

STAMP guideline version 8.1 – December 1, 2017

Scandiatransplant Acceptable Mismatch Program (STAMP) and Local Acceptable Mismatch Program (LAMP)

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STAMP

1. General STAMP guidelines

Purpose

To increase the likelihood of offering a suitable kidney graft to broadly immunized recipients, thus reducing their time on the waiting list.

Success criteria

- Reduced waiting time for broadly immunized patients.
- Acceptable frequency of when a shipped kidney is not transplanted to the indicated STAMP patient (< 10 %).
- Survival of grafts comparable to graft survival in PRA-negative patients.

Acceptance criteria

1. Transplantability score (TS) \leq 2%
2. The last tested sample drawn less than 3 months before acceptance

Recipient HLA typing

Recipient HLA-antigens must be assigned at split level, by serology or molecular typing.

Recipient acceptable HLA-antigens

Definition of acceptable HLA-mismatches is performed by laboratory at recipient center.

Acceptable mismatches may be HLA-A, -B, -C, -DR, -DQ antigens.

Acceptable mismatches may include repeated mismatches from previous transplantations.

Definition of acceptable mismatches may be based on CDC and/or solid phase assays.

Wait listing and matching:

Recipients own antigens and the defined acceptable mismatches are treated like.

Recipients in the program must be regularly screened at least every 3 months; antibody specificities must be re-evaluated at least once a year.

Once accepted, patients will stay included even if PRA value decreases.

For each donor search, a special search among STAMP-recipients based on split level HLA, is performed. Exchange obligation is marked when the donor only has HLA-A, -B, -C, -DR, -DQ antigen specified in the recipient as own or acceptable.

Exchange priority will follow Scandiatransplant rules and placed as priority number 2:

Patient with STAMP-status when all donor HLA-A, -B, -C, -DR, -DQ antigens are either shared with the recipient or are among those defined as acceptable. Return obligation as for other kidney exchange rules.

Exchanged organ may be used for other local recipient if the indicated STAMP patient for any reason cannot be transplanted.

Only the centers joining STAMP have an obligation to exchange kidneys to a STAMP recipient.

Re-evaluation by the steering committee

- A STAMP patient not transplanted with a shipped kidney because of a positive cross-match should be temporarily withdrawn from STAMP, re-evaluated and eventually re-admitted.

- When removing defined antibodies and adding them as acceptable mismatches the patient must be re-evaluated by the committee. The responsible laboratory is obliged to inform the committee in such cases. Re-evaluation is not needed when adding new antibodies and removing them as acceptable mismatches.

Event reporting

Recipient centers must notify Scandiatransplant if the kidney is transplanted to somebody else than the indicated STAMP patient.

Recipient center must give detailed follow-up information on performed transplantations.

Steering committee:

The STAMP steering committee (SC) is a scientific subgroup of the Tissue Typers Group, which is in an expert advising committee for the Nordic Kidney Group.

SC shall be composed by one tissue typer from each of the countries within Scandiatransplant together with a representative from each country represented in the Nordic Kidney Group.

Proposals of STAMP candidates from individual centers must be evaluated and accepted by two of the tissue typers in the SC from which the candidate does not originate from.

SC must keep updated on all effects of the program, including:

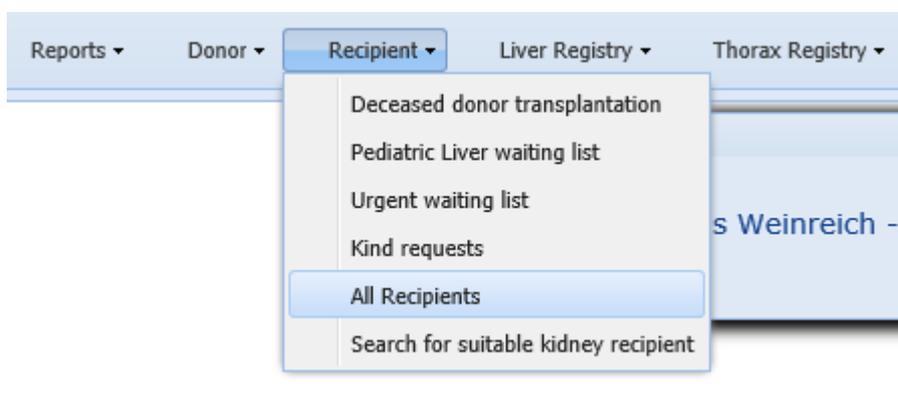
- Number of exchanged organs.
- Changes in waiting time for STAMP recipients and for other waiting patients.
- Changed reactivity in individual waiting recipients
- Positive cross matches at donor center.
- Fate of performed transplants.

SC may decide to withdraw STAMP-status if antibody reactivity changes.

SC must give yearly status reports to Scandiatransplant.

At the annual Scandiatransplant Tissue Typer Group meetings individual patient cases on patients who have been waiting for years on the STAMP list can be brought up for discussion.

2. Finding the menu for entering STAMP-data



Enter patient identification (Scandia No./birthday) and press search
 Click on the relevant patient on the search result list

All Recipients Search Add new Print Statistics Reset

[Enter search parameters]

Scandia Number: 686 Nationality:

Person Number: Sex: Age ≥ < Age at notif. ≥ <

Surname: First Name:

Transplant Center: Recip.ABO: Donor ABO: Wait.time ≥ < months

Waiting list status: Waiting List type: Urgency: Local Urgency:

STAMP Extra

Sign up: Positive infection:

Status: Kidney Prefs.:

	Scandi...	Nation...	Person Number	Age	Surname	First Name	Transp...	Recip....	Height	Weight	Waitin...	Waitin...	Urgency
→ X	686	S: Swe...			Surname:	First name:	GO: Gö...	0			N: Noti...	KI: Kid...	T: Tra...

Page 1 of 1 Order by: Scandia Number Recip.ABO Displaying 1 - 1 of 1

Click on the waiting list tab followed by the active kidney waiting list entry

Recipient information Back Save Reset Print

Scandia Number: 44 Nationality: S: Sweden

Date of Birth: Person Number: Sex: M: Male

Surname:

First Name:

Transplantation History: (1)KI 05 LI; PA; IT; HE; LU;

Survival Status: ALIVE

Waiting list status: N: Notified Waiting list type: KI: Kidney Urgency: T: Transplantable

First regist.: 17-Jun-2002 Latest regist.: 19-Sep-2016

Basic info **Waiting List** Clinical data Address/Phone HLA Typing Antibody Screen Test Acceptable Antibodies Previous Mismatches Death

Add new

	Waiting List	Date of entry	Termination
→ X	KI: Kidney	14-May-2013	
→ X	KI: Kidney	02-Nov-2007	Transplantation - deceased donor <- Donor: 33, Tx-date: 05

Any patient with a kidney treatment record will have the STAMP tabs available.

The screenshot shows a web-based form titled "Waiting list information". At the top right, there are buttons for "Back", "Save", "Reset", and "Print STAMP". The form is divided into two main sections: "Generic data" and "Specific data".

Generic data:

- Scandia Number: 172
- Surname: Surname:
- Waiting list type: KI: Kidney
- Urgency: T: Transplantable
- Date of entry: 16-Feb-2012
- Future Withdrawn from: [empty]
- Future Withdrawn to: [empty]
- Date of first urgency: 05-Mar-2012
- Date of last urgency: 29-Mar-2016
- Transplant center: CP: København
- Treatment/dialysis center: AE: Rigshospitalet
- Immunization: I: Immunized
- Date of last change of Immunization: 23-Aug-2016
- STAMP Sign Up: Y: Yes
- STAMP Status: A: Active

Specific data:

The "Specific data" section has several tabs: "Infection serology", "STAMP/LAMP", "STAMP Aux", "STAMP QC", "Urgency History", and "Termination". The "STAMP/LAMP" tab is highlighted with a red box.

Below the tabs, there are several input fields:

- Primary diagnosis: [dropdown]
- Old diagnosis: [text box]
- Kidney Waitinglist:
 - Waiting For Kidney Number: 3
 - Local Urgency Code: N: No
 - Special Preferences: [dropdown]
 - Other special requirements: [text box]
 - Dialysis at entry: [dropdown]
 - Start of dialysis: [text box]

3. Selection of patients

3.1 Potential candidates

Potential candidates can be found by entering the list from the menu entrance 'Quality Control' -> 'STAMP - HI immunized KI patients with no STAMP record'. This list contains patients that have been highly immunized for more than a year and highly immunized pediatric patients.

3.2 Good candidates?

Evaluate if these potential STAMP eligible patients may have difficulties in getting kidneys from local donors.

- Good candidates usually have a reason for immunization (previous transplants, pregnancies, or blood transfusions).
- Good candidates usually have both CDC and solid phase reactivity (although both do not have to fulfill HI criteria).
- Good candidates usually have high-level reactivity in antibody testing.
- Good candidates occasionally have a history of positive cross matches.

3.3 Consult clinician

Consult clinician about the need for STAMP or any other type of prioritizing. Consider both STAMP and LAMP and decide together which one is better for particular patient.

4. STAMP initial preparation

4.1 Registration of relevant HLA antibodies

All registered antibodies can be viewed in the 'STAMP Aux' tab

The screenshot shows the 'Waiting list information' form with the following data:

- Generic data:** Scandia Number: 183638, Surname: Surname: U., Waiting list type: KI: Kidney, Urgency: T: Transplantable, Transplant center: CP: København, Immunization: HI: Highly immunized, STAMP Sign Up: Y: Yes, Date of entry: 31-Jan-2014, Date of first urgency: 25-Feb-2014, Treatment center: AG: Herlev, Date of last change of Immunization: 15-May-2015, STAMP Status: A: Active.
- Antibody Summary:** A1,11,23,24,3,36,66,80; B13,27,41,42,47,48,49,50,60,61,67,7,73,81; Cw10,9; DQ4,5,6,7; DR11,12,13,14,15,16,17,18,7,8,9;
- Own HLA:** A*2,25;B*18,44;C*12,16;Bw*w4,w6;DRB1*4;DQB
- Antibody Screen Test Table:**

Date of sample	PRA Class I	PRA Class II	Identified Antibodies
1 09-May-2015	95		
2 17-Mar-2015	70	99	A23,24,66; B13,27,41,42,47,48,49,60,61,67...

- Include all antibodies that are positive according to local rules (e.g. all with Luminex MFI level > 1000)
- If allele specific antibodies are detected, consider adding them at serological level if the allele is not extremely rare. Remember that you do not know ethnical background of potential donor beforehand!

