Information system for Stem Cell Registries – Donor Centers – Transplant centers

# Prometheus

Part 1: Donor and Cord Blood management





Steiner

Marrow Donor Program Belgium – Registry

User documentation MDPB-R Version 5.0 (2019)

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# Changes – upgrade version 2.0 – September 2013.

Change in window panel (user interface/screen-layout).

Other changes

# Changes – upgrade version 3.0 – April 2014.

New EMDIS connections. (since 10-02-2014)

EN: British Bone Marrow Registry / British Bone Marrow Registry - cord blood

RO: Romanian Registry of Hematopoïetic Stem Cells Voluntary Donors

Donor manual: Initial validation date for donors available.

Maximum of 10 selected donors is stored in the Select button history.

Reminder option for confirmatory typing results (reminder button in the SMP-ARR button).

# Changes – upgrade version 4.0 – May 2018.

New CITRIX version.

IV.VIII. EMDIS connections.

II.III. 2. Panel on second row: additional tab "Messages" "Requests".

II.IV. New donor

ION: prefilled: 4201 (the ION Issuing Organization number) assigned by the ICCBBA.

EMDIS Ethnic: donor Ethnic Group.

II.VI. HLA Data typing history. (typing updates are logged and discrepant typings are better illustrated).

III. Cord Blood. EMDIS cord project, extended Cord dataset.

IV.III.2. Sample request: new option: New sample info.

New WMDA reports.

New EMDIS reports.

(Comment: on request of other registries using Prometheus the patient name is replaced by Hidden when printing the EMDIS messages - for GDPR reasons – General Data Protection Regulation). (The patient name is available when printing the WMDA report).

# Changes – upgrade version 5.0 – April 2019.

#### NEW items are highlighted in green.

**GRID:** implementation of GRID code – GRID codes are upload to BMDW, so that both the old donor code and the GRID codes are available in the WMDA search system. There is no impact on the search-workup communication – the existing donor code will still be used in the workflow. WMDA collaborated with <a href="ICCBBA">ICCBBA</a> (International Council for Commonality in Blood Banking Automation) to create a system for assigning a globally unique identifier for potential volunteer blood stem cell donors.

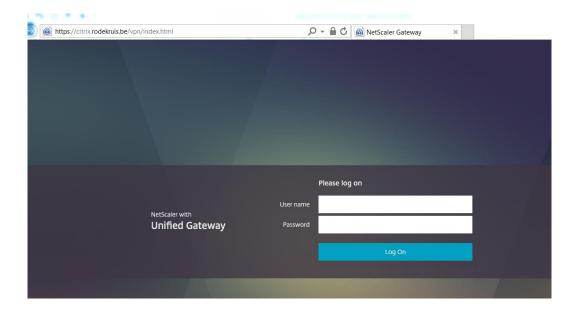
# I. INTRODUCTION

# I.I. PROGRAM START

# I.I.1. Program start up

To start the application you need a Citrix username and password and a Prometheus password.

To login go to <a href="https://citrix.rodekruis.be">https://citrix.rodekruis.be</a> and enter your Citrix username and password:



In case you have problems, you need to install the receiver first:

https://www.citrix.nl/products/receiver/

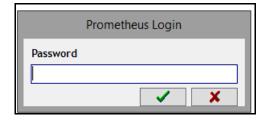
After successful download, the following screen will be displayed: select **Prometheus:** 



#### Select Prometheus Productie:



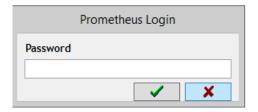
The following screen will be opened, enter your Prometheus login:



#### I.I.2. Login

You have 3 attempts to enter the right password. When the third attempt in a row fails, the user account will be locked. The user has to ask the Registry coordinator to unlock the account. When the ID and the password are correct the program will initialize and the main program window screen will be displayed.

#### **FIRST LOGIN**



To access the application for the first time, please log in by entering the password type "23 23" (23space23) that was sent to you. You will be required immediately to change your password. Your new password must be in format 23 shoe1 (23spaceshoe1). (combination of letters and numbers required).

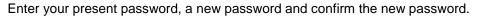
#### 23spaceshoe1).



#### I.I.3. User password change

Go to **SERVICE** and select **"Change password**" to change your password:



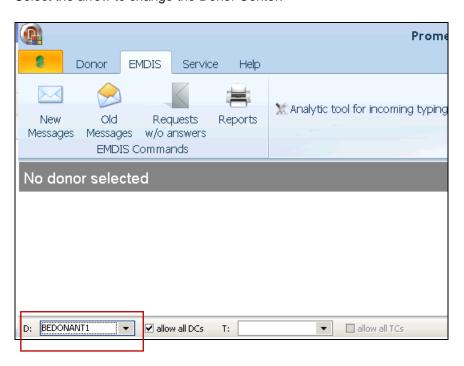


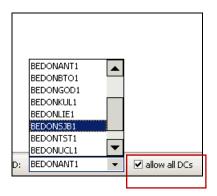


# I.I.4. Multiple access rights

Some users have rights for multiple Donor Centers. When logging in you will be guided to one Donor Center, it is however possible to change the Donor Center without ending the application.

Select the arrow to change the Donor Center.





**Allow all DCs –** this check-box allows the user to work simultaneously with data from all Donor Centers he has access to.

Select the arrow to change the active center, you can switch between Donor Centers, Transplant Centers, Cord Blood Banks. You can simultaneously display data from multiple Donor Centers or multiple Transplant Centers. A mix between donor and Transplant Center however, is not possible.

**User Box** – The user box shows the name of the person currently logged into the system, below the user group.

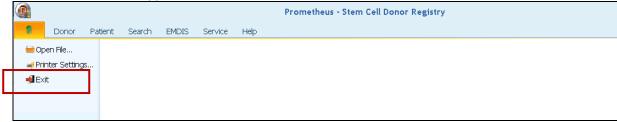


Double blind data entry includes data typed by one individual, then typed by a second individual, with the computer comparing each difference. Differences are noted in red after pressing the "check all" button. In Prometheus the profile "single managed" have rights to enter and validate HLA typing data.

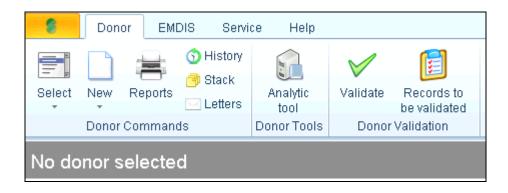
#### We have 2 profiles:

- \* person with only registration rights
- \* person with registration and validation rights

**Exit** – Termination of application.

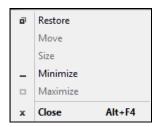


# I.II. MAIN PROGRAM WINDOW



The upper part of the panel exists of the following menu options:

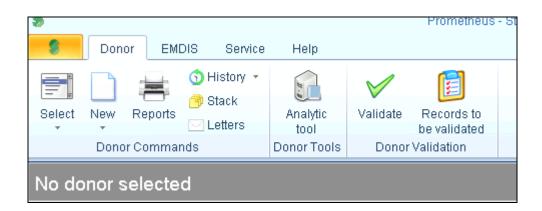
#### I.II.1.1. File



Minimize - minimizes your window screen

Close - lets you end the session

#### I.II.1.2. Donor

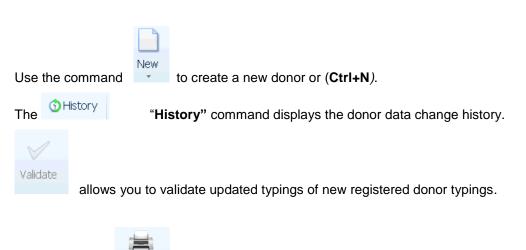


The donor program functions are available in menu "Donor". Via Select or (**F3**) the donor can be selected, via close or (**F2**) the donor record will be closed.

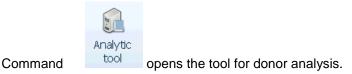
The currently opened record is automatically closed at shutdown of the program, as well as when opening a record of another donor.



The program remembers the last selected donors and can be opened via arrow below to the "select" button).

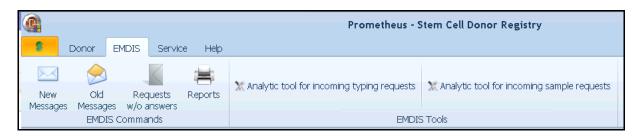


The command (Ctrl+R) offers you a list of donor reports.



The donor menu will be explained in chapter II. Donor menu.

#### **I.II.1.3. EMDIS**



"New messages" – "old messages" - allows you to view the arrival of new EMDIS messages and to display the old messages you already consulted.

"Analytic tool for incoming typing requests" – "Analytical tool for incoming sample requests" The use of analytic tools is further explained in <a href="https://chapter.ll.X. Analytical tool">chapter ll.X. Analytical tool</a>.

"Reports" Allows you to print EMDIS reports.

"Requests without answers" Allows you to consult the pending requests.

#### I.II.1.4. Service



**Change password –** allows you to change your password.

**HLA codes toolbox –** allows you to consult the renamed and deleted alleles.

Template Manager - see addendum manual "Template Manager"

#### I.II.1.5. Help



**Prometheus Help –** enables you to consult the Prometheus user documentation. (general from Steiner – not the Belgian version.) Not operational.

About - Prometheus version

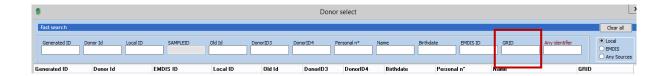
#### I.II.2. Quick select buttons

#### I.II.2.1. Select donor

**Select donor** – the selection of a donor.



Click the "select " button to go to the "donor select" screen, the following screen will be opened:



#### **New: the GRID**

You can search donors by several parameters:

#### > Search for sequence:

- Anywhere: (..XX123XX..) if entering "1000" all donors with 1000 will be offered for selection: BEANT100012345, BEANT100001234, BEANT100001234,
- From beginning: (XX123...) when entering "BEANT1000" all donors starting with BEANT1000 will be offered for selection: **BEANT1000**1234, **BEANT1000**1234,....

#### Search by:

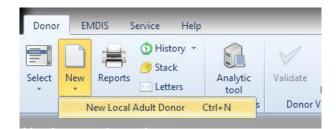
- Generated ID: for new Prometheus donors, fill in only numbers of the full ID: 123456.
- Old ID: the Syrenad code or code from the Cord Blood Bank.
- EMDIS ID: is equal to the old ID
- Local center ID: Local center ID field.
- Birthdate: fill in year (YYYY), year and month (MMYYYY) or full date (DD/MM/YYYY)
- Personal number: NA
- Name: fill in full name or several characters of last name (at least 3 characters needed).
- **EMDIS ID:** For new Prometheus donors: BE123456D.
- GRID NR: Global Registration Identifier for Donors.
- Any identifier

Note: new donors will be attributed a identification code by Prometheus: BE123456D. (donors migrated from the Syrenad application will keep the Syrenad codes). (as cord bloods will always be uploaded in Prometheus, the Syrenad identication code will not change).

Only the option "Local" is applicable for the donor center or cord blood bank.



#### I.II.2.2. New donor



This menu selection allows you to register a new donor in the national database. The donor registration is explained in <u>chapter II.IV New donor</u>.

# I.II.3. Hot Keys

Table of keyboard shortcuts:

Hot key	Function	Hot key	Function
F3	Donor select	F2	Donor close
Ctrl-N	New donor	Ctrl-D	Donor edit
Alt-Q	Program shutdown	Esc	Option abort
Alt-X	Option confirm		

# I.II.4. Behavior of input fields

#### I.II.4.1. Date field

- date format: "dd.mm.yyyy", e.g. "26.01.2009";
- press "d" for today's date;
- type "17" to select day in actual month, e.g. January 17, 2009 (if current month is January and year is 2009);
- type "17 6" to select day and month in actual year, e.g. June 17, 2009 (if current year is 2009);
- type "6 12 7" to select December 6, 2007;
- F3 for calendar selection.

#### I.II.4.2. Selection from static code list

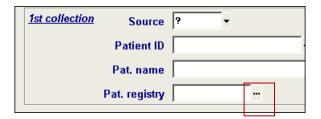
- press space for next value;
- F3 for selection by list, Esc to leave selection list;
- press **number** (0, 1, 2 or +, -) as shortcut of selection.

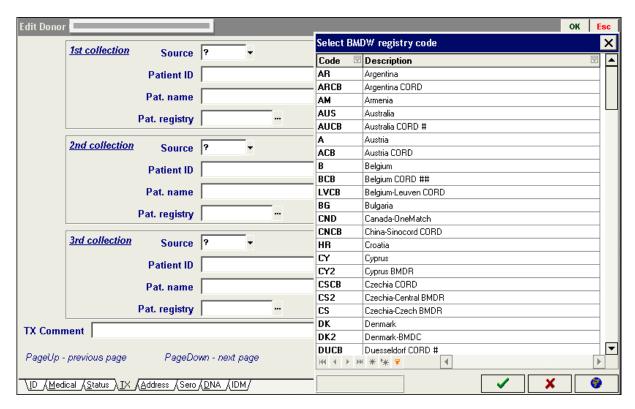




#### I.II.4.3. Selection from dynamic code list

- Type code of the selection;
- F3 for selection by list, type first characters of code to filter the list, backspace to clear filter,
   enter to confirm selection, Esc to leave selection list.





#### I.II.4.4. Form control



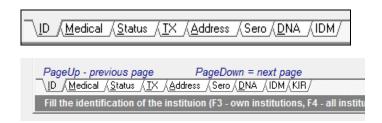
Pressing the **OK** button confirms data entry, changes will be saved in the database and the record will be closed. The command can also be called up by using the shortcut **Alt-X**.

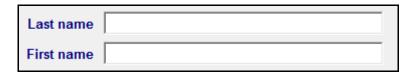


This button is used to undo all the changes made to the current record.



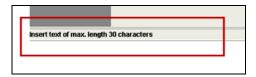
Most forms are multi-page forms, the arrow enables to browse between the different tabs.





You can use enter, the down arrow or tab to go to the next field. (Shift-tab – the up arrow to go to the previous field).

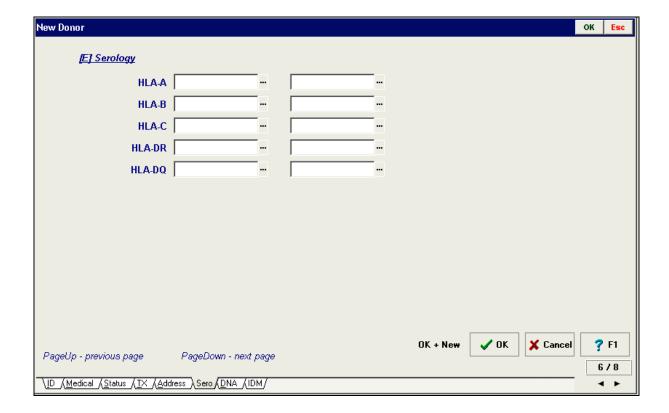
The bottom part of the window screens gives you contextual help for data entry:



## I.II.4.5. HLA DATA

#### I.II.4.5.a. Serology

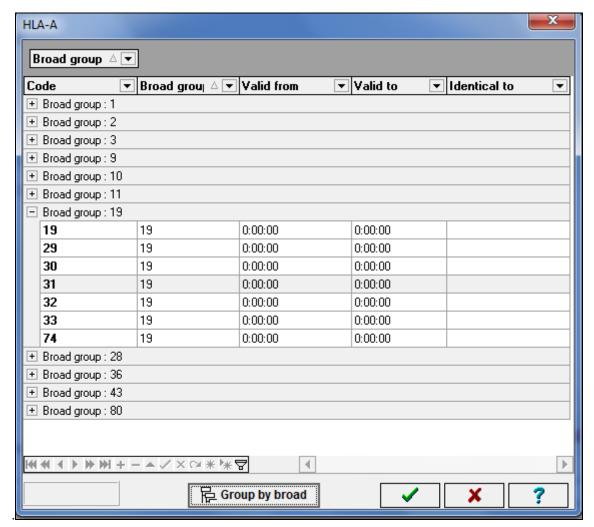
The following screen is offered for serology typing, but it is not mandatory to enter serology if molecular typing is available.



List of valid values appear when clicking the dots right from input field or by pressing **F3**.

Codes can be grouped by broad group

or filtered by custom criteria 🔻



Group by broad view

#### I.II.4.5.b. DNA typing results

Enter high resolution code, XX code or MAC code. System warns you when you enter an invalid code or a code not matching serology.

DNA typing results respect the new nomenclature. When entering a value in an old format (e.g. 0301) system corrects it automatically to the new format (e.g. 03:01).

Values as 1, 01, 01xx, 01XX, 01:xx are automatically changed into 01:XX. Values as 701 are automatically changed to 07:01.

