# STAMP lathund version 4.1 - 18oct2012

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 highly immunized (HI) recipients, thus reducing their time on the waiting list.

Success criteria
- Reduced waiting time for highly 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. On waiting list > 1 year (Not necessary for paediatric patients)
2. HI status PRA ≥ 80% reactivity based on CDC and/or solid phase assay
   2.1 Must be identified in two consecutive samples over a period of more than 3 months (calculated from last tested sample)
   2.2 With proven reactivity against HLA class I or II antigens OR both HLA class I and II antigens.
3. 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, -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; PRA reactivity must be re-evaluated at least once a year.
Once accepted, patients will stay included even if PRA drops below 80%.

For each donor search, a special search among AM-recipients based on split level HLA typing is performed. Exchange obligation is marked when the donor only has HLA-A, -B, -DR, -DQ antigen specified in the recipient as own or acceptable. Exchange priority will follow Scandiatransplant rules and placed as priority number 3: Patient with STAMP-status when all donor HLA-A, -B, -DR, -DQ antigens are either shared with the recipient or are among those defined as acceptable. Return obligation as for other exchange rules. Exchanged organ may be used for other local recipient if the indicated STAMP patient for any reason not can 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
Donor centers must notify Scandiatransplant when exchanging a kidney to a STAMP recipient. 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:
A steering committee (SC) for the project must be appointed by the board of Scandiatransplant. SC shall be composed by one tissue-typer from each of the countries Denmark, Finland, Norway and Sweden together with two representatives from the Nordic Kidney Group. Proposals of STAMP candidates from individual centers must be evaluated and accepted by SC.

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 crossmatches 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.

2. Finding the menu for entering STAMP-data

MAIN MENU

1. Organ Transplantation
2. Nordic Living kidney Donor Follow-up
3. Nordic Liver Transplantation Registry
4. Nordic Thorax Transplantation Registry
5. Heart/Lung rotation list
6. Waiting list reports
7. Quality Control
8. Liver rotation list
9. Special reports
10. Exit

Enter your choice: 1
ORGAN TRANSPLANTATION

1. Recipient And Waiting List System
2. Organ Donor System
3. Transplantation And Follow Up
4. Search
5. Reports
6. Previous Menu

Enter your choice: 1

RECIPIENT SYSTEM

1. Registration Of New Patient
2. Updating Of Waiting List Data
3. Antibody Screen Test
4. STAMP – Acceptable Mismatches Program
5. Withdrawal From Waiting List
6. Previous Menu

Enter your choice: 4

STAMP – Acceptable Mismatches Programs

1. STAMP/TAPE pre-transplantation
2. Patients being prepared for STAMP/TAPE
3. Patients ready to go on STAMP
4. Patients on STAMP
5. Patients temporarily off STAMP
6. Patients on LAMP (local programme)
7. Patients permanently withdrawn from STAMP
8. STAMP reports
9. Previous Menu

Enter your choice: 1
3. STAMP pre transplantation

3.1 Query

Any patient with a treatment record, meaning that they are actively on a waiting list with an urgency,
T = Transplantable
NT = Temporarily not transplantable
WU = Temporarily withdrawn until specified date
can be looked up.

If you are unable to query the patients, it means;
That the individual has not been Notified to the waiting list yet – OR–
the person has newer been entered into the system – OR –
you are using a wrong Scandia-/Person-number.

<table>
<thead>
<tr>
<th>Scandia Number</th>
<th>Pers Num 111111 1111</th>
<th>Sex</th>
<th>AB0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surname</td>
<td>First name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tx Center</td>
<td>Country</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curr wait list</td>
<td>W1 status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date of W1 entry</td>
<td>Dial/Tr cn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mrr sq ser HLA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Repeat mismatches
Most recent PRA 1
Most recent PRA 2
Identif antib

Date of accept
Methods of detern
Acc. mismatches
Comments
STAMP check

Enter a query; press F12 to execute. F4 to cancel.
Count: *0
Enter query <Replace>

3.2 Entering STAMP data in pre transplantation

3.2.1 Date of acceptance
First enter ”Date of accept” and press <F10>
3.3.2 Methods of determination

Go to “Methods of determ” and get a POP-UP window using <F7>
Pres <F5> to select one to many values from the list.

Save your input by pressing <F10>
Go back by pressing <F4>

3.3.3. Acceptable mismatches

Go to “Acc mismatches” and get a POP-UP window using <F7>
Pres <F5> to select one to many values from the list.
Please note that the patient's own A-, B-, and DR- tissue types can't be selected. However, the patient's acceptable DQ- must also contain the patient's own DQ.

3.3.4 Comments
Go to “Comments” if you have any additional information.
Save your input by pressing <F10>.
- OR – if you have nothing more to add leave the patient for now by pressing <F4>.
TIP!
You can always start entering data on the person – leave the person – and then return to enter more data. You don’t have to have all data ready at once, when you start work-up on a possible STAMP-patient.

4. Patients being prepared for STAMP

In the Menu "Patients being prepared for STAMP” you can always see the patients you at the moment is finalizing data on.
5. Quality check of STAMP data

When all data have been entered on the patient a quality check must be performed. Go to 'STAMP check' and press <F7>.

By doing this all STAMP acceptance criteria, as described in the STAMP lathund, are checked. Yes/No statement to the right defines for each criteria if it passes the quality check or not.

Check and calculations are done on all the following variables:

5.1 Wait time > 1 yr or child
The total waiting time on kidney waiting list and present age on the patient is calculated. Total waiting time on kidney waiting list must be more than one year. (Excepted are children they do not have to wait one year before acceptance).

5.2 HI PRA >= 80% at present
Defines if the patient is highly immunized (PRA ≥ 80%) in last registered antibody screen test

5.3 Most recent PRA < 3 months
Checks if the last registered antibody screen test is done within the last 3 months
5.4 HI >= x2 > 3 months
Identifies if highly immunized test result is identified in two consecutive samples over a period of more than 3 months.

5.5 A,B,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.

5.6 Acc. mm. Splits
Checks if all acceptable mismatches are registered as splits

5.7 Id. antib. splits
Checks if all identified antibodies are registered as splits

5.8 Patient DQ in Acc. mm.
Checks if patients own DQ is entered as acceptable mismatch.

5.9 No identif. AB in Acc. mm.
Compares one to one if any identified antibodies by mistake are given as acceptable mismatches.

5.10 An example of a STAMP record check:

To the right it is stated if every single criteria is accepted or not. The conclusion of this check is that:
- a new sample needs to be antibody screen tested (and the result entered into Scandiatransplant)
- a broad type DR3 is given as an acceptable mismatch this indicates that it is necessary also to check if DR17 and DR18 are given as acceptable mismatches.

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 a criteria is not fulfilled, please enter a message to the STAMP committee, in the field for comments.
6. 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.

Go to the field 'Status'

Press <F5> and chose 'Active' by pressing <Enter>. Save by pressing <F10>.

You will then get a note, that an email has been send to the STAMP committee – Please acknowledge the message by pressing <ENTER>. An Email has now been sent to the committee and they will then go trough the patient to see if the person is valid for the program.

The results of the STAMP quality check will automatically be included in this message.
Example of an email message

You will now be able to find the STAMP record on the patient by entering the menu “Patients ready to go on STAMP”

NOTE
When at least two of the Committee members has accepted the candidate, the “Sign up” will be altered by Scandiatransplant from N = No to Y = Yes, this will make the patient active on STAMP.

7. Patients on STAMP

In the Menu ”Patients on STAMP” all the patients accepted on STAMP is displayed together with the number of days they have been waiting on the program.
8. Quality control of antibody screening

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

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

9. 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.
When pressing <F10> to save, an email will automatically be sent to the STAMP committee. After this a pop-up appears where the cause of temporary withdrawal must be registered. Press <F5> and select cause from list of value. Press <F10> to save.

Note

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

In the menu “Patients temporarily off STAMP” a list of patients temporarily of STAMP are displayed.

10. Patients permanent off STAMP

Patients no longer eligible for STAMP, must be permanently withdrawn from STAMP. Go to 'Perm. Withdrawal' and press <F7>.
Press <F5> and select cause from list of value. Press <F10> to save.

### 11. STAMP reports

If you want to gain insight into STAMP history and activities you can do so by entering the menu “STAMP reports”.

#### 11.1 Patient History Report

Here it's possible to enter a query on a patient no longer on STAMP and see historically data.
When you have a STAMP-patient on screen you can press <Ctrl-p> to print or <F7> to display the data on the screen.

A typical printout will look like this

<table>
<thead>
<tr>
<th>Scandianumber:</th>
<th>123</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person number:</td>
<td>123456</td>
</tr>
<tr>
<td>Gender:</td>
<td>M Male</td>
</tr>
<tr>
<td>Name:</td>
<td>Test</td>
</tr>
<tr>
<td>Country:</td>
<td>N Norway</td>
</tr>
<tr>
<td>Tx-Center:</td>
<td>OS Oslo</td>
</tr>
<tr>
<td>Dialysis/Treatment center:</td>
<td>02 Sykehus</td>
</tr>
<tr>
<td>Waiting list:</td>
<td>KI Kidney</td>
</tr>
<tr>
<td>Date of entry on waiting list:</td>
<td>21-JUN-2005</td>
</tr>
<tr>
<td>Waiting list status:</td>
<td></td>
</tr>
<tr>
<td>Waiting for tx number:</td>
<td>2</td>
</tr>
<tr>
<td>Blood group:</td>
<td>0</td>
</tr>
<tr>
<td>Narrow HLA:</td>
<td>A 2,11;B 18,35;DR 1,14;DQ 5,5;</td>
</tr>
<tr>
<td>Repeated mismatches:</td>
<td>A19,28;B5,7,12;DR4,7</td>
</tr>
<tr>
<td>Antibody Screen Test:</td>
<td>07-APR-2009 I% 80 II% 80</td>
</tr>
<tr>
<td></td>
<td>10-FEB-2009 I% 80 II% 80</td>
</tr>
<tr>
<td>Identified antibodies:</td>
<td>A1,23,24,25,29,32,43; B13,27,37,38,44,45,47,49,51,52,53,57,58,59,63,76,77,78; DQ2,4,7,8,9; DR10,11,12,13,15,16,4,7,8,9;</td>
</tr>
<tr>
<td>Date of entry on STAMP:</td>
<td>11-MAR-2009</td>
</tr>
<tr>
<td>Date of acceptance on STAMP:</td>
<td>17-MAR-2009</td>
</tr>
<tr>
<td>Signed up:</td>
<td>Y Yes</td>
</tr>
<tr>
<td>STAMP status:</td>
<td>A Active</td>
</tr>
<tr>
<td>Determination methods:</td>
<td>OTHER</td>
</tr>
<tr>
<td>Acceptable mismatches:</td>
<td>A3,26,30,31,33,34,66,68,69;B7,8,39,41,42,46,48,50,54,55,56,60,61,64,65,67,71,73,75,81;DQ5;DR103</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
</tr>
</tbody>
</table>

Waiting time > 1 year or child Yes Age: 72 years Wait time: 74 months
Most recent PRA < 3 months No 07-APR-2009 29 months 26 days
HI PRA >= 80% at present  Yes HI Highly immunized
HI >= x2 > 3 months   Yes 5 samples over 20 months 0 days
A,B,DR,DQ splits       Yes A 11,2; B 18,35; DR 1,14; DQ 5,5;
Acc. mm. splits        Yes All acc. mismatches are splits
Id. antib. splits      Yes All identified antibodies are splits
Patient DQ in Acc. mm. Yes DQ 5,5;
No identif. AB in Acc. mm. Yes No identified AB in AM

First registered:  11-MAR-2009 LEIVOS
Last changed: 27-MAR-2009 LEIVOS

11.2 Summary Reports
In the menu “Summary Reports” you can press <F5> to get a list of possible choices of reports.

11.2.1 STAMP Notifications (Name of excel file: STAMP_pre_tx_not.xls)
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/inactive on STAMP, transplanted and permanently withdrawn.

11.2.2 Withdrawals from KI Waiting List (Name of excel file: STAMP_pre_tx_wtd.xls)
Consist of all patients with a STAMP record that have been withdrawn from the main kidney waiting list.

11.2.3 STAMP Permanent Withdrawals (Name of excel file: STAMP_pre_tx_pwd.xls)
This extraction contains patients permanent withdrawn from STAMP together with cause and date.

11.2.4 STAMP Temporary Withdrawals (Name of excel file: STAMP_pre_tx_twd.xls)
If you choose this report you will get a list patients that have been temporary off STAMP along with cause and date.

11.2.3 STAMP Transplantations (Name of excel file: STAMP_tx.xls)
If you choose this report you will get a list of patients transplanted while they we signed up on STAMP waiting list.

It is possible to do the search for a specific period just enter starting and/or ending date.
Commit the extraction by pressing <F10>

You find the extracted excel file by pressing the icon marked with an arrow on the next picture (New File Transfer Window)

Find the file and click on it to open the excel file
Now it is possible to work as you like with the extracted data

**LAMP**

1. **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.

2. **Finding the menus for entering LAMP-data and LAMP pre transplantation information**

   You use the same menus, facilities and screens as described for STAMP patients.

```
1. STAMP-LAMP pre transplantation
2. Patients being prepared for STAMP-LAMP
3. Patients ready to go on STAMP
4. Patients on STAMP
5. Patients temporarily off STAMP
6. Patients on LAMP (local programme)
7. Patients permanently withdrawn from STAMP
8. STAMP reports
9. Previous Menu

Enter your choice: 1
```

Methods of determination, acceptable mismatches and comments are registered the same way as for STAMP patients.
### 3. 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 programme.

Go to the field 'Status'

![Table](image)

Press <F5> and chose 'Local programme', then press <Enter>. Save by pressing <F10>.

The patient is now on LAMP

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

### 4. Patients on LAMP

In the Menu "Patients on LAMP (local programme) all the patients included on LAMP are displayed together with the number of days they have been waiting on LAMP (and STAMP).
5. Recipient search result LAMP

In the search selection screen a new line has been added
If a match is found for a LAMP patient it will appear on the search result list (marked with an L to the far left) depending on search selections.

Printout off STAMP and LAMP information

When you have a STAMP/LAMP-patient on screen you can press <Ctrl-p> to print or display the data.
A typical printout will look like this

Scandianumber: 126645
Person number: 210563-1111
Gender: M Male
Name: test person, test person
Country: DK Denmark
Tx-Center: AR Aarhus
Dialysis/Treatment center: AC Aarhus
Waiting list: KI Kidney
Date of entry on waiting list: 01-JAN-2006
Waiting list status: N Notified
Waiting for tx number: 1
Blood group: AB
Narrow HLA: A 1,2;B 5,7;DR 1,2;DQ 4,9;
Repeted mismatches:
Antibody Screen Test: 01-JAN-2008 I% 55 AUTO II% 89 BLOCK
26-JAN-2007 I% 100 CDC II%
Identified antibodies: A3,+X;Cw4,5;DQ1,+X;DR10
Date of acceptance on STAMP: 26-JAN-2009
Signed up: Y Yes
STAMP status: A Active
Determination methods: CDC, FLOW
Acceptable mismatches: A3,11;B703,21;DQ4,9;DR9,13
Comments: this is freetext for additional comment
Y:I:26-JAN-2009:SCTP
First registered: 26-JAN-2009 SCTP
Last changed: 26-JAN-2009 SCTP
Calculated frequency for 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.

1. Frequency calculated combined PRA

On the basis of registered identified antibodies on a specific patient it is possible to make a percentage calculation of a combined PRA class I and II.

Enter the menu 'Updating Of Waiting List Data', make a query on the specific patient and go into the 'Antibody screen test' menu on page 3/3 with <F7>.

Press >F1< and a combined PRA value, containing class I and II antibodies, will be calculated and saved. Recalculating can be made by pressing >F1< again. The last date of calculation together with the PRA value will always be displayed.
2. Frequency calculated transplantability

In STAMP it is possible to get:

- A 'frequency calculated transplantability' based on patient's own tissue type
- A 'frequency calculated transplantability with acceptable mismatches' based on patient's own tissue type and acceptable mismatches.

The calculation is based on the HLA tissue types and ABO blood types represented in the donor pool.

Place the cursor in the field 'Calc. frequency' and press >F7< to get a pop up.

By pressing >F10< you get the calculated match frequency among the 1000 donor types with and without acceptable mismatches.