Minutes
Tissue Typers Meeting
Aarhus, 21st September 2018

Location: Aