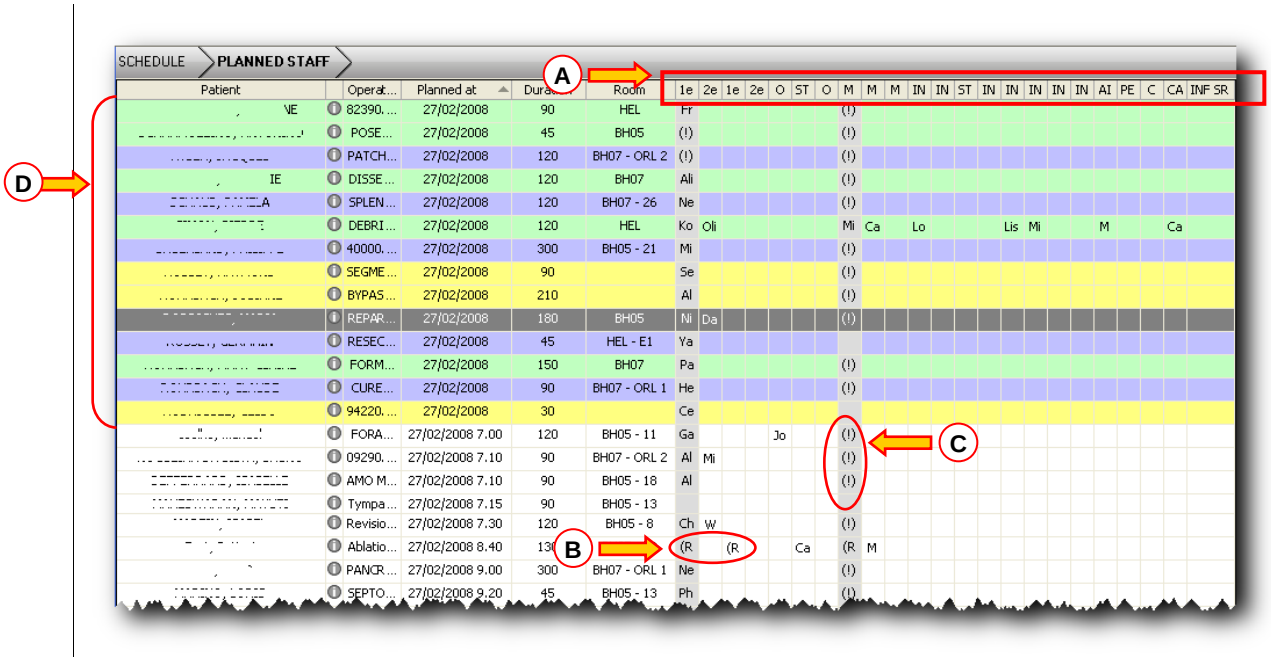


Fig 259 – "Planned Staff" Page

The table shown in Fig 259 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 254).
- 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 259 **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 259 **B**).

The (D) on the staff page corresponds to the symbol of the “planned staff” page on the “Operation Record” screen (Fig 196 **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 259 **C**).

The (!) symbol on the staff page corresponds to the symbol of the “planned staff” area on the “Operation Record” page (Fig 196).

The operations that appear highlighted on the staff page are reserves (Fig 259 **D**). See paragraph 14.5.5 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.

14.4.3. Zoom

The 

button on the command bar (Fig 260) makes it possible to change the time range displayed.

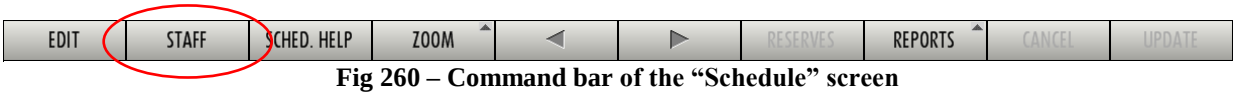


Fig 260 – Command bar of the "Schedule" screen

Click this button to open the different options possible (Fig 261).

Fig 261 – Change time range displayed

To change the time range displayed

- Click the 

button.

The options available appear (Fig 261).

- 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.

14.4.4. How to display the reserves list

The 

button (Fig 262) makes it possible to display the detailed list of all reserves (Fig 263 **A** - See paragraph 14.5.5 for the explanation of the concept of reserve).

Fig 262 – Command bar of the "Schedule" screen

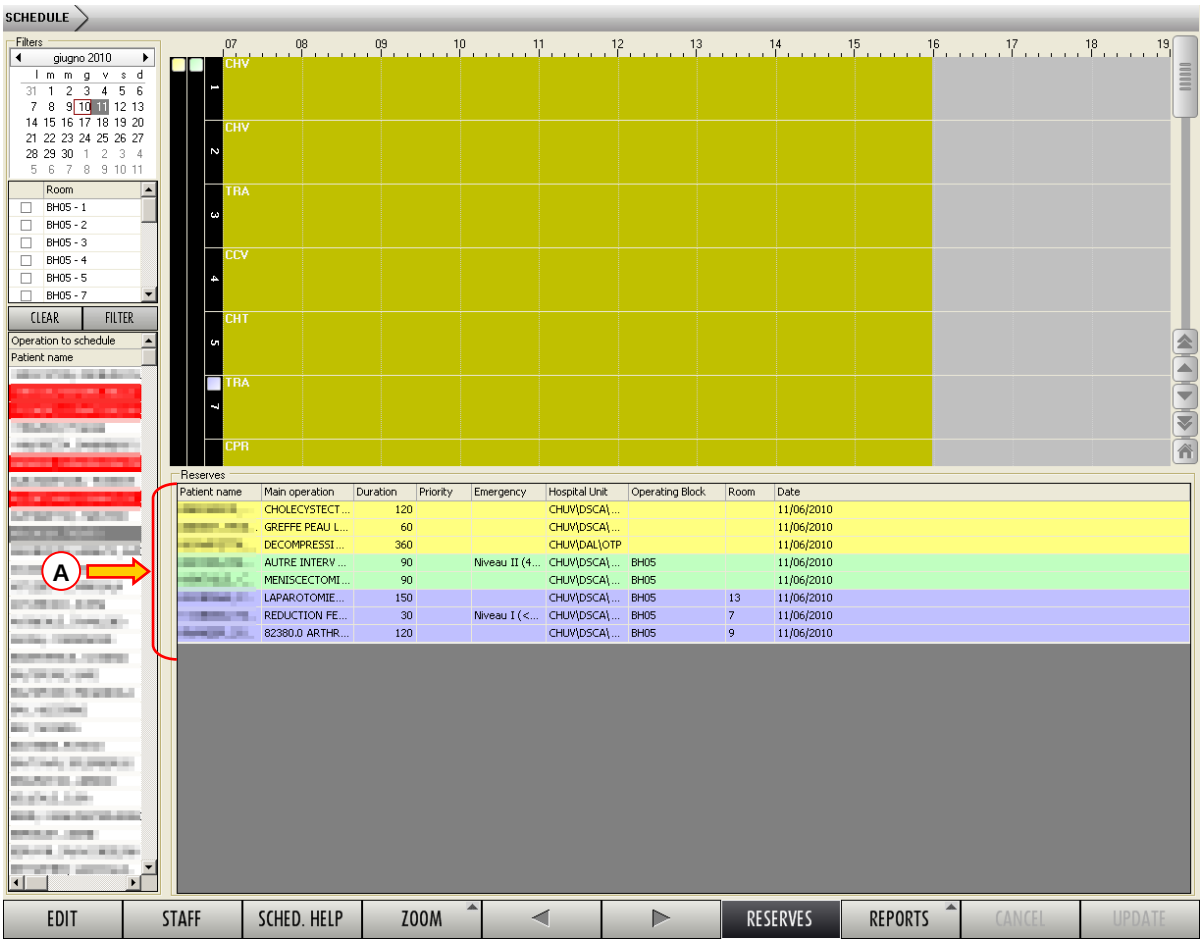


Fig 263 – All reserves

The list of reserves is presented in a table (Fig 263 **A,** Fig 264).

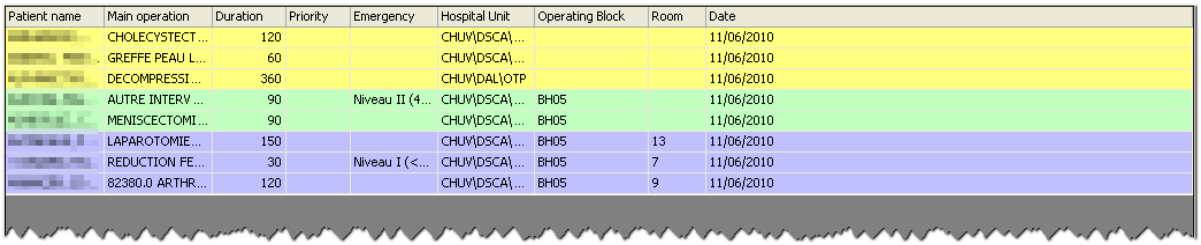


Fig 264

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).

14.4.5. Reports

The 

button (Fig 265) makes it possible to create a document which shows the information available on the operations scheduled.

Fig 265 – Command bar of the "Schedule" screen

To create the document

- Click the 

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.

The DIGISTAT® system's print functionalities are described in paragraph 7.5.2.

14.5. 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 266 **A**).

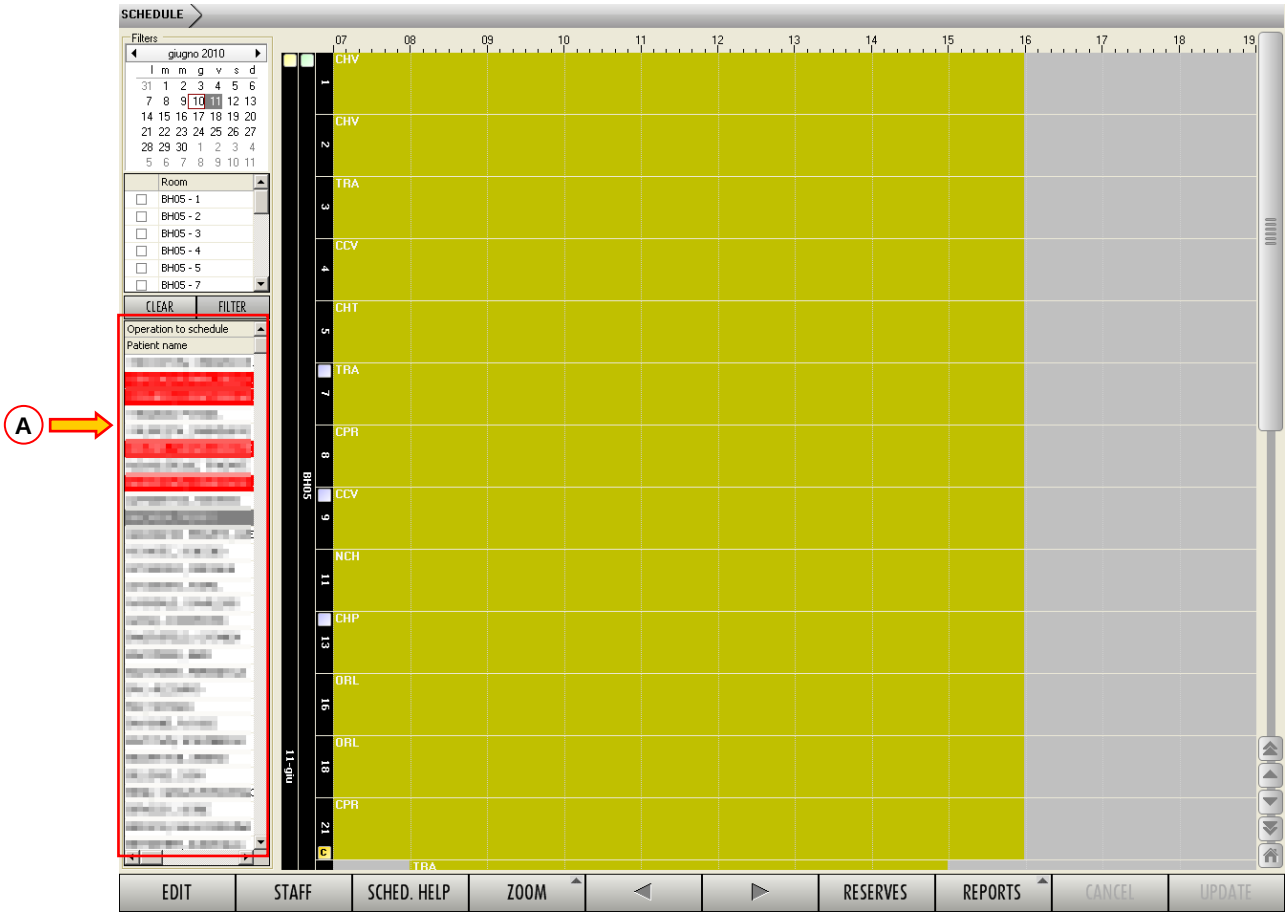


Fig 266 – List of operations to schedule

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 266 **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 267 **A**).

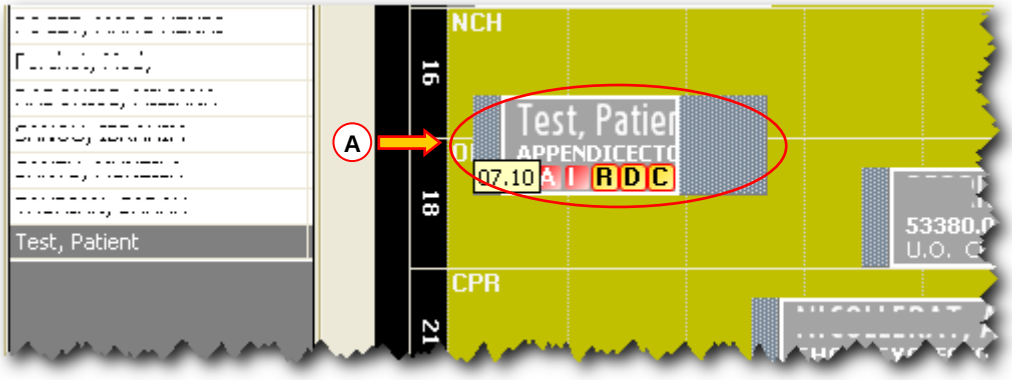


Fig 267 – Operation rectangle being dragged

- 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 268 **A**).

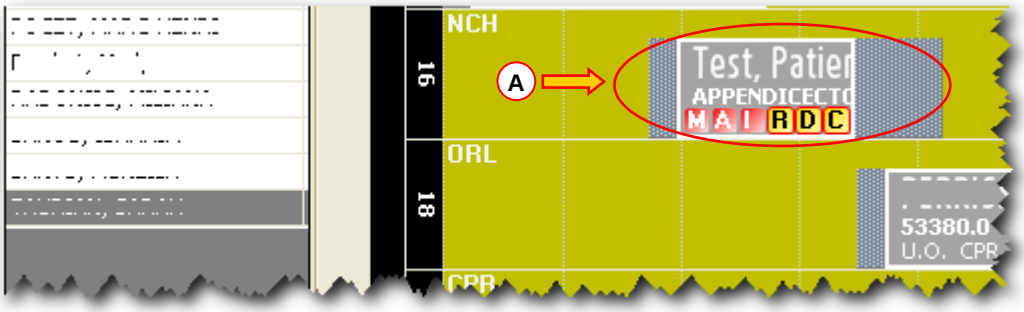


Fig 268 – Scheduled Operation

- Lastly, click the UPDATE button on the command bar to save the change made.

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

14.5.1. How to schedule an emergency operation

The “Emergencies” are highlighted red in the “Operations to schedule” area on the left of the screen (Fig 269).

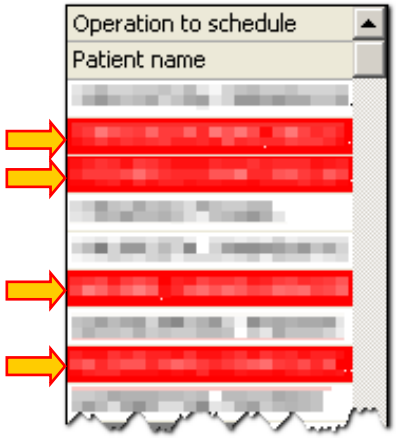


Fig 269

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 270).

Fig 270

14.5.2. 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 269 **A**).
- Click the UPDATE button on the command bar to save the changes.

The operation goes back to “Requested” state.

14.5.3. 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 10).

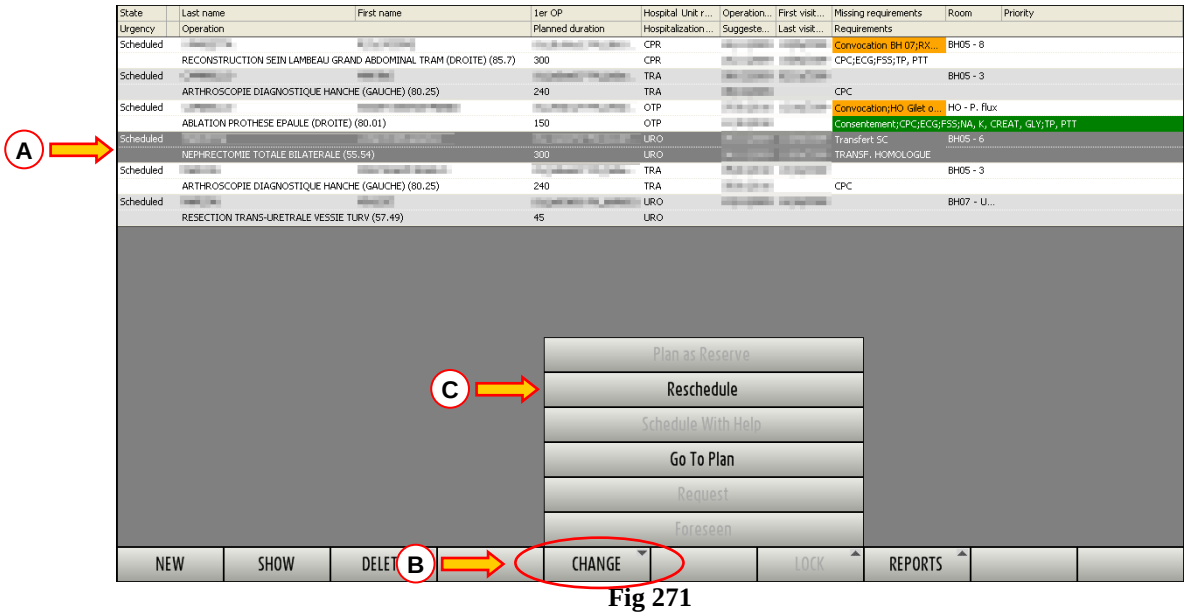


Fig 271

To do so, you must

- Access the “Operation list” screen (see paragraph 10).
- Search for the operation you wish to reschedule (see paragraph 10.1 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 271 **A**).

- Click the 

button on the command bar (Fig 271 **B**).

A menu containing different options opens.

- Click the “Reschedule” option (Fig 271 **C**).

A window requesting confirmation of the operation opens (Fig 272).

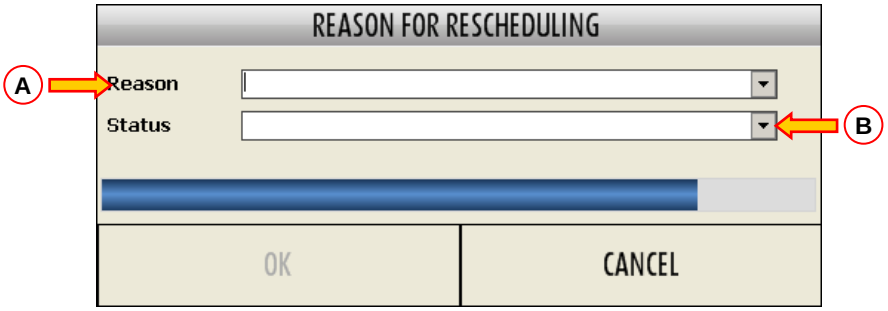


Fig 272 – Rescheduling an operation

- Enter the reason for rescheduling in the “Reason” field (Fig 272 **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 272 **B**).

A menu offering the choice between four options opens (Fig 273).

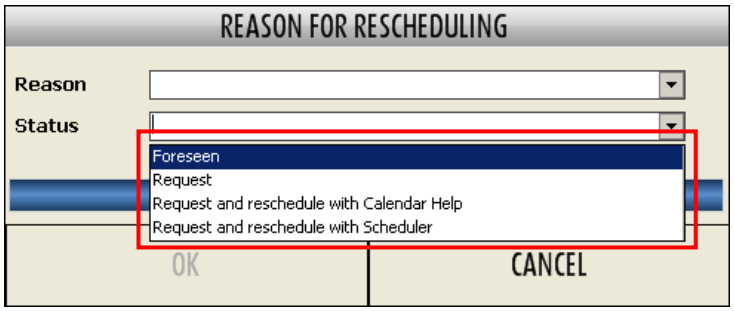


Fig 273 – Rescheduling options

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 287, paragraph 14.7).

The “Reschedule” option takes the operation back to the “requested” state and gives direct access to the scheduling page (Fig 228, paragraph 14.2).

- Click the option required.
- Click the OK button.

14.5.4. 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 274 - Slot

The goals and features of the “Lock/unlock operation” functionalities are described in paragraph 8.3.

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 275). The lock/unlock options are indicated in Fig 275 **A**.

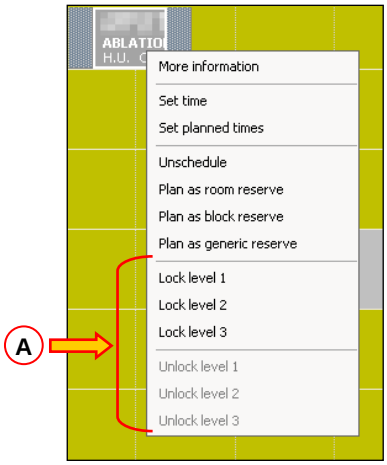


Fig 275 – Lock Operations

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 276 **A**).

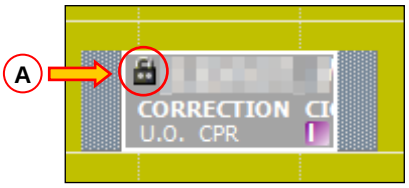


Fig 276 - Operation locked level 2

- 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 275 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 277 **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 277 **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 277 **C**) and then click the required “lock” option.

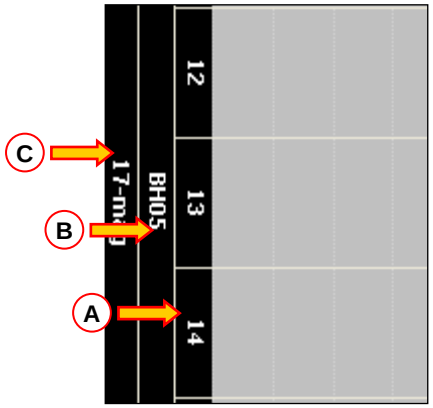


Fig 277

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.

14.5.5. 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 14.4.4 and Fig 263 for the description of the relative page).

14.5.5.1. 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 278 **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 278 **B**, **C**, **D**).
If the operation is dragged to the bar indicating the day (Fig 278 **B**) a generic reserve is created.
If the operation is dragged to the bar indicating the block (Fig 278 **C**) a block reserve is created.
If the operation is dragged to the bar indicating the room (Fig 278 **D**) a room reserve is created.

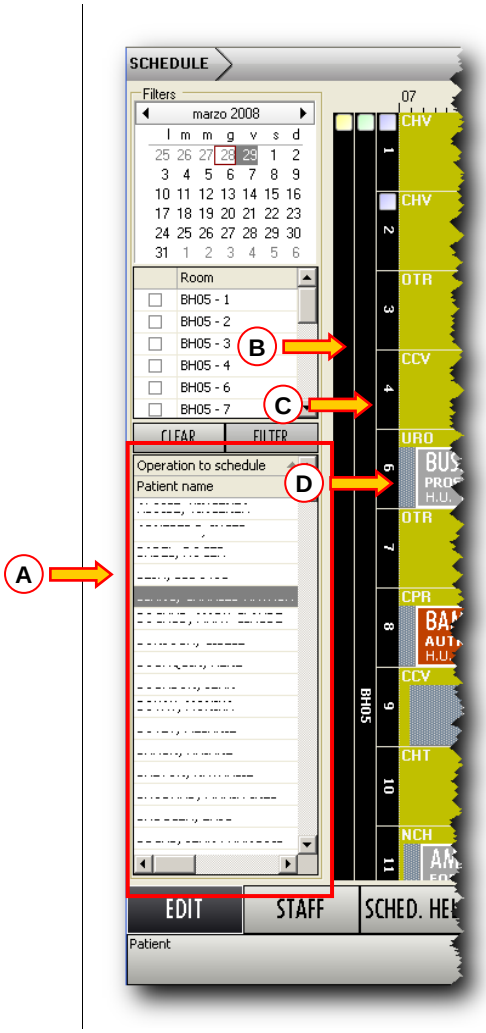


Fig 278 - Reserves

When there are reserves, special icons appear on the black bar (Fig 279).

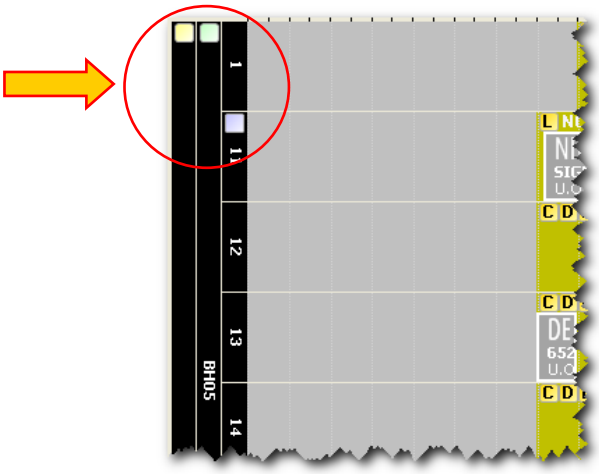


Fig 279 – Reserve Indication

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 263).

To add a reserve to the scheduling grid, after clicking the 

button on the command bar, click the corresponding row in the "reserves" table (Fig 264) 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 

button on the command bar, click the corresponding row in the "reserves" table (Fig 264) and drag it back to the "Operations to schedule" area.

14.6. Calendar

The "Calendar" screen of the DIGISTAT® "Smart Scheduler" system offers an overview of the operating room and block schedule (Fig 281).

To access this screen

- click the  icon on the lateral bar.

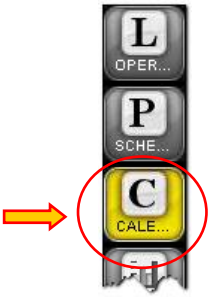


Fig 280

The screen shown in Fig 281 will open.

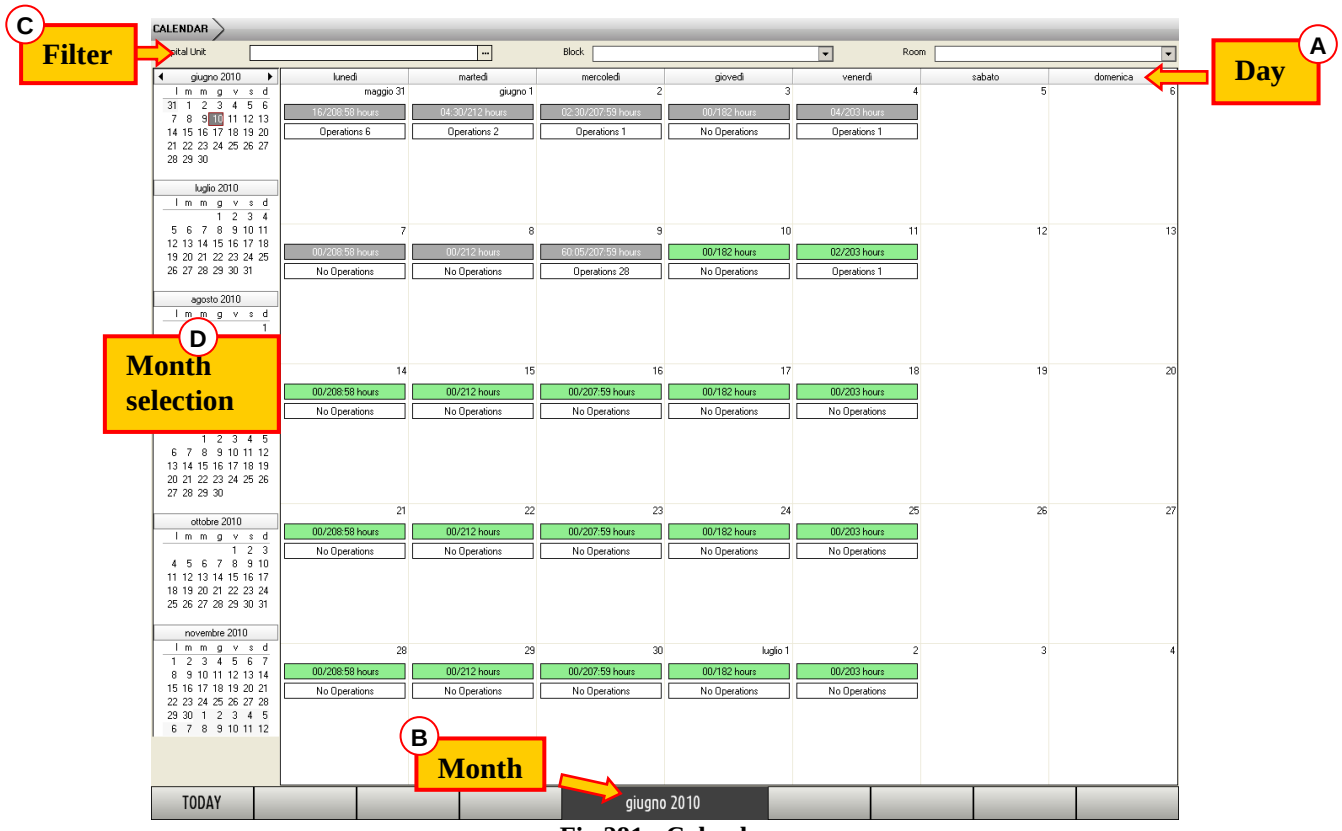


Fig 281 - Calendar

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 282).

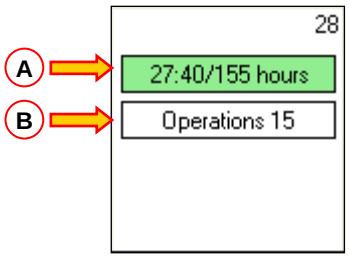


Fig 282 – Operating Day

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 281 **A**), the name of the month can be read on the central button of the control bar (Fig 281 **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 282 **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 282 **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 283).

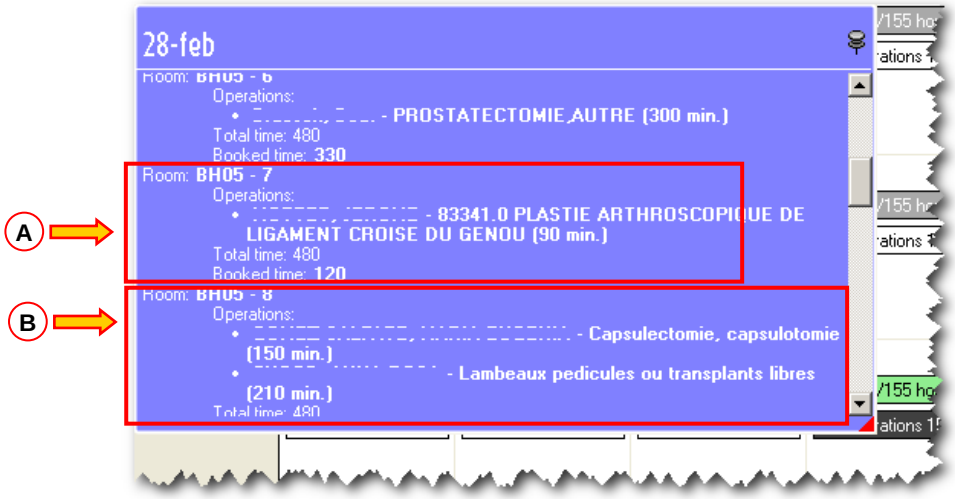


Fig 283 – Information Window

The example shown in Fig 283 **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 283 **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.

14.6.1. Selecting the month

The left side of the page makes it possible to select the month to display (Fig 281 **D**). This part of the screen displays 6 months. Click one of them to display it, enlarged, in the center of the page.

Fig 284

The arrows indicated in Fig 284 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 285).

Fig 285

Click the TODAY button in the bottom left corner of the command bar to return to display the current month.

14.6.2. 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 281 **C,** Fig 286).

Fig 286

If any value is specified inside these fields the data displayed on screen are calculated only referring to the Hospital Unit, Block, Room specified.

14.7. Schedule with help

The schedule with help page (Calendar Schedule - Fig 287) makes it possible to schedule the operations selected using certain automatic calculation functions for the availability of the different rooms.

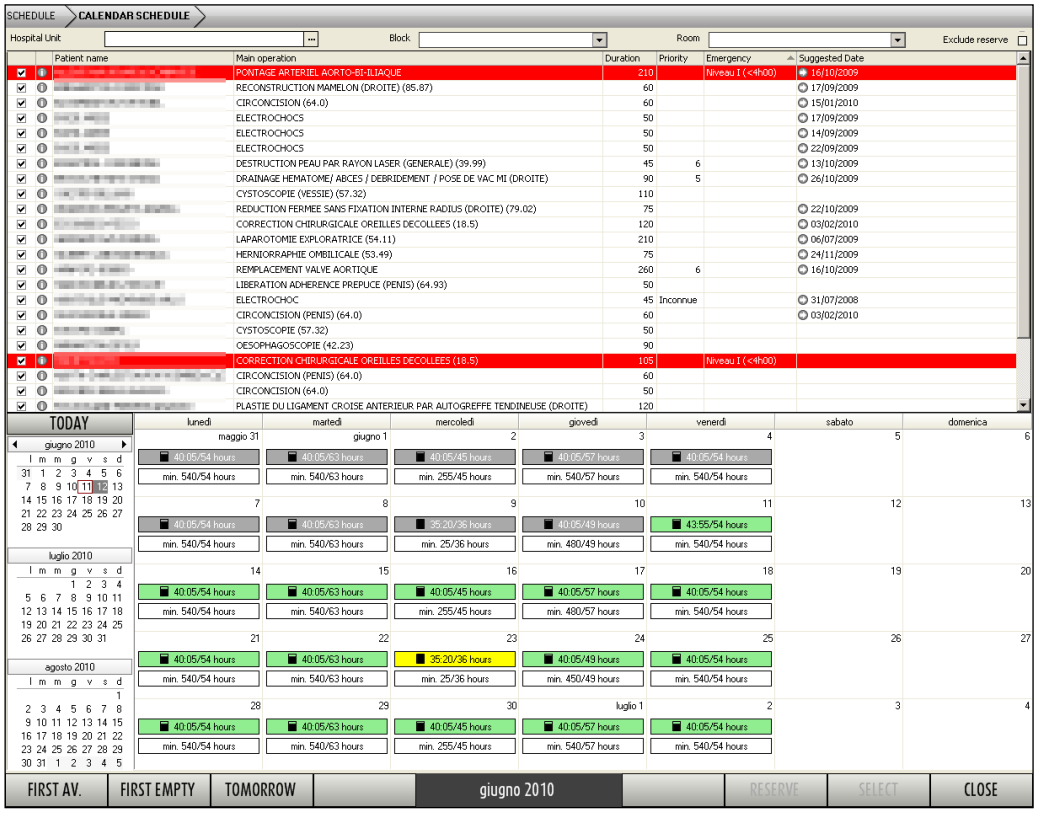


Fig 287 – Calendar Schedule

14.7.1. 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.

14.7.1.1. Access from the “Operation List” page

On the “Operation List” page (Fig 101, paragraph 10),

- select the operations to schedule.
- Click the CHANGE button on the command bar (Fig 288 **A**).

The menu shown in Fig 288 will open.

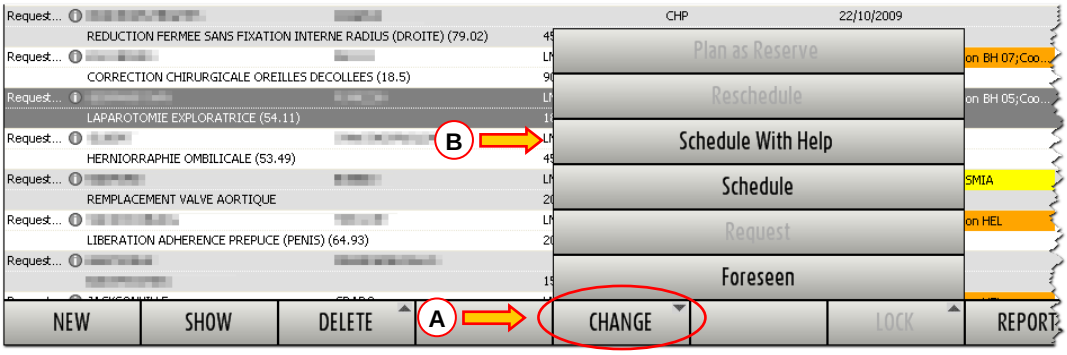


Fig 288

- Click the “Schedule with help” option (Fig 288 **B**).

The “Calendar schedule” screen will open (Fig 290). 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.

14.7.1.2. Access from the “Operation Record” page

- On the “Operation Record” page (Fig 106, paragraph 11).
- Click the EDIT button on the command bar (Fig 289 **A**)

The screen turns to “edit” mode.

- Click the CHANGE button on the command bar (Fig 289 **B**).

The menu shown in Fig 289 opens.

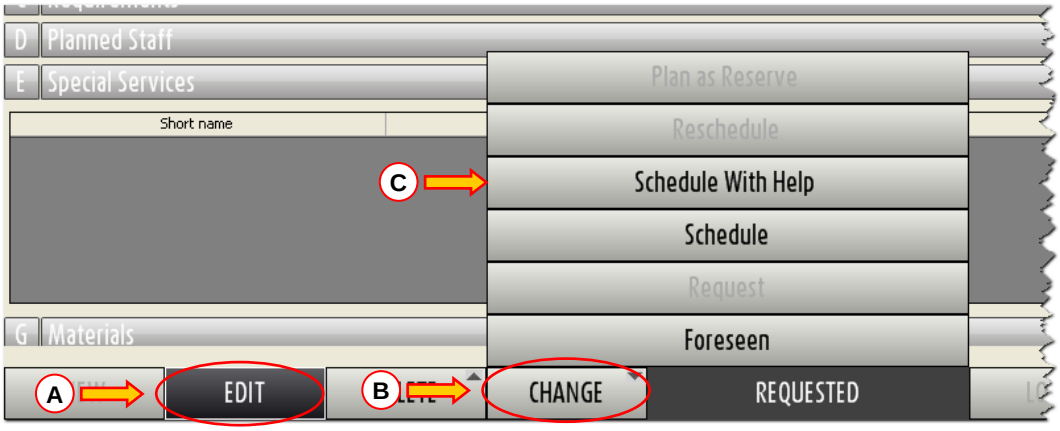


Fig 289

- Click the "Schedule with help" option (Fig 289 **C**).

This accesses the "Schedule with help" page (Fig 290). Only the operation referred to by the initial "Operation Record" page will be shown on this page.

14.7.1.3. Access from the "Scheduling" page

On the "Scheduling" page (Fig 228, paragraph 14).

- Click the SCHED.HELP button on the command bar.

This accesses the "Schedule with help" page (Fig 290). All the operations listed on the initial "Scheduling" page in the "Operation to schedule" area will be shown on this page.

14.7.2. Page description

The “Schedule with Help” page is made up of 5 areas.

1) The “Hospital Unit”, “Block” and “Room” selection filters (Fig 290 **A**).
2) The month selection area (Fig 290 **B**).
3) The area containing the list of operations (Fig 290 **C**).
4) The central area, the calendar of the month selected (Fig 290 **D**).
5) The command bar (Fig 290 **E**).

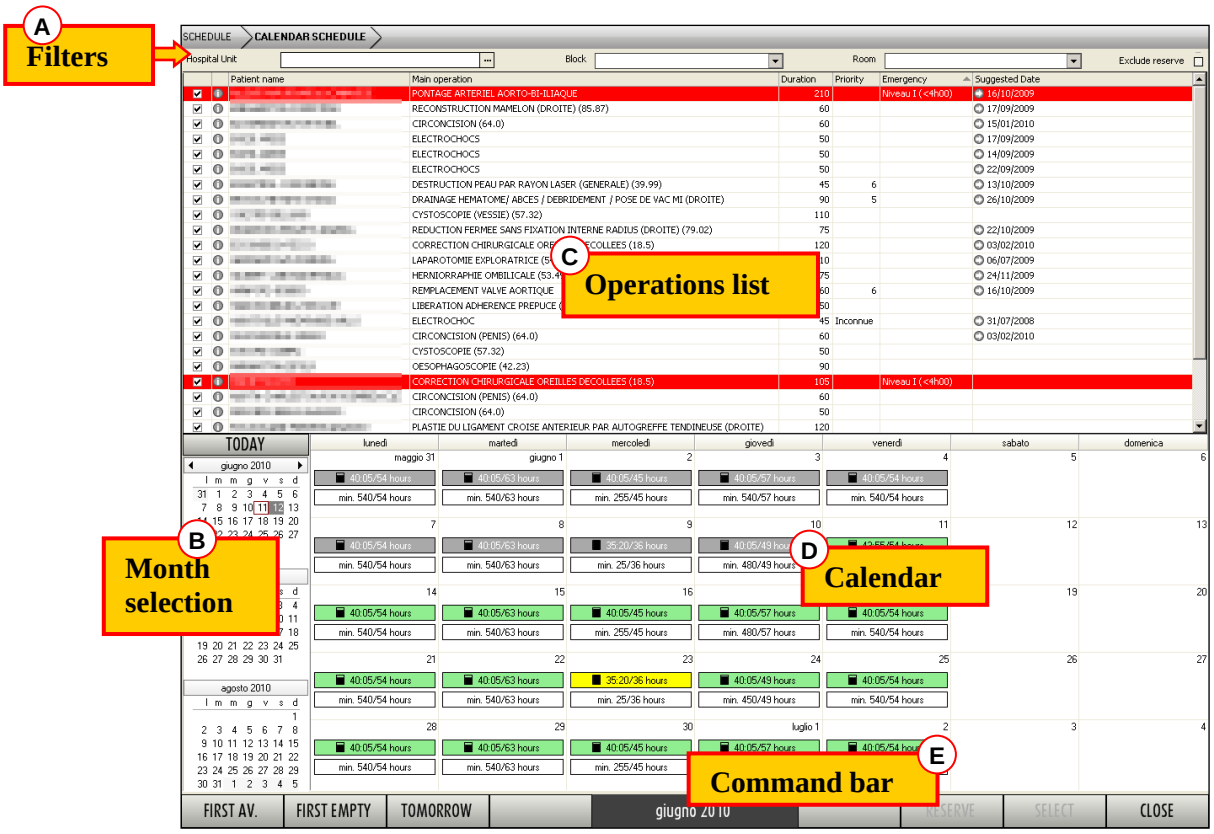
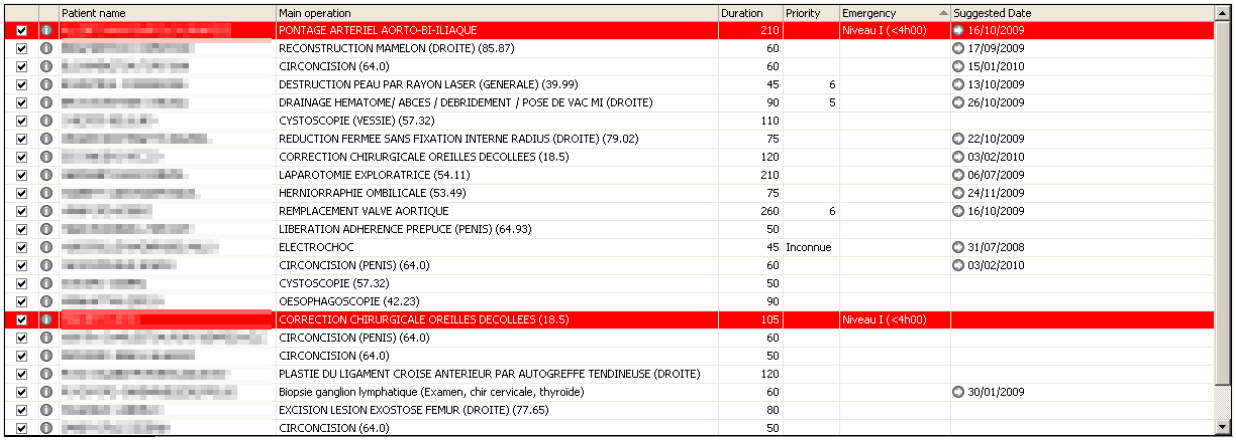


Fig 290

The characteristics and operation of areas **A** (selection filters) and **B** (month selection) are the same as those described in paragraph 14.6 for the “Calendar” page. See this paragraph for their description.

14.7.2.1. 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 291 – 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 292).

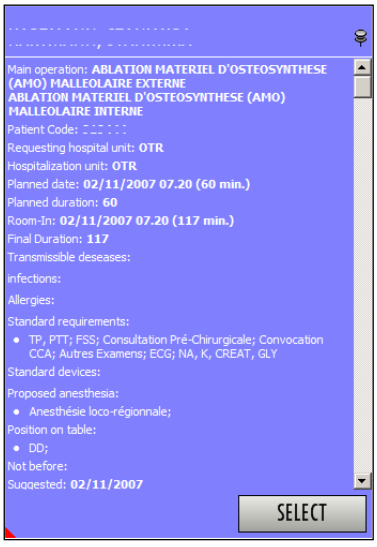


Fig 292 – Operation data

Click the SELECT button in the window to access the “Operation Record” page relating to the operation clicked (Fig 106).

- 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 106).

Click the icon alongside the suggested date to highlight the corresponding day in blue on the calendar (Fig 293 **A**). In this way you can immediately check the availability of time on the day suggested for a specific operation.

Fig 293 – Suggested date

14.7.2.2. 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 294).

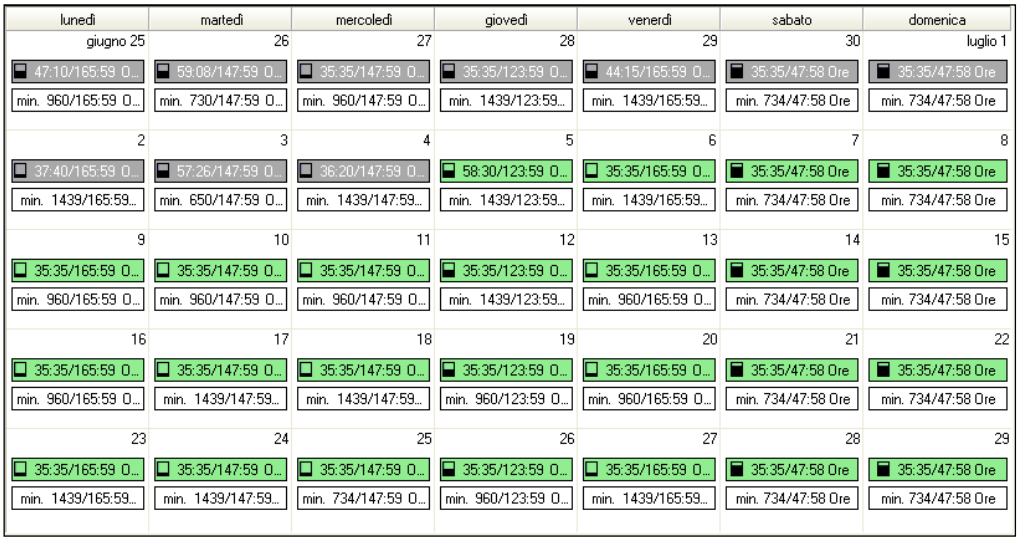


Fig 294 – Month selected

Every box corresponds to an operating day (Fig 295).

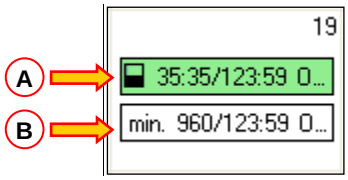


Fig 295 – Operating day

The upper box (Fig 295 **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 295, 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 291) can be planned on that day.

The box in question can appear in yellow (Fig 296).

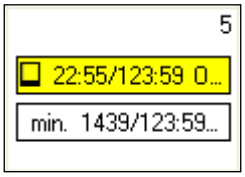


Fig 296

The color yellow means that at least one of the operations (but not all of the operations) selected on the list of operations (Fig 291) can be planned on that day.

The box can appear in red (Fig 297).

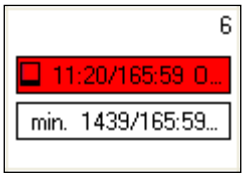


Fig 297

The color red means that none of the operations selected on the list of operations (Fig 291) 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 298).

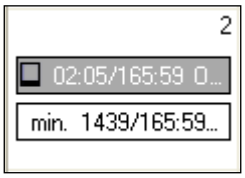


Fig 298

The lower box (Fig 295 **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 295 **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.

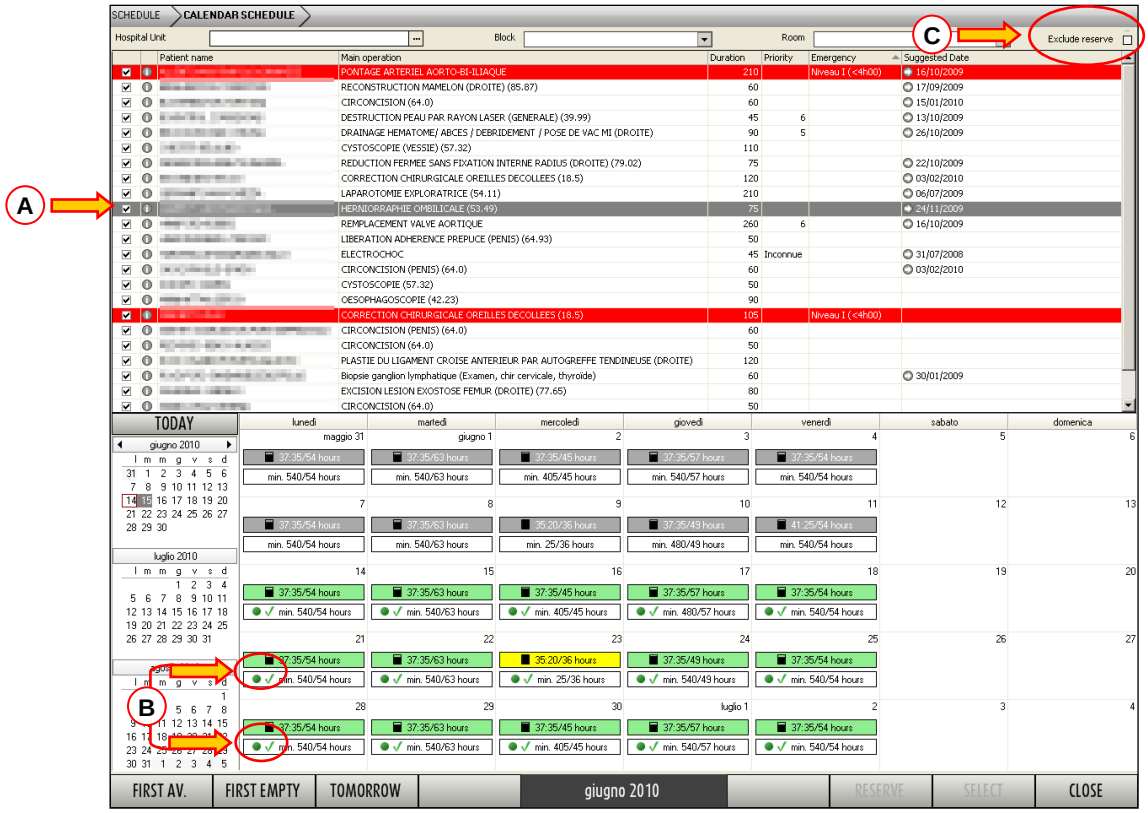


Fig 299 – Selecting an operation

The operation clicked appears highlighted (Fig 299 **A**) and new icons appear inside the boxes indicating the various days (Fig 299 **B**, Fig 300).

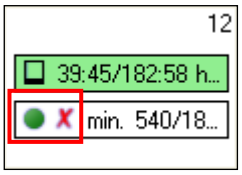


Fig 300

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 295 **B**) to open a window containing detailed information on the situation of every room in the day corresponding to the box.

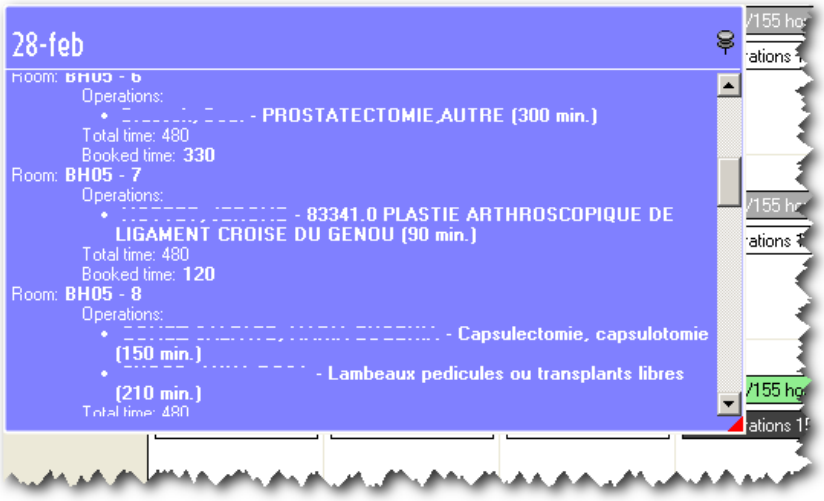


Fig 301 – Day Details

The example shown in Fig 301 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 301 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 299 **C** can be used to exclude the room, block or generic reserves from the calculation of available hours and minutes (see paragraph 14.5.5 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 302.

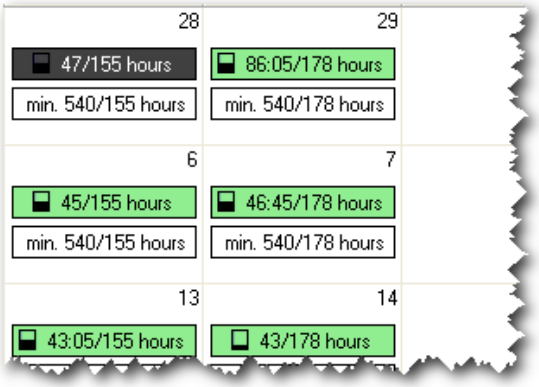


Fig 302 – Day Selected

14.7.2.3. 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 287 – Calendar Schedule) so that the operation appears in the list of operations - Fig 291 - (see paragraph 14.7.1 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 294).

- Select the most suitable of the green boxes.
- Click the box to select it.

The box will be highlighted (Fig 302).

- Click the 

button on the command bar.

The scheduling page opens (Fig 228) 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 14.5.

14.7.3. 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 303).

Fig 303

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 14.7.3.1 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 14.7.3.2 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 14.7.3.3 for the detailed procedure.

This button makes it possible to access the scheduling page related to the day selected (Fig 228)

This button closes the “Calendar schedule” screen.

14.7.3.1. First available day

The 

button (Fig 304) 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 304 - "Calendar schedule" command bar

To use this function, you must

- click the box corresponding to the operation (or operations) to be scheduled (Fig 305).

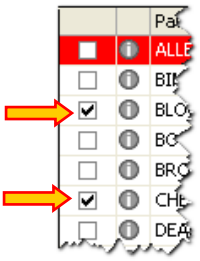


Fig 305

- Click the FIRST AV. button on the command bar (Fig 305 **A**).

The first day containing at least one empty slot is highlighted on the calendar.

- Click the SELECT button on the command bar (Fig 305 **B**).

The scheduling page for the day chosen and the operation selected opens (Fig 228).

14.7.3.2. First empty day

The FIRST EMPTY button (Fig 306 **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 306 - "Calendar schedule" command bar

To use this function, you must

- click the box corresponding to the operation (or operations) to be scheduled (Fig 307).

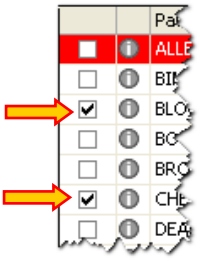


Fig 307

- Click the FIRST EMPTY button on the command bar (Fig 306 **A**).

The first completely free day is highlighted on the calendar.

- Click the SELECT button on the command bar (Fig 306 **B**).

The scheduling page for the day chosen and the operation selected opens (Fig 228)

14.7.3.3. Create a generic reserve

The RESERVE button (Fig 308) makes it possible to enter the operations selected in the schedule of any operating day as a generic reserve (see paragraph 14.5.5 for an explanation of the concept of "reserve").

Fig 308 - "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 309).

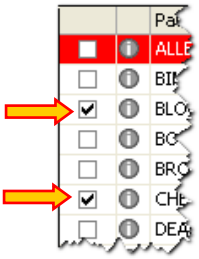


Fig 309

- Click the box corresponding to the day on which you wish to enter the reserve.

The box appears highlighted (Fig 310).

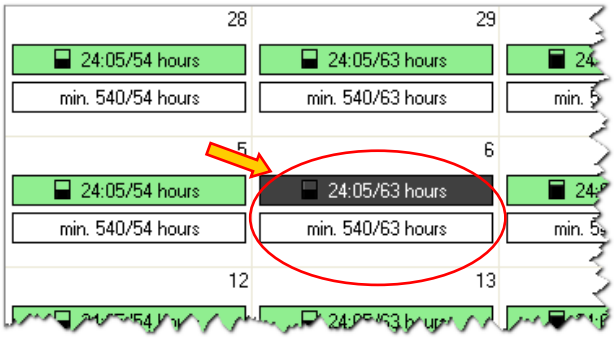


Fig 310

- Click the RESERVE button (Fig 308).

A window requesting confirmation of the operation opens (Fig 311).

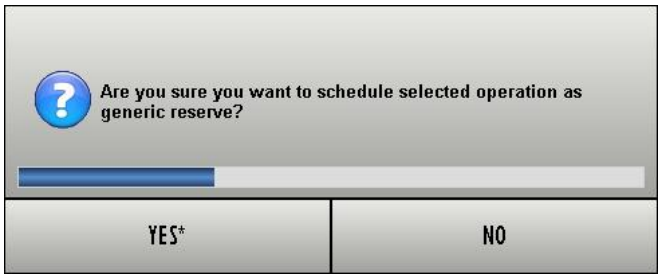


Fig 311

- 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 312*).*

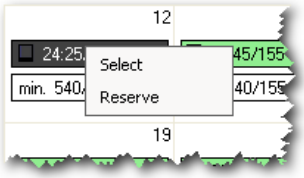


Fig 312

15. 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 313)

Fig 313

The “Staff Management” screen will open (Fig 314).

Staff can be also scheduled, with different procedures, on the “Operation Record” screen. The relating procedures are described in paragraph 13.4.

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.

15.1. Staff Management

The "Staff Management" screen (Fig 314) makes it possible to manage the operating staff for the planned operations.

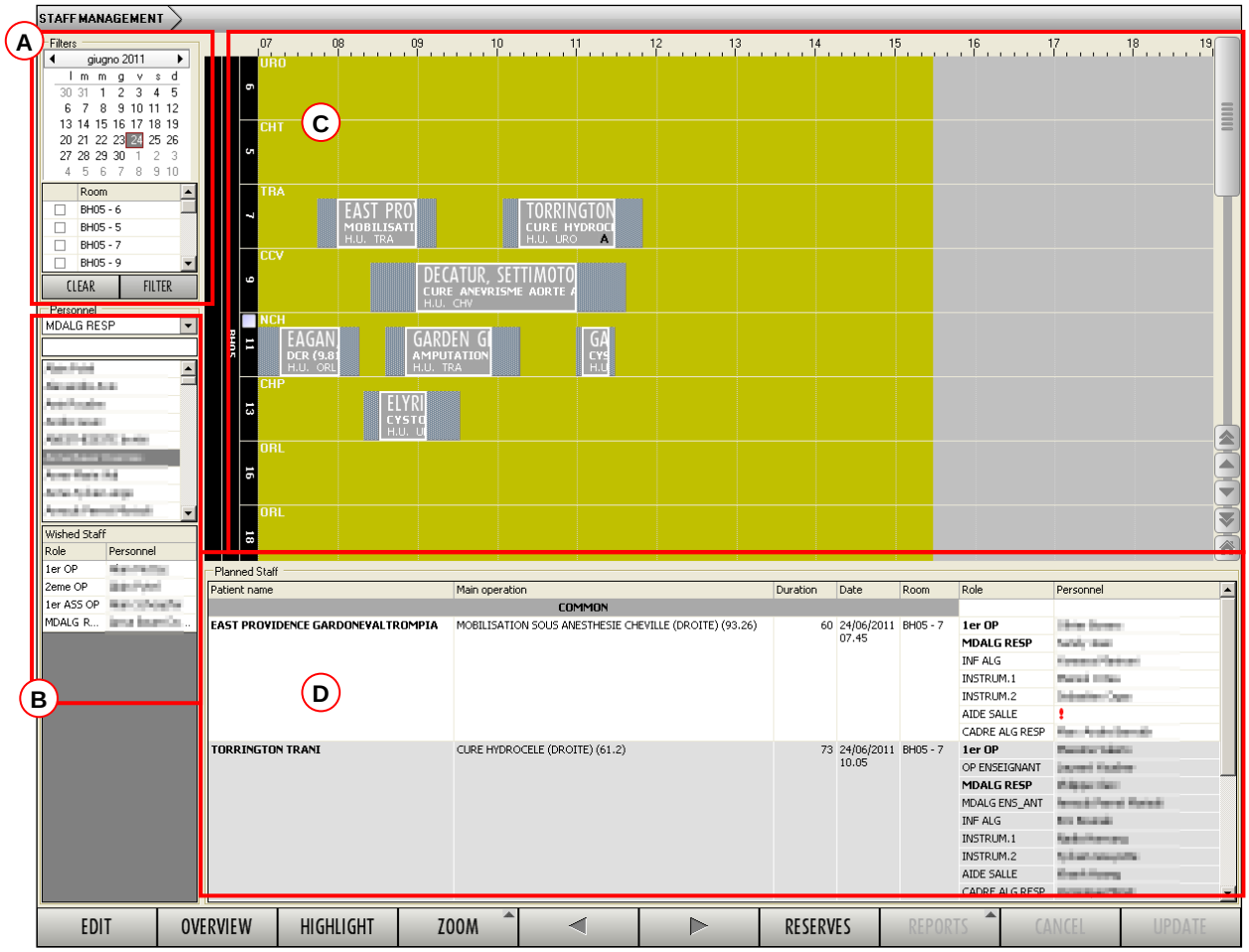


Fig 314

The screen is formed of four areas:

- The search filters area (Fig 314 **A**).
- The personnel editing tools panel (Fig 314 **B**).
- The area displaying either the operations plan or the reserves list (Fig 314 **C**).
- The area named "Planned Staff area" dedicated to show the planned staff (Fig 314 **D**).

These four areas are described in the following paragraphs.

15.1.1. Search filters

The search filters (Fig 314 **A**, Fig 315) make it possible to decide which operations are displayed in the "Planned operations" area (described in paragraph 15.1.3) by selecting the operation date and room.

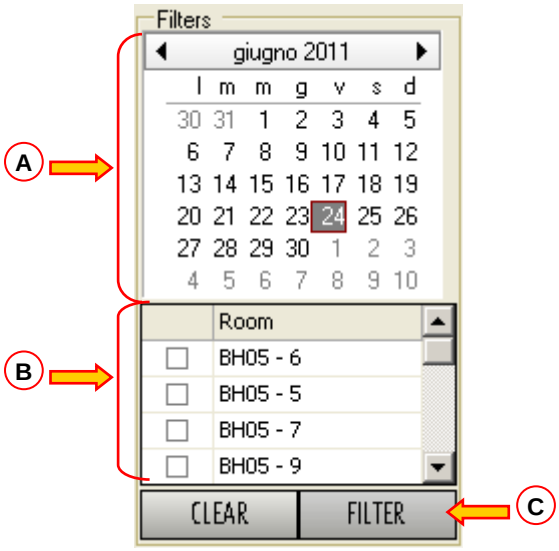


Fig 315

To display the operations planned for a specific date

- Click the cell corresponding to the wanted day on the calendar indicated in Fig 315 **A**.
- Click the FILTER button (Fig 315 **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 315 **B**.
- Click the FILTER button (Fig 315 **C**).

Only the operations planned for the selected rooms are this way displayed. Multiple room selection is possible.

15.1.2. Personnel editing tools

The personnel editing tools, shown in Fig 316, 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.

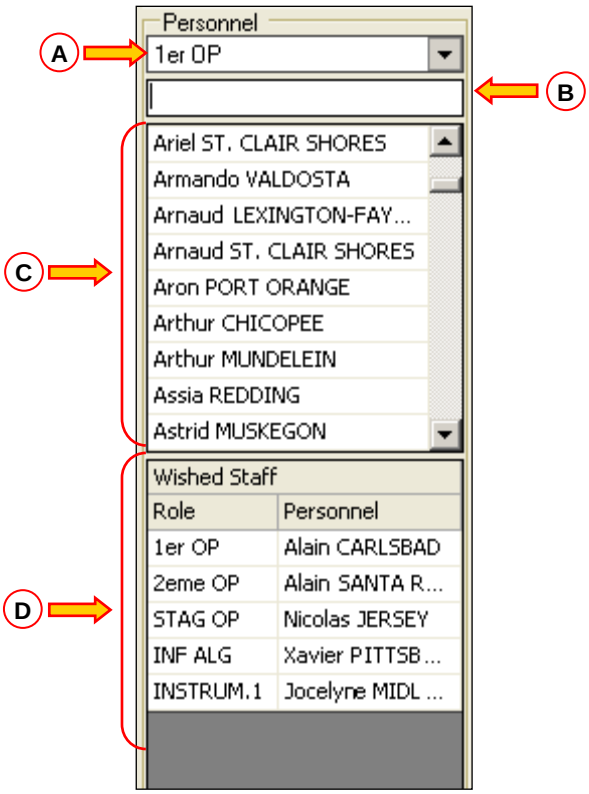


Fig 316

The panel shown in the figure is formed of four tools.

- **Role filter** (Fig 316 **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 316 **C**).
- **Name filter** (Fig 316 **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 316 **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 316 **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 15.2.2 for the detailed procedure.

15.1.3. "Planned operations" area

The area shown in Fig 314 **C** and Fig 317 provides a view of the operating plan. The plan has the same structure and features of the "Operating Plan" described in chapter 14. See this chapter for a detailed description.

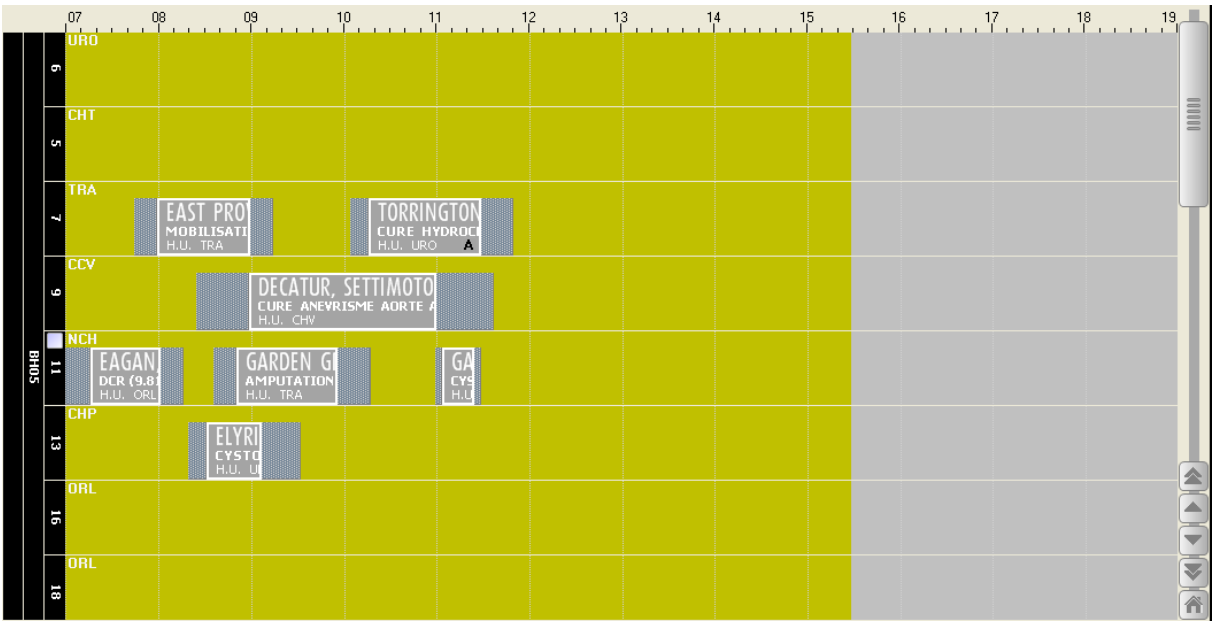


Fig 317

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 318).

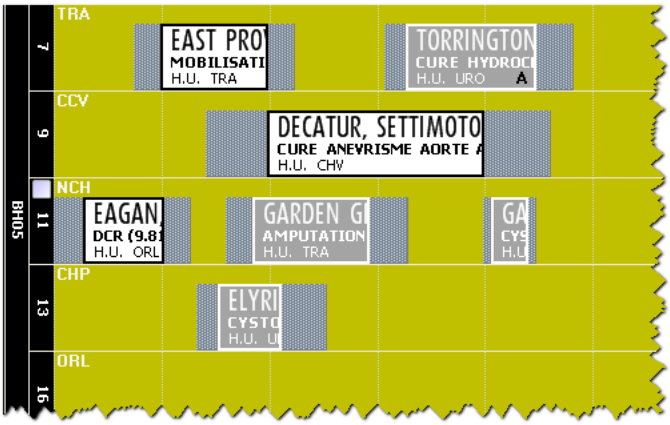


Fig 318

The selection of one or more operations displays the details of the selected operations in the "Planned staff" area (Fig 314 **D**, Fig 320). 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.

15.1.3.1. "Reserves" display

The "Planned operations" area (Fig 317) is also used to display the list of "Reserves" (see paragraph 14.5.5 for an explanation of the "Reserve" concept).

To display the “Reserves” list

- Click the RESERVES button on the command bar (Fig 319 **A**).

The list of “Reserves” will be displayed (Fig 319 **B**).

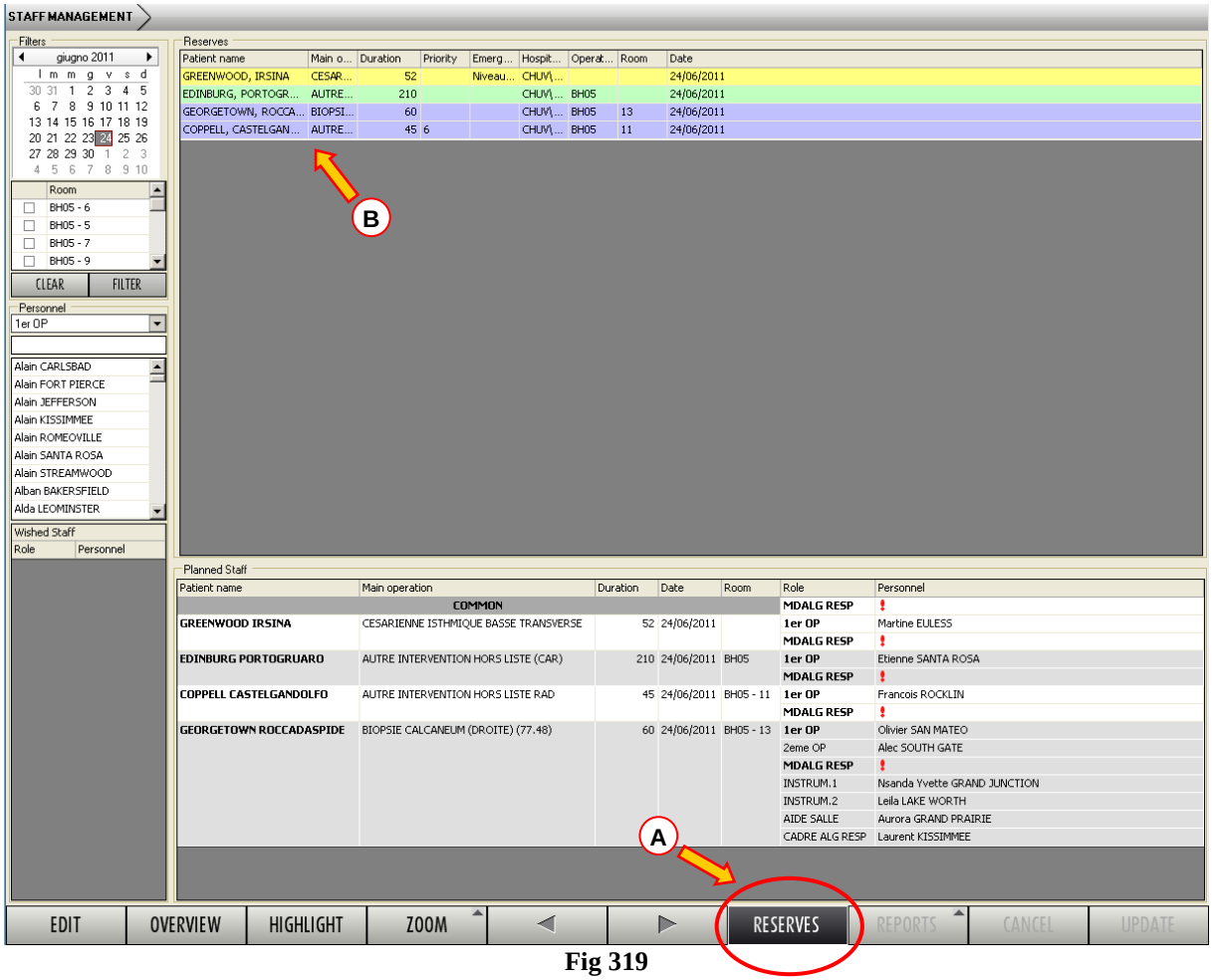


Fig 319

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 314 **D**, Fig 320). 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.

15.1.4. "Planned staff" area

The area shown in Fig 320 and Fig 314 **D** displays, alongside the operation's main data, detailed information on the staff planned for the operations selected in the "Planned operations" area (Fig 317). If no operation is selected in the "Planned operations" area, the data relating to all the planned operations are displayed.

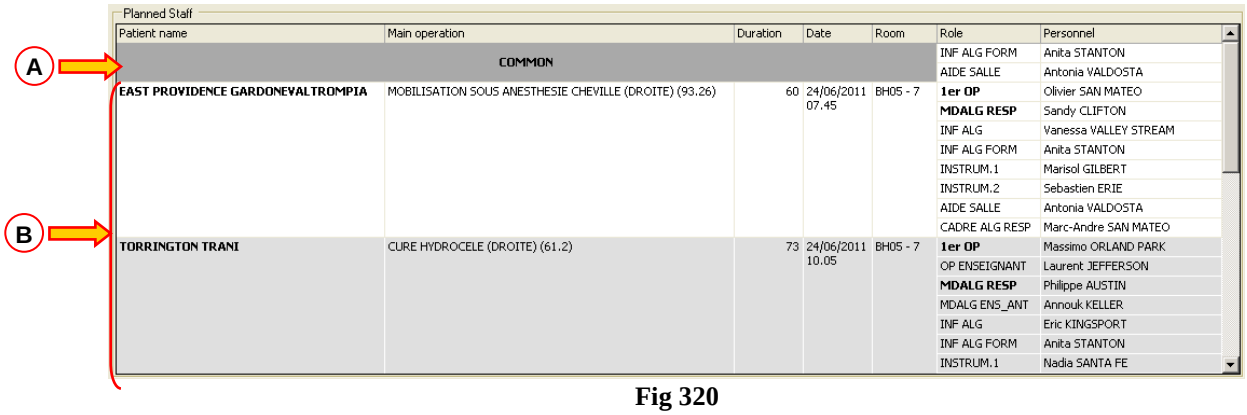


Fig 320

The operations are displayed on a grid. The first row, indicated in Fig 320 **A** and enlarged in Fig 321, 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).

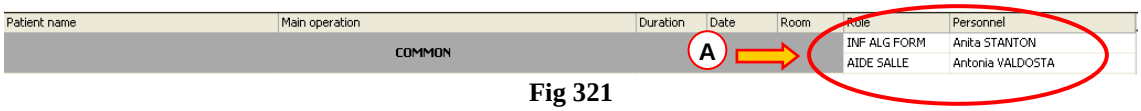


Fig 321

For each staff member the role and the name are indicated (Fig 321 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 320 **B**, Fig 322) 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.

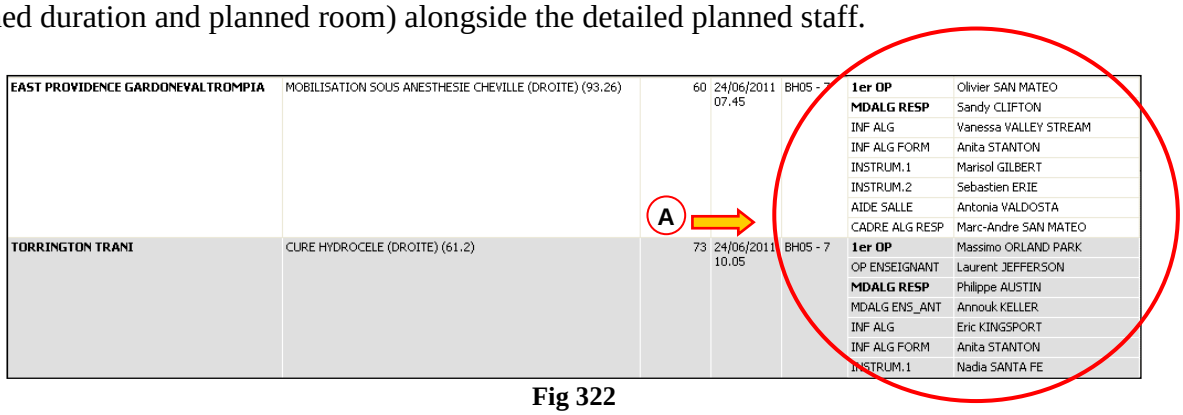


Fig 322

The name and the role of each staff member are displayed (Fig 322 A). If an operation requires the same role more than once, various rows are displayed, referring to the same role.

15.1.5. 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 323 **A**).
- Click the HIGHLIGHT button (Fig 323 **B**).

The person’s name will be highlighted in the “Planned staff” area (Fig 323 **C**).
Also, the corresponding operation boxes are highlighted on the “Plan” (Fig 323 **D**).

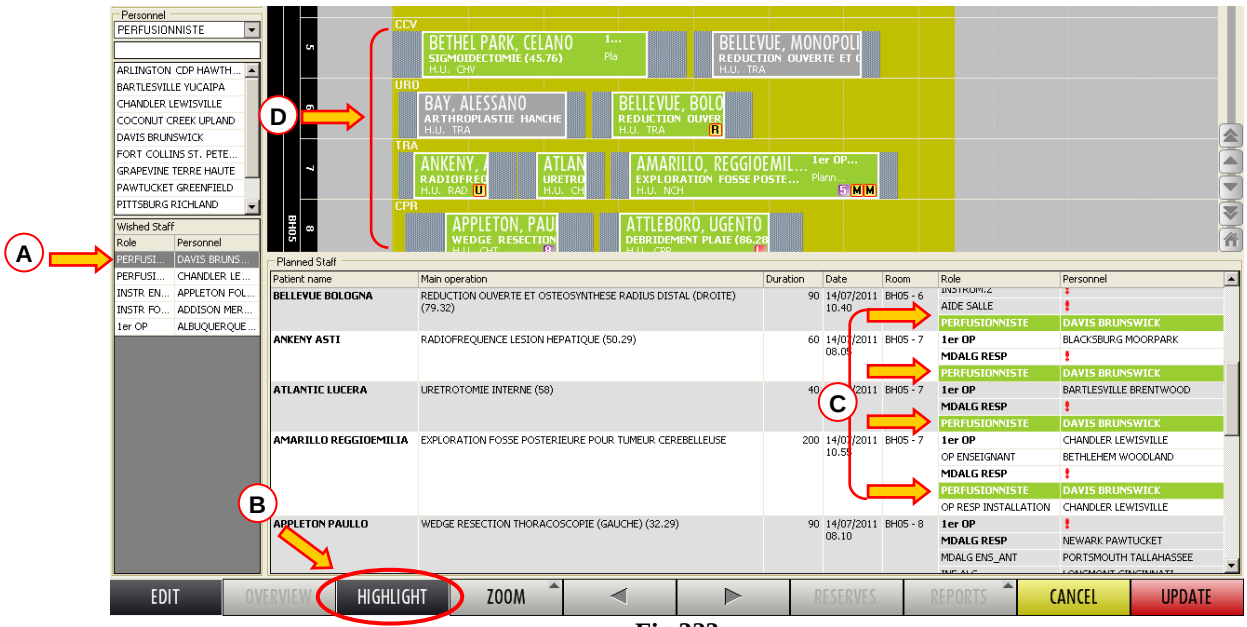


Fig 323

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 324) to highlight all the wished staff members at once. In this case all their operations will be highlighted.

Fig 324

The "Highlight" functionality can also be used as a filter for the "Staff overview" screen (see paragraph 15.3). 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.

15.2. 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.

15.2.1. 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 325, in which the “Personnel Table” and “Wished Staff” area are bordered (on the right).

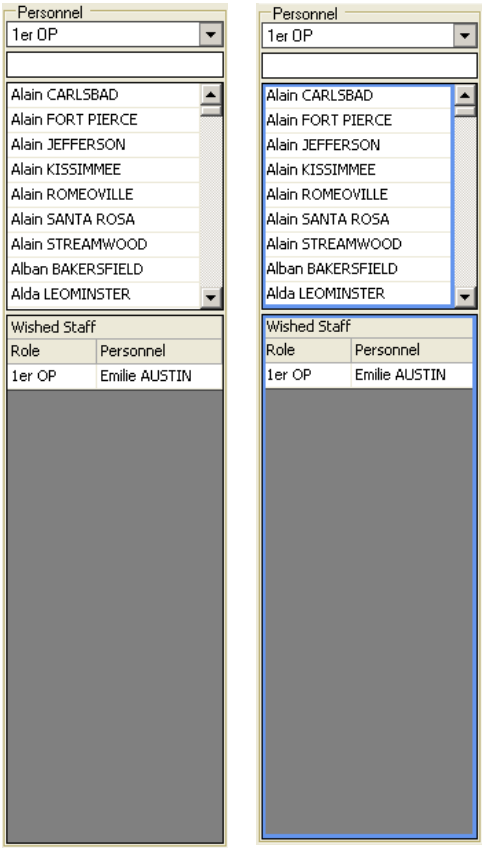


Fig 325

15.2.2. Adding a staff member to the “Wished staff”

The “Wished staff” area (Fig 326 **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.

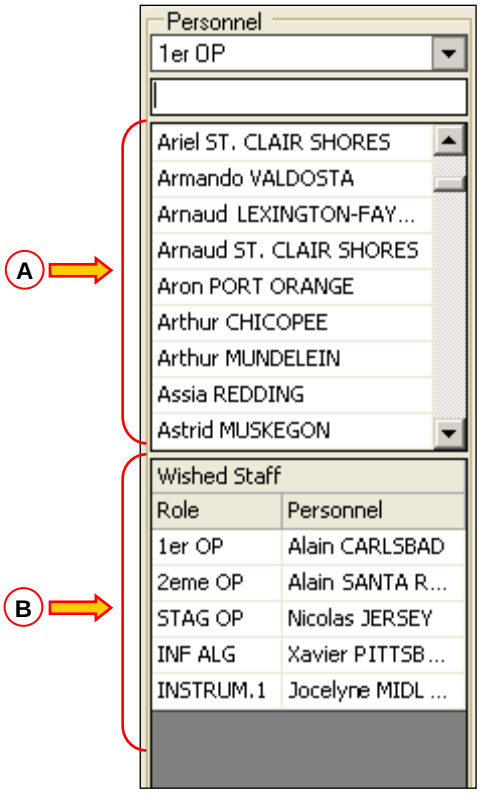


Fig 326

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 326 **A**).

   Drag the row onto the “Wished Staff” area (drag from Fig 326 **A** and drop onto Fig 326 **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 327).

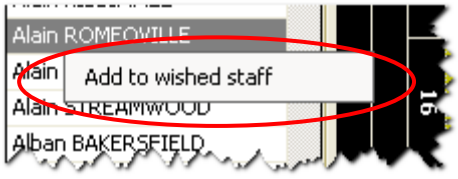


Fig 327

   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 328 **A**). Drag the item onto the “Wished staff” area (Fig 328 **B**).

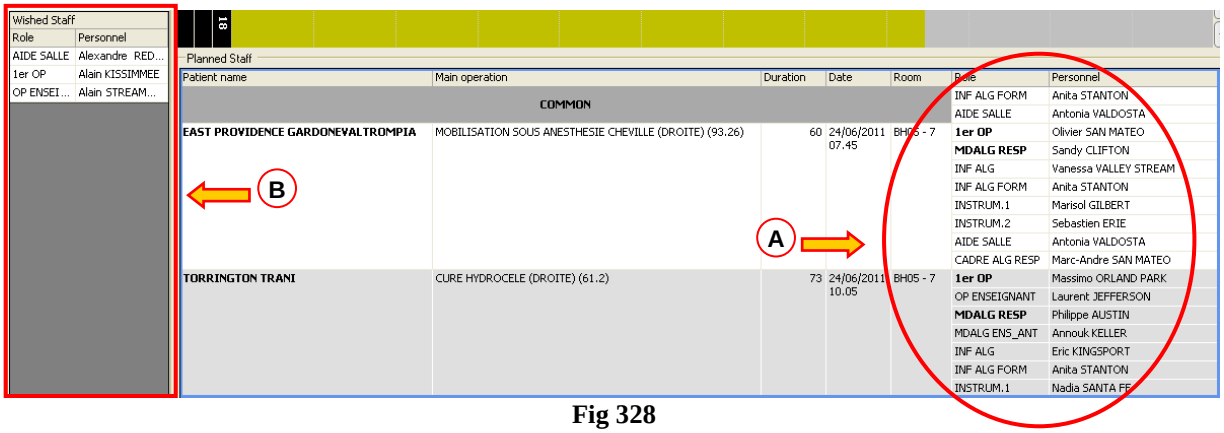


Fig 328

2) Second way: right-click on the row corresponding to the wanted staff member on the “Planned staff” area.

   A contextual menu opens (Fig 329)

Fig 329

   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.

15.2.3. 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 326 **B** and drop onto Fig 326 **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 330).

Fig 330

   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.

15.2.4. 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 331 **A**).

- Drag the item onto the “Wished staff” area (Fig 331 **B**).

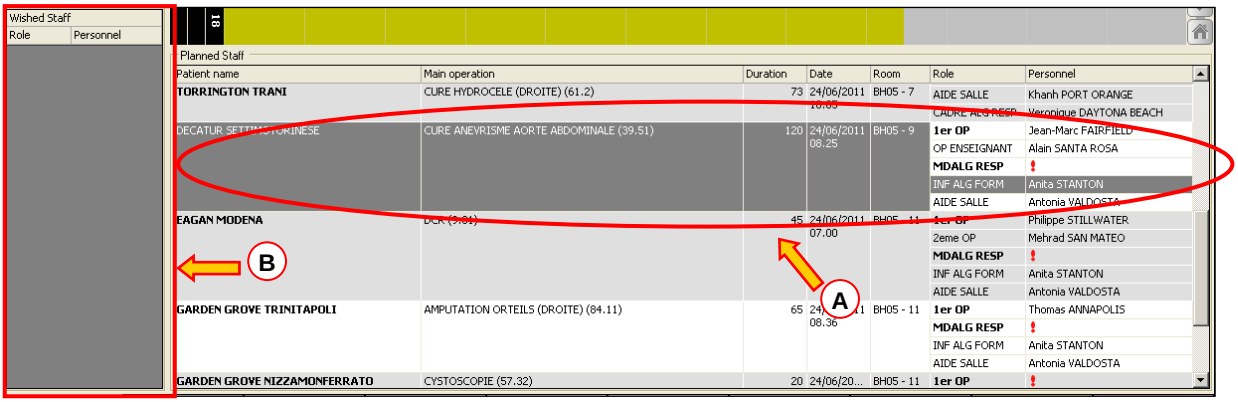


Fig 331

- Click the UPDATE button.

All the staff members of the selected operation are this way added to the wished staff.

15.2.5. 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 15.1.1 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.

15.2.6. 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 15.2.2 to define the operating staff.
- Click the "Wished staff" bar (Fig 332 **A**) and drag it onto the "Planned Staff" area (Fig 332 **B**).

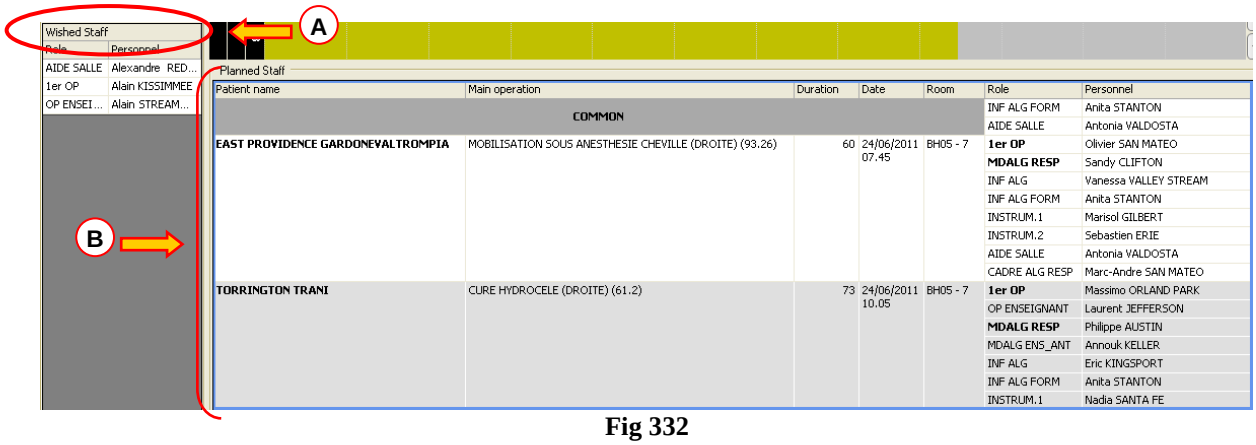


Fig 332

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.

15.2.7. 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 333 **A**), the row corresponding to the staff member to be removed.
- Drag the item onto the Personnel Table (Fig 333 **B**).

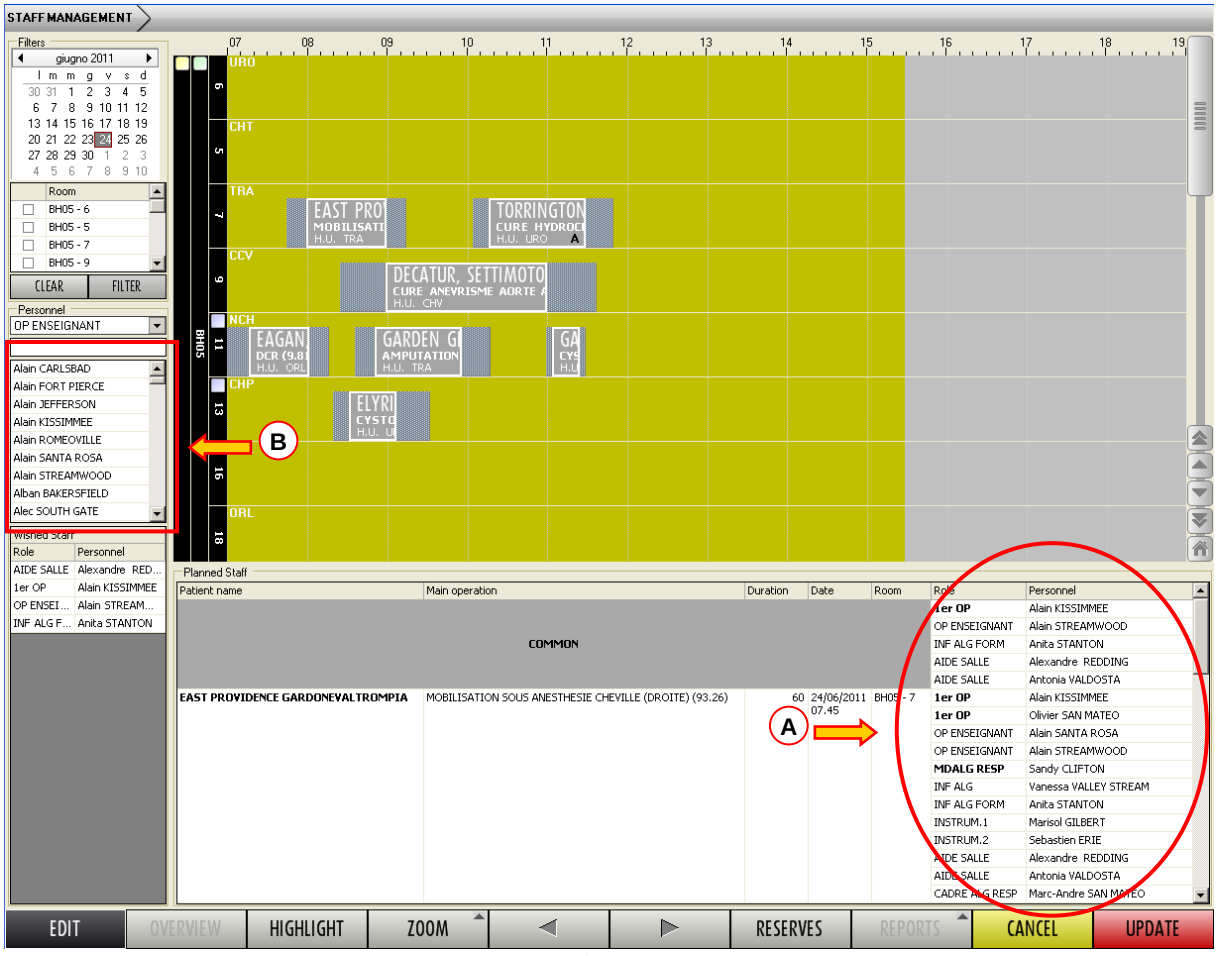


Fig 333

- 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 334).

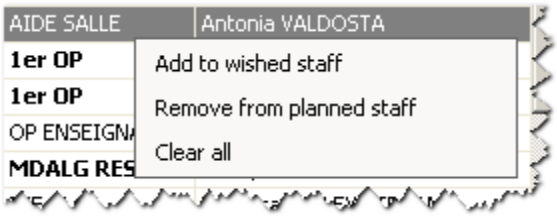


Fig 334

Three options are here available:

- Click the "Add to wished staff" option to add the selected person to "Wished staff" area (Fig 328 **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.

15.3. 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 335).

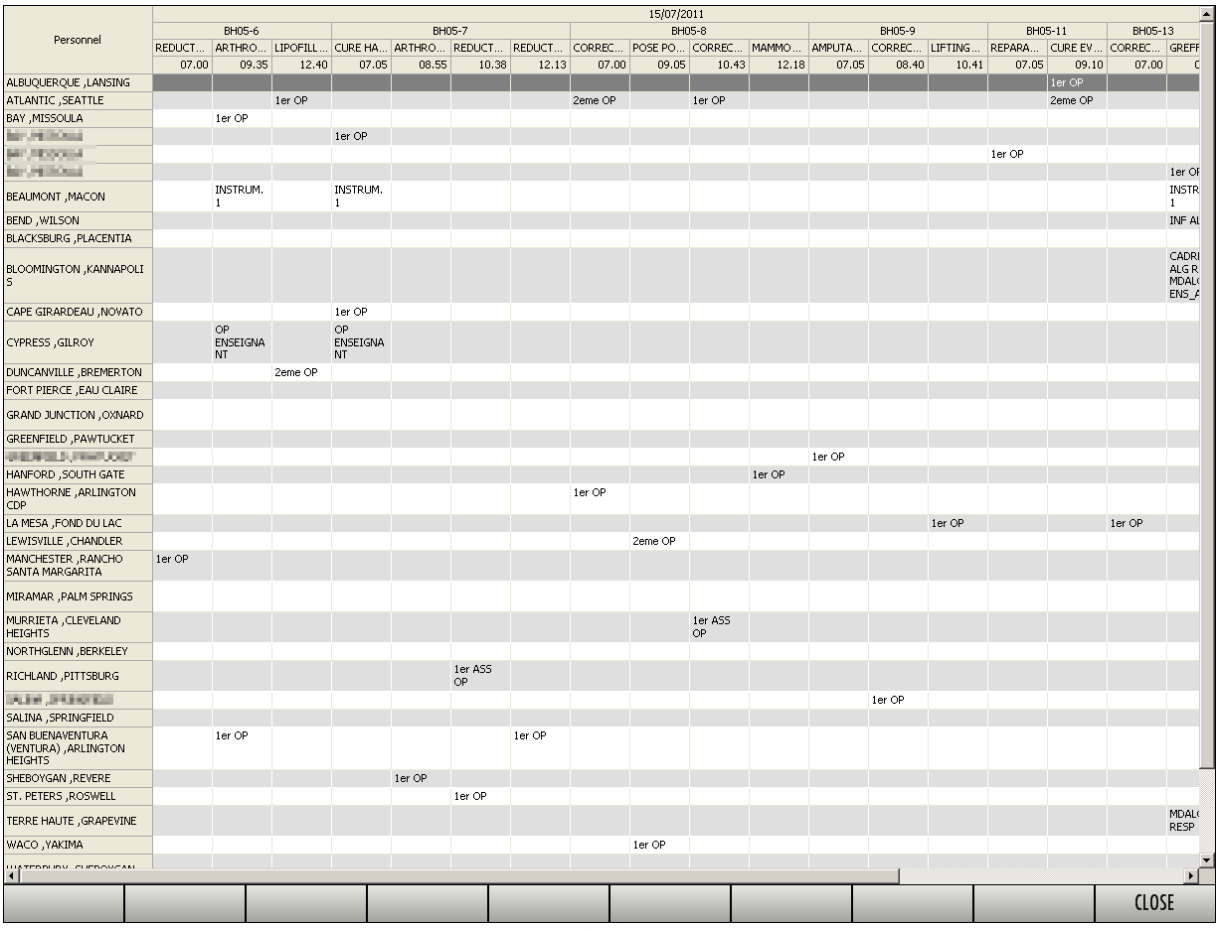


Fig 335

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 336 **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.

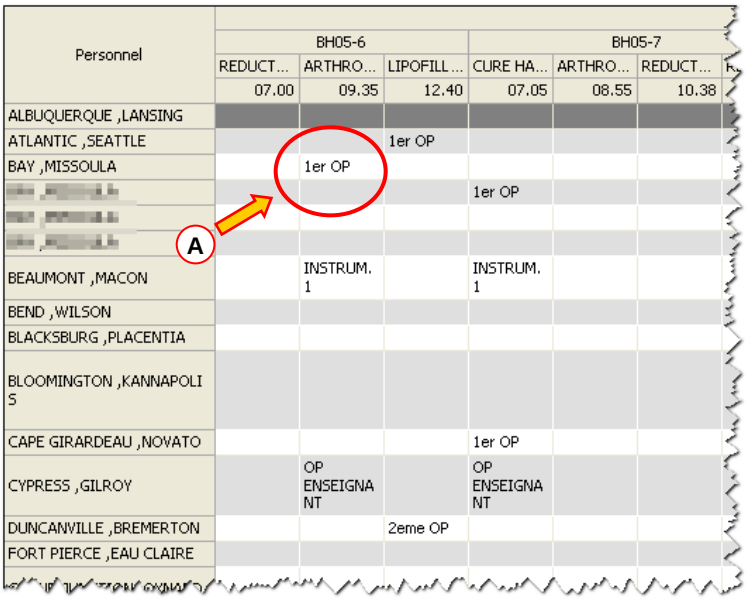


Fig 336

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 333) one or more staff members are highlighted, the "Staff Overview" screen displays only the operations scheduled for the highlighted staff members. See paragraph 15.1.5 for more information on this functionality.

16. Enclosed Documentation

The following documents are enclosed

1. *Product tracking form*. To be filled and sent to UMS in case the device is moved to another place.

2. *End-user licence agreement*. To be fully read, signed and sent to UMS

PRODUCT TRACKING FORM

Return to:

UMS SRL
Quality Assurance Department
Via di Mucciana 19
50026 San casciano in Val di Pesa (Firenze)

Italy

Tel: 800 999715
Tel: +39 055 0512161
Fax +39 055 8290392

Name of product/system _____

Code (REF) _____

Serial Number (SN) _____

Name and address of the former owner:

Name and address of the new owner:

Date: _____ Signature and Stamp

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FOR "DIGISTAT®", A UMS PRODUCT

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Application Software. The User may install, use, access, view, run or otherwise interact ("RUN") with one copy of the PRODUCT or any previous version for the same operating system on a single computer, workstation, terminal, palmtop computer, pager, "intelligent telephone" or other electronic digital device ("COMPUTER").

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After installing a copy of the PRODUCT in compliance with the terms of this Contract, the User may preserve the original media on which UMS supplied him the PRODUCT only for backup or storage purposes. If he needs the original media to use the PRODUCT, he may run only one copy of the PRODUCT only for backup or storage purposes. Except for this Contract's express specifications, the User may not run copies of the PRODUCT or of the annexed printed material for other purposes.

LIMITED WARRANTY
UMS warrants for a period of twelve (12) months from the date of delivery of the PRODUCT to the User that: (a) the media on which the PRODUCT is supplied shall be free of material and of manufacturing defects under normal conditions of use; and (b) the PRODUCT shall perform substantially in accordance with its published specifications.
Except for the above specifications, the PRODUCT is supplied "just as it is". This Limited Warranty shall apply only to the initial User/licensee.
The sole obligation of UMS under this warranty shall be, to the discretion of UMS, either to repair or replace the PRODUCT or to refund the price paid for the purchase of the PRODUCT, provided that the defect of the PRODUCT is technically attributable to UMS and that UMS has authorized its return.
Responsibility for loss or damages suffered by the PRODUCT during its shipment in connection with this warranty shall vest on the party shipping the PRODUCT.
UMS does not guarantee that the PRODUCT will be free from errors or that the User can operate the system without problems or interruptions.
Furthermore, due to the ongoing development of intrusion methods and attacks of networks, UMS does not guarantee, notwithstanding its performance of the due checks and its preparation of upgrades based on the best knowledge and experience in existence from time to time, that the PRODUCT or other equipment systems, or the network itself on which the PRODUCT is used, will be invulnerable to intrusions and attacks.
It is the responsibility of the User to install and to maintain software means for the protection against intrusions or attacks (i.e. antivirus, firewall, etc.)

Limitations. This warranty does not apply if the PRODUCT: (a) has been installed, repaired, maintained or in any other way altered by persons not authorised by UMS, (b) has not been used in compliance with UMS instructions, (c) has been subjected to abnormal physical or electronic stress, improper or negligent use or accident, or (d) is granted only for pilot testing, evaluation, testing, demonstration purposes or free of charge, for which UMS receives no payment as license fee.

Limitation of Liability. IN NO CASE WILL UMS OR ITS SUPPLIERS BE HELD RESPONSIBLE FOR THE LOSS OF INCOME, PROFIT OR DATA OR FOR SPECIAL, INDIRECT, SUBSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES EITHER CAUSED, TRIGGERED OR RESULTING FROM THE USE OR INABILITY TO USE THE PRODUCT, EVEN IF UMS OR ITS SUPPLIERS WERE INFORMED ABOUT THE POSSIBILITY THAT SUCH DAMAGES COULD OCCUR. Under no circumstance will either UMS or its suppliers' responsibility cover compensation exceeding the price paid by the Client. UNDER NO CIRCUMSTANCE WILL THESE GENERAL CONTRACT CONDITIONS INVOLVE ACKNOWLEDGEMENT OF UMS OR ITS SUPPLIERS' RESPONSIBILITY IN CASE OF DECEASE OR PERSONAL LESIONS RESULTING FROM THE USE OF THE PRODUCT. The said limitations shall apply even if this warranty fails to meet its essential purpose. THE ABOVEMENTIONED LIMITATIONS SHALL NOT APPLY IN THE STATES AND IN THE JURISDICTIONS WHICH DO NOT ALLOW LIMITATION OR EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGE.

This Contract and the warranty concerning the PRODUCT shall be subject to the Italian law. The United Nations Convention on the International Sales of Goods shall not apply. Should one or more provisions of this Contract be held as null or void by a Court of competent jurisdiction, the remaining provisions shall be considered as fully valid and effective. Except for what expressly provided for herein, this Contract constitutes the complete agreement between the parties on the license of the PPRODUCT and replaces any other conflicting or additional provision of the purchase order. The date of shipment of the PRODUCT by UMS is recorded in the shipment documentation or in the PRODUCT delivery documentation.

INTENDED USE

The PRODUCT is a medical device composed only by software that is licensed exclusively to create an electronic copy of certain patients' data and recording of the unit's activity in order to provide:

- electronic documentation of the activity in the unit;
- information on the use of human resources and materials;
- deferred statistics for quality control;
- support to the diagnostic and therapeutic activities, within the limits of what specified herein below;
- support to the management of alarm coming from the connected medical devices;
- display of information to remote users for non-clinical purposes.

The PRODUCT is not aimed to administer or exchange energy to or from the human body or to transmit medicines, liquids or other substances to or from the human body.
The PRODUCT is not aimed to allow direct diagnosis or monitoring of vital physiological processes (by way of example cardiac performance, respiration or activity of CNS) and therefore the therapeutic or diagnostic procedure or maneuver, if any, deemed necessary by the user, shall be performed by him/her solely as consequence of the direct examination and of the scientific correspondence of the specific case with the data obtained through the use of the PRODUCT.

Based on the above features, the PRODUCT, even if designed to provide the maximum reliability, cannot guarantee the perfect correspondence of the provided data, nor can it substitute the direct verification of the same by the user.
In any case, the PRODUCT must be used in compliance with the safety procedures reported in the user manual accompanying the Product.

The PRODUCT can be used close to the patient and to the medical devices in order to speed up the data entry, to decrease the chances of errors and to allow the user to verify the correctness of the data through the immediate comparison with the actual data and activities.

The user must implement adequate procedures to guarantee that potential errors occurring in the PRODUCT are promptly detected and corrected and do not constitute a risk to the patient and the operator.
These procedures depend on the configuration of the Product and the method of use preferred by the user.

Only printouts that are signed (with digital signature or autograph) by authorized physicians or medical operators shall be considered valid clinical documents. In signing the aforementioned printouts, the user certifies that he/she has checked the correctness and completeness of the data present in the document.
Only these signed documents are a valid source of information for diagnostic or therapeutic processes and/or procedures.

The PRODUCT may provide, depending on the modules installed, access to information on drugs. This information is taken from official publications. It is responsibility of the user to periodically verify that this information is current and updated.

The PRODUCT can be connected to other medical devices in order to import data therefrom but is not aimed to control, monitor or influence the performances of the medical devices with which it is connected.

The information displayed by the PRODUCT is not meant to replace or replicate the original display of data, messages and alarms of the medical devices. The PRODUCT is not intended to control, affect or modify the normal use of those devices.

The PRODUCT does not substitute a “Nurse Call” system and it is not a “Distributed Alarm System” (as defined by the regulation EN 60601-1-8). Therefore, it must not be used in place of the direct monitoring of the alarms generated by the medical devices.

INTENDED USERS
The PRODUCT must be used by properly trained physicians, nurses, administrative staff and technicians.
Use of the system must be granted, by means of specific configuration of the passwords and active surveillance, only to trained personnel in possession of the professional qualifications to correctly interpret the information supplied and to implement the appropriate safety procedures.

Limited parts of the PRODUCT may be used by other categories of users for non-clinical purposes, to access a limited set of information and without the ability to alter existing information or enter new ones. For example patient’s family member can access information of their relative.

INTENDED ENVIRONMENT
The PRODUCT can be used inside medical facilities in intensive care units, wards, operating blocks, operating theatres and other departments.

The PRODUCT is software-only medical device that can be run on a computer connected to the hospital local network and must be adeguately protected against cyber-attacks.
The PRODUCT must be installed only on recommended PCs and/or operating systems.

In using the PRODUCT, the User declares to have understood and accepted the provisions and the limitations contained herein.

CONFLICTING TERMS
Should the User and UMS enter into an agreement for the supply and/or the license of the PRODUCT containing terms different from those contained herein, the terms of that agreement shall prevail on the terms of this Contract which are not compatible with them, it being understood that all the remaining terms of this Contract shall remain fully valid and the enforceable.

* * * * *

Should you have any questions concerning this End-User License Contract, please contact the UMS representative in your area or write to UMS srl, Customer Service, Via di Mucciana 17, 50026 San Casciano in Val di Pesa (Firenze), Italy.

Date Signature

SPECIFIC ACCEPTANCE OF CERTAIN PROVISIONS IN THIS CONTRACT

IMPORTANT—READ CAREFULLY

In compliance with articles 1341 and 1342 of the Italian Civil Code or to any other equivalent provision applicable in any other jurisdiction, I hereby declare that I have read, fully understood and specifically accept the following clauses of the UMS End-User License Contract concerning the product “DIGISTAT®”:

- COPYRIGHT
- LIMITED WARRANTY
- LIMITATIONS
- LIMITED LIABILITY
- INTENDED USE
- RESTRICTIONS.

Date Signature

Appendix A - Glossary

The use of DIGISTAT® systems requires a basic knowledge of the most common IT terms and concepts. In the same way, the comprehension of this manual is subject to such knowledge. However, in order to improve access to the document and clarify the use of certain terms relating to the DIGISTAT® systems, we have included a glossary for quick (and obviously concise) reference for the clarification of terms.

Remember that the use of DIGISTAT® systems must only be granted to professionally qualified and properly trained personnel.

Use of DIGISTAT® systems must only be granted to professionally qualified and properly trained personnel.

ALARM MESSAGE

An “Alarm message” coming from any one of the devices in use warns the user about an immediate danger for the patient or the users of the device. Alarm messages are of vital importance and must be managed with the highest priority.

BUTTONS

- **Function buttons**

  Buttons which, when clicked, make it possible to perform different operations or access different functions of the software. In Figure 2 the function buttons are NEW, SHOW, DELETE, CHANGE and REPORTS.

- **Active button**

  Button which, in the context present, can be clicked and makes it possible to perform operations or access particular functions.

- **Inactive button**

  Button which, in the context present, cannot be clicked.

- **Make button active**

  Perform an operation which means that a certain button becomes clickable.

CHECKBOX

Small box, usually square, which can be clicked to select an option. It can also be called a “selection box”.

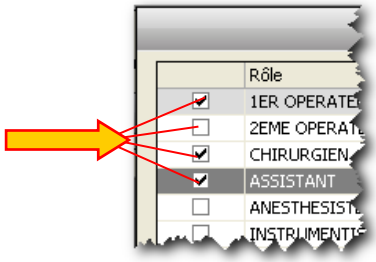

Figure 1 - Checkboxes

- **Selection box**

  See “Checkbox”.

CLICK

Move the mouse over a specific object and press one of the buttons (the left one unless otherwise specified).

- **Double Click**

Click twice in rapid succession.

CLIENT

A computer connected to a server (see) in an information network that requests the server for one or more services.

COMMAND BAR

Term used to generically indicate a portion of screen containing different function buttons (Figure 2).

Figure 2 – Command Bar

CONFIGURATION

The configuration of a software product is a series of operations and choices which determine the general set-up of the software and its operation and appearance. The configuration is not to be performed by the user (see) but by a system technician/administrator (see).

CONTROL BAR

The external portion of each page on the DIGISTAT® environment, comprised a control bar at the bottom and a side control bar. “Controlbar” is used to manage, among other things, access to the system (login - see), exit from the system (logout - see) and selection of the module required.

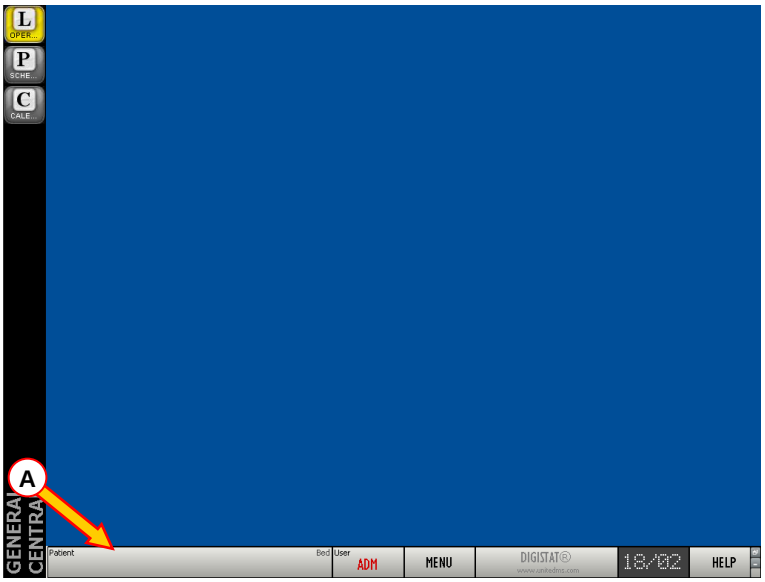

Figure 3 - Control Bar

CURSOR

Moving mark indicating a position. It is often a short blinking vertical line indicatine where the user is inserting data.

DATABASE

A database is a collection of data organized so that it is easily accessible. The data in a database can be consulted, edited and updated.

DEFAULT

A value is classed as being "by default" when it is automatically used by the system if the user does not specify any other values.

DIGISTAT®

- **DIGISTAT® Module**

  Software designed and developed to offer a solution to a specific series of needs and problems.

- **DIGISTAT® System**

  A series of DIGISTAT® modules that work in an integrated, synchronized and interdependent way.

- **DIGISTAT® Environment**

  The combination that encompasses and characterizes all DIGISTAT® modules and systems

DRAG

To “drag an item” means to move to an object with the cursor of the mouse, click and, keeping the button pressed, move the cursor across the page. The object moves with the cursor. The “dragged” items stops when you release the left button.

DRAG AND DROP

“Drag and drop” is the act of dragging an item to move it to a different point of the screen (see “drag”).

EDIT

Modify the data on a screen.

- **Edit Mode**

  A screen is said to be in edit mode when it can be edited by the user.

- **Edit state**

  See “Edit Mode”.

EVENTS

In the OranJ system, an event is a significant occurrence in the operating process which must be documented. The number and kind of possible events depend on the user needs and are set by configuration.

FIELD

Portion of screen in which you can enter data (digits, letters or both - Figure 4).

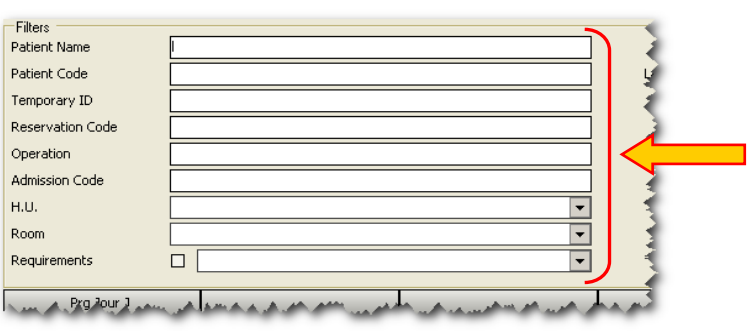

Figure 4 - Fields

❖ **Free field**

A field is “free” when you can enter any type of text or digit and it is not restricted to a series of pre-defined options.

LOCATION

The term “Location”, when used within the DIGISTAT® environment, indicates the area (fo instance a department, or a ward) for which the system is configured.

LOG

Item recording in real-time and chronologically certain operations defined as “meaningful”.

LOGIN (procedure)

The act of accessing (by means of username and password - see) the system.

❖ **Logout**

The act of exiting the system.

MARKER

In the OranJ system, markers are events which are defined as characterizing every operating event. The number and nature of markers, as well as the logic of succession, can be configured to suit the user’s needs. The OranJ system envisages 6 markers as standard:

1. Entrance to the block (the patient has undergone block check-in)
2. Entrance to the room (the patient has undergone room check-in)
3. Skin incision
4. Suture
5. Exit from the room (Operation done)
6. Exit from the block

MESSAGE CENTER

A software that manages the messages and the licences within the DIGISTAT® environment (see). The use of “Message Center” is reserved to the system administrators (see).

PAGE

Term used to indicate what can be seen on the screen in a specific moment.

PASSWORD

A password is a sequence of numbers and/or letters used to access a protected area. It should only be known to the user concerned.

PATIENT

- **Admitted Patient**

  Within the DIGISTAT® environment, the expression "admitted patient" means that the patient has been admitted to the hospital structure. The admission of a patient involves the assignment of a bed and a location. When a patient is admitted, the number of his/her bed appears alongside his/her name on the PATIENT button on the ControlBar (see Figure 3 **A**).

- **Patient registered in the database**

  The expression means that the name and data of a patient appear in the archive that we are consulting.

- **Patient Selected**

  Within the DIGISTAT® environment, when the patient is selected, his/her name appears on the PATIENT button on the ControlBar (see Figure 3 **A**).

POP-UP

Window containing a message for the user (see) which appears following the performance of any operation.

QUERY

A database interrogation performed to obtain a specific set of data.

RADIOBUTTON

Selection tool enabling to select one among many available options and having the feature:  . The selection of an option excludes the other options. See, for instance, the radiobuttons indicated in Figure 5.

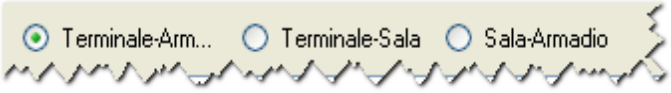

Figure 5

READ-ONLY

This expression means that a series of data cannot be edited by the user.

RECORD

A series of data organized rationally and composed of coherent items. An example of a record could be the patient data composed of name, last name, address, code, etc.

RESERVE

In the OranJ and Smart Scheduler systems, reserves are those operations which have not been assigned a time, block or room but which have been 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".

SCREEN

Term used to indicate what can be seen on the computer screen in a specific moment.

SERVER

An informatic component (a computer, for instance) providing services to other components (tipically named "clients" - see) in an information network.

SLOT

In the Smart Scheduler system, the term "slot" indicates the range of time in which an operating room is available to a hospital unit for scheduling. From the graphic point of view, on the scheduling grid, the slot is one of the ochre yellow colored areas (Figure 6 **A**).

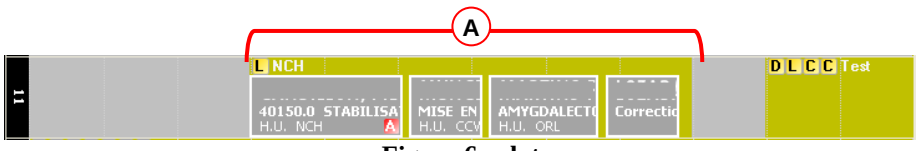

Figure 6 - slot

STATE (of the operation)

In the OranJ and Smart Scheduler systems, the "operation state" is the "stages" in which an operation is, in relation to the process necessary to its completion. There are 6 visible operation states in the two systems. These are

1) Foreseen – It has been decided that an operation must be performed for a specific patient.

2) Requested – It has been declared that the operation can be included in the schedule of the structure where you are operating, therefore its scheduling has been requested.

3) Scheduled – The operation has been included in the schedule of the structure where you are operating. The location and time of the operation have been decided.

4) Ready - The patient has undergone check-in and is inside the surgical block.

5) In progress – The patient has undergone room check-in. The operation is being performed.

6) Completed - The patient is out of the operating room. The operation is over.

The Smart Scheduler system manages operations up to scheduling, i.e., in the three states described here. The OranJ system manages the operations from scheduling up to completion (the last 4 states). Within OranJ the states are characterized by different colors. The "scheduled" state is light gray; the "ready" state is green; the "in progress" state is blue; the "completed" state is dark gray.

SYSTEM ADMINISTRATOR

Specialized technician responsible for managing the IT system used. This is the first person to contact if you have any kind of problem.

TAB

Tabs like those of an address book, which you click to access a different page (Figure 7).

Figure 7 - Tab

TOOLTIP

A tooltip is an area containing information about one of the items displayed on screen. The tooltip appears when the mouse pointer passes over the specific item (clicking is not necessary).

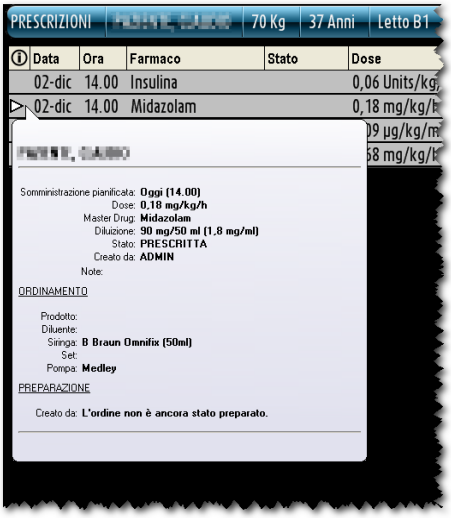

Figure 8 - Tooltip

TOUCH SCREEN

Particular type of screen in which the operations usually performed using the mouse are performed by touching the surface of the glass.

USER

The person using the system.

- **User Connected**

  See “User Logged In”.

- **User Logged In**

  User who has accessed the system (login - see) by entering his/her username and password and is therefore authorized to access some of its functions. The user logged in is also known as the “user connected”.

- **User Logged-out**

  User who has not accessed the system (login) or who has exited the system (intentionally or otherwise) and cannot therefore access his/her functions without logging in again.

USERNAME

The name which identifies the user of a system. It can be composed of letters, numbers or both together.

WARNING MESSAGE

A “Warning message” warns the user that an ongoing situation or procedure could lead to a danger for the users or the patient. Warning messages are very important and must be managed as soon as possible.

WORKSTATION

In this manual the word “workstation” indicates the computer on which the software or part of it is installed.

Appendix B - Residual risks

The risk management process has been actualized for the DIGISTAT® medical device according to the relevant technical regulations (EN14971, EN62304, EN62366). All the possible control measures have been defined to reduce all residual risks to the minimum level and make them this way acceptable considering the benefits brought in by the product. The total residual risk is also accettable if compared to the same benefits.

The risks listed below have been taken into consideration and reduced to the minimum level possible. Yet, given the inherent nature of the "risk" concept, it is not possible to completely remove them. It is therefore necessary, according to the regulations, let the users know each and every possible risk (even though remote).

- Impossibility in using the system or some of its functionalities, which can cause delays and/or errors in the therapeutic/diagnostic actions.
- Slowdown of device performance, which can cause delays and/or errors in the therapeutic/diagnostic actions.
- Circulation of users' and/or patients' sensible data.
- Unauthorized actions carried out by users, which can cause errors in the therapeutic/diagnostic actions and in the attribution of responsibilities of these actions.
- Wrong data insertion and display, which can cause errors in the therapeutic/diagnostic actions.
- Display of either partial or hard-to-read information, which can cause delays and/or errors in the therapeutic/diagnostic actions.
- Attribution of patient data to the wrong patient (patient exchange), which can cause errors in the therapeutic/diagnostic actions.
- Accidental data deletion, resulting in loss of data, which can cause delays and/or errors in the therapeutic/diagnostic actions.

RISKS RELATING TO THE HARDWARE PLATFORM IN USE

- Electric shock for the patient and/or the operator, which can cause injury and/or death for the patient/operator.
- Hardware components overheating, that can cause injury for the patient/operator.
- Infection contraction for the patient/operator.