

User manual

STEP

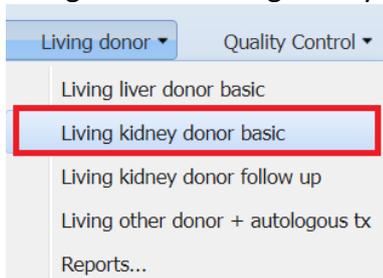
(10may2022)

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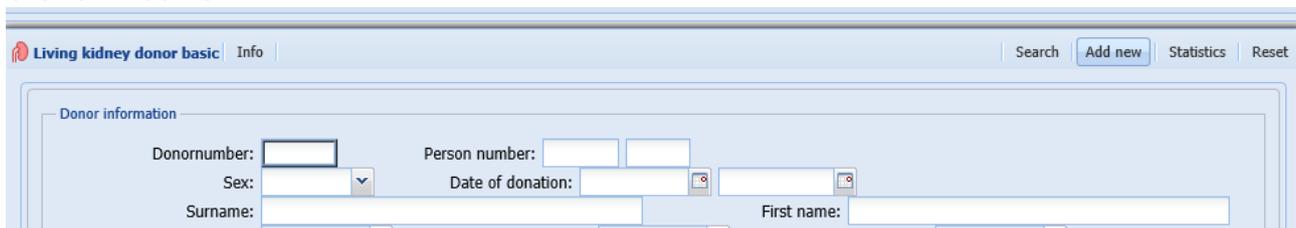
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1. Register an incompatible/altruistic living donor

Living donor -> Living kidney donor basic



Click on 'Add new'

A screenshot of the 'Living kidney donor basic' data entry form. The form has a header with 'Living kidney donor basic' and 'Info' tabs, and buttons for 'Search', 'Add new', 'Statistics', and 'Reset'. The main form area is titled 'Donor information' and contains several input fields: 'Donor number:', 'Person number:', 'Sex:' (a dropdown menu), 'Date of donation:', 'Surname:', and 'First name:'. The 'Donor number' field is currently empty.

1.1. Basic donor parameters

You can now start with the data entry. Donor number will be assigned after you have saved the data.

A few parameters are obligatory to register before you can save the data. The obligatory parameters are sex, country, birth-date, Tx. center, ABO blood group, relation code and organ type. Organ type is found under the "Preop." tab.

Relation code: For incompatible living donors select 'STEP-donor' as relation code, as the code is related to the possible transplantation and not the incompatible related-recipient.

Clinical data: GFR, sitting untreated BP, Diabetes and Proteinuria must be register on the donor to fulfil the requirements outlined in the STEP guidelines.

1.2. Linkage between donor and recipient

Create a link between the incompatible donor-recipient pair by clicking in the STEP relation field:

Basic information | Preoperative data | Infection serology | HLA Typing | Baseline risc factors | Kidney function

Tx-center: ML: Malmö/Lund | No basic info:

Local hospital: | ABO blood group: 0

Relation information

Relation code: | STEP Recip.: Click here to choose STEP-relation

Other relation: |

Bring forward the recipient by searching on Scandia number or person number, click on the specific patient and save

Registered recipients | Info | Search | Reset

[Enter search parameters]

Scandianumber: 201006 | Country: | Personnumber: |

First name: | Last name: |

Date of birth: | Tx center: |

Scandianumber	Personnummer	First name	Last name	Tx center
→ 201006	5011214	First name: T.	Surname: K.	TA: Tartu

1.3. HLA typing on Living donor

The donor must be typed and registered with 2nd field resolution on HLA-A, B, C, DRB1, DRB3, DRB4, DRB5, DQA1, DQB1, DPA1 and DPB1. If it is not possible to exclude ambiguities please register CWD alleles and state this by selecting from 'Haplotype/CWD alleles' list and/or add a comment.

Basic information | Preoperative data | Infection serology | HLA Typing | Baseline risc factors | Kidney function

Serological/serological equivalent

A: | B: | Bw4/Bw6: |

Cw: | DR: | DQ: |

Genomic

A: 0201 | B: 5701 | 1501 | C: 0602 | 0304 |

DRB1: 0401 | 0701 | DRB3/4/5: 4*0103 | 4*0102 | DPA1: 0103 | |

DPB1: 0301 | 0402 | DQA1: 0101 | | DQB1: 0302 | 0303 |

Haplotype/CWD alleles: |

Comments: | Calculated Bw: w4,w6

For match

A: 2 | B: 17 | 15 | Cw: 6 | 3 | DR: 4 | 7 | DQ: 3 | 3

2. Update information on recipient

Recipient -> All Recipients

The recipient must be on the kidney waiting list (active/on hold) to be part of the STEP program.

2.1. Recipient ABO acceptance

The default setting is that the recipient is allowed to receive kidneys of all blood groups.

If you want to add restrictions you need to add the blood groups that the recipient cannot accept, this is done on the waiting list under 'Non-accepted ABO'.

Waiting List	Date of entry	Termination	Tx date	Tx number
→ KI: Kidney	01-Mar-2022			

Non-accepted ABO: A1B,A2B,AB,B

Indication for STEP: DSA

Max anti-A titre: Max anti-B titre: Date of analysis:

STEP Donor	DSA	non-DSA	non-bead
98306	B*5101 DQA1*0101...	A*0301 A*1101 B*3501 C*0401 C*1502 DPA1*0103,DPB1*0301 DPA1*0103,DPB1*0402 DQA...	DQA1*0101,DQB1*0303 DQA1*0302,DQB1*...

2.2. HLA typing on recipient

The recipient must be typed and registered with 2nd field resolution on HLA-A, B, C, DRB1, DRB3, DRB4, DRB5, DQA1, DQB1, DPA1 and DPB1. If it is not possible to exclude ambiguities please register CWD alleles and state this by selecting from 'Haplotype/CWD alleles' list and/or add a comment.

Basic info	Clinical data	Address/Phone	HLA Typing	Antibody Screen Test	Fusion	Acceptable Antibodies	Previous Mismatches	Death
Serological/serological equivalent								
A:	2		B:	57	62	Cw:	10	6
Bw4/w6:	w4	w6	DR:			DQ:	8	9
Genomic								
A:	0201		B:	5701	1501	C:	0602	0304
DRB1:	0401	0701	DQB1:	0302	0303	DPB1:	0301	0402
DQA1:	0201	0301	DPA1:	0103		DRB3/4/5:	4*0103N	4*0103
Haplotype/CWD alleles: <input type="text"/>								
Comments: <input type="text"/>				Calc. Bw: <input type="text" value="w4,w6"/>				
For match								
A:	2		B:	17	15	Cw:	6	3
DR:	4	7	DQ:	3	3			

2.3. HLA antibody data on recipient

MFI/bead data on recipients with HLA antibodies must be transferred from Fusion software to YASWA to define if there are any donor specific antibodies (DSA) against the donors enrolled in the program. Separate manuals describing this procedure is found on the [homepage](#).

Basic info	Clinical data	Address/Phone	HLA Typing	Antibody Screen Test	Fusion	Acceptable Antibodies	Previous Mismatches	Death
Date of sample		Antibodies						
09-Jul-2018		A*23:01,A*24:02,A*24:03,B*15:01,B*15:02,B*15:12,B*45:01,B*49:01,B*50:01,C*03:03,DQA1*01:02,DQB1*06:09,DQA1*01:03,DQB1*06:03						

Bead information in the Fusion tab is isolated and currently only used for STEP match runs. Data found in 'Antibody screen test' and 'Previous mismatches' have no effect on these data.

Default setting is that antigens/beads with MFI ≥ 2000 are regarded as positive. If you wish to view/change default values select the most recent sample in the 'Fusion' tab.