Type 1301-46810 for B\*13:VVS = B\*1301/1302/1303/1304/1306/1308/1310.

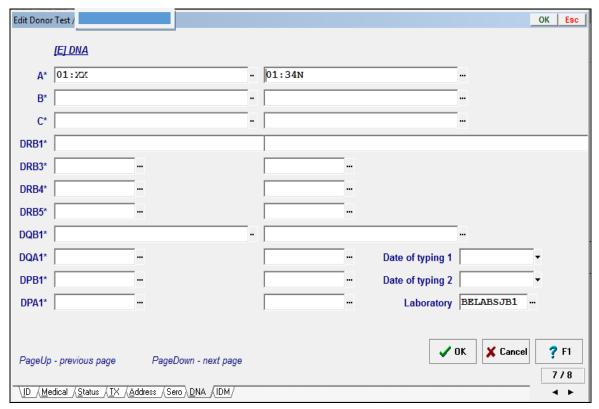
Codes are automatically converted to MAC:

A\* "0101/0102" to 01:FWEY
A\* "0101/2" to 01:FWEY
A\* "0101 2" to 01:FWEY
B\* "1301-4 6 8 10" to 13:DMYV

Valid codes are updated each four days.

**Note:** Serology or search determinant are not needed in Prometheus: the serology or search determinant will be removed when migrating donors and cord bloods to Prometheus: if the molecular value is available, the serology or search determinant will not be migrated.

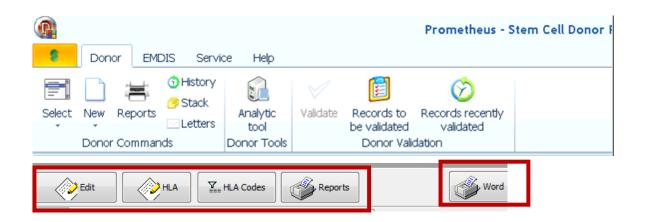
When doing a **typing update** the serology must be removed when entering a molecular value. Regular serology removal will be performed by the Registry.



**DNA Typing results view** 

# I.III. WORK PANEL DONOR

# I.III.1. Upper panel



**Edit**: this button allows you to enter and edit the donor's data.

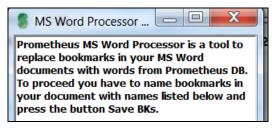
**HLA:** data typing history

HLA codes: allows you to consult the renamed and deleted alleles

**Reports**: this button opens the donor reports application.

#### Word:

New is the MS word processor.(not implemented in MDPB).



#### I.III.2. Panel on second row



The donor data consists of 5 tabs: "Donor record", "Messages", "Requests", "Files", "Notes", "Letters". (New)

Letter History (will be explained in additional manual "letter templates")...

#### I.III.2.1. Donor record



The "**Donor Record**" tab shows the basic information of the donor, also available in the different tabs when editing the donor record. (<u>Chapter II.III</u>. <u>Donor edit</u>).

At the bottom of the window screen will be indicated:

**Record changed on:** last change of the record : date – time – user

**Record inserted on:** date when record inserted

HLA/DNA validated on: date when the HLA/DNA data have been validated

(after first registration or hla typing update) – time – user

First validation: date of first validation

If the record has not yet been validated, the text "HLA/DNA to be validated" will be highlighted in red, or when the typing validation failed, "failed HLA/DNA validation", waiting for a typing update.

#### I.III.2.2. Messages

The "Messages" tab allows you to see all specific EMDIS messages received for this donor.



The old "EMDIS messages" tab has been expanded by 2 different tabs: "Messages" and "Requests".

The tab "Messages" will list all incoming and outgoing messages as in the previous "EMDIS messages".



## I.III.2.3. Requests



The tab "Requests" lists the different requests you received and the status of the request:



#### I.III.2.4. Files

It is possible to attach external files to a donor record: open the donor record and select the "**Files**" tab in the donor work panel.



You can upload Excel, Word and PDF files, e-mails, pictures, ... by selecting the button "New file".



#### Table description:

- File name column: the name of the file, as it was imported;
- Description: a short text description of the file;
- Date edit: date and time of last change;
- Edited by: name of the user that made the last change.

#### File management:



Open file button:

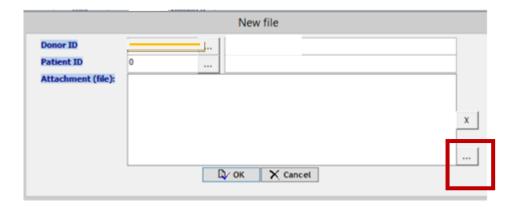
open the highlighted file in the attached files table.



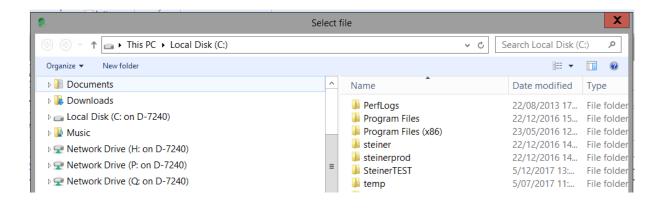
New file button:

attach a file to the donor record.

Click on to open the "Select File" window screen:



And browse for the document you wish to upload:





**Describe file button**: enter a text description of the file highlighted in the

attached files table.



**Update file button**: replaces the highlighted file in the attached files table with a

new or updated version of the document.



**Delete file:** delete the highlighted file in the attached files table.



**Save file:** save a copy of the highlighted file in the attached files table on your pc.

#### I.III.2.5. Notes



It is possible to add an unlimited free text note to the donors records. The text can be edited with the similar tools as available in Windows Word pad.

Select the "Notes" tab to open the window screen. .



To add a note, type the text.

To export or save the note to a different location, use the "save" icon on the tool bar. The text will be saved as a text file.

#### I.III.2.6. Letters

Is explained in the Addendum Letter template manager 4.0. 2017.

# II. DONOR MENU



#### II.I. DONOR SELECT

The select option is explained in chapter I.II.2. Quick select buttons.

#### II.II. DONOR CLOSE

Select Donor Close or F2 or press to end the donor editing.

# II.III. DONOR EDIT – CONSULTATION – UPDATE OF DONOR

Edit can be used for consulting the donors record, change donor data (medical data – availability - address coordinates – HLA data) and cancel the donor from the national database.

If there is a change of HLA data (sero – DNA) the record must be validated. Validation rules are explained in chapter II.VII. Validate.

Press to open the donors record: the ID tab will be opened (other tabs are Medical – Status – TX – Address – Sero – DNA – IDM). You'll find more detailed information in next <u>chapter II.IV. New donor.</u>

#### New the GRID code:

WMDA collaborated with <a href="ICCBBA">ICCBBA</a> (International Council for Commonality in Blood Banking Automation) to create a system for assigning a globally unique identifier for potential volunteer blood stem cell donors. This was needed to facilitate communication and prevent errors in identification of donors (not applicable for cords).

First part: ION for Belgium is 4201

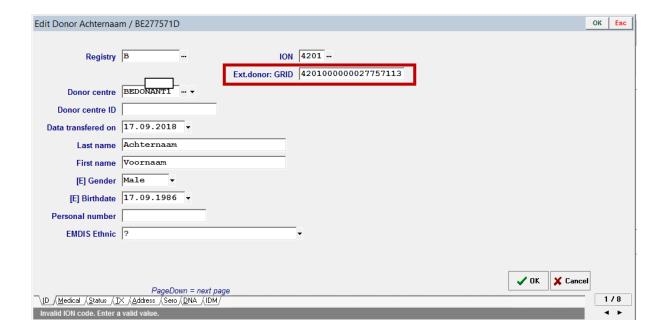
Second part: 13 digits:

= the internal Prometheus code of the donor record prefilled with leading zeros as the

code is shorter than 13 digits.

**Third part:** Checksum – will be calculated by Prometheus.

(is an algorithm – used to validate and check the GRID to ensure that the input data is genuine and error free).

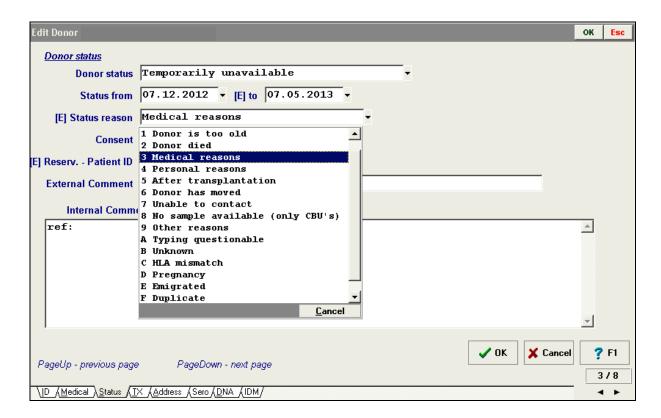


When reporting HLA typing results or IDM results for national and international patients, the results must be edited before sending the EMDIS message. When doing a typing update, the new HLA values will not be available for EMDIS as long as the typing has not been validated.

## II.III.1. Donor status: temporarily unavailable - reservation - cancellation

#### a. Temporarily unavailable

If a donor is not available for a period, the status must be set to "Temporarily unavailable". Indicate the time period by filling in "status from... to.... " and select the reason:



A pregnant donor must be temporarily suspended from the Registry's database file during the entire time of the pregnancy and up to a period of six months after delivery when requested for a typing request or blood sample request.

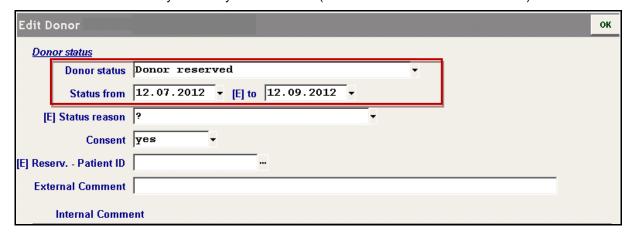
When the end of TCI has been reached, Prometheus will set the status to availability again.

#### b. Reservation

When a donor has been requested for additional typing or a blood sample shipment, the donor will be reserved for 2 months. The user must change the availability status and reserve to donor for a period of 2 months (cfr MDPB-R SOP).

Donor status: donor reserved

Status from: date of today to 60 days from now on (These data will be sent via EMDIS).



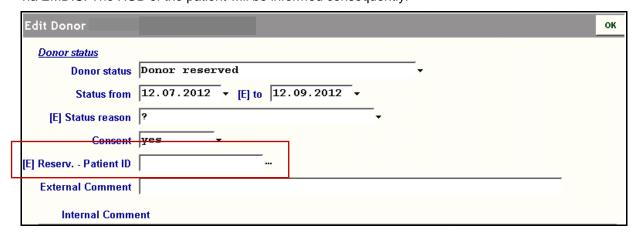
By pointing the actual month a drop-down list will be opened. You can also navigate with the arrows.

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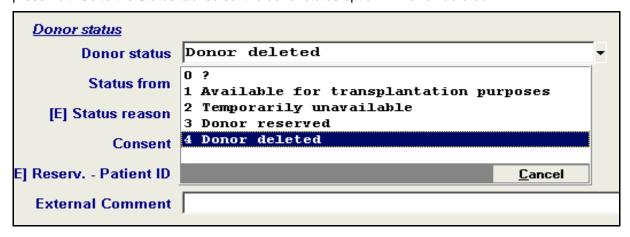


It's mandatory to enter the patient ID for which the donor has been reserved, the message will be sent via EMDIS. The HUB of the patient will be informed consequently.

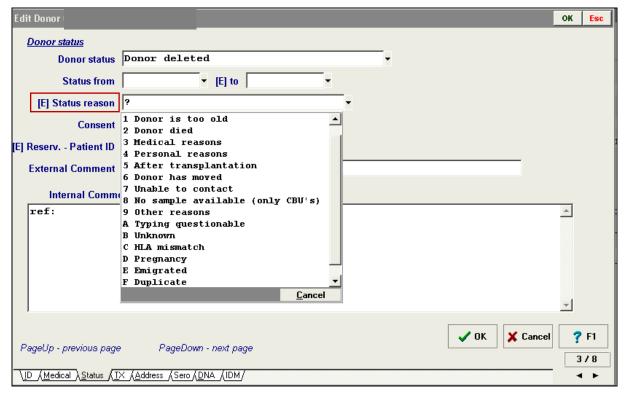


#### c. Cancellation

You should use the edit option to cancel a donor from the database. First select the donor, and then press Edit. Go to the **S**tatus tab: select the donor status option "4 **Donor deleted**".



Specify the reason and date of cancellation, this information will be sent via EMDIS. All patients linked to this donor will receive the information that the donor is no longer available.



By pointing the actual month a drop-down list will be opened. You can also navigate with the arrows.

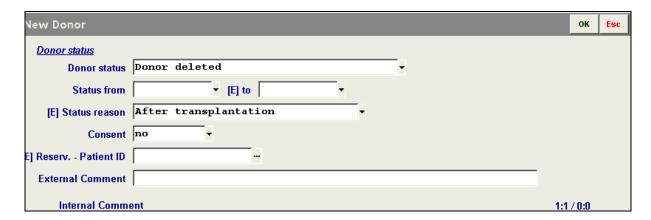


#### Status reason:

- 1. Donor is too old
- 2. Donor died
- Medical reason
- 4. Personal reason
- 5. After transplantation
- 6. Donor has moved
- 7. Unable to contact
- 8. No sample available
- 9. Other reasons

- A. Typing questionable
- B. Unknown
- C. HLA mismatch
- D. Pregnancy
- E. Emigrated
- F. Duplicate
- L. Donor currently abroad. (new: will be mapped to EMDIS value PR personal reasons).

A volunteer donor must be prevented from donating again (unless he or she donates for the same recipient). After donation the donor must be cancelled from the database.



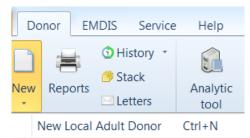
When cancelling the donor after donation, information of the transplantation can be entered in the tab TX: source, patient ID, patient name, patient Registry, date of collection and date of TX.

Even if the donor has been cancelled from the database, the data will be available for consultation and it is possible to enter consecutive transplantations for the same patient.

Donors reaching cancellation age (60 years) will be deleted automatically, the user will be informed by the Quality check.

# **II.IV. NEW DONOR**





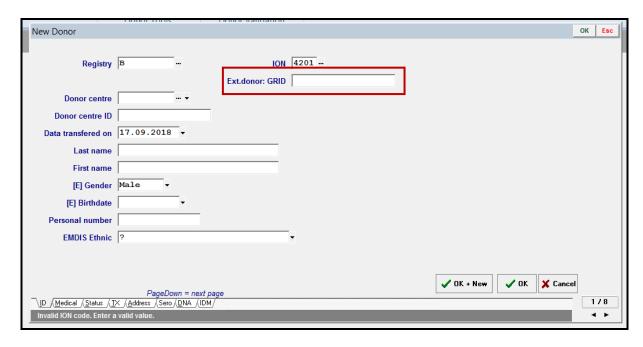
Go to donor command

to register a new donor.

This menu includes the following tabs:

- ID,
- Medical,
- Status,
- TX,
- Address,
- Sero,
- DNA,
- IDM.

# **1. TAB ID**



Registry: prefilled B ION: prefilled 4201

The ION (Issuing Organization number) assigned by the ICCBBA.

GRID: Will be assigned by Prometheus.

Donor center: prefilled donor center code

Donor center ID: local Donor Center code, not mandatory (max. length 17 characters)

Data transferred on: prefilled date of today

Last name: please enter last name, not mandatory (max. length 30)

First name: please enter first name, not mandatory (max. length 30)

(E) Gender: please enter Gender, **mandatory**, EMDIS field (default value male)

(E) Birthdate: please enter birth date, mandatory, EMDIS field

Personal number: Social security number, not mandatory.

EMDIS Ethnic: Donor ethnic group:

AFNA = African: North Africa

AFSS = African: Sub-Sahara Africa

ASSW = Asian: Southwest Asia (Middle East, Turkey) ASSO = Asian: Southern Asia (India, Pakistan, Bangladesh,

Sri Lanka, Bhutan, Nepal)

ASCE = Asian: Central Asia (Eastern Russia, Kazakhstan,

Uzbekistan, Kyrgyzstan, Tajikistan)

ASSE = Asian: Southeast Asia (China, Mongolia, Burma,

Laos, Cambodia, Thailand, Vietnam, Taiwan)

ASNE = Asian: North and Northeast Asia (Japan, North

Korea, South Korea)

ASOC = Asian: Oceania (Pacific Islands, excluding Japan,

Australia, Taiwan, Sakhalin, Aleutian Islands)

CAEU = Caucasian: Mainland Europe, Greenland, Iceland,

Western Russia

CAER = Caucasian: Eastern Russia

CANA = Caucasian: North America (USA, Canada, Mexico)

CAAU = Caucasian: Australia (Australia, New Zealand)

HICA = Hispanic: Central America, Caribbean

HISA = Hispanic: South America

MX = Mixed / multiple

OT = Other (e.g. Australian Aborigine)

UK = Unknown

To be able to be registered within the MDPB-R, donors must have passed their **18**<sup>th</sup> **birthday** but must not have passed their **40**<sup>th</sup> **birthday**.

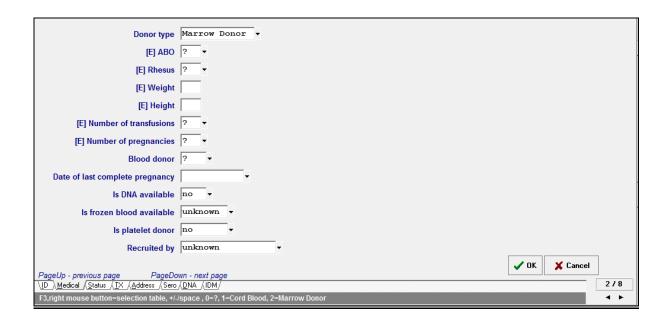
The duration of the registration will be until the age of **60**. When a donor reaches the age of **60**, the status will change automatically to "**4 Donor deleted**".

The identification code will be attributed by Prometheus after ending the donor registration:

New Prometheus numbering: BE123456D.

#### **2.TAB MEDICAL**

Press "Medical" to go to the following tab.



#### (E) = sent via EMDIS

**Donor type:** prefilled Marrow Donor

(E) ABO: 0.? - 1.O - 2.A - 3.B - 4.AB (optional field)

**(E) Rhesus:** 0.? - 1.+ - 2.- (optional field)

(E) Weight: value between 0-250 (optional field)
(E) Height: value between 0-300 (optional field)
(E) Number of transfusions: value between 0-9 or ? (optional field)
(E) Number of pregnancies: value between 0-9 or ? (optional field)

Date of last pregnancy: date (optional field) (new field)

Blood donor: yes or no (optional field)

Is DNA available: yes or no (optional field)

**Is frozen blood available**: 0. no - 1. yes - 2. unknown (optional field)

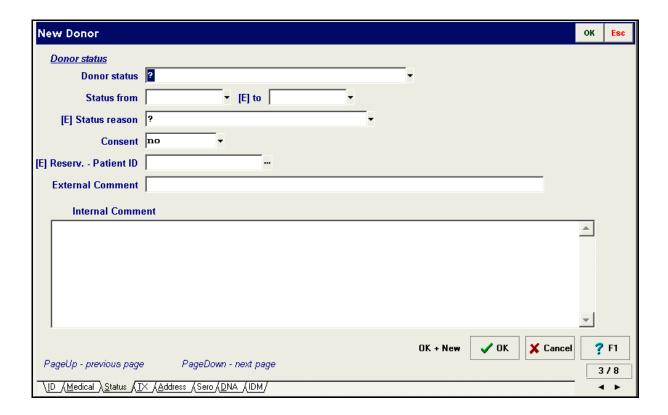
Is platelet donor: yes or no (optional field)

Recruited by: default value: unknown

0. Unknown - 1. Associations - 2. Entourage - 3. Blood donor info -

4. Press – 5. Website - 6. Other

#### **3.TAB STATUS**



Donor status: cancellation and reservation rules are explained in chapter II.III. Donor

edit - consultation - update of donor.

Consent: mandatory field

following the MDPB-R SOP each potential volunteer donor should be, at a first stage, provided with a written document containing specific

information on BM, PBSC donation to be specified in this field:

1.Yes (both BM, PBSC consent).

2.Only PBSC consent3.Only BM consent.

Reservation Patient ID: when a donor is reserved for a patient, the patient ID must be entered in

this field. The information will be sent via EMDIS to inform the

international Registry.

External comment: information is not sent via EMDIS

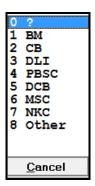
Internal comment: information from Syrenad has been uploaded into this field.

(Fi. The history of Syrenad mailing letters generated in PDF)

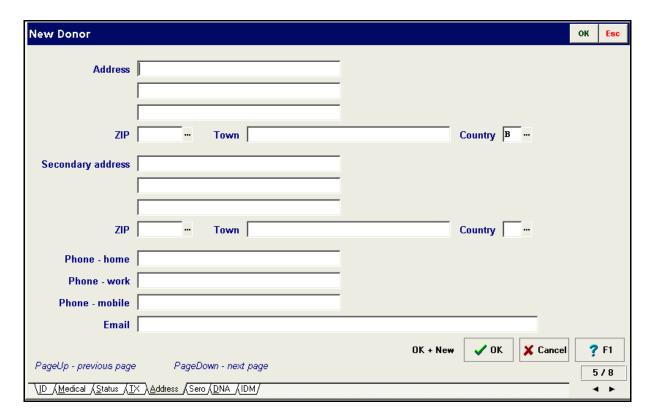
#### **4.TAB TX**

The transplantation data are not sent via EMDIS. After a transplantation took place, the source of cells (BM, CB, DLI, PBSC, Other), patient ID, patient name, patient Registry, date of collection, date of TX and TX center can be entered for 3 collections.

In case of more than 3 please put the info at the TX comment section.



# **5.TAB ADDRESS**



Data not mandatory.

Address: enter street and number

**ZIP:** enter ZIP code or select to go to the select zip code screen:

clicking on "description" will set the towns in alphabetical order.

**Town:** town selection via ZIP code.

Country: prefilled

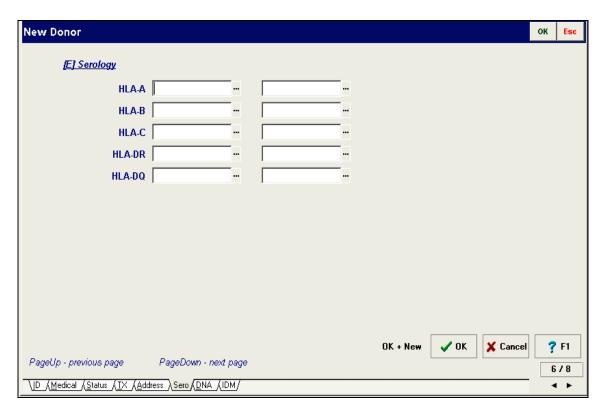
Secondary address: data entry of additional address

Phone: home - work - mobile

**Email** 

## **6.TAB SERO**

For information about the serology typing input go to <u>I.II.4.5.a HLA data – serology</u>. It is however not necessary to enter serology typing results, because of the molecular typing methods. Data entry of search determinant is not necessary.



### **7.TAB DNA**

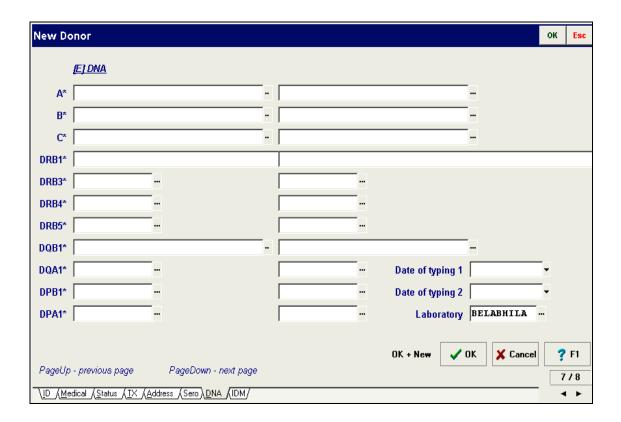
All typings done on a newly recruited donor must be done with molecular methods. All new donors must be at least HLA-A, B and C typed in low resolution (2 digits) and DRB1 typed in high resolution (4 digits).

List of valid values appear when clicking the dots right from input field or by pressing F3. (only high resolution, intermediate codes must be entered manually).

For information about the DNA typing input go to I.II.5.4. HLA data – DNA.

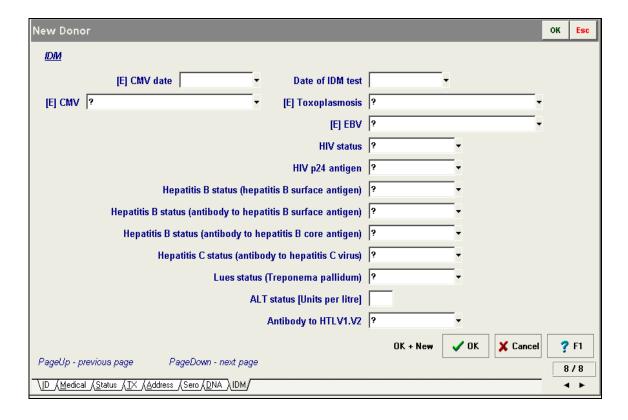
**Date of typing 1 – 2**: fields where dates of typing can be entered.

Laboratory: HLA typing lab



## 8.TAB IDM

This window screen allows to enter Infectious Disease Marker results; all fields are optional.



(E) CMV date:

if the CMV value is given, CMV date is mandatory

(E) CMV:

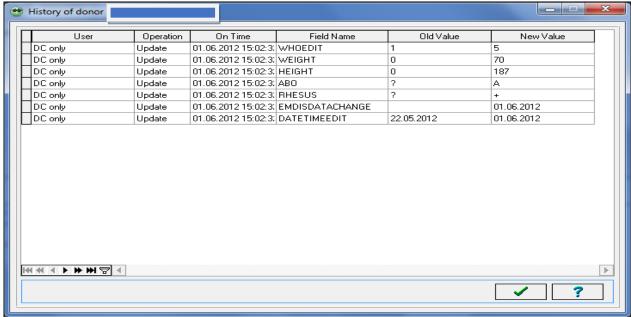
0. ?

1. Both negative

	<ol> <li>unclear</li> <li>IgG-posit; IgM-negat</li> <li>IgG-negat; IgM-posit</li> <li>both positive</li> <li>IgG or IgM posit</li> <li>IgG posit; IgM not tested</li> <li>IgG negat; IgM not tested</li> </ol>				
Date of IDM test:	IDM test date is mandatory when IDM test results are given				
(E) Toxoplasmosis:	0. ? 1. Both negative 2. unclear 3. IgG-posit; IgM-negat 4. IgG-negat; IgM-posit 5. both positive 6. IgG or IgM posit 7. IgG posit; IgM not tested 8. IgG negat; IgM not tested				
(E) EBV:	<ul> <li>0. ?</li> <li>1. Both negative</li> <li>2. unclear</li> <li>3. IgG-posit; IgM-negat</li> <li>4. IgG-negat; IgM-posit</li> <li>5. both positive</li> <li>6. IgG or IgM posit</li> <li>7. IgG posit; IgM not tested</li> <li>8. IgG negat; IgM not tested</li> </ul>				
HIV status:	0.? – 1.Positive – 2.Negative – 3.Questionable				
HIV p24 antigen:	0.? – 1.Positive – 2.Negative – 3.Questionable				
Hepatitis B status (hepatitis B surface antigen):	0.? – 1.Positive – 2.Negative – 3.Questionable				
Hepatitis B status (antibody to hepatitis B core antigen): 0.? – 1.Positive – 2.Negative – 3.Questionable					
Hepatitis C status (antibody to hepatitis C virus):	0.? – 1.Positive – 2.Negative – 3.Questionable				
Lues status (Treponema pallidum):	0.? – 1.Positive – 2. Negative – 3. Questionable				
ALT status (units per litre):	value from 0 to 999				
Antibody to HTLV1.V2:	0.? – 1.Positive – 2.Negative – 3.Questionable				

## II.V. DONOR DATA CHANGE HISTORY

The history of donor data change is called up by the menu command option of donor data change is called up by the menu command option open the donor's record and then go to "donor – history". If a history for the donor exists, the table with his data will appear, otherwise a blank table will be opened. The user's individual actions will be logged in this history tracking audit.



Donor data change history

#### **History window description**

Title bar: donor code

**User:** the individual who did the "operation"

On time: time of operation

Field name: changed value names

**Old value:** original value before the update

**New name:** contains the new value

#### **Navigation**

There is a navigation panel on the bottom-left, right above the data result. Navigation arrows allow movement in the table (left to right): first record, previous record, next and last record. Filtering and sorting are equally possible.

#### **Termination**

Press or to terminate the history window screen.

## II.VI. HLA « DATA TYPING HISTORY »

A new functionality is the "HLA data typing history". This tool is only available for consultation purposes.

Press "HLA" to open the "Data typing history window screens". Another option is to open the window screens by the History tab:





In this window screen typing updates are logged and discrepant typings are better illustrated:



Typing update: the new typings are logged: discrepancy is explained.



Copy of the previous lines, this means that the entry has been validated.

## II.VII. VALIDATE

#### II.VII.1. Records to be validated

#### II.VII.1.a. Validation of a new registered donor

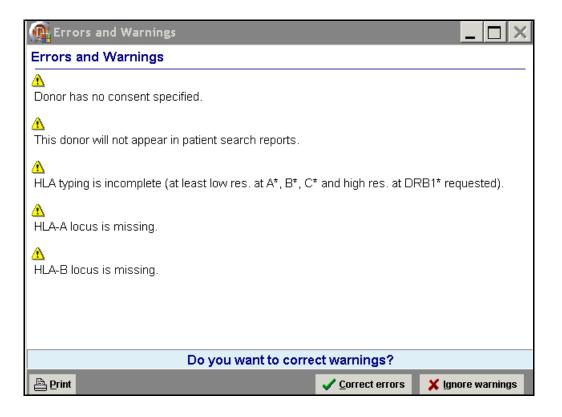
After a donor registration a donor record must be validated in the national database before the record will be available in EMDIS: the record will receive "HLA/DNA to be validated" status. (before validating the donor's record must be opened, via select).

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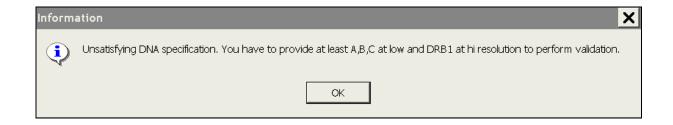


#### **VALIDATION RULES**

It is possible to register a donor without any typing: Prometheus will display yellow warnings, which can be passed. As long as a donor has not been properly validated, the donor will not be sent by EMDIS and will not be available for patient search reports:



When you try to validate this specific donor, the following alert will be displayed:

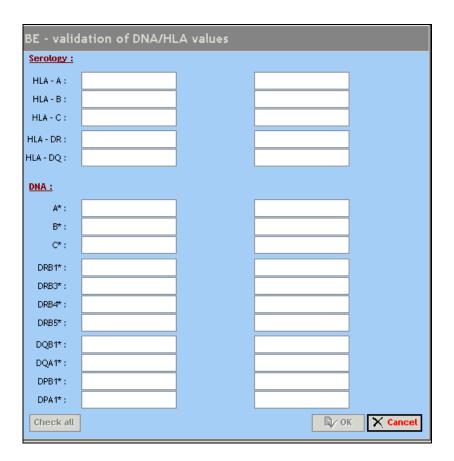


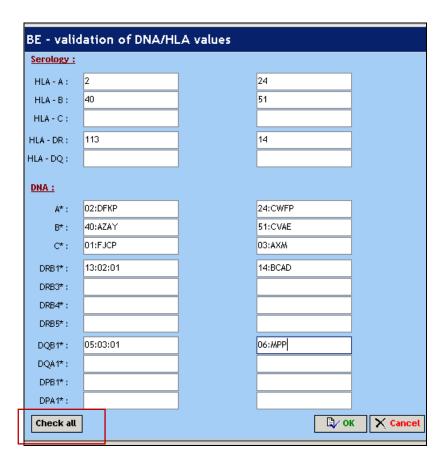


Go to the "donor" menu and press



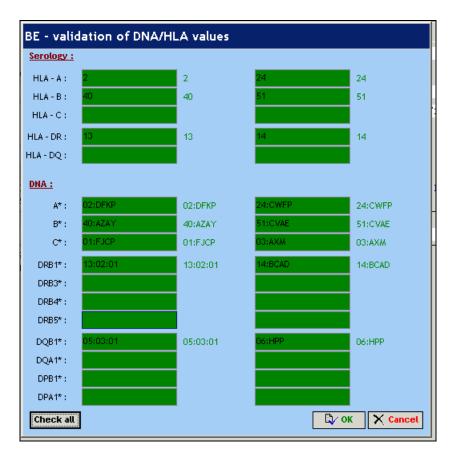
The following validation screen will be opened for entry of the typing fields by double blind input:



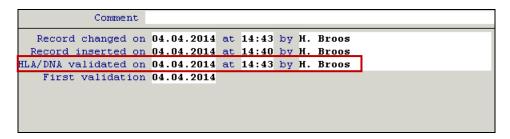


The "check all" button will be available as soon as all applicable fields have been entered:

Press "check all" to check the validation – if the validation is correct, all fields will be highlighted in green.



Press OK, to confirm the validation and the record is validated.



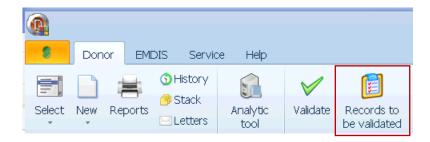
The HLA/DNA validation date will be displayed on the donor record file (will be updated when validating further HLA typing updates). The first validation date will be available.

#### II.VII.1.b. Validation of typing update

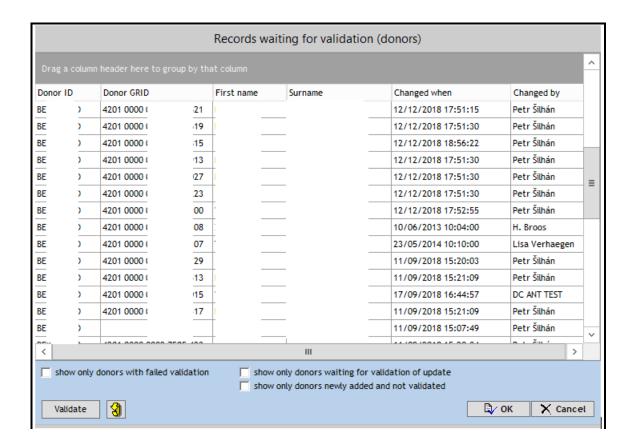
After a typing update the records waiting for validation will be offered in a table after selection of the



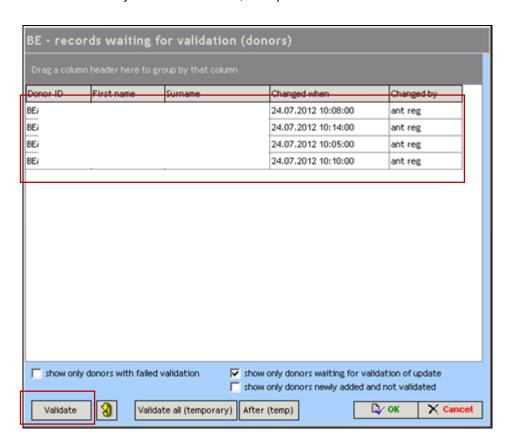
"Donor menu" and then



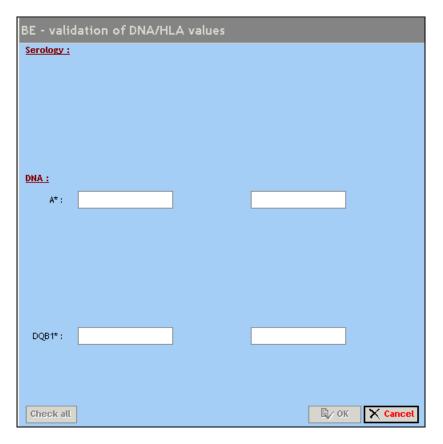
Tick show only donors waiting for validation of update will display the updated donors waiting for validation:



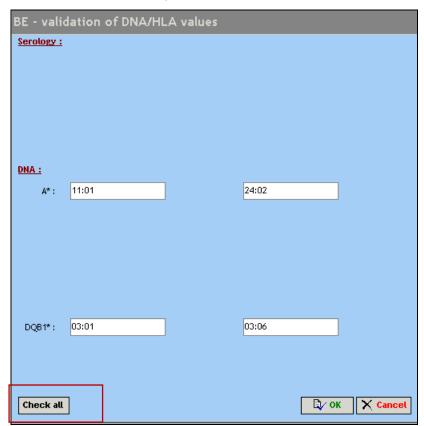
Select the donor you wish to validate, then press "validate":



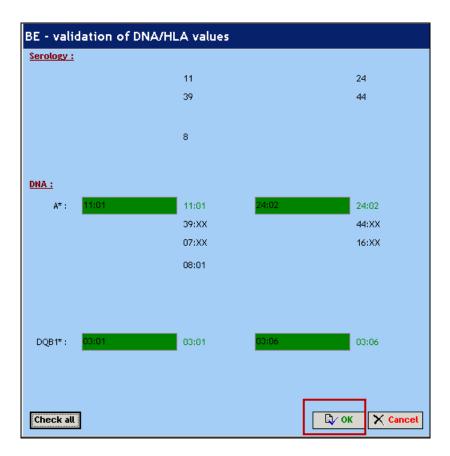
The following screen will be displayed for data entry:



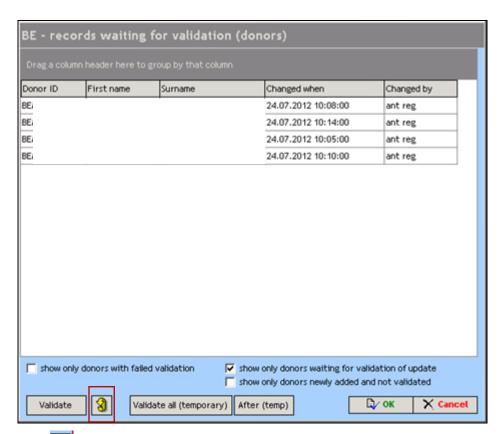
Blank fields will be offered, all fields have to be filled before the "check all" button will become visible:



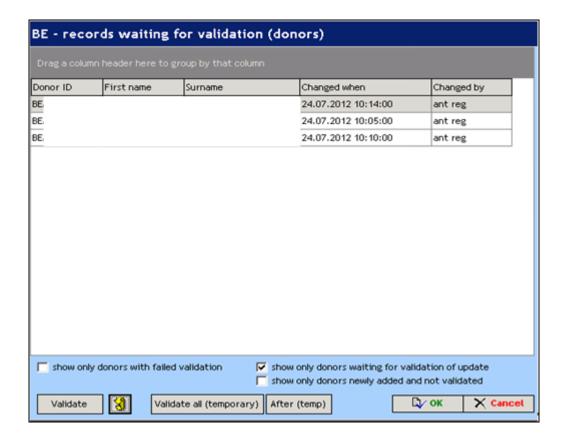
Press "Check all":



The correct validated fields will be highlighted in green, then press OK to terminate the validation.



Click to refresh the window screen, the validated record will disappear from the list.



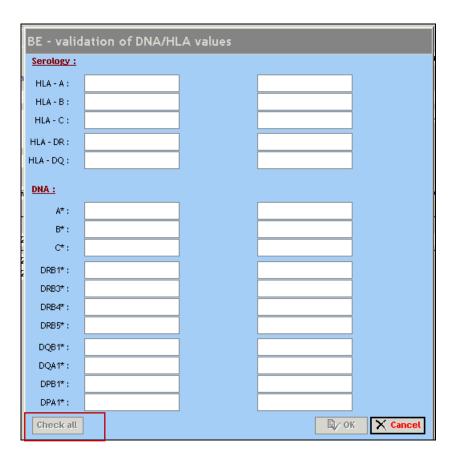
**Note:** in case of a typing update it is recommended to validate the typing as soon as possible. As the record is linked by EMDIS to patients, the old value will still be sent out by updates as long as the update has not been validated.

#### II.VII.2. Failed validation

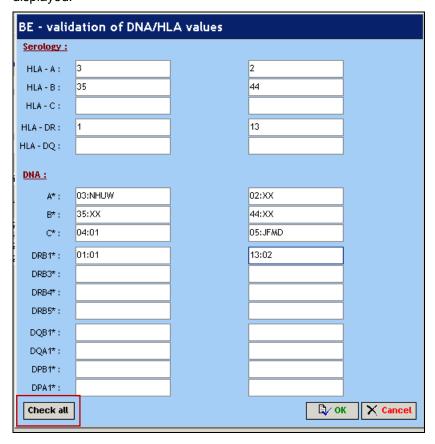
#### II.VII.2.a. Failed validation of new registered donor

As double blind data entry includes data typed one individual, and then typed by second individual (in case of single managed profile, by the same user again), differences will be noted in red after pressing the "check all" button.

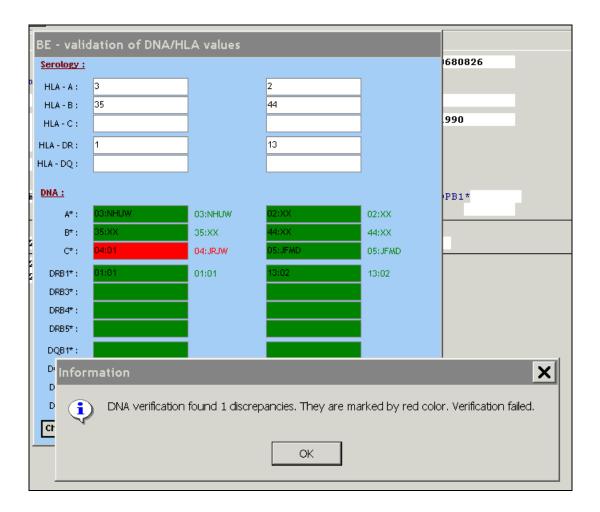
Before validating the donor record must be opened: go to "**Donor**" "Validate": the following screen will be opened:



Enter the data waiting for validation, all data need to be entered before the "check all" button will be displayed:



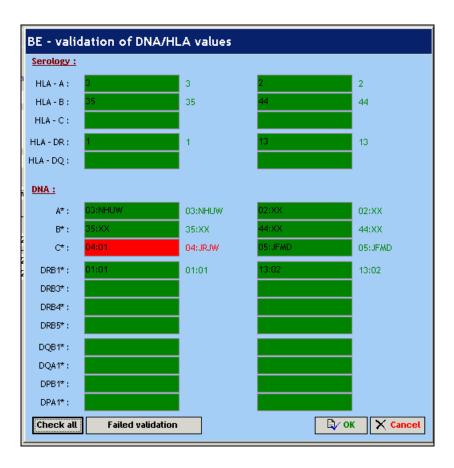
Press "select all" to have the system compared the entered data:



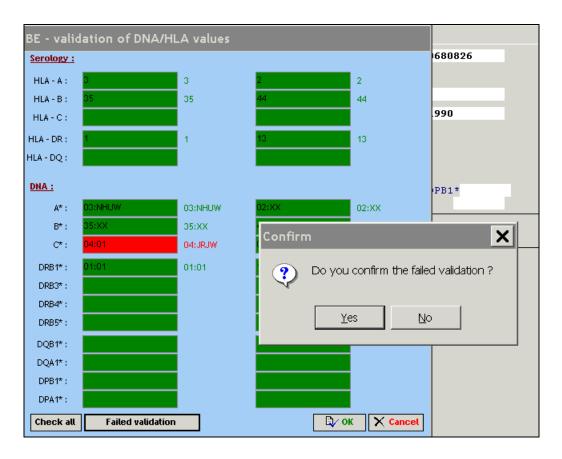
If not all data are correct: the system will display an alert, the discrepancies will be highlighted in red. If the validator made a mistake, he or she can then correct, press "check all", and the DNA verification will be done again. The record will be approved for validation and gets status "HLA/DNA validated".

If the initial data entry is not correct the following steps are to be followed:

Press "OK" to go to the validation window:



The C DNA value should be 04:01, the individual responsible for initial data input should be informed: press "failed validation" to return the record for data input.

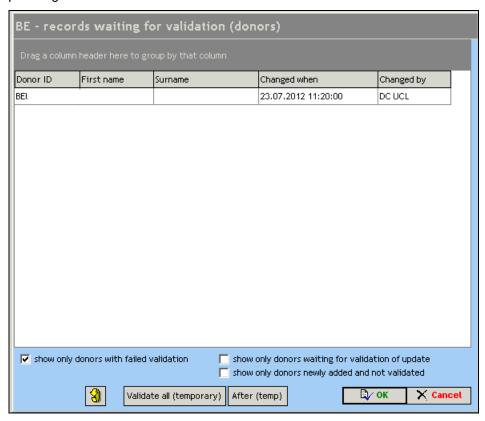


Press "yes" for confirmation.

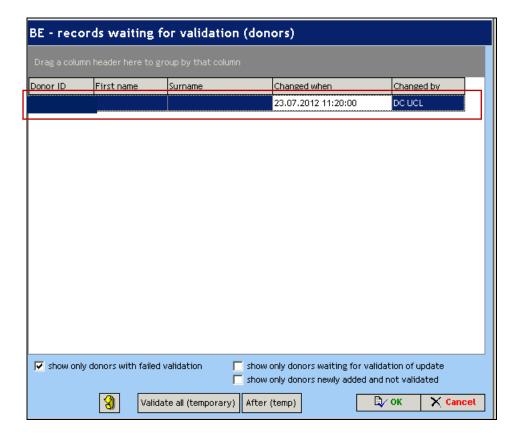


The record will have status "HLA/DNA validation failed": the record will not be available in EMDIS in this stage.

The records with failed validation, waiting for validation will be listed in the following table when pressing "Y":



Click the cursor on the donor you wish to correct and double click to open the donor's record and then press "**OK**":



Your donor record needs to be validated again and will get status "**HLA/DNA** to be validated" again. The validation flow as explained in <u>chapter II.VII.I.</u> will be applicable again.

A donor availability status cannot be changed as long as the record has not been validated, you will be informed by the following warning:



#### II.VI.2.b. Failed validation of typing update

The discrepancy discovered when validating a typing update follows the same process flow. The failed validation will be also be displayed in the "update record with failed validation".

# II.VIII. STACK

The donor stack allows working with more donors together and is mainly used when printing donor reports. The content of a donor stack (set of donors) is saved in a database - it means that the content will stay saved even after termination and restart of the program. Each user works with his own donor stack: each user has at his disposal three sets (stacks) of donors, those are marked by numbers 1, 2 and 3. Data can be stored in all three stacks at once but only one stack is always actively used.

**Active stack:** select the stack (stack 1 - 2 - 3);

**Add:** adds a donor to the stack;

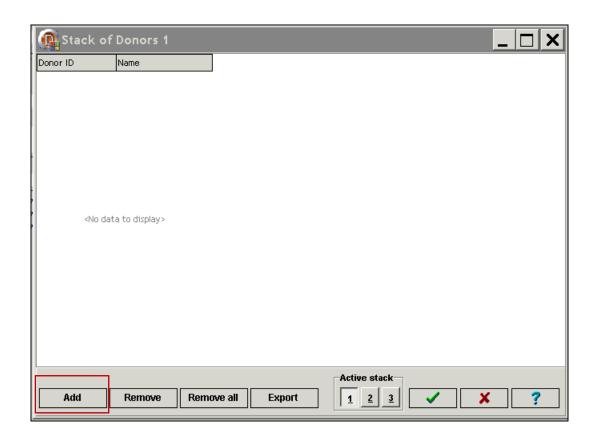
**Remove:** removes a selected donor from the active stack, the donor is deleted from the

stack, but will not be cancelled from the donor database;

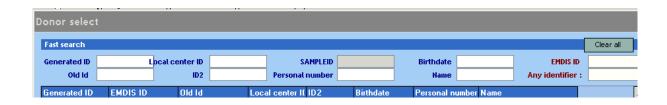
**Remove all:** deletes all donors from the active stack;

**Export:** enables to export your data to an external excel – text – html – xml file.

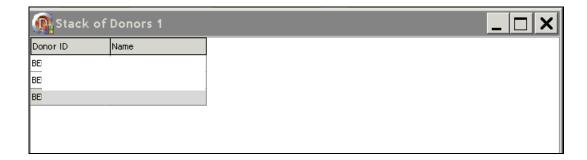
You can open the donor stack through the use of the button opened:

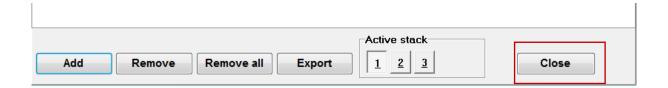


Press "Add" to add a donor to the donor stack, the following screen will be opened:



Enter the donor code or search via the donor select option the donor you wish to add to the stack:



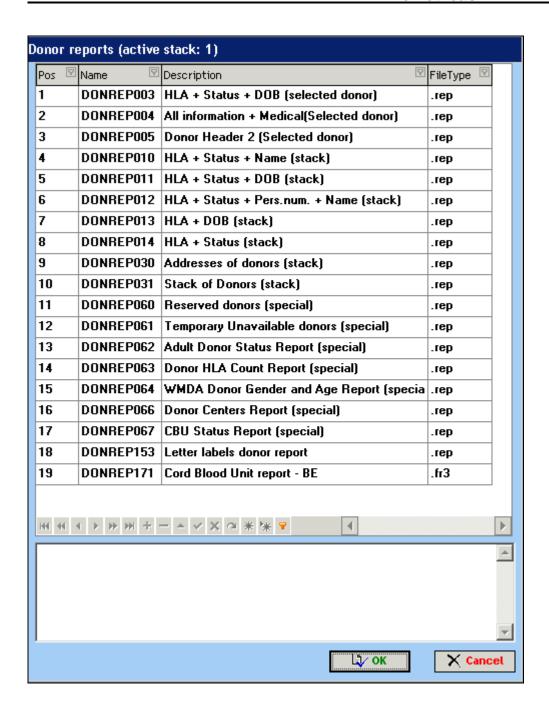


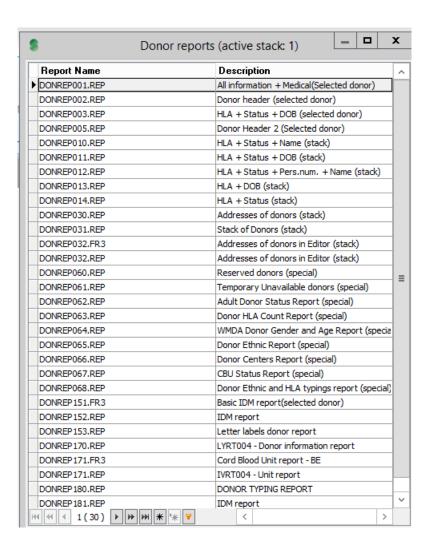
Press "close" to end your stack creation, your stack number 1 will be saved. To call up your different stacks, go to menu|stack, the above window screen will be opened, it is possible to browse between the different stacks you created.

# **II.IX. REPORTS**

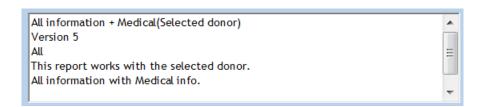


The menu of print reports can be called up by the menu button



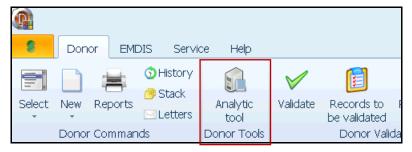


In the window screen below, information about the report is provided.

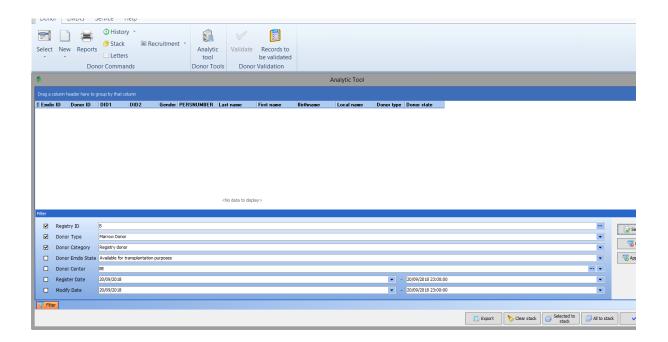


# **II.X ANALYTICAL TOOL**

Your donor \_\_\_\_\_illable for analysis via the software tool donor tools (main m Analytic tool). Click on "Analytical tool":



The following screen will be opened:



It is possible to specify certain parameters to limit the amount of data loaded from the database and to speed up the loading process.

First use the check-boxes to select which parameter to apply before loading the data. Buttons: **Select all** and **Clear** work only with the check-boxes.

Button **Apply filter** starts loading donors from database to the analytic tool.

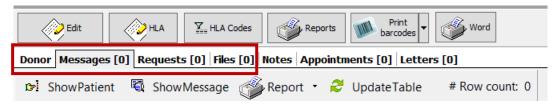
# III. CORD BLOOD MENU

In version 184 the cord dataset includes the extended EMDIS cord dataset, and the cord window screens have been updated consequently.

The explanation of the EMDIS cord data are explained in the latest version of the EMDIS cord Data Dictionary and the latest version of the Mapping version of the CBU EMDIS cord import.

## III.I. SELECT

Cord blood selection follows same rules as applicable for the donor: donor select is explained in chapter I.II.2. Quick select buttons.



Notes – Appointments – Letters : are not applicable for cord bloods.

# III.II. CLOSE

Select Donor Close or F2 or press to end the donor editing.

## III.III. EDIT – CONSULTATION – UPDATE OF CORD BLOOD RECORD

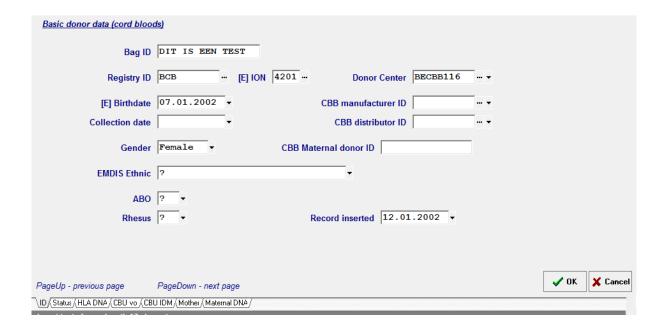
Edit can be used for consulting the cord blood record, change data (medical, availability, ... and change the availability status (Prometheus does not allow to delete any record).

If there is a change of HLA data (sero – DNA) the record must be validated. Validation rules are explained in chapter II.VII. Validate.

Press to open the cord blood record: the ID tab will be opened (other tabs are Status – TX – Address – Sero – DNA – CBU).

### 1.TAB ID

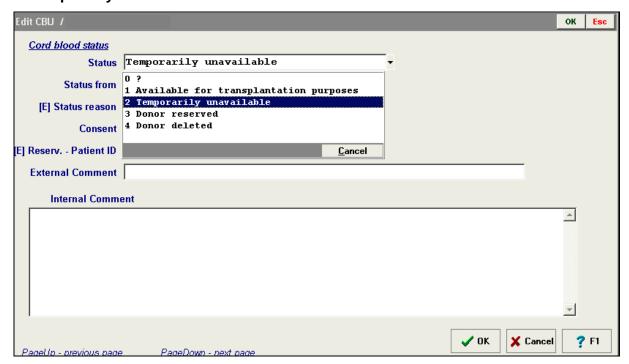
Basic cord blood data:



## **2.TAB STATUS**

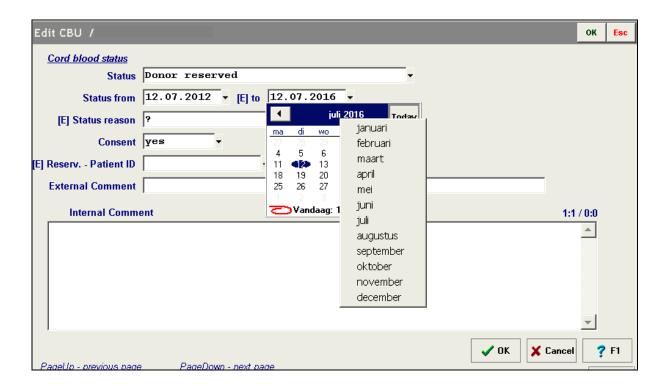
This screen serves to manage the cord availability status

# a. Temporarily unavailable

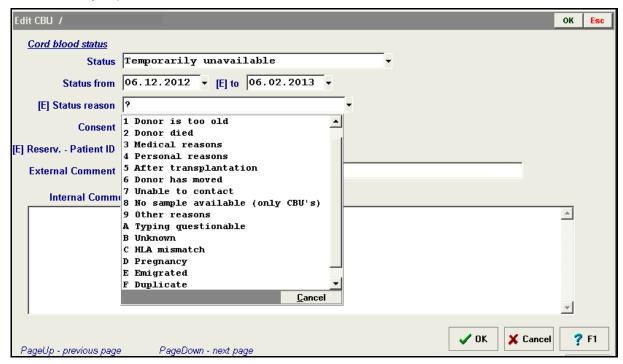


When the cord has been requested for additional typing or shipment of a DNA sample, the user must change the availability status to "2 Temporarily unavailable", and reserve the cord for a period of 60 days cfr MDPB-R SOP:

Click on the actual month to display the drop list and select the month 60 days ahead to enter the end of availability date:

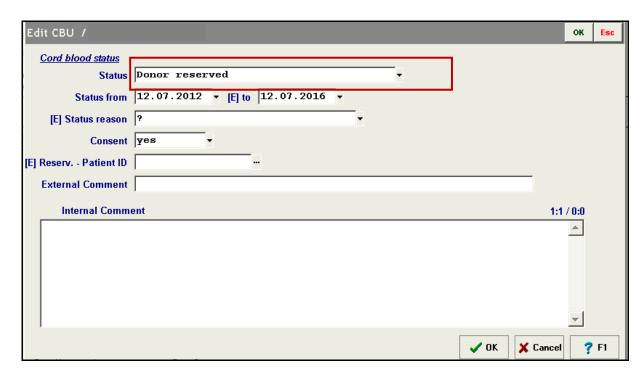


It is mandatory to put a status reason. You need to choose "9 Other reason".



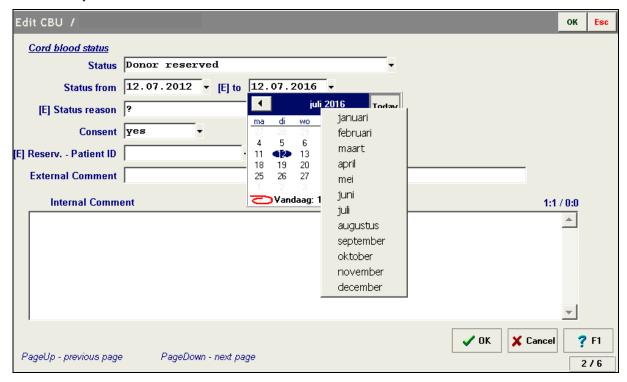
#### b. Reservation

When a TC is requiring a reservation of a unit you need to edit the status into "3 Donor reserved".



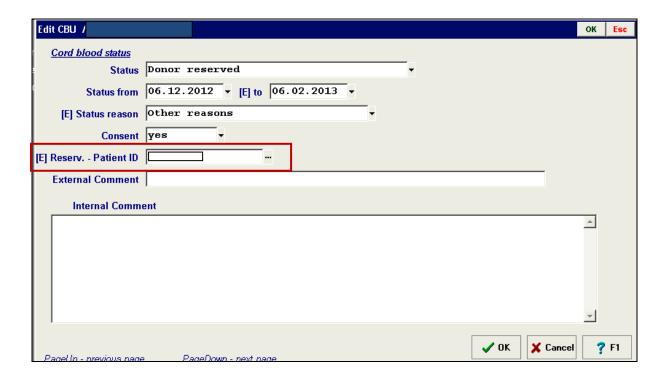
It is mandatory to enter the reservation period by indicating the start date and the end date of reservation.

Click on the actual month to display the drop list and select the month 60 days ahead to enter the end of availability date:



There will be an alert for CBU reservation expiration via the system (warnings: donor database quality check).

It's mandatory to enter the patient ID for which the CBU is reserved, the message will be sent via EMDIS. The HUB of the patient will be informed consequently.



#### c. Cancellation

When a cord blood has been shipped for transplantation, the record must be set to deleted status, otherwise the cord search results will be sent out for national and international patients. (in Prometheus the record will not be deleted but receive the status 'deleted'.)



The information will be sent out via EMDIS.

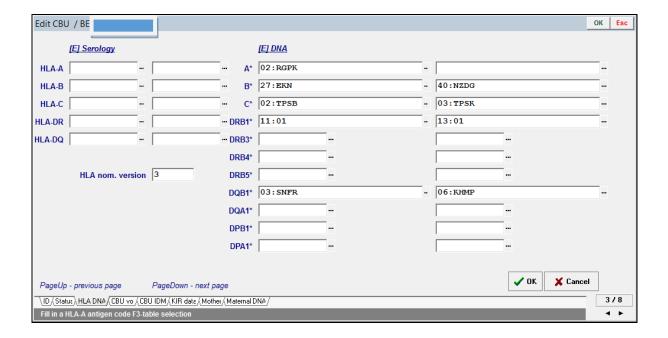
Go to the tab TX to add complementary information in the cord blood delivery field.

# 3. TAB HLA DNA

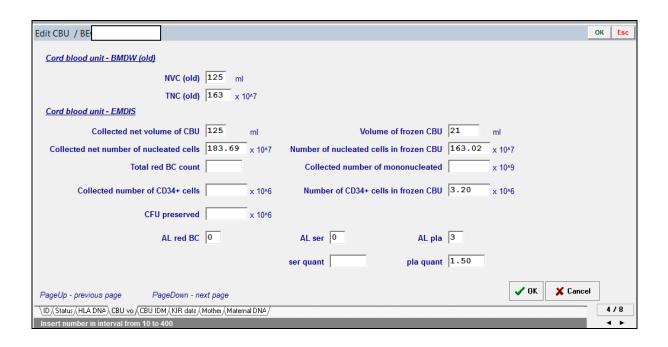
List of valid values appear when clicking the dots right from input field or by pressing F3.

For information about the serology typing go to <a href="mailto:chapter1.II.4.5.a">chapter I.II.4.5.a</a> HLA data – serology

For information about the DNA typing input go to <u>chapter I.II.4.5.b HLA data – DNA</u>.

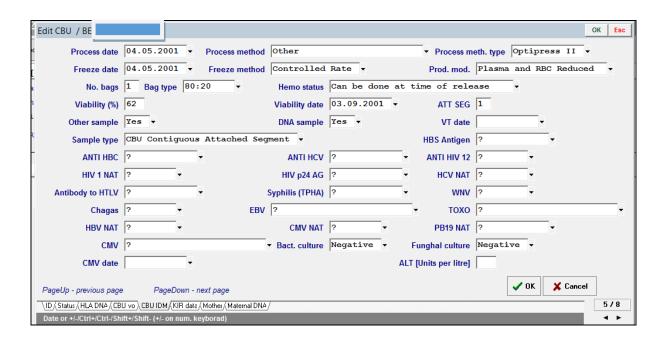


## 4. TAB CBU vol



The NVC/TNC values under cord blood unit – BMDW are the data exported to BMDW.

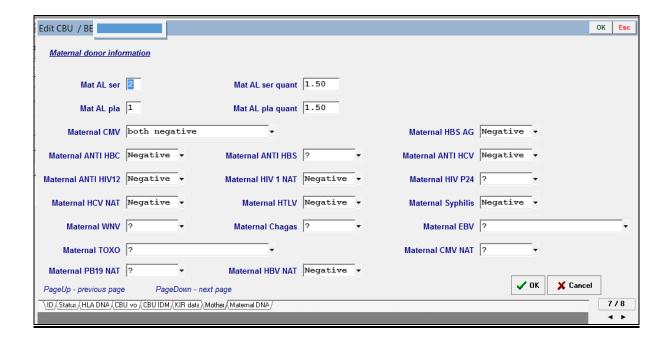
## 5. TAB CBU IDM



# 6. TAB KIR DATA

<u>NA</u>

## **6. TAB MOTHER**



### **6. TAB MATERNAL DNA**

## NA

## III.IV. NEW CORD BLOOD

The tool to create new records is not available for cord blood: the cord bloods will be uploaded via interface.

## III.V. HISTORY

The history of cord blood data change is available by the command History . Open the cord blood's record and then go to "donor – history". If a history exists, the table with his data will appear, otherwise a blank table will be opened.

# III.VI. VALIDATE

The validation of a typing update follows the same rules as for donor validation and is further explained in chapter II.VII. Validate.

## III.VII. STACK

Please see chapter II.VIII. Stack.

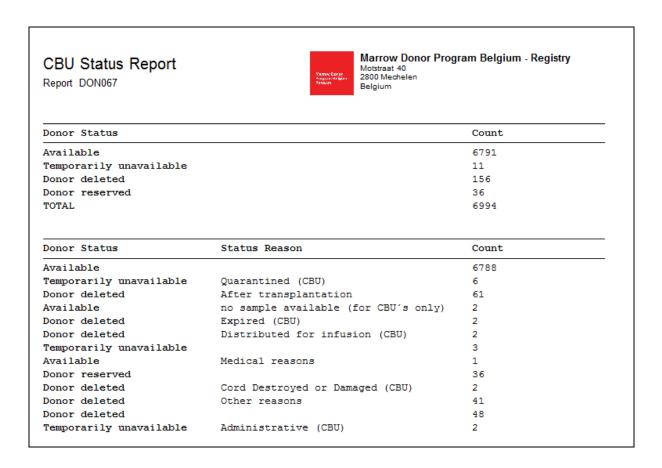
## III.VIII. REPORTS

The same reports as explained in chapter II.IX. Reports are available for the Cord Blood Bank user.

Two reports are especially for CBU's:

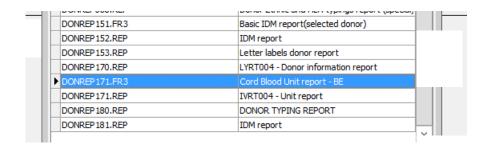
#### a. DONREP067 CBU status Report

Report DON067 is created for Cord Blood Bank use: the report displays counts of cords and their respective availability status:

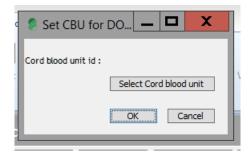


#### b. DONREP171 BE Cord Blood Unit report:

Report DON171 is created for Cord Blood Bank use: the report displays characteristics of the unit.



DONREP171 will open the next window screen:



Then press OK: the cord blood report will be edited:

				UNIT HLA TYPII	NG		
A or	B or	C or	DR or	DRB3	DRB4	DRB5 DQ or	DPB1
<b>A</b> *	B*	C*	DRB1			DQB1	
	27:EKN	02:TPSB	11:01			03:SNFR	
	40:NZDG	03:TP SK	13:01			06:KHMF	
UNIT CH	ARACTERIS	STICS		CBU MAT	ERNAL		
Colle	cted net volume	e of CBU <b>125</b>	ml	Mat AL ser	2	Mat AL ser quant	1,5
	Volume fro	zen CBU 21	ml	Mat AL pla	1	Mat AL pla quant	1,5
Collected net n	umber of nuclea	ted cells 183.6	9 10^7	Matana al CMIV	D-#5 1-0		
Number of nucle				Maternal CMV	Both IgG and	igii negative	
				EBV			
0000.0	d number of CD	011 00110 0	10^6	TOXO			
Number of CE	34+ cells in fro	zen CBU 3,2	10^6	HBS AG pos./neg.	Negative	WNV	?
Collected number	of mononuclea	ited cells 0	10^9	ANTI HBC	Negative 2	Chagas	?
	CFU p	reserved 0	10^9	ANTI HBS ANTI HCV	? Negative	HBV NAT	Negative
Met	hod of volume r		-	ANTI HIV12	Negative	CMV NAT	?
				HIV 1 NAT	Negative	PB 19 NAT	?
Boo	kmark CBU	<u>II</u>		HIV P24	?		•
Bag				HCV NAT	Negative		
Bag typ		guous Attached	l Segment	HTLV	Negative		
No. bag	gs 1						
Sample typ	ample type CBU Contiguous Attached Segment			<u>Bookmark</u>	CBU IV		
Collection da	te 3/05/2001			ANTI HBC		ATT SEG	1
CT complete da	te			ANTIHOV		OTH SMPL	Y
Bacterial cultu				ANTI HIV 12	?	DNA SMPL	Ý
Process me				HIV 1 NAT	?		-
Process da		5.4		WNV	?		
Freeze met Freeze da		Rate		Chagas	?	HCV NAT	?
Funghal cultu				HBV NAT	?	ALred BC	0
Prod. mo	_	d RBC Reduce	d	CMV NAT	?		
			-				
Hemo statu		ne at time of rel	ease	AL ser	0	serquant	0
RED B				AL pla	3	pla quant	1,5
Viabili Viability da							
viability da	16 3/09/2001						

# **III.IX. ANALYTICAL TOOL**

Please see chapter II.X. Analytical tool.

# IV. EMDIS

## IV.I. INTRODUCTION

**EMDIS** (European Marrow Donor Information System) is a communication system for the data exchange between bone Marrow Donor Registries, Transplant Centers, Donor Centers, HLA labs, and Cord Blood Banks.

The term **HUB** is used for the Donor Center or Transplant Center sending or receiving EMDIS messages. In Prometheus **Belgium** is considered as an EMDIS country. The activation of a Belgian search will be processed as an EMDIS search activation, as well as the reported results from Belgian donors.

The term "donor" means "stem cell donor" or "cord blood unit".

Each request is uniquely determined by the donor, patient identifier, the category of request and the date of request.

The user is not allowed to create duplicate requests, if necessary, cancel the previously created request before creating new ones. The request received from abroad will be rejected if it is duplicate.

The donor status in the EMDIS system can take following values:

**AV** (Available): the donor is available for transplantation.

**TU** (Temporarily Unavailable): the donor is temporarily unavailable. The reason why and the

period of unavailability must be indicated.

**RS** (Reserved): the donor is reserved.

**OP** (Other Patient): the donor is reserved for another patient.

**DE** (Deleted): the donor is deleted from the Registry. The reason is indicated.

## IV.II. EMDIS MESSAGES

## IV.II.1. New and old messages – requests without answers

In the Emdis window panel the requests without answer, new and old messages will be displayed. This panel allows to print reports, and analytic tool for incoming typing and sample requests.

Rq. w/o answer - pending messages

New - all recently received or sent messages

Old – messages marked by the user as processed will be listed under the EMDIS – old section.

Reports - EMDREP001 - EMDIS messages

Analytic tool for incoming typing requests

Analytic tool for incoming sample requests

## New messages:

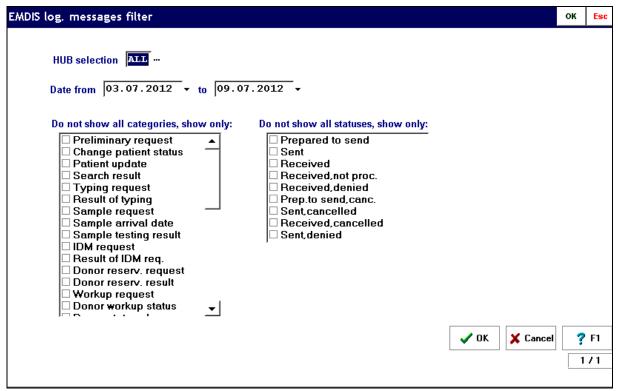
Another way to check new arrival of messages or old messages is by going to the "EMDIS menu" and when you press EMDIS the new messages will be displayed on the window screen:



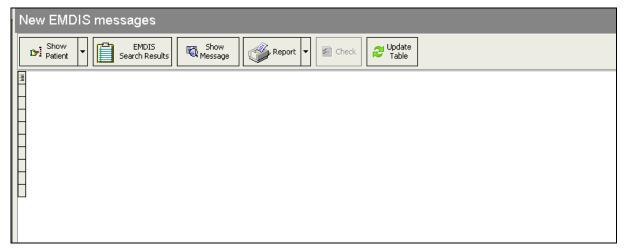
# **Old EMDIS messages:**

It is possible to use the filter to add some conditions to the messages you want to display. You can limite e.g. the date range (date from ... to ...) and make a selection of message type.







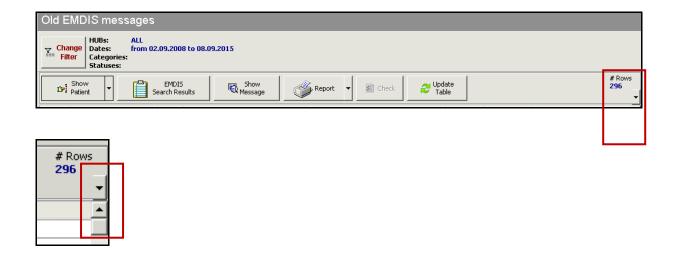


Click on the small button in the left upper corner , to display all available columns :



Your selection will be saved for your following login sessions. Don't forget to select the "**OK**", as this option serves to change the status of the Emdis from new to old.

You can store the user settings by selecting the arrow on the right:





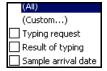
### IV.II.2. Window panel EMDIS messages

When you tick the OK box (in the table of the messages), you indicate that you have consulted the message and it will be saved in the **old messages** category.



Press update table to update the new EMDIS messages list, the message you consulted will be removed from the list.

- Column headings of the table behave intelligent: if you click on them, you can sort them by ascending or descending order.
- You can filter the displayed values in this column by the click on the arrow in the column heading.



- You can edit the column width.
- You can change the displayed order of the columns by the "drag & drop" of the column heading between two other column headings.
- The title bar of a message consist of the following tabs:

Patient's name: patient name;

HUB: code of the Registry;

Category: type of request;
Date: request date;

Status: EMDIS status of the message: received, cancelled, ...;

Donor: donor code:

TC: in some cases the Transplant Centers TC codes are included in the

message;

## IV.II.3. Status of messages

The status of the message can be consulted in the status field:



The different options:

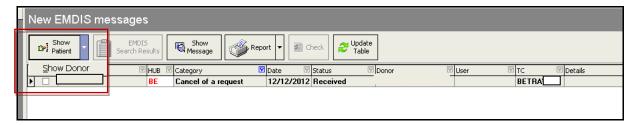
- Prepared to send: the message has not yet been sent, will be sent with next processing session
- Sent: the message has been sent
- Received: message received
- Prep. to send, canc.: the message was cancelled before being sent
- Sent, cancelled: the message has been sent, but cancelled afterwards
- Received, cancelled: the message has been received, but cancelled later by the sender
- Received, not proc.: received search request but the system has not yet done a search. This is a very temporary state.
- Received, denied: a formal message denial because breaking EMDIS rules

#### IV.II.4. Message contenance

This chapter describes the window browsing of the messages:



Clicking on the message or selecting "show message" will open the message:



**Show patient** – not applicable for donor management

**Show donor** - you can switch to the donor records file to consult the donor record and the list of donor messages

The message consists of 3 tabs: **G**eneral – **P**hysical messages – **C**ontent.

When you open the message the **Content tab** will be immediately opened.

The basic information of your message (request – result) is available in the screen: the buttons below will allow you either print the message, create a WMDA report or to send an answer (result, warning, reminder, cancellation, ...) to the other HUB (or Belgium).

User documentation part 2 – Donor and Cord Blood management – version 5.0

The EMDIS system data message is available in the **Physical message tab**, technical information about the message (inserted in the database, status, message number, .... ) is available in the **General** tab.

# IV.II.5. Overview of message types

In the table below of the different message types (donors, but patients as well).

Message title	Description
PAT_UPD	New patient registration
PAT_STAT	Patient status change
PAT_ALTPH	Patient alternative phenotype registration (IS NOT USED ANY MORE)
DONOR_CB	List item of convenient donors for patient (one donor or cord blood)
PHEN_LIST	List item of convenient phenotypes for patient (one phenotype).
MATCH_SUM	Summary of search result for patient.
TYP_REQ	Request of further donor type testing.
TYP_RES	Result of further donor type testing
SMP_REQ	Request of sending of donor blood sample.
SMP_ARR	Supposed date of delivery of donor blood sample.
SMP_RES	Sample test result.
IDM_REQ	Request of sending of infectious illness sample.
IDM_RES	Result of request of sending of infectious illness sample.
RSV_REQ	Request of donor reservation for transplantation purpose.
RSV_RES	Result of reservation.
REQ_CAN	Request cancel.
WOR_REQ	Request of starting work on transplantation.
MARR_STAT	State of "work" with donor.
NEW_ADD	Register data update.
MSG_DEN	Request rejection.
WARNING	Warning message.
TXT_MSG	Text message.
DON_UPD	Donor downloading. (not used)
SEA_RES	Search result. (not used)
NO_RES	No result. Service cannot be settled.
MSG_ACK	Received messaged confirmation.
RES_REM	Unsettled request remind.
ALM_REQ	Donor alternative phenotype reservation.
ALM_RES	Same as DONOR_CB, but it is used as answer to ALM_REQ
CBR_REQ	Request of supplemental information about Cord blood unit

# IV.II.6. Automatic warnings and message denials

Patient status changed

Type: warning

Institution is not registered in HUB XX

Type: warning

Cannot change patient status

Type: Message denial

Cannot change patient status

Type: Message denial

Invalid fax or phone format

Type: Message denialInvalid institution typeType: Message denial

Request has already result

Type: Message denial

Request has already result or it has been already cancelled

Type: Message denial

Request does not exist or it has been denied or cancelled

Type: Message denial

Your request has been denied

Type: Message denial

Our request has been cancelled

Type: Message denial

Your request has been cancelled

Type: Message denial

Our request has been denied

Type: Message denial

## IV.III. RECEIVING REQUESTS - REPORTING RESULTS

A Donor Center (Cord Blood Bank) can receive requests from 3 parties: EMDIS patients, Belgian patients and non EMDIS patients (entered by the MDPB-R search coordinator).

The following messages will arrive:

- a. Typing request
- b. Sample request
- c. IDM request
- d. CBU unit report
- e. Reservation request

The tools offered in these messages (reporting result, printouts, WMDA forms) are the same for the different folders and are explained below.

Click on **Messages** to display the list of received and sent messages (the number of available messages between brackets);



Show message - will open the message

Show patient - not applicable for donor management

Report - offers the possibility the print the message or the WMDA form

Update table - to display new messages or replies you sent

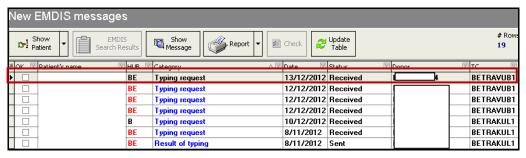
#### **NEW**:

"Messages": all messages will be listed under messages.

"Requests": all requests will be listed under requests with additional status info .

#### IV.III.1. Typing request (TYP\_REQ)

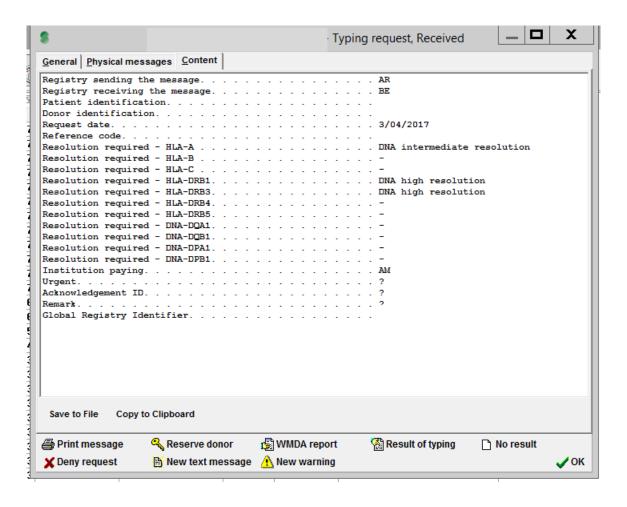
Double click or click on Message to open the request screen:



#### **NEW: field donor GRID.**



Double click and go to the tab "content": patient ID, requesting country, donor ID, request date and the requesting resolutions will be displayed. The tab "Content" allows you to have printouts or report the result by clicking on the buttons below:



#### The following actions are possible:

- Print message
- Print WMDA report
- Result of typing
- No result
- Deny request
- New text message
- Reserve donor
- New warning

#### 1. Print message:

Messagenumber:79030 Category: Typing request Date: 03.04.2017 12/45 Status: Received		Marrow Conce Anagram Helgian Registry	Motstraat 2800 Med Belgium	helen			
PATIENT Name: hidden EMDIS	ID:						
TC: AR Date of birth:	Sex	: F Pat	. reg.:	AR ABO: ?			
DONOR ID:							
Date of birth:	ex: M Don	. reg.: 1	BE ABO:	?			
	A or	B or	C or	DR or D	RB345	DQ or	DPB1
	A*	B*	C*	DRB1		DQB1	
Patient's antigens	23:01	14:02	07:02	11:02		03:01	
	68:02	49:01	08:02	15:03		06:02	
	2	44					
Donor's antigens	9	21		11 7			
Registry receiving the message  Patient identification  Donor identification							
Request date			3/0	4/2017			
Resolution required - HLA-A			DNA	intermediat	te resolu	ıtion	
Resolution required - HLA-B							
Resolution required - HLA-C							
Resolution required - HLA-DRB1			DNA	high resolu	ution		
Resolution required - HLA-DRB3			DNA	high resolu	ution		
Resolution required - HLA-DRB4							
Resolution required - HLA-DRB5							
Resolution required - DNA-DQA1							
Resolution required - DNA-DQB1							
Resolution required - DNA-DPA1							
Resolution required - DNA-DPB1							
Institution paying			AM				
Urgent			?				
orgent							
Acknowledgement ID							

# 2. Print WMDA report:

The request can also be printed on a prefilled WMDA form by clicking:



The WMDA S20 Request for extended donor HLA typing report will be printed:



Marrow Donor Program Belgium - Registry

Marrow Donor Progra Motstraat 40 2800 Mechelen 2800, Mechelen +32-15443396 +32-15443656 mdpb-registry@rodekruis.be

S20	REQUE	ST FOR EXTE	NDED DONOF lage 1 of 2	R HLA TYPING	Urgent request
PATIENT DA					
Patient name:	OKTOBEL OKTOBEL				
Patient registr	у: В				
Diagnosis:	Hodgkin's Lymp	homa	In a con-		
Patient ID: (assigned by patie	ent registry)	Þ	Patient ID: (assigned by donor	r registry)	
	(YYYY-MM-DD)		(addigited by define	rogiony,	
	(*****				
PATIENT HLA					
Locus:	First value:	Second value:		Testing method	d:
	03:01	03:01	☐ DNA-SSP	☐ DNA-SSO	☐ DNA-SBT
A	00.01	00.01	Other:		
	15:01	15:01	☐ DNA-SSP	☐ DNA-SSO	☐ DNA-SBT
В	15.01	15.01	Other:		
	00.00.00.04	00.00.00.04	☐ DNA-SSP	☐ DNA-SSO	☐ DNA-SBT
С	02:02:02:01	02:02:02:01	Other:	☐ DIVA-330	☐ DIVA-3B1
DRB1	03:01	03:01	☐ DNA-SSP	☐ DNA-SSO	☐ DNA-SBT
			Other:		
DRB3/4/5			☐ DNA-SSP	☐ DNA-SSO	☐ DNA-SBT
			Other:		
DQA1			☐ DNA-SSP	☐ DNA-SSO	□ DNA-SBT
Dani			Other:		
DQB1			☐ DNA-SSP	☐ DNA-SSO	☐ DNA-SBT
DQBI			Other:		
5544			☐ DNA-SSP	☐ DNA-SSO	☐ DNA-SBT
DPA1			Other:		
			☐ DNA-SSP	☐ DNA-SSO	☐ DNA-SBT
DPB1			Other:		
LA TYPING RE	QUEST				
B 1B	BEANT0				
A	High		П	П	
В	High	i i	<u> </u>		
С					
DRB1	☑ High				
DRB3/4/5					
DQA1					
DQB1	☑ High				
DPA1					
DPB1	П				



Marrow Donor Program Belgium - Registry

Motstraat 40 2800 Mechelen 2800, Mechelen +32-15443396 +32-15443656 mdpb-registry@r

	mapo-registry@rodekrais.be
REQUEST FO	PAGE 2 of 2 Urgent request
PATIENT DATA	
Patient name: Oktober Oktober	
Patient registry: B	
Diagnosis: Hodgkin's Lymphoma	
Patient ID: (assigned by patient registry)	Patient ID: (assigned by donor registry)
Date of birth: (YYYY-MM-DD)	
Comments:	
Requesting institution:	Invoice(s) to be sent to:
nstitution: BE	Institution: BEMDP-B
Address:	Address:
	l I

Requesting institution:	Invoice(s) to be sent to:				
Institution: BE	Institution: BEMDP-B				
Address:	Address:				
Marrow Donor Program Belgium - Registry	Marrow Donor Program Belgium - REGISTRY.				
ZIP code: <sub>2800</sub>	ZIP code: <sub>2800</sub>				
City: MECHELEN	City: MECHELEN				
Country: BE	Country: BE				
Attention: HILDEGARDE BROOS	Attention: Hildegarde Broos				
Phone: +32-15-443396	Phone: +32-15-443396				
Fax: +32-15-443656	Fax: +32-15-443656				
E-mail: MDPB-registry@rodekruis.be	E-mail: hildegarde.broos@rodekruis.be				

Person completing form:	Date: (YYYY-MM-DD)	Signature:
DC ANT TEST	2017-12-12	

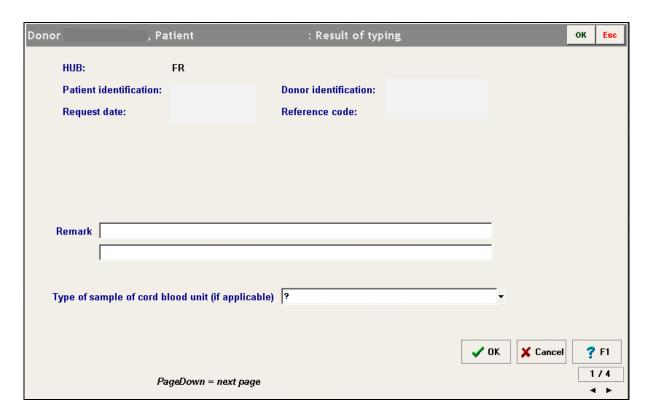
#### 3. Result of typing

To enter a typing result, you first need to **Edit t**he donor file (HLA typing update) and validate afterwards before you can send the result to the requesting Registry.

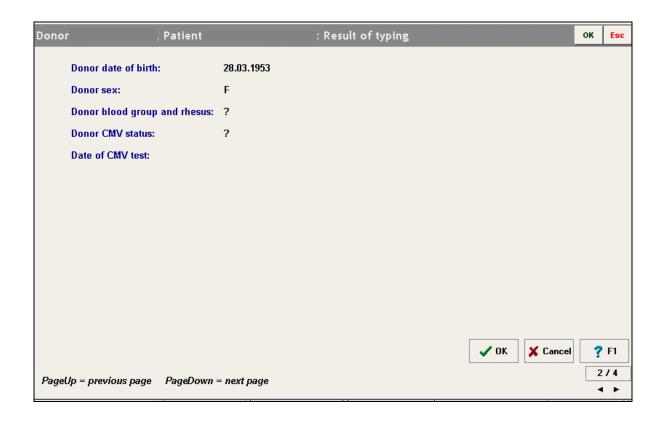
When the update has been done, you can immediately go to the EMDIS message to send the result via EMDIS:

Press Result of typing and the first screen (of 4) will be displayed:

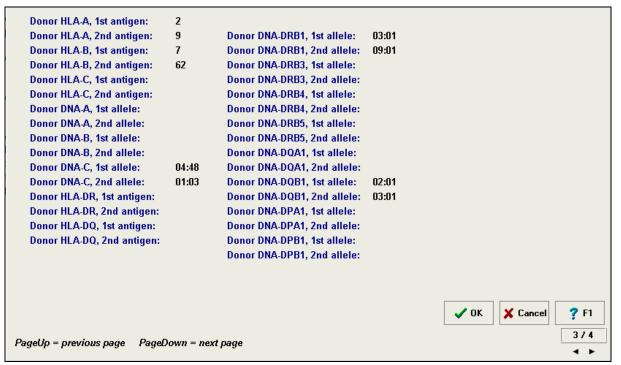
Enter a remark if necessary, type of sample of cord blood unit is not applicable for donors.



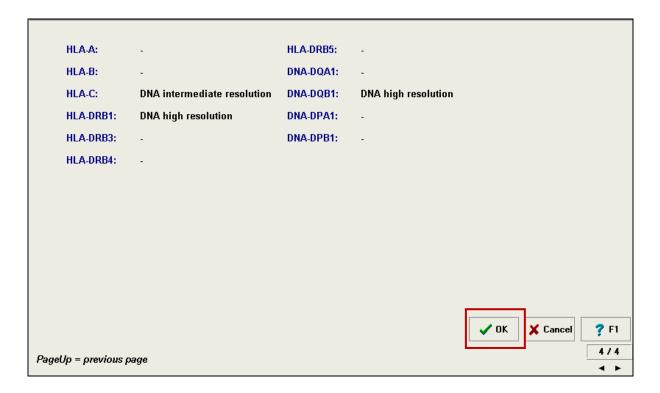
**Screen 2/4**: DOB – sex – blood group – CMV are displayed:



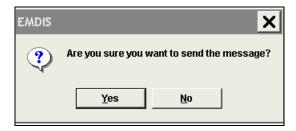
Screen 3/4: Complete HLA data are displayed



Screen 4/4: Display of requested typing resolutions:



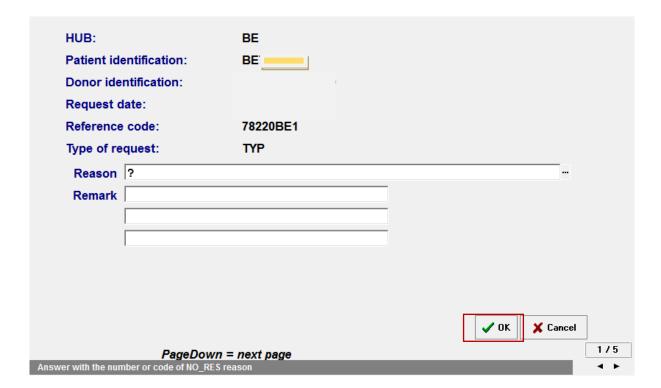
Press "**OK**" to send the message:



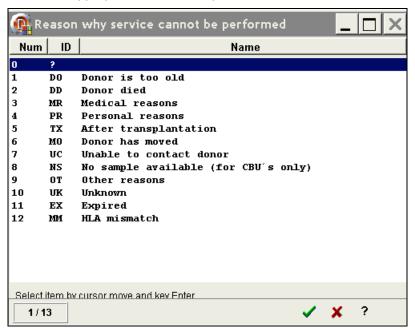
The typing results will be queued in the messages, and receive status "prepared to send": the message will be sent with the next processing session. Afterwards it will receive status "message has been sent".

## 4. No result : service cannot be performed (NO\_RES)

The no result message informs the requesting hub that a service cannot be performed. Several no result messages are allowed for the same request since they can be considered as an update to the result.



Select the appropriate reason and press



In window 2, 3, 4, 5 the main donor date will be displayed.

Press to confirm your message :



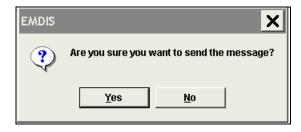
Press "yes" and the message will be queued for the next processing session.

## 5. Deny request: message denial (MSG\_DEN)

The software contains functions to automatically send out message denials. This message will not be processed at the other side and has to be resent.

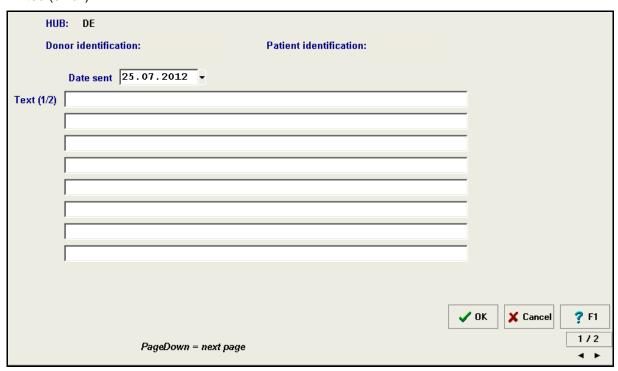


Enter the reason why the service cannot be performed and press "yes" to confirm:



## 6. New text message (TXT\_MSG)

The text message has a comment function for a patient/donor pair to send to the remote database. It can be used to transmit free text messages between hubs, however this communication should be limited (email).



#### 7. Reserve donor

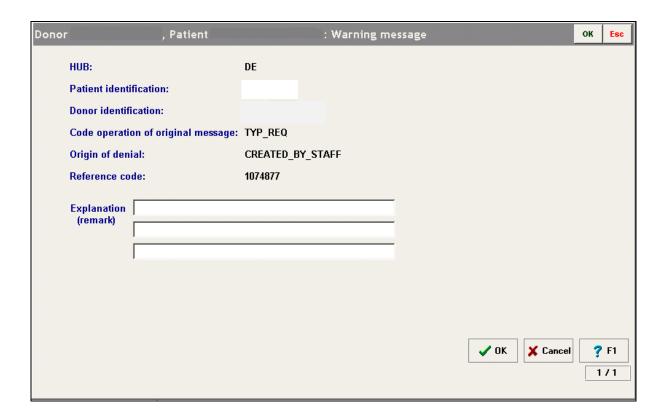
Press to open the donor reservation window screen, set time frame. The donor record will be updated, and the record will be reserved for this patient until the defined end of reservation period.



#### 8. New warning

It is possible to send a warning message to the Hub via the New warning

The warning has an informational character. The message is processed, but has not to be resent.



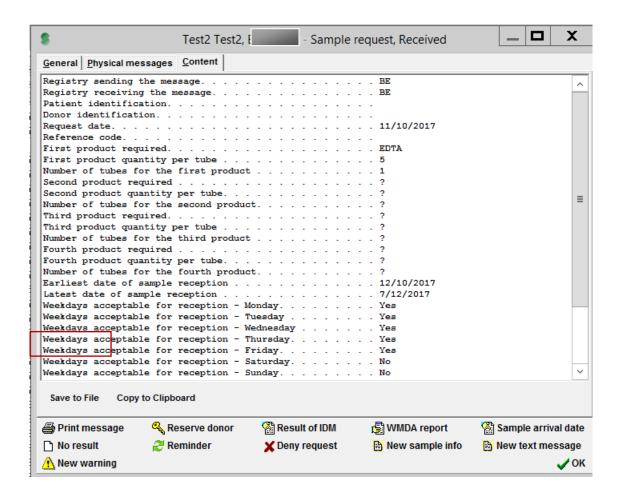
## IV.III.2. Sample request

#### The following actions are possible:

- Print message
- Print WMDA report
- Sample arrival date
- Result of IDM
- No result (same as typing request)
- Deny request (same as typing request)
- New text message (same as typing request)
- Reserve donor (same as typing request)
- New warning (same as typing request)
- New sample info



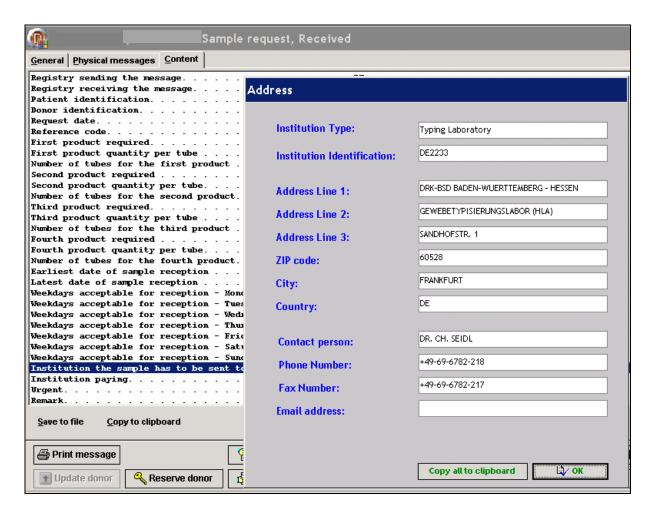
Select the "sample request" and double click to open the request screen. Details and blood sample requirements of the request are displayed in the **Content tab**:



The fields "earliest and latest date of sample reception" represent the lower and upper limit of a period of time in which the blood sample has to be received. If the second date is missing, the sample may be received any time after the first date.

Only one sample request can be open for a patient / donor pair.

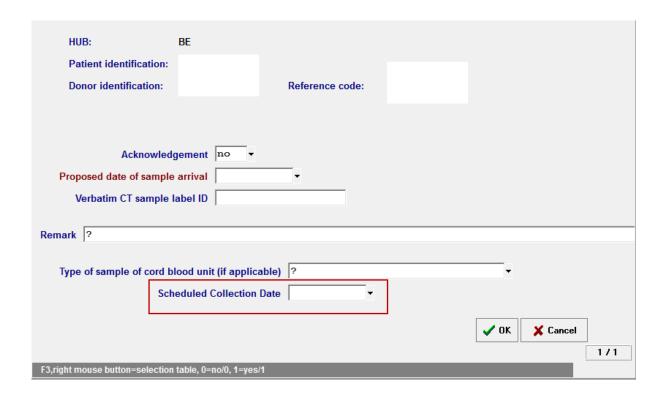
You can click on the institution line to open the address coordinates:



- 1. The message can be printed via the Print message or WMDA report
- 2. WMDA report: S40 Blood sample request for verification typing.

Marrow Donor Program Belgium Registry			Marrow Dono Motstraat 40 2800 Mechelen 2800, Mechelen +32-15443396 +32-15443656 mdpb-registry@rod		ram Belgium - Regis
BLOOD SAMP			RIFICATIO	N TY	PING
	Page	1 of 1			
PATIENT DATA					
Patient name: Test2 Test2					
Patient registry: B					
Diagnosis: Plasma Cell Disorder					
Patient ID: BE BE		Patient ID: (assigned by d	onor registry)		
	3-10-04	Gender: F	onor registry)		
	3-10-04	Gender: F			
Transplant center: BETR,					
DONOR ID(s)					
BE274842D					
BLOOD SAMPLE REQUIREMENTS (rec	ommended maximur	n = 50 mL - nle	ase provide clinica	al reason	s for greater volumes)
5 mls EDTA					neck all that apply)
mls heparin	Monday		Tuesday		Wednesday
mls ACD	Thursday		Friday		Saturday
mls no anticoagulant	Sunday				
mls					
DISCLAIMER: The cell products collected from the donor a mentioned patient. No other use is permissible. Excess blo used for the intended testing must be disposed of properly, deviations from these terms must be submitted in writing to	od volume is allowed for qu By accepting these cells,	uality control testin the transplant phys	only but not for research	ch purpose	
Courier Service: VT samples will automate for this VT sample are based on the use of courier service, please list that courier service.	of this courier servi	ce. If you pre	fer that the samp		
Preferred courier service:					
Samples to be shipped t	0.	Involo	e(s) to be sent to		
In a 416 a 41 a a a	Institution:			Copy shipping address	
Address: BELABHILA1	Institution: BEMDP-B Address:				
RODE KRUIS - VLAANDEREN Histocompatibility & immunogenetics LA	Marrow Donor Program Belgium - Registry Motstraat 40				
ZIP code: 2800		ZIP code: 2800			

3. Click the Sample arrival date to enter the blood sample arrival date:



New: "Scheduled collection date": new EMDIS release requires scheduled collection date:

**Acknowledgement Id** – if you wish to receive a message from the Transplant Center that they received the message select yes.

**Proposed date of sample arrival** - suggested arrival date.

Verbatim Ct sample label ID - donor label ID (if not used unknown).

Remark - optional (120 characters)

(in case of cord blood)

#### Type of sample of cord blood unit (if applicable): CB sample type

0:?

- 1: CBU contiguous Attached Segment
- 2: whole Blood sample
- 3: Red cell Fraction (pellet)
- 4: Blood Spotted Filter Paper
- 5: Extracted DNA

Scheduled collection date: date of blood sample collection

Press to confirm the date, and press "yes" to send the EMDIS message:



The message will be queued for processing, and receive status "prepared to send".

4. Click the Result of IDM button, to open the window screens (4 pages):

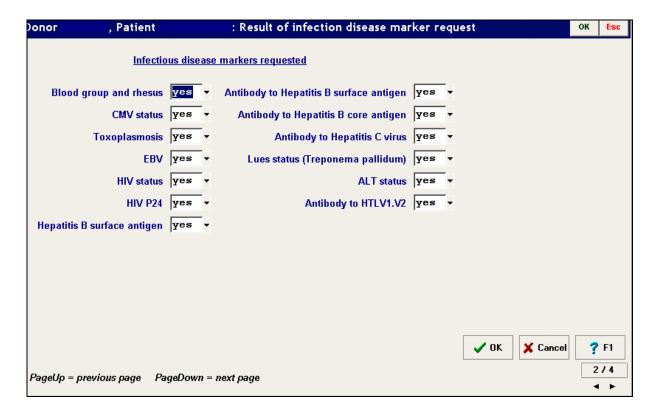
The first screen of 4 pages will be opened. Don't forget that this tool will send the IDM results, but does not offer data entry: **the IDM results need to be entered in the donor record via edit.** When you select the donor for editing, you can immediately go to the tab "EMDIS messages" to send the message:



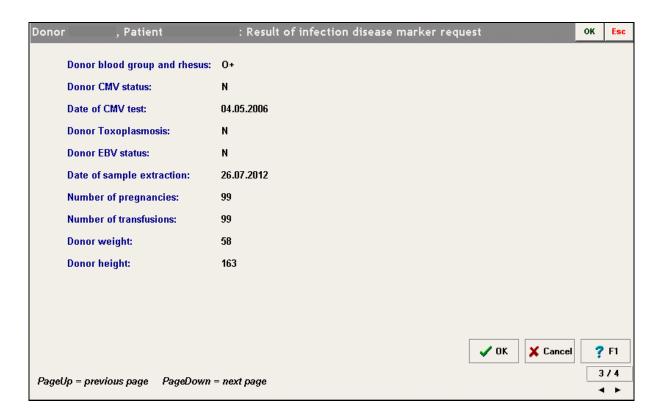
At the first screen a remark (120 characters) can be added:

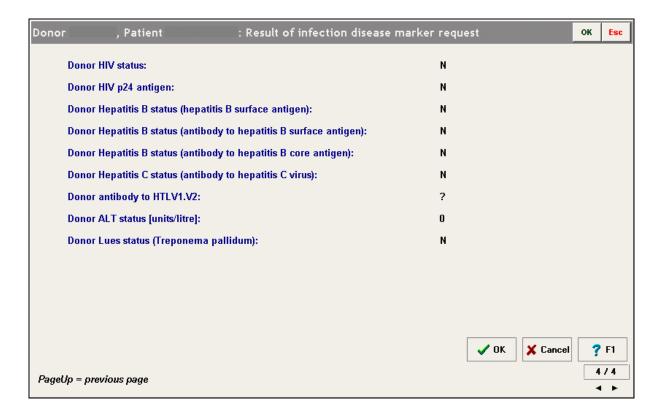


The requested markers are indicated in screen 2/4:

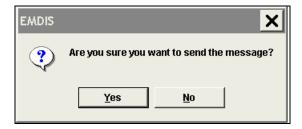


The reported infectious disease markers updated in the donor record are displayed in window screen 3 and 4:





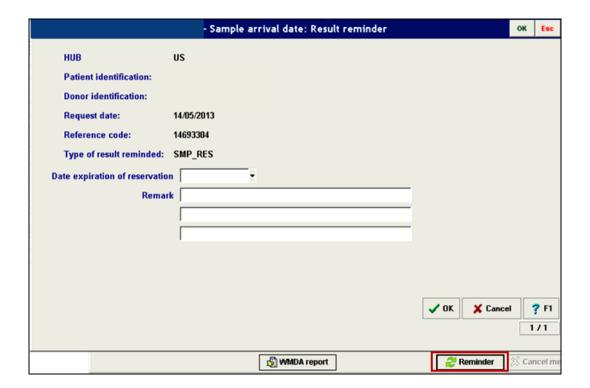
Press "OK" to confirm:



Press 'yes' and the message will be queued for processing, and receive status "prepared to send".

No result, Deny request, New text message, Reserve donor, New warning are the same window screens as for typing request.

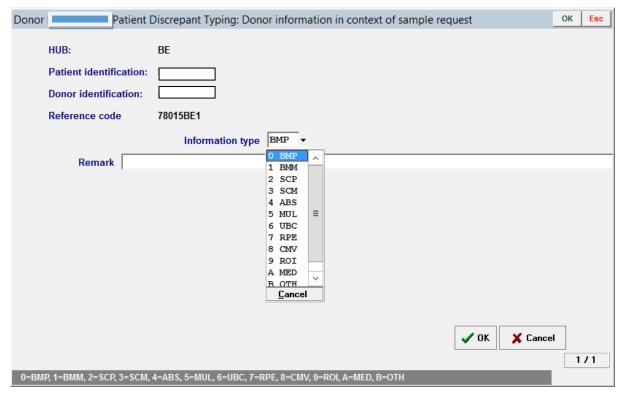
It is possible for the donor center to remind the transplant center (Belgian and international) to send the confirmatory typing results: go to the sample arrival message and click on the button to open the following window screen:



5. Click the button, to open the window screen to send additional information about the donor.

This message can only be exchanged in one direction, from the donor side to the patient side, and the message always refers to sample information. There might be several sample information messages within the context of one sample request, subsequent sample information is regarded as new or additional information.

A remark is available for detailed information



Explanation of the list of codes:

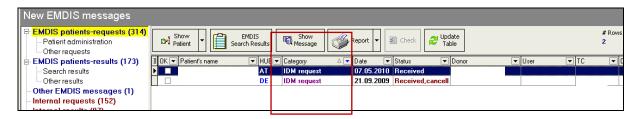
donor only available for bone marrow donation for personal reasons BMM: donor only available for bone marrow donation for medical reasons SCP: donor only available for PBSC donation for personal reasons SCM: donor only available for PBSC donation for medical reasons ABS: (absent) donor not available for a certain period of time MUL: Multi donation UBC: donor unavailable after blood collection RPE: increased risk that donor is declined during physical examination CMV:

CMV: additional information regarding CMV status ROI: donor was in a region with a higher risk of infection

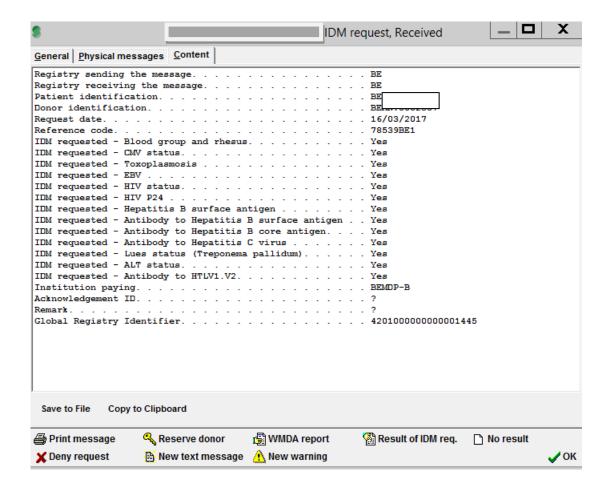
MED: other medical information

OTH: other non-medical information

# IV.III.3. Infectious disease marker requests (IDM request)



Click the IDM request to open the request screen, the IDM's requested are displayed in the content tab:



The requested IDM's include: the blood group and rhesus, CMV status, toxoplasmosis, EBV, HIV status, HIV p24 antigen, Antibody to hepatitis B surface antigen, Antibody to hepatitis B core antigen, Antigen to hepatitis C virus, Lues status, Alt (alanine aminotransferase) and Antibody to HTLV1.V2.

Several requests for the same patient – donor pair are possible, but each message has to be answered by a result message, but it is recommended to avoid multiple requests.

The result has to be sent by clicking on Result of IDM req. , the same window screens will be offered as in the result screen after a blood sample request. Please note that the IDM's have to be updated in the donor's record, before being able to send via EMDIS

### IV.III.4. CBU report request (CBU\_REQ)

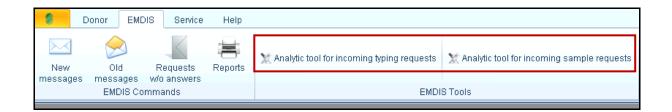
It is possible to print the message, have a WMDA printout, reserve the donor, send txt messages and warnings, and deny the request.

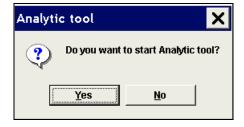
## IV.III.5. Reservation request (RSV\_REQ)

It is possible to print the message, have a WMDA printout, reserve the donor, send txt messages and warnings, and deny the request.

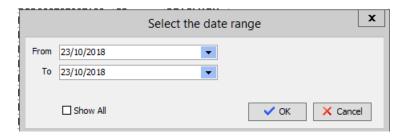
# IV.VI. ANALYTICAL TOOL: INCOMING TYPING REQUESTS – INCOMING SAMPLE REQUESTS

The analytical tool gives an overview of all received typing requests or sample requests. Go to:





Select the period for which you want to print the incoming typing request by selecting date from:

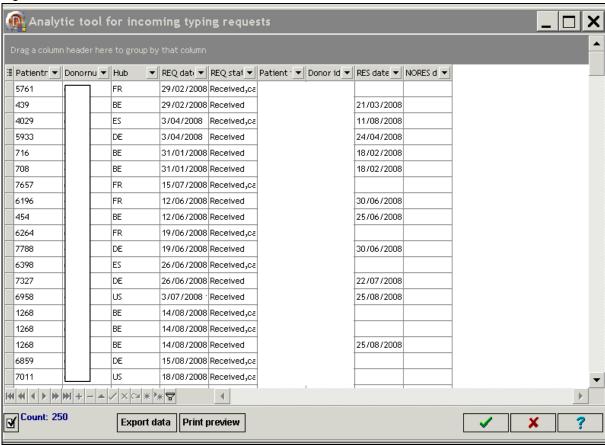




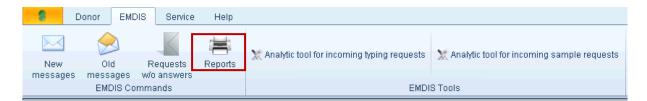
The analytical tool gives an overview of all received typing requests or sample requests. Clicking on enables you to make of a selection of columns to you wish. Further tool options are explained in chapter II.X. Analytical tool.

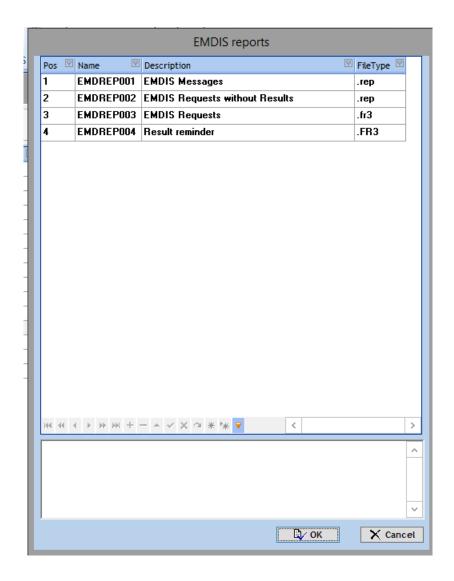


The first time you login, you have to set your columns settings, your selection will be saved for future login sessions.

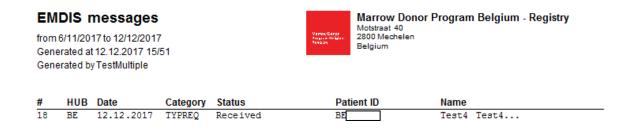


## **IV.VII. EMDIS REPORTS**





The EMDIS REP001 report will list up all EMDIS messages (received – sent) inclusive EMDIS status:



HUB: code of requesting Registry

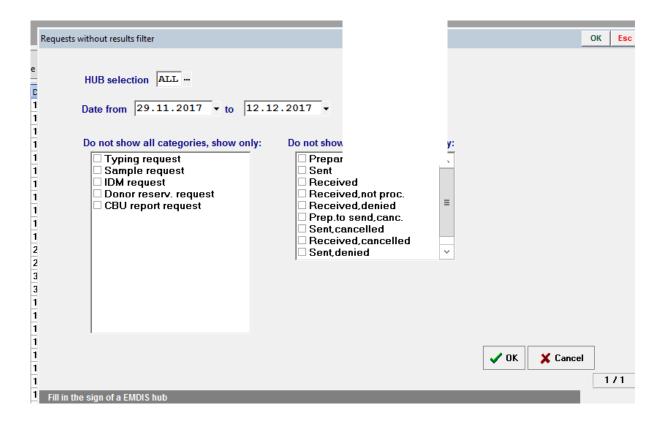
Date: request date
Category: type of request

Status: EMDIS status of the message: received, sent, ...

Patient ID: patient's ID

Name: patient's name

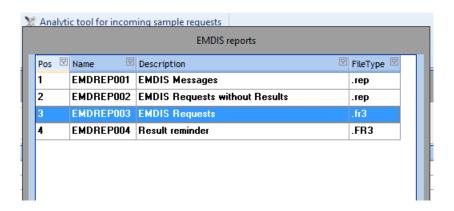
The **EMDIS REP002** report will open the following window screen:



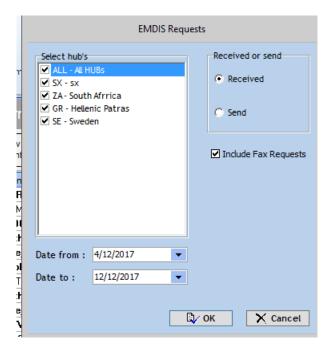
When you select "Typing request" and the "Received" a report with pending typing requests will be printed:



The **EMDIS REP003** report will open the following window screen:



#### Select the registry:



This report will count the number of typing requests, sample requests, IDM requests and Reservation requests:



#### Statistic report how many requests were received.

Marrow Donor Program Belgium - Registry

Motstraat 40

2800 Mechelen

Belgium

Received requests from 4/12/2017 to 12/12/2017.

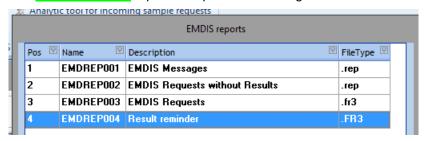
Generated at 12/12/2017 15:36:08

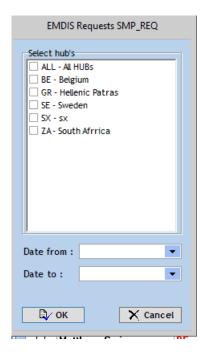
Generated by TestMultiple

Hub	TYPREQ	SMPREQ	IDMREQ	RSVREQ
SX	0/0/0/0	0/0/0/0	0/0/0/0	0/0/0/0
ZA	0/0/0/0	0/0/0/0	0/0/0/0	0/0/0/0
GR	0/0/0/0	0/0/0/0	0/0/0/0	0/0/0/0
SE	0/0/0/0	0/0/0/0	0/0/0/0	0/0/0/0
Total	0/0/0/0	0/0/0/0	0/0/0/0	0/0/0/0

Format in columns: Received/Canceled/Denied/All

The **EMDIS REP003** report will open the following window screen:





This report lists the pending sample requests:

