

I. Introduction

Dear colleagues,

We are very proud to present our database manual version 1.5.

In this user guide, you can find everything to be ready to register data into our BeSECT Perfusion Database.

You can find these items:

- I. Introduction
- II. Memory of understanding
- III. Dataset 1.5
- IV. Variables for special procedures
- V. Excel file
- VI. Online access for dedicated emailaccount
- VII. Tips & tricks

We are very pleased to have your center on board.

Our objective is to register as much data as possible in Belgium, because every participating center is important.

The presentation of the data will be on the general assembly, so we hope to meet you there so you can have the results.

For questions, you can always contact our data manager at datamanager@belsect.be .


On behalf of the BeSECT database committee,

Gerdy Debeuckelaere

Chairman database committee.

II. Memory of understanding

- I. BelSECT is the Belgian Society of ExtraCorporeal Technology, founded in 1979.
- II. The database committee is a subcommittee of BelSECT.
- III. The purpose of the perfusion database committee is to collect information of perfusion related clinical activity in Belgian cardiac centers. Analysis of this data has to lead to quality improvement of perfusion activity in Belgium.
- IV. The data collection will never serve to rank centers or perfusionists, and the data will never be shared with other parties. Anonymous results can be presented to other parties after approval by the BelSECT board. The database committee will never participate in malpractice investigation or conformity checking with legal requirements of centers and perfusionists.
- V. The data collection will be done anonymously. Participating centers will have a secret code. Nor members of the board, nor members of the database committee will have access to these codes. We refer to the 'database user guide' for more details.
- VI. The data-manager is responsible for the data collection, data optimisation and data mapping in preparation of the data-analysis. The data-manager optimises the layout of the reports, as proposed by the database committee.
- VII. The data-analyst is an independent expert in biomedical statistics, responsible for data analysis. The data-analyst interfaces with the data-manager concerning the data and with the Committee concerning the data-analysis.
- VIII. The access to the data has three levels. The first two levels concern the Database Committee members.
 - a. The first level is unrestricted. This access is given to the data-analyst and the data manager.
 - b. The second level is restricted to a need to know level, defined by the committee and this access is given to all the members of the database committee.
 - c. The third level is restricted to the centers own data. This access is given to the datamanager of each center. This access is unrestricted in time but limited to the data of the center.All members of the committee, including the data manager and the data analyst are under the medical secret.
- IX. The Privacy Law (Dec 8th 1992) dictates that: (1) The database should be registered at the Commission for Protection of Privacy; (2) All centres have to be informed about the identity and the address of the holder of the database, the purpose of the database, the fact that one can get more information at the "Commission Protection of Privacy", the right to access and when necessary to correct their data; (3) The person responsible for analyzing the data, has to indicate the persons who have access to the data. The contents as well as the limits of this access have to be described in a registry. The registry process of the registry of the perfusion database committee is processed at the Commission for Protection of Privacy, Ministry of Justice, Hoogstraat 139, B-1000 Brussel under unique number VT005007966.

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- X. The chairman of the database committee is chosen by the board of directors of Be|SECT. The board of directors of Be|SECT nominates and dismisses the members of the Committee. The number of members can be changed on the suggestion of the chairman of the committee. Violation of the confidentiality (identified by the committee) leads to automatic dismissal of the member or chairman by the board of directors of Be|SECT.

 - XI. The chairman of the database committee reports to the board of directors of Be|SECT on a regular basis, as requested by the board or the committee. In addition, an annual report is given at the general assembly of Be|SECT. He will answer to the questions of the members concerning all matters of the committee. The website will be updated on a regular basis.

 - XII. Be|SECT will take charge of the legal protection of the committee members and the perfusion database.

III. Dataset 1.5: variable definitions

This is a guide to help you with the correct input of data in the Excel® registry form of the Be|SECT perfusion database.

Please read this guide carefully before entering data, to ensure that scoring is done in a similar correct way by all participating centers. This way, we believe that errors and unnecessary corrections are avoided.

All fields must be entered and have a value, some may require “non-applicable” as entry, especially for ECLS and standby cases, whenever the parameter is not applicable or not measured.

At this time, cell saver cases are not scored.

DDM = Drop Down Menu, indicating the different options if applicable.

Please, ALWAYS use the appropriate Excel file (provided by Be|SECT) with drop-down menus!

Demographic Data

- Center:**
- this is the unique number of the participating center where the procedure was performed
 - should always be the same number for procedures performed in the same center
 - 1 to 2 digit number (provided by Be|SECT database committee by start of registering perfusion activity)
- Number:**
- this is a unique identification number given to the patient for this procedure in your center
 - is a reference in case communication is needed and the record needs identification
 - can be any number or code containing numbers or letters
- Date:**
- this is the date the procedure was performed; equals the date the patient was entered in the operating room
 - form is DD/MM/YYYY
- Sex:**
- indicates the gender of the patient
 - DDM: M=male; F=female
- Age:**
- indicates the age of the patient on the day of surgery in years
 - is a 1 to 3 digit number for age ≥ 1 year
 - 2 decimals for pediatric cases < 1 year
 - (example: 4 months = 0,04 and 11 months = 0,11)
- Length:**
- indicates the height of the patient in centimeters
 - 2 to 3 digit number
- Weight:**
- indicates the weight of the patient in kilograms
 - 1 to 3 digit number, with up to 2 decimals for pediatric cases
- Status:**
- indicates the status of the patient at the time of surgery
 - DDM: - ELECTIVE = scheduled >24 hrs
 - URGENT = scheduled within 24hrs
 - EMERGENT = not delayable
 - SALVAGE = preoperative cardiac massage during anesthesia or on the way to OR
- Redo operation:**
- indicates whether the patient underwent previous cardiac surgery
 - DDM: NO = no previous cardiac surgery; YES = one or more previous cardiac surgical procedures

Procedure Data

- Procedure:** - indicates which kind of procedure was performed
- DDM: - CABG: indicates a coronary artery bypass graft was performed
 - VALVE(S): indicates a procedure on either the aortic, mitral, tricuspid or pulmonary valve, or on multiple valves in the same surgical procedure
 - CABG + VALVE(S): indicates a CABG procedure was performed with a concomitant single or multiple valve procedure
 - CABG + OTHER: indicates a CABG procedure was performed with a concomitant procedure other than a valve procedure
 - HEART TX: indicates a heart transplantation was performed
 - LUNG TX: indicates a single or double lung transplantation was performed on ECC; if perfusionist standby (no ECC): score 'STANDBY (other than OPCAB)'
 - HEARTLUNG TX: indicates a heart-lung transplantation was performed
 - SURGERY ON THORACIC AORTA: indicates any of the following procedure on the thoracic aorta was performed;
 - Ascending Aorta graft w/wo valve suspension
 - Ascending Aorta graft with coronary reconstruction
 - Ascending Aorta graft with root replacement / Bentall procedure
 - Transverse Arch graft
 - Descending thoracic aorta graft
 - Thoracoabdominal graft
 - LEFT PARTIAL ECC: indicates a left partial ECC was used in a surgical procedure
 - RIGHT PARTIAL ECC: indicates a right partial ECC was used (i.e. for liver transplantation)
 - ECMO / ECLS: indicates the initiation of an ECLS (VA-, VV, AV-ECMO, **ECLS controls by perfusionists unaccounted for**)
 - VAD: indicates the implantation or explantation of a left-, right- or biventricular assist device **with the use of ECC** , as primary indication (**VAD controls by perfusionists unaccounted for**)
 - OPCAB: indicates a coronary artery bypass graft procedure was performed without the use of extracorporeal circulation, with perfusionist standby
 - CONVERSION OPCAB --> CABG: indicates the conversion from an OPCAB procedure to a CABG when OPCAB procedure was already in course, necessitating going on bypass in emergency
 - STANDBY (OTHER THAN OPCAB): indicates a procedure where perfusionist was required to be standby for any surgical procedure other than an OPCAB or cell saver
 - ISOLATED PERFUSION: indicates an isolated organ perfusion was performed (limb, hyperthermic intraperitoneal chemotherapy, lung, liver or other organs)
 - CONGENITAL: congenital procedures with the use of ECC:
 - septal defects (atrial, ventricular, atrioventricular)
 - right heart malformations (tricuspid valve, pulmonary valve, Fallot+variants, pulmonary artery)
 - left heart malformations (mitral valve, aortic valve, coronary artery, aortic root anomalies, vascular anomalies(coarctation-dusctus arteriosus))
 - truncus malformations (truncus arteriosus, aortopulmonary window)
 - transposition great arteries
 - single ventricle malformations and palliative procedures
 - total anomalous pulmonary venous drainage
 - OTHER: indicates any surgical procedure not mentioned in the DDM-list of procedures with ECC involved

Equipment Data

- Perfusionist:** - indicates the level of training of the primary perfusionist
- DDM: - TRAINEE = any student or apprentice running a stage
 - CLINICAL PERFUSIONIST = any perfusionist holding a clinical perfusionist certificate
 - ECCP = any perfusionist holding a European Certificate in Cardiovascular Perfusion (ECCP) whose certificate is currently valid, either through recent [EBCP](#) examination or re-certification
- IABP:** - indicates the use of an intra-aortic balloon pump during the procedure
- DDM: - PRE OPERATIVE: indicates when the patient was having an IABP when entering the OR, or placement was done in the OR before the surgical procedure
 - PER OPERATIVE: indicates that an IABP was placed during or after the surgical procedure when the patient was still in the OR
 - NO: indicates no IABP was placed during the surgical procedure, or during the postoperative phase in the OR
 - NA = non applicable
- Pump:** - indicates the type of arterial pump that was used
- DDM: - ROLLER = roller pump type
 - CENTRIFUGAL = any kind of centrifugal pump type
 - NA = non applicable
- Oxygenator:** - indicates the type of oxygenator used during the procedure
- DDM: - HOLLOW FIBER = standard hollow fiber microporous membrane
 - POLYMETHYLPENTENE = true type membrane with polymethylpentene fibers
 - NO = there was no oxygenator in the circuit
 - NA = non applicable
- Arterial Filter:** - indicates the use of an arterial filter
- DDM: - YES = arterial filter used, the pore size in microns is indicated with a 2 digit number
 - NO = there was no arterial filter in the circuit
 - NA = non applicable
- Venous Reservoir:** - indicates the type of venous reservoir used in the procedure
- DDM: - OPEN = venous open reservoir
 - CLOSED = closed venous reservoir, **including mini-bypass systems**
 - NO = there was no venous reservoir in the circuit
 - NA = non applicable
- Prebypass filter:** - indicates the use of a prebypass filter
- DDM: - YES = a prebypass filter was used
 - NO = no prebypass filter was used
 - NA = non applicable
- Use of checklist:** - indicates the use of a checklist before the procedure was started
- DDM: - YES = a checklist was used
 - NO = no checklist performed
 - NA = non applicable

- Priming:**
- indicates which fluid was used to prime the circuit
 - DDM: - COLLOID = only a colloid priming solution was primarily used
 - CRISTALLOID = only a crystalloid priming solution was primarily used
 - MIXED = a mix of colloid- and crystalloid solution was primarily used
 - NA = non applicable
- Priming volume:**
- indicates the total volume of priming fluid needed to prime the circuit in milliliters (before RAP)
 - 2 to 4 digit number; 0 (zero) indicating non applicable or not measured
- Blood products in priming:**
- indicates if any blood products were added to the priming solution
 - DDM: - BLOOD = addition of whole blood or packed red blood cells to priming
 - ALBUMINE = addition of human albumin in any concentration to priming
 - BOTH = addition of both whole blood or packed red cells together with human albumin to priming
 - NONE = no addition of any kind of blood product
 - NA = non applicable
- Surface coating:**
- indicates the use of any kind of coating on the inner surface of the extracorporeal circuit
 - DDM: - NONE = if no coating at all was used
 - HEPARINCOATING = if only heparin coating was used of any kind
 - ALBUMIN = if only albumin coating was used of any kind
 - PMEA = if only PMEA coating was used of any kind
 - PHOSPHORYLCHOLINE = if only PC coating was used of any kind
 - MODIFIED SURFACE = if only a modifying surface coating was used of any kind
 - COMBINATION = if a combination of any of the previous coatings was used or together with any other coating
 - OTHER = if only any other coating was used
 - NA = non applicable
- Surface coating area:**
- indicates the relative extent of the area that was coated
 - DDM: - LIMITED COMPONENTS = if only a limited area of the circuit was coated with any kind or combination of coatings
 - ALL BUT CANNULAE = if the whole circuit was coated except for the cannulae with any kind or combination of coatings
 - TIP-TO-TIP = if the complete surface of the circuit was coated with any kind or combination of coatings
 - NA = non applicable
- CO₂-flush:**
- indicates the use and the extent of a CO₂-flush to aid the deairing of the circuit
 - DDM: - YES, WHOLE SYSTEM = if all components of the circuit were flushed with CO₂ prior to priming of the circuit
 - YES, ARTERIAL FILTER ONLY = if only the arterial filter was flushed with CO₂ prior to priming of the circuit
 - NO = if no CO₂-flush was used to aid deairing
 - NA = non applicable

Course of Procedure

- Retrograde Autologous Priming:**
- indicates if any kind of retrograde autologous priming (RAP) method was used when initiating the bypass run, be it on the venous or arterial side
 - DDM: - YES = RAP was used
 - NO = no RAP was used
 - NA = non applicable
- Volume substitution pre-ECC:**
- indicates the use of acute normovolemic hemodilution (ANH) as a blood saving / thrombocyte sparing technique
 - DDM: - YES = ANH was used
 - NO = no ANH was used
 - NA = non applicable
- Highest glycemia on pump:**
- indicates the highest glycemia that was measured during the bypass run, expressed in mg/dl
 - 2 to 3 digit number; 0 (zero) indicating non applicable or not measured
- Use of antifibrinolytics:**
- indicates the use of any kind of antifibrinolytics during the procedure or in the prime fluid of the circuit (antifibrinolytics given after the pump run unaccounted for)
 - DDM: - YES = any kind of antifibrinolytics was used
 - NO = no antifibrinolytics were used
 - NA = non applicable
- Pump mode:**
- indicates the use of a pulsatile perfusion modus, meaning the generation of a biphasic arterial wave form by the arterial pump
 - DDM: - PULSATILE = a pulsatile perfusion modus was used (even only during a small period of the pump run)
 - NON-PULSATILE = a non-pulsatile perfusion modus was used
 - NA = non applicable
- pH-strategy:**
- indicates which blood gas management strategy was used during the pump run
 - DDM: - ALPHA-STAT = only alpha-stat management was used during the pump run
 - PH-STAT = pH-stat management was used during at least one period during the pump run or during the entire pump run
 - NA = non applicable
- Hematocrit at end of ECC:**
- indicates the last hematocrit value measured before the end of the pump run, expressed in %
 - 2 digit number; 0 (zero) indicating non applicable or not measured
- Lowest hematocrit on ECC:**
- indicates the lowest value of hematocrit measured during the pump run, expressed in % (can equal the 'hematocrit at end of ECC' value)
 - 2 digit number; 0 (zero) indicating non applicable or not measured
- Target ACT on ECC:**
- indicates the highest activated clotting time (ACT) value measured during the pump run, including the ACT measured after initial heparin dose was given; expressed in seconds
 - 2 to 4 digit number; 0 (zero) indicating non applicable or not measured

- Lowest ACT on ECC:**
- indicates the lowest activated clotting time (ACT) value measured during the pump run, including the ACT measured after initial heparin dose was given; expressed in seconds
 - 2 to 4 digit number; 0 (zero) indicating non applicable or not measured
- Total amount of heparin given:**
- indicates the total amount of heparin that was given (by the anesthesiologist and perfusionist) before and during the pump run; expressed in International Units (IU)
 - 3 to 5 digit number; 0 (zero) indicating non applicable or not measured
- Venous drainage:**
- indicates the way the venous drainage was maintained during the pump run
 - DDM: - UNASSISTED = the blood was drained by gravity, using no additional suction technique
 - VACUUM ASSISTED = vacuum was applied to the venous side of the circuit by means of wall suction to enhance venous drainage, during a period of the pump run, or during the whole run
 - KINETIC ASSISTED = venous drainage was enhanced by means of a pump (roller or centrifugal) placed in the venous line, during a period of the pump run, or during the whole run
 - NA = non applicable
- Temperature strategy:**
- indicates the temperature management of the patient during the pump run
 - DDM: - ACTIVE NORMOTHERMIA = the patient is kept at a normothermic state (>36°C) by means of a heat exchanger during the whole pump run
 - DRIFTING = the patient is not actively kept warm, nor actively cooled, the temperature is allowed to drop (be it to a certain level or to the point of rewarming) after which the patient is actively warmed up
 - HYPOTHERMIA AT _____ °C = the patient is actively cooled to a certain temperature <36°C and actively warmed up afterwards. The lowest core temperature that was reached is noted, be it the bladder, rectal, esophageal, nasopharyngeal or tympanic temperature, in this order of importance; expressed in degrees Celsius
 - 1 to 2 digit number
 - HYPERTHERMIA AT _____ °C = the patient is actively warmed to a certain temperature >37°C. Expressed in degrees Celsius (for example: HIPEC)
 - 1 to 2 digit number
 - NA = non applicable or not measured
- Hemofiltration:**
- indicates the use of a hemofiltration technique used during the procedure
 - DDM: - UF = ultrafiltration
 - MUF = modified ultrafiltration
 - ZBUF = zero-balanced ultrafiltration
 - OTHER = any hemofiltration or dialysis technique used, other than the techniques mentioned before
 - COMBINATION = two or more of the preceding techniques used in the same procedure
 - NO = no hemofiltration technique used
 - NA = non applicable
- Volatile anesthetics on ECC:**
- indicates the use of volatile anesthetics during the pump run
 - DDM: - YES = a volatile anesthetic agent was administered during a period of the pump run or during the whole pump run
 - NO = no volatile anesthetic agent was administered during the pump run
 - NA = non applicable

CO₂-flush in the operative field:

- indicates the use of CO₂ gas flooding the operative field in order to minimize the risk of air embolism
- DDM: - YES = CO₂ gas flooding used during the procedure
- NO = no CO₂ gas flooding used during the procedure
- NA = non applicable

Cardioprotective & Neuroprotective Strategies

Cardioplegia:

- indicates which kind of cardioplegic solution was used
- DDM: - NONE = no cardioplegia was administered
- CRYSTALLOID = crystalloid cardioplegic solution was administered as cardioplegia
- BLOOD = a mixture of blood with any cardioplegic solution was administered as cardioplegia, including miniplegia techniques
- COLLOID = colloid cardioplegic solution was administered as cardioplegia
- NA = non applicable

Volume of cryst. cardioplegia given:

- indicates the total amount of crystalloid cardioplegic solution given, as a standalone solution, or together with blood, not counting the volume of blood. Also small volumes of miniplegia techniques accounted for; expressed in milliliters
- 2 to 4 digit number, 0 (zero) indicating no solution was administered
- NA = not applicable

Cardioplegia temperature:

- indicates the temperature at which the cardioplegia was administered for most of the time during cardioplegic arrest
- DDM: - NORMOTHERMIC = temperature above 34 ° Celsius
- TEPID = temperature between 28 and 34 ° Celsius
- COLD = temperature under 28°Celsius
- NA = non applicable or not measured

Cardioplegia administration:

- indicates the route of administration of the cardioplegic solution
- DDM: - ANTEGRADE = the cardioplegia was administered in any antegrade route, the aortic root or directly in the coronary osti(a)um or the venous bypass
- RETROGRADE = the cardioplegia was administered in the coronary sinus
- BOTH = the cardioplegia was administered both antegradely and retrogradely, one after another or simultaneously
- NA = non applicable

Hot shot:

- indicates if a hot shot (warm blood administration w or w/o crystalloid cardioplegic solution was added prior to declamping of the aorta
- DDM: - YES = a hot shot was given
- NO = no hot shot was given
- NA = non applicable

Circulatory arrest:

- indicates the use of one or more periods of circulatory arrest during the procedure
- DDM: - YES = one or more periods of circulatory arrest were used
- NO = no period of circulatory arrest was used
- NA = non applicable

Core temperature at arrest:

- indicates the temperature at which the circulatory arrest was started, be it the bladder, rectal, esophageal, nasopharyngeal or tympanic temperature, in this order of importance; expressed in degrees Celsius
- 1 to 2 digit number, 1 decimal, 0 (zero) if no arrest was used or non applicable

Cerebral perfusion flow:

- indicates the use of a cerebral perfusion technique during the period of circulatory arrest, hereby specifying the mode of delivery (antegrade/retrograde), be it through a specially placed cannula or through the aortic cannula
- DDM: - ANTEGRADE = cerebral perfusion was used in an antegrade manner
- RETROGRADE = cerebral perfusion was used in a retrograde manner
- BOTH = antegrade and retrograde manner were used alternately or at the same time
- NO = the period of circulatory arrest was not accompanied by the use of a cerebral perfusion technique
- NA = non applicable

Cerebral perfusion direction:

- indicates the side where the cerebral perfusion was administered
- DDM: - UNILATERAL LEFT = cerebral perfusion was only administered to a vessel nourishing the left side of the brain
- UNILATERAL RIGHT = cerebral perfusion was only administered to a vessel nourishing the right side of the brain
- BILATERAL = cerebral perfusion was administered to both sides of the brain, alternately or at the same time
- NA = non applicable

Monitoring

- Inline blood temperature monitoring:** - indicates the measurement of the blood temperature at specific sites of the perfusion circuit
- DDM: - ARTERIAL = the temperature of the blood returning to the patient was measured
 - VENOUS = the temperature of the blood coming from the patient was measured
 - BOTH = the temperature of the blood coming from and going to the patient was measured
 - NO = no blood temperature was measured at any point in the circuit
 - NA = non applicable
- Highest arterial line temperature:** - indicates the highest blood temperature measured in the arterial line / oxygenator during the rewarming phase, expressed in degrees Celsius
- 2 digit number, 1 decimal, 0 (zero) if not measured or non applicable
- Inline/online gas/electrolyte-monitoring:** - indicates the use of a device to measure - inline or online - blood gas or electrolyte monitoring
- DDM: - YES = such a device was used
 - NO = no such device was used
 - NA = non applicable
- SVO₂ monitoring:** - indicates if the oxygen saturation of the blood coming from the patient was measured (continuously or at certain time points) in the venous line of the circuit (no measurement from central venous catheter)
- DDM: - YES = the SVO₂ was measured
 - NO = the SVO₂ was not measured
 - NA = non applicable
- CO₂ monitoring at gas outlet:** - indicates if the concentration of CO₂ gas was measured at the exhaust port of the oxygenator
- DDM: - YES = CO₂ gas was measured at the exhaust port of the oxygenator
 - NO = CO₂ gas was not measured at the exhaust port of the oxygenator
 - NA = non applicable
- Automatic data collection:** - indicates the use of a device to automatically and continuously collect data on perfusion and patient parameters, which can be later be reproduced
- DDM: - YES = automatic data collection was used
 - NO = no automatic data collection was used
 - NA = non applicable

Blood transfusion & cell salvage

- Units of packed red cells administered on ECC:** - indicates the number of units of packed red cells administered during the pump run only, including those administered by other staff in the OR (e.g. anesthetist...), expressed in number of units
- 1 or 2 digit number, 0 (zero) if no units were given or non applicable
- Units of FFP administered on ECC:** - indicates the number of units of fresh frozen plasma administered during the pump run only, including those administered by other staff in the OR (e.g. anesthetist...), expressed in number of units
- 1 or 2 digit number, 0 (zero) if no units were given or non applicable
- Cell salvage therapy:**
- indicates the use of a cell saver during the procedure
 - DDM: - STANDBY = reservoir was placed standby, cell saver was not used
 - NO = no cell saver standby or used or non applicable
 - YES = a cell saver was used, the volume of the end product returned to the patient is given, expressed in milliliters
 - 2 to 4 digit number, 0 (zero) if cell saver used, but no volume returned
- Destiny of pericardial shed blood:**
- indicates the destiny and processing of the pericardial shed blood
 - DDM: - CARDIOTOMY SUCTION = all pericardial shed blood was returned to the patient via the cardiomy reservoir
 - CELL SALVAGE = all pericardial shed blood was processed in a cell saver
 - WASTE = all pericardial shed blood was discarded
 - COMBINATION = two or three of fore mentioned techniques were used to process the pericardial shed blood
 - NA = non applicable

IV. Variables for special procedures

ECMO / ECLS: - only the following variables has to be scored:

- Demographic Data
- Procedure Data
- Equipment Data
- Pump mode
- Target ACT on ECC
- Venous Drainage
- Temperature strategy
- Hemofiltration (if connected to the ECMO/ECLS-circuit)
- Volatile anesthetics on ECC
- Inline blood temperature monitoring
- Inline/online gas/electrolyte monitoring
- CO₂ monitoring at gas outlet
- SvO₂ monitoring
- Automatic data collection