HLA with mfi			Info			Back	Save	Reset	Filter; e.g. DRB1*
Scandianumber: 1			Date of sample: 09-Jul-2018						
Bead data									
MFI	HLA	Status	MFI	HLA	Status	MFI	HLA	Status	
4344.16	A*24:02	M: MFI cut-off	612.33	B*67:01	M: MFI cut-off	0	DRB1*09:02	M: MFI cut-off	
3683.56	A*23:01	M: MFI cut-off	610.38	DQA1*04:0...	M: MFI cut-off	0	DRB1*10:01	M: MFI cut-off	
3602.71	A*24:03	M: MFI cut-off	587.48	C*03:02	M: MFI cut-off	0	DRB1*11:01	M: MFI cut-off	
2861.67	B*15:01	M: MFI cut-off	566.1	DQA1*02:0...	M: MFI cut-off	0	DRB1*14:01	M: MFI cut-off	
2781.26	B*15:12	M: MFI cut-off	554.08	A*80:01	M: MFI cut-off	0	DRB1*14:02	M: MFI cut-off	
2636.83	C*03:03	M: MFI cut-off	553.31	B*53:01	M: MFI cut-off	0	DRB1*14:54	M: MFI cut-off	
2490.91	B*15:02	A: Acceptable						M: MFI cut-off	
2430.91	B*49:01	M: MFI cut-off						M: MFI cut-off	
2419.47	DQA1*01:0...	U: Unacceptable						M: MFI cut-off	
2410.92	B*50:01	M: MFI cut-off	365.1	A*43:01	M: MFI cut-off	0	DRB1*16:01	M: MFI cut-off	
2232.41	B*45:01	M: MFI cut-off	247.08	B*27:08	M: MFI cut-off	0	DRB3*01:01	M: MFI cut-off	
2103.01	DQA1*01:0...	M: MFI cut-off	240.92	A*66:01	M: MFI cut-off	0	DRB3*02:02	M: MFI cut-off	
1985.08	B*13:02	M: MFI cut-off	237.21	B*55:01	M: MFI cut-off	0	DRB3*03:01	M: MFI cut-off	
1980.39	B*15:03	M: MFI cut-off	214.39	B*42:01	M: MFI cut-off	0	DRB4*01:01	M: MFI cut-off	
1842.2	B*15:10	M: MFI cut-off	170.89	DRB5*01:01	M: MFI cut-off	0	DRB4*01:03	M: MFI cut-off	
								M: MFI cut-off	

If you click on the status field you are able to change a positive MFI/bead to 'A: Acceptable' or a negative bead to 'U: unacceptable'.

Previous mismatches/non-acceptable antigens must be given separately in the Fusion tab or as a non acceptable antigen in YASWA.

Before each match run it is important to check that the most recent sample in the Fusion tab is updated with correct information, as it is this information that is used in the match algorithm.

If a new sample has been exported from Fusion to YASWA and you wish to bring forward manually conclusions made on a previous sample, that deviate from the default conclusion, you click on the 'Add conclusions' button.

MFI	HLA	Status	MFI	HLA	Status	MFI	HLA	Status
5854	DRB1*04:01	M: MFI cut-off	65.24	A*24:03	M: MFI cut-off	35.65	B*59:01	M: MFI cut-off
4940	DRB1*04:03	M: MFI cut-off	64.48	B*47:01	M: MFI cut-off	34.92	B*53:01	M: MFI cut-off
4903	DRB1*04:02	M: MFI cut-off	64.23	B*27:05	M: MFI cut-off	34.43	C*03:03	M: MFI cut-off
4456	DRB1*04:04	M: MFI cut-off	63.74	B*44:03	M: MFI cut-off	33.68	DRB1*01:03	M: MFI cut-off
3892	DRB1*04:05	M: MFI cut-off	62.98	DRB1*01:02	M: MFI cut-off	32.62	DRB1*14:02	M: MFI cut-off
2817	A*34:01	M: MFI cut-off	62.97	DRB3*03:01	M: MFI cut-off	32.15	DRB1*15:01	M: MFI cut-off
1294	B*37:01	M: MFI cut-off	62.67	B*41:01	M: MFI cut-off	31.37	B*81:01	M: MFI cut-off
589.36	DRB1*09:02	M: MFI cut-off	60.99	DRB4*01:03	M: MFI cut-off	30.33	DPA1*01:05,DPB1*28:01	M: MFI cut-off
511.05	A*66:01	M: MFI cut-off	59.88	B*18:01	M: MFI cut-off	30.21	A*02:06	M: MFI cut-off
485.47	DQA1*05:01,DQB1*02:01	M: MFI cut-off	59.33	A*32:01	M: MFI cut-off	30.20	DRB1*15:03	M: MFI cut-off
424.88	DRB1*07:01	M: MFI cut-off	59.11	A*68:01	M: MFI cut-off	28.14	A*24:02	M: MFI cut-off
393.74	A*25:01	M: MFI cut-off	58.67	B*51:01	M: MFI cut-off	28.10	C*15:02	M: MFI cut-off
368.12	DRB1*09:01	M: MFI cut-off	58.60	A*74:01	M: MFI cut-off	25.98	DPA1*03:01,DPB1*13:01	M: MFI cut-off

This will bring forward the conclusions made on the previous sample, which you will now be able to modify and save.