If list of antibodies needs to be updated, you need to go back

The screenshot shows the 'Waiting list information' form with the 'Back' button highlighted in red, indicating the action to take when updating the antibody list.

And enter the 'Antibody screen test' tab, further procedure is described in the 'All recipient' manual.

The screenshot shows the 'Recipient information' form with the following data:

- Recipient information:** Scandia Number: , Nationality: DK: Denmark, Date of Birth: , Person Number: , Sex: F: Female, Surname: Surname: , First Name: First name: , Transplantation History: (0)KI; LI; PA; IT; HE; LU; Survival Status: ALIVE, Waiting list status: N: Notified, Waiting list type: KI: Kidney, Urgency: T: Transplantable, First regist.: OPS\$CPCC, 31-Jan-2014, Latest regist.: OPS\$CPCC, 15-May-2015.
- Antibody Summary:** A1,11,23,24,3,36,66,80; B13,27,41,42,47,48,49,50,60,61,67,7,73,81; Cw10,9; DQ4,5,6,7; DR11,12,13,14,15,16,17,18,7,8,9;

4.2 Entering STAMP data

4.2.1 Determination method

Click on the field 'Determination method' and select one to many from the list

The screenshot shows a web application interface with several tabs: 'Specific data', 'Infection serology', 'STAMP/LAMP', 'STAMP Aux', 'STAMP QC', 'Urgency History', and 'Termination'. The 'STAMP/LAMP' tab is active. A dropdown menu for 'Determination Method' is open, showing options: 'CDC, LUMI', 'AUTO: Autoantibody examination', 'HLA-A: CDC: Complement Dependent lymphocyte Cytotoxicity test', 'HLA-E: FLOW: FLOW-PRA', 'HLA-Cw: LUMI: Luminex', and 'OTHER: Other routines'. The 'Determination Method' field is currently set to 'CDC, LUMI'.

4.2.2. Acceptable mismatches

Acceptable mismatches are selected from the lists or entered one by one.

The screenshot shows the 'Acceptable mismatches' section of the STAMP data entry interface. The 'Determination Method' is set to 'CDC'. The 'Acceptable mismatches' section contains several dropdown menus for HLA antigens: 'HLA-A:', 'HLA-B:', 'HLA-Cw:', 'HLA-DR:', 'HLA-DQ:', and 'Date of acceptance:'. The 'HLA-A:' dropdown is currently set to 'Select all...'. The 'HLA-B:' dropdown is set to 'Select calculated...'. The 'HLA-Cw:' dropdown is set to '1'. The 'HLA-DR:' dropdown is set to '3'. The 'HLA-DQ:' dropdown is set to '10'. The 'Date of acceptance:' dropdown is set to '11'. There is also a 'Sign up:' dropdown menu at the bottom right.

Deselect by clicking on the antigen specificity again

'Select all' will select all antigens on the list as acceptable mismatches

'Select calculated' will select all antigens that the recipient has no HLA antibodies against.

How to select antigens to be listed as acceptable mismatches (AMM)

- All antigens that the patient has no antibodies against could usually be added to the AMM list. These may also include possible previous mismatches.
 - If you add DR17 remember to **add** DR3 also.
 - If you add both Cw9 and Cw10 **add** Cw3 also.
 - Other broad serological level antigens may be added if all splits are on the AMM list, but usually are not necessary since laboratories type these at split level.
- Own known antigens cannot be added to the AMM list. Add most likely own (according to haplotype analysis) C/DQ antigens to the AMM list if these are not typed and reported.
- Do not add antigens that are strongly linked with other antigens that patient have antibodies against, if particular antigens are not analyzed from donors (DRB3-5 and all allele specific antibodies).
- DP and DQA-antigens are neither added to the AMM list nor analyzed from donor. Therefore, consider LAMP or other options for patients with multiple strong DP antibodies

4.2.3 Date of acceptance

Date of acceptance is automatically inserted when saving data the first time

Specific data	Infection serology	STAMP/LAMP	STAMP Aux	STAMP QC	Urgency History	Termination
Determination Method: CDC,LUMI						
Acceptable mismatches						
HLA-A: 23,25,31,43						
HLA-B: 8,13,39,41,48,59,60,61,64,65						
HLA-Cw: 1,2,4,5,6,8,16,17,18						
HLA-DR: 12,17						
HLA-DQ: 2,7						
Date of acceptance: 06-Dec-2012		Status: I: Inactive			Sign up: Y: Yes	

4.2.4 Status

When you are preparing the patient set the status to Inactive/calculation

Specific data	Infection serology	STAMP/LAMP	STAMP Aux	STAMP QC	Urgency History	Termination
Determination Method: CDC,LUMI						
Acceptable mismatches						
HLA-A: 23,25,31,43						
HLA-B: 8,13,39,41,48,59,60,61,64,65						
HLA-Cw: 1,2,4,5,6,8,16,17,18						
HLA-DR: 12,17						
HLA-DQ: 2,7						
Date of acceptance: 06-Dec-2012		Status: I: Inactive			Sign up: Y: Yes	

4.2.5 Comments

Write all relevant information to comments field. At least the following information should be added:

- List of all detected DRB3-5 antibodies.
- List of all detected allele specific antibodies that are not added at serological level to the antibody list.
- List of all antigens that are not included to antibody or the AMM list, for instance due to strong linkage to detected allele specific or DRB3-5 antibodies.
- Other relevant explanations for No in the 'STAMP QC' tab

Specific data	Infection serology	STAMP/LAMP	STAMP Aux	STAMP QC	Urgency History	Termination
Determination Method: CDC,LUMI						
Acceptable mismatches						
HLA-A: 23,25,31,43						
HLA-B: 8,13,39,41,48,59,60,61,64,65						
HLA-Cw: 1,2,4,5,6,8,16,17,18						
HLA-DR: 12,17						
HLA-DQ: 2,7						
Date of acceptance: 06-Dec-2012		Status: I: Inactive			Sign up: Y: Yes	
Comments: Highly immunized against B-Cell panel (CDC)						

TIP!

You can always start entering data on the patient– leave the patient – with status inactive and return to enter more data later.

5. Quality check of STAMP data

When all data have been entered on the patient a quality check must be performed. Go to the tab 'STAMP check'

Specific data	Infection serology	STAMP/LAMP	STAMP Aux	STAMP QC	Urgency History	Termination
Quality control - STAMP preconditions						
TS <= 2%:	Yes					
Wait time > 1 yr or child:	Yes (Age: 41 years Wait time: 131 months)					
HI PRA >= 80% at present:	No (I Immunized)					
Most recent PRA < 3 months:	No (09-MAR-2017 3 months 0 days)					
HI >= x2 > 3 months:	Yes (over 45 months 4 days)					
A,B,Cw,DR,DQ splits:	Yes (A 2,23; B 51,57; Cw 6,15; DR 4,7; DQ 2,8;)					
Acc. mm. splits:	No (DR *2,*3; DQ *1,*3;)					
Id. antib. splits:	No (B *12;)					
No identif. AB in Acc. mm.:	No (Cw 18;)					
Consistent Sero/Geno HLA:	Yes (Consistent Sero/Geno HLA)					
All HLA checked:	Yes (All HLA checked)					

The STAMP QC will give you an indication of the quality of the registered data.

Green colour = quality check passed

Red colour = quality check did NOT pass, mandatory according to the STAMP guidelines, please check and/or add explanation to comment field

Orange colour = quality check NOT passed, please check and/or add explanation to comment field

The STAMP check is a quality control and is meant as a help, it does not inflict with the activation of patients to STAMP. If you have an explanation of why criteria are not fulfilled, please enter a message to the STAMP committee, in the field for comments.

The quality check and calculations are done on all the following variables:

TS <= 2% (obligatory to full fill)

Checks if the current transplantability score is $\leq 2\%$

HI PRA >= 80% at present

Defines if the patient is highly immunized (PRA $\geq 80\%$) in last registered antibody screen test

Most recent PRA < 3 months (obligatory to full fill)

Checks if the last registered antibody screen test is done on serum drawn within the last 3 months

HI >= x2 > 3 months

Identifies if highly immunized test result is identified in two consecutive samples over a period of more than 3 months.

A, B, C, DR, DQ splits

A check is done whether the recipient HLA-antigens are assigned at split level. A '*' in front of an allele indicates that the assigned HLA type contains a broad type which is serological typed. A '!' in front of an allele indicates that the problematic broad type is genomic typed.

Result of the QC check may be No, if so check carefully that the reason for No is something you have intended.

Acc. mm. splits

Checks if all acceptable mismatches are registered as splits

Result of the QC check May be No, if so check carefully that the reason for No is something you have intended.

Id. antib. splits

Checks if all identified antibodies are registered as splits

Result of the QC check may be No, if so check carefully that the reason for No is something you have intended.

Patient DQ in Acc. mm.

Checks if patients own DQ is entered as acceptable mismatch.

No identif. AB in Acc. mm.

Compares one to one if any identified antibodies by mistake are given as acceptable mismatches.

Consistent Sero/Geno HLA

Compares the patient's own serological and genomic HLA as it is registered in the database

All HLA checked

Listing all antigens not given as own HLA antigens, acceptable mismatches or identified antibodies.

Result of the QC Check may be No. If so, check carefully that you have mentioned not to include some antigens and that you have explained reasons not to include some antigens (for instance if antigens are left out due to linkage or if these are considered as "grey zone").

6. Patients being prepared for STAMP

Finding the patients being prepared for STAMP, enter the menu 'All recipients' and register the search parameters below (Status should be either Inactive or calculation)

The screenshot shows the 'All Recipients' search interface. It features a search form with various fields for patient identification and clinical data. A dropdown menu for 'Status' is open, showing options: A: Active, C: Calculation, I: Inactive, and L: Local programme. The interface also includes a table header with columns for Scandi..., Natic..., Recip..., Height, Weight, Waitin..., Waitin..., and Urgency. The status bar indicates 'Page 1 of 4' and 'Order by: Scandia Number Recip.AB0'.

7. Patients ready to go on STAMP

When you have done the quality check and you believe that sufficient data has been entered you have to change "Status" from I = Inactive to A = Active and save data.

The screenshot shows the patient record form for 'STAMP/LAMP'. The 'Status' dropdown menu is open, showing options: A: Active, I: Inactive, and L: Local programme. The form includes fields for Date of acceptance (19-May-2015), Comments, First Registr. (IDW, 19-May-2015), and Last Change. (IDW, 19-May-2015). The 'Status' field is highlighted with a red box.

An Email will now be sent to the committee and they will go through the patient to see if it is valid for the program. The results of the STAMP quality check will automatically be included in the email message.

Example of part of an email message

Scandia updated 05/19/2015 00:00:00 by IDW: Not signed up, changed status to Active

Ser. equiv. HLA: A 11,26;B 7,8;Cw 1,7;DR 17,15;DQ 2,6;

Identif. Antib.: A1,2,23,24,25,32,68,69; B13,27,35,37,38,44,45,46,47,49,50,51,52,53,56,57,58,59,62,63,71,72,75,76,77,78; Cw10,9;

Calc. comb. PRA: 98 (19-MAY-2015)

Acc. Mism.:

Waiting time > 1 year or child: Yes (Age: 48 years Wait time: 26 months)

PRA < 3 months: Yes (11-MAY-2015 0 months 8 days)

Present immunization status HI: No (NI Non immunized)

Repeated immunization status HI > 3 months: No (samples over 0 months 0 days)

A,B,Cw,DR,DQ splits: Yes (A 11,26; B 7,8; Cw 1,7; DR 15,17; DQ 2,6;)

STAMP patients ready for evaluation is found by entering the menu 'All recipients' and register the parameters below:

All Recipients Search Add new Print Statistics Reset

[Enter search parameters]

Scandia Number: Nationality:

Person Number: Sex: Age ≥ < Age at notif. ≥ <

Surname: First Name:

Transplant Center: Recip.ABO: Donor ABO: Wait.time ≥ < months

Waiting list status: Waiting List type: Urgency: Local Urgency:

STAMP **Extra**

Sign up: N: No Positive infection:

Status: A: Active Kidney Prefs.:

Scandi...	Nation...	Person Number	Age	Surname	First Name	Transp...	Recip....	Height	Weight	Waitin...	Waitin...	Urgency
Page 1 of 4 Order by: Scandia Number Recip.ABO												

Displaying 1 - 25 of 92

8. Patients on STAMP

In the menu 'All recipients' enter the search parameters below and you will find all patients on STAMP. If you only wish to see patients belonging to a specific tx. Center you can add it as a search parameter.

The screenshot shows the 'All Recipients' search interface. It features a search form with various fields for patient identification and clinical parameters. The form is organized into sections: 'Enter search parameters' (top), 'STAMP' (bottom left), and 'Extra' (bottom right). Below the form is a table with columns: Scandi..., Nation..., Person Number, Age, Surname, First Name, Transp..., Recip..., Height, Weight, Waitin..., Waitin..., Urgency. The table shows Page 1 of 4, Order by: Scandia Number, Recip.ABO, and is displaying 1 - 25 of 92 records.

9. Quality control of antibody screening

Patients on STAMP must be HLA antibody screen tested at least every 3 months. To ensure that all active STAMP patients complies with this rule go to the menu Quality Control -> 'STAMP - PRA older than 3 months'.

The screenshot shows the 'Quality Control' menu. The menu is open, showing a list of options. The option 'STAMP - PRA older than 3 months' is highlighted in blue.

By entering this menu, you get a display of patients missing the regular antibody screen test. To the right is a count of months and days since last registered screen test.

- Immunization status of STAMP listed patients must be screened at least every 3 months, and antibody specificities must be re-evaluated at least yearly. However, it is recommended to perform the AMM list re-evaluation immediately when you notice significant changes in patient's immunization status, although the patient may have been previously evaluated less than a year ago.
- Add all new antibodies into the detected antibodies list and remove the same antigens from the AMM list. This does not necessitate steering group re-evaluation.
 - If the new antibody is allele specific, add it to antibody list at serological level if it is not extremely rare and remove the antigen from the AMM list. Information of very rare new allele specific antibody could be only added to the comments field without changing the AMM list.
 - If the new antibody is DRB3-5, add this information to comments field and remove all strongly associated antigens from the AMM list.
 - If detected new antibody is DP antibody and you think it is relevant, consider changing the patient's status from STAMP to LAMP
- If your patient's immunization status has improved, you may consider register previously detected antibodies as allowable antibodies and adding them into the AMM list.
 - Change the patient's status from A to I
 - After all modifications to the antibody and the AMM lists, write the information of all changes into comments field
 - Finally change the status back to A
 - Case will be re-evaluated by the steering group.

10. Patients temporary off STAMP

After acceptance to STAMP, the center responsible for the patient, has the possibility to remove the patient temporary from the program (for instance after a positive X-match). If you want to do so, you have to change "Status" from A = Active to I = Inactive.

The screenshot shows the STAMP patient management interface. The 'Status' dropdown is set to 'I: Inactive'. The 'Cause of withdr.' dropdown is open, showing options: 'ADDABS: Further antibody specification required', 'ADDHLA: Further HLA typing required', 'OT: Other, not specified cause', and 'PXMTCH: Positive crossmatch: HLA typing and antibody specification required'. Below the dropdown is a table with columns for STAMP Status, N: No, Date, and Cause of withdr.

STAMP Status	N: No	Date	Cause of withdr.
1 A: Active			PXMTCH: Positive crossmatch: HLA typing and antibody specification required
2 A: Active	N: No	16-Sep-2016	NAPEROS
3 L: Local programme	N: No	20-Jul-2015	OP\$NAPEROS
4 I: Inactive	N: No	20-Jul-2015	OP\$NAPEROS

Please select cause of temporary withdrawal.

Note

The patient will of cause still be searchable in Kidney-search only the STAMP exchange obligation will be suppressed.

To find "Patients temporarily off STAMP"

The screenshot shows the 'All Recipients' search interface. The 'Status' dropdown is set to 'I: Inactive'. The interface includes various search filters such as Scandia Number, Person Number, Surname, First Name, Transplant Center, Recip.AB0, Donor AB0, Wait.time, Urgency, and Local Urgency. The 'Sign up' dropdown is set to 'Y: Yes' and the 'Positive infection' dropdown is set to 'I: Inactive'.

Perform thorough re-evaluation of the case and change the antibody/ the AMM list accordingly

Write the information of all changes and your opinion of the reason for positive cross match into comments field.
 Finally change the status from I = Inactive to A = Active and the patient will be re-evaluated by the steering group.

11. Patients permanent off STAMP

Patients no longer eligible for STAMP, must be permanently withdrawn from STAMP.

Determination Method: LUMI

Acceptable mismatches

HLA-A: 26

HLA-B: 18,65

HLA-Cw: 1,4,5,6,12,14,15,16,17,18

HLA-DR: 1,103,10,3,4,7,8,9,12,13,14,15,16,18

HLA-DQ: 4,5,6,8,9

Date of acceptance: 20-Jul-2015 Status: A: Active Sign up: Y: Yes

Comments:

First Registr.: 20-Jul-2015 Last Change.: 22-Sep-2016

Calculated transplantability

STAMP match: 0.40 % Normal match: 0.20 % Date of Last Calc: 29-Dec-2015

Cause of withdr.: Permanent Withdrawal: by:

	STAMP Status	STAMP SignUp
1	A: Active	Y: Yes
2	A: Active	N: No
3	L: Local programme	N: No
4	I: Inactive	N: No

EVNOCR: Reevaluated, does not meet STAMP criteria
 NOMMHL: HLA antibodies / acceptable mismatches cannot be provided
 NOPRA: PRA not provided according to rules
 NOTACC: Not accepted on STAMP
 OT: Other cause
 PRNOCR: In preparation, does not meet STAMP criteria
 XMATCH: Persistent positive cross match

Select cause from list of value and save data.

12. STAMP reports

12.1 Patient STAMP details

When you have a STAMP-patient (active/on hold/ withdrawn) on screen you can press the STAMP print button to display STAMP data on the screen.

A typical printout will look like this

```

SCANDIATRANSPLANT                                     stamp_details
Report produced: 23-JUN-2016 12:09 requested by user:   Page 1

*-----*
|                                     STAMP details                                     |
*-----*

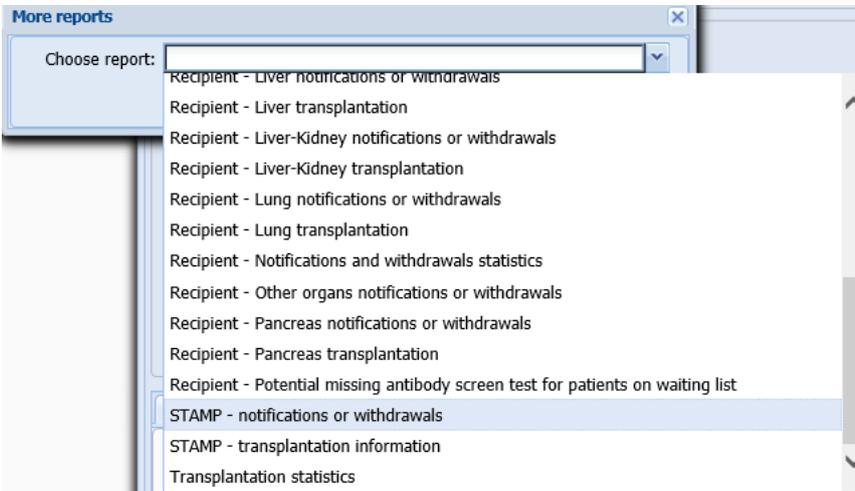
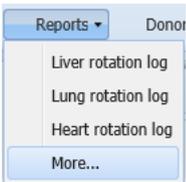
Scandianumber:                123
Person number:                123456-7891
Gender:                       F Female
Name:                         Test, test
Country:                      S Sweden
Tx-Center:
Dialysis/Treatment center:
Waiting list:                 KI Kidney
Date of entry on waiting list: 23-JAN-2012
Waiting list status:         N Notified
Waiting for tx number:       1
Blood group:                 AB
Narrow HLA:                  A 2,3;B 7, 62;Cw 7;DR 15;DQ 6, 5;
Repeated mismatches:
Antibody Screen Test:       20-APR-2016 I% 99 FLOW II% 85 FLOW
                             21-JAN-2016 I% 99 FLOW,LUMI II% 83 FLOW,LUMI
Identified antibodies:      A23,24,25,26,32,33,34,66,68,69; B13,18,27,35,37,
                             38,39,41,44,45,46,47,48,49,50,51,52,53,56,57,58,
                             59,60,61,63,64,65,71,72,75,76,77,78,8,82;
                             DR11,12,13,14,17,18,7,8,9;
Date of entry on STAMP:      23-FEB-2016
Date of acceptance on STAMP: 17-MAR-2016
Signed up:                   Y Yes
STAMP status:               A Active
Determination methods:     LUMI
Acceptable mismatches:     A1,11,29,30,31,36,43,74,80;B42,54,55,67,73,81;

```

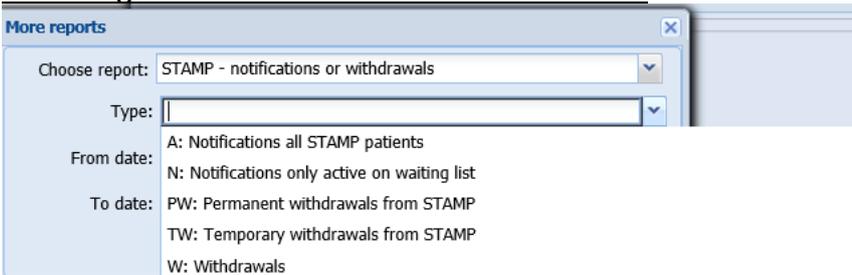
	Cw1,10,12,14,15,16,17,18,2,4,5,6,8,9;DQ2,4,7,8,9;DR1,10,103,16,4
Comments:	Has anti-DR52
STAMP events:	N:I:23-FEB-2016:xx,N:A:17-MAR-2016:xx, Y:A:17-MAR-2016:xx
Waiting time > 1 year or child	Yes Age: 35 years Wait time: 14 months
Most recent PRA < 3 months	Yes 20-APR-2016 2 months 3 days
HI PRA >= 80% at present	Yes HI Highly immunized
HI >= x2 > 3 months	Yes samples over 17 months 2 days
A,B,Cw,DR,DQ splits	Yes A 2,3; B 7; Cw 7; DR 15; DQ 6;
Acc. mm. splits	Yes All acc. mismatches are splits
Id. antib. splits	Yes All identified antibodies are splits
No identif. AB in Acc. mm.	Yes No identified AB in AM
Consistent Sero/Geno HLA	Yes Consistent Sero/Geno HLA
All HLA checked	Yes All HLA checked
First registered:	01-FEB-2016 xx
Last changed:	01-MAR-2016 xx

12.2 Reports

A variety of STAMP reports are available in Reports -> More..:



Selecting STAMP notifications or withdrawals



A: Notifications all STAMP patients

If you choose this report you will get all patients with a STAMP record. In other words, the report will contain patients that are: Preparing to go on STAMP, active/on hold on STAMP, transplanted, permanently withdrawn and dead.

N: Notifications only active on waiting list

Gives you patients with a STAMP record active/on hold in the specified period

PW: Permanent withdrawals from STAMP

This extraction contains patients permanent withdrawn from STAMP together with cause and date.

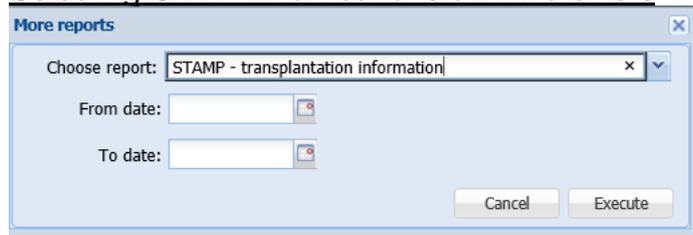
TW: Temporary withdrawals from STAMP

If you choose this report you will get a list of patients that have been temporary off STAMP along with cause and date.

W: Withdrawals

Consist of all patients with a STAMP record that have been permanent withdrawn from the main kidney waiting list.

Selecting STAMP notifications or withdrawals



The screenshot shows a dialog box titled "More reports" with a close button (X) in the top right corner. Inside the dialog, there is a "Choose report:" label followed by a dropdown menu currently displaying "STAMP - transplantation information". Below this are two date input fields: "From date:" and "To date:", each with a small calendar icon to its right. At the bottom of the dialog are two buttons: "Cancel" and "Execute".

If you choose this report you will get a list of patients transplanted while they were signed up on STAMP waiting list.

It is possible to do the extraction for a specific period just enter starting and/or ending date.

LAMP

13. Introduction

Purpose

This program is a local alternative for patients that do not meet STAMP criteria. At recipient search the patients are matched the same way as STAMP patients, due to defined acceptable mismatches. The program does not result in any exchange obligations between centers.

Acceptance criteria

Each center defines the acceptance criteria themselves and there is no approval for inclusion to the program from the committee. Patients can both go directly on LAMP and no matter their STAMP status be 'transferred' to LAMP.

14. Menus for entering LAMP-data and LAMP pre transplantation information

You use the same menus, facilities and screens as described for STAMP patients. Methods of determination, acceptable mismatches and comments are registered the same way as for STAMP patients.

15. Patients ready to go on LAMP

When you have done the quality check and you believe that sufficient data has been entered you have to change "Status" from I = Inactive to L = Local program and save data.

The screenshot shows a software interface with several tabs: 'Specific data', 'Infection serology', 'STAMP/LAMP', 'STAMP Aux', 'STAMP QC', 'Urgency History', and 'Termination'. The 'STAMP/LAMP' tab is active. The 'Determination Method' is set to 'LUMI'. Under 'Acceptable mismatches', there are dropdown menus for HLA-A, HLA-B, HLA-Cw, HLA-DR, and HLA-DQ. The 'Date of acceptance' is '30-Sep-2016'. The 'Status' dropdown is open, showing options: 'A: Active', 'C: Calculation', 'I: Inactive', and 'L: Local programme' (which is selected). The 'Sign up' dropdown is set to 'N: No'. There is a 'Comments' text area. Below that, 'First Registr.' is '30-Sep-2016' and 'Last Change.' is '30-Sep-2016'. The 'Calculated transplantability' section shows 'STAMP match: 1.90 %', 'Normal match: 0.00 %', and 'Date of Last Calc: 03-Oct-2016'. At the bottom, there are fields for 'Cause of withdr.' and 'Permanent Withdrawal'.

The patient is now on LAMP

Please note that no matter what STAMP status a patient has it can always become a LAMP patient.

16. Patients on LAMP

To find patients on LAMP enter the menu 'All recipients' and make a search on 'Local program'.

17. Kidney search result LAMP

In the kidney search result screen a LAMP match will appear as a priority 6 match and marked with a 'L' in the STAMP status column.

Pri...	Sc.No	Rec...	Surname	First Name	Age	Wa...	Tx...	Im...	AB0	AB...	DR...	DSA	CMV	HCV	HB...	Prev...	Type	ST...
6		OS	Surname:	First name:		2	1	HI	A	1	0		+	ND	ND	A1	KI	L
6		OS	Surname:	First name:		14	3	HI	A	3	0		+	-	-		KI	L
7		OS	Surname:	First name:		13	1	NI	A	2	0		+	-	-		KI	
7		OS	Surname:	First name:		1	1	NI	A	2	0		+	-	-		KI	

18. Calculated combined PRA and transplantability

A donor pool, based on 1000 recently HLA typed deceased donors registered in Scandiatransplant, has been made. The pool forms the basis of the following calculations.

18.1 Calculated combined PRA

The calculated PRA is based on the antibody summary and is updated automatically when list of identified antibodies is changed.

This feature is accessible from two places:

1. From the 'STAMP Aux' tab

Waiting list information Back Save Cancel STAMP Calc.

Generic data

Scandia Number: Surname:

Waiting list type: KI: Kidney Date of entry: 16-Feb-2012

Urgency: NT: Temporarily not Date of first urgency: 05-Mar-2012

Transplant center: CP: København Treatment center: AE: Rigshospitalet

Immunization: I: Immunized Date of last change of Immunization: 17-Mar-2015

STAMP Sign Up: Y: Yes STAMP Status: A: Active

Specific data Infection serology STAMP/LAMP **STAMP Aux** STAMP QC Urgency History Termination

Antibody Summary: A1,11,2,23,24,25,3,31,32,33,36,68,69,74,80; B13,18,27,35,37,38,39,41,42,45,46,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,67,7,71,72,75,76,77,78,8,81,82; Cw15,17,18,2,5,6; DQ6,8,9; DR10,103,12,13,14,15,16,17,18,4,7,8,9;

Own HLA: A26,29;B27,44;Cw1;Bw*w4;DR1,11;DQ5,7

Calculated Combined PRA: 100 %

2. From the menu 'All recipient', make a query on the specific patient and enter the antibody screen test tab.

Recipient information Back Save Cancel

Scandia Number: Nationality: SF: Finland

Date of Birth: Person Number: Sex: F: Female

Surname:

First Name:

Transplantation History: (0)KI; LI; PA; IT; HE; LU;

Survival Status: ALIVE

Waiting list status: N: Notified Waiting list type: KI: Kidney Urgency: T: Transplantable

First regist.: OPS\$SIVA 14-Feb-2014 Latest regist.: OPS\$PIIAR 18-May-2015

Basic info Clinical data Address/Phone Waiting List HLA Typing **Antibody Screen Test** Acceptable Antibodies Previous Mismatches Death

Antibody Summary: A2,29,3,31,33,68,69,74; B45,73,76,82; DQ4,5,6; DR12,8;

Calculated combined PRA: 95 % Immunization: HI: Highly immunized

Add new

Date of sample	PRA Class I	PRA Class II	Identified Antibodies
→ 07-May-2015	90	88	
→ 05-Feb-2015	87	88	A2,29,3,31,33,68,69,74; B45,73,76,82; DQ4...
→ 06-Nov-2014	87	88	
→ 07-Aug-2014	86	88	
→ 08-May-2014	87	88	
→ 06-Feb-2014	64	64	

18.2 Calculated Transplantability

In STAMP, it is possible to get a calculated:

- 'Transplantability Score' based on split level HLA typing on the patient and defined acceptable mismatches. It gives you the percentage of donors which are AB0 identical and have HLA split level antigens that are acceptable to the recipient (recipient HLA + Acceptable mismatches)
- 'Normal match' based on the patient HLA type and a 'normal' broad level A, B and DR match. It gives you the percentage of donors which are AB0 identical and have no mismatches on HLA broad level A, B and DR match with the recipient, similar to a priority 1 kidney exchange obligation.

The calculation is based on the HLA and AB0 blood types represented in the donor pool. The calculation is done each time data is saved.

HLA-Cw:	1,2,5,6,7,8,9,12,14,15,16,18	
HLA-DR:	3,8,11,12,17,18	
HLA-DQ:	1,4,5,7,8,9	
Date of acceptance:	22-Jan-2016	Status: A: Active
		Sign up: Y: Yes
Comments:		
First Registr.:	22-Jan-2016	Last Change.:
		17-Mar-2017
Calculated transplantability		
Transplantability score:	0.00 %	Normal match: 0.00 %
		Date of Last Calc: 17-Mar-2017

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