OPCAB: - only the following variables has to be scored:

- Demographic Data
- Procedure Data
- Perfusionist
- IABP
- Use of Checklist
- Target ACT
- CO₂ flush
- Cell salvage therapy
- Destiny of pericardial shed blood

Standby (other than OPCAB): - only the following variables has to be scored:

- Demographic Data
- Procedure Data
- Perfusionist
- IABP
- Use of Checklist
- Cell salvage therapy

Isolated perfusion: - **only** the following variables has to be scored:

- Demographic Data
- Procedure Data
- Equipment data
- Pump mode
- Target ACT on ECC
- Total amount of heparine given
- Venous Drainage
- Temperature strategy
- Inline blood temperature monitoring
- Inline/online gas/electrolyte monitoring
- CO₂ monitoring at gas outlet
- SvO₂ monitoring
- Automatic data collection
- Units of packed red cells administered on ECC
- Units of FFP administered on ECC
- Cell salvage therapy
- Destiny of pericardial shed blood

Other: - **only** the following variables has to be scored (**for procedures with ECC involved**):

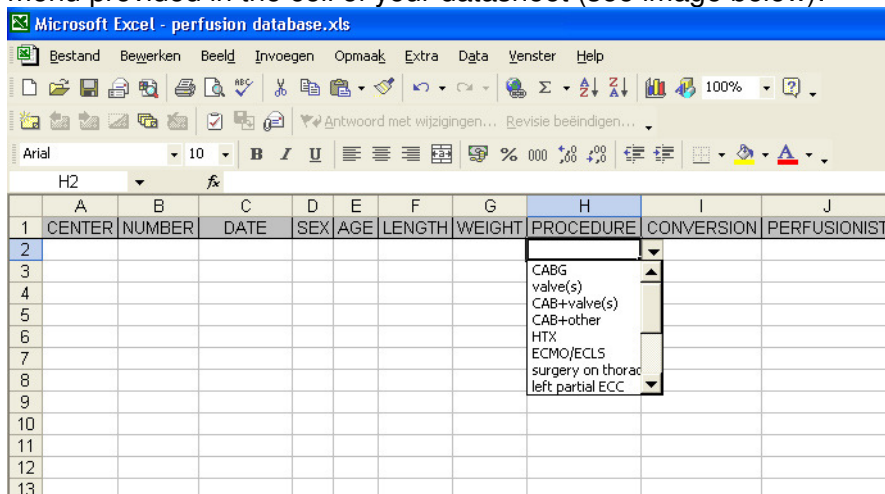
- Demographic Data
- Procedure Data
- Perfusionist

V. Excel file

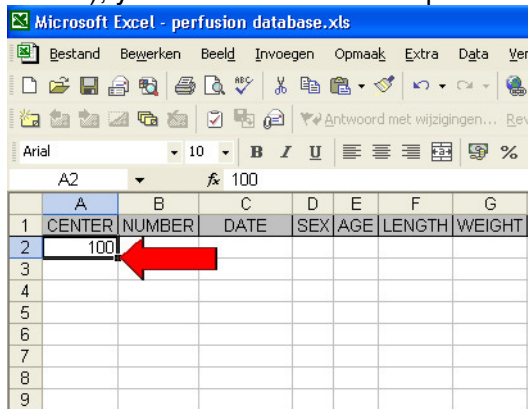
□ **Data admission**

You can fill in the items manually.

When you have to choose between different options: you can choose the right option in the menu provided in the cell of your datasheet (see image below):



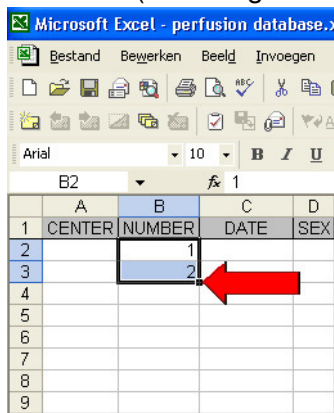
If you have the same parameter for more than one case (for example the number of your center), you can click the little square in the right under corner of the cell (see image below):



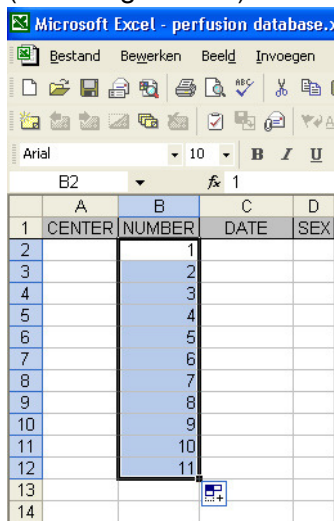
You can drag the cursor down and the content of the cell will be copied into the selected cells.



P.s: if you select two cells with two following values (for example 1 and 2), you can do the same as above (see image below):



The cells will be filled with the rest of the following values (useful for following numbers, ...) (see image below):



Protecting your excel-file

Click on menu: 'Extra' => 'Protection' => 'Secure sheet'.
You can add a password to your file or datasheet.

VI. Online access of dedicated emailaccount

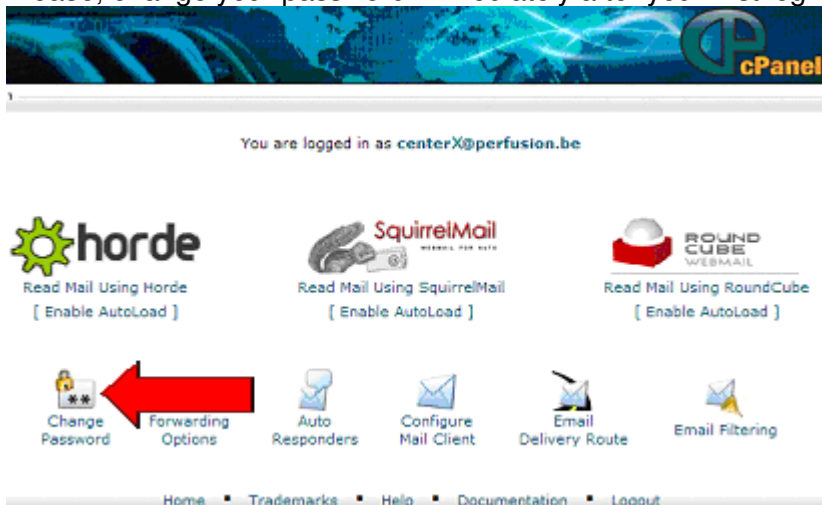
You received a letter with a user-id and a password.

Please, do NOT pass your password to other persons!

You can login at <http://www.belsect.be/webmail> by using your user-id and password:



Please, change your password immediately after your first login(for security reasons):



After you changed your password, you can choose one of the three programs to read your email:

- i. Horde
- ii. SquirrelMail
- iii. Round Cube

So you can try to see what fits best.

You can also use an email client to use your mailbox (like Outlook, Outlook Express, Mozilla Thunderbird, ...).

Then you need the following settings to configure your mail client properly:

Mail Server Username: center10XX+belsect.be (XX = the correct number for your center)

Incoming Mail Server: perfusion.be

Outgoing Mail Server: perfusion.be (*server requires authentication*) **port 26**

VII. Tips & tricks

In order to avoid as much as possible any scoring errors, misinterpretation of parameters and redundant work, we present you some tips and tricks that may assist you in the management of the database.

- We advise you to use the datasheet (for backup and error reviewing) to initially score the data.
- Non-measured or non applicable parameters can be barred on the sheet
- For some procedures, only well-defined variables must be scored, indicated in this Manual. These procedures are in *italic* on the datasheet, to easily recognise them.
- The perfusionist or supervisor who performed the procedure should be the one who fills in the datasheet, preferably as soon as possible **after** the procedure (after the procedure to make sure no parameters are missed).
- It is easier for the person filling in the records if all (or most) variables are found back on the perfusion record.
- **! Please, follow the guidelines of the Registry Definitions in the manual, certainly for the first few weeks of scoring, or when in doubt.**
- Centers with large activity, fill in the Excel[®]-files, weekly. Send them through each month to avoid large build-up of files (the database manager will send email reminders).
- **! It is mandatory to use the Excel file (with drop-down menus) that can be found on the website in order to facilitate statistical processing.**
- **! Input is case-sensitive and no lines or columns may be inserted in between the data, no extra sheets may be created in the Excel file.**
- **If things are still unclear:** please, don't hesitate to contact us:
datamanager@belsect.be