2.4. Non-acceptable antigens on recipient

In some cases it is necessary to block a whole antigen, the reason for this can be common antigens where no bead exists and/or the DQ/DP matching on dimers.

Examples:

- There is currently no bead for HLA-C*07:01 and if you know that you will not accept any C*07 subtypes for a specific recipient you add HLA-Cw7 as a non-acceptable antigen.
- Your recipient has strong antibodies against DQB1*05 and you don't want to accept any combinations of DQA with DQB1*05 you block HLA-DQ5.

Basic info | Clinical data | Address/Phone | HLA Typing | Antibody Screen Test | **Fusion** | Acceptable Antibodies | Previous Mismatches | Status

Date of sample: 16-Sep-2021 | Antibodies: B*51:01 C*07:02 DQA1*01:01,DQB1*05:01

STEP - Non acceptable antigens

HLA-A:

HLA-B:

HLA-Cw: 7

HLA-DR:

HLA-DQ: 5

HLA-DP:

HLA-DRB3/4/5:

HLA-DQA:

HLA-DPA:

2.5. Add recipient to match run

When you are ready to add the recipient/pair to the match run, you enter the waiting list and select the specific match run from the list:

Recipient information Info Back Save Reset Print

Scandianumber: 207789 Nationality: S: Sweden Sex: F: Female

Date of Birth: Person Number: Surname: Surname: First Name: First name: :

Recipient Status: ALIVE; STEP

Waiting list status: W: Withdrawn Waiting list type: KI: Kidney Urgency: NT: Temporarily not trar Treatm. center: LUND, Dialysavd/Med kli

First regist.: 01-Mar-2022 Latest regist.: 09-May-2022

Basic info Clinical data Address/Phone HLA Typing Antibody Screen Test Fusion Acceptable Antibodies Previous Mismatches Status

ABO Blood Group: 0 Rhesus D: POS

Transplant center: ML: Malmö/Lund Department:

Notes on Patient:

Waiting List

Add new

Waiting List	Date of entry	Termination	Tx date	Tx number
→ KI: Kidney	01-Mar-2022			

Waiting list information Info Back Save Reset Print Add Liver Add Pancreas

Generic data

Scandianumber: 207789 Surname: Surname:

Waiting list type: KI: Kidney Date of entry: 01-Mar-2022

Urgency: NT: Temporarily not transp

Future Withdrawn from: Future Withdrawn to:

Date of first urgency: 01-Mar-2022 Date of last urgency: 03-May-2022

Transplant center: ML: Malmö/Lund Treatment/dialysis center: AC: LUND, Dialysavd/Med k

Immunization: NI: Non immunized Date of last change of Immunization: 21-Feb-2022

ABO: 0 STAMP Sign Up: STAMP Status:

Specific data Infection STEP LAMP LAMP QC STAMP STAMP log STAMP QC STAMP Aux Urgency History Termination

Non-accepted ABO: A,A1,A1B,A2,A2B,AB,B Indication for STEP: ABOi

Max anti-A titre: 512 Max anti-B titre: 128 Date of analysis: 14-Apr-2022

STEP run remarks

Included in STEP run	Remarks
<input checked="" type="checkbox"/> 10re: 10th re-run 2022	
<input checked="" type="checkbox"/> 9: 9th run 2022	
<input type="checkbox"/> 9re: 9th re-run 2022	
<input type="checkbox"/> 10: 10th run 2022	
<input type="checkbox"/> 10re: 10th re-run 2022	
STEP Dono 11: 11th run 2022	non-bead
12: 12th run 2022	

In the menu 'Recipient' -> 'STEP' -> 'Participating pairs' you are able to get an overview of what recipients/pairs are included in which match run from your own center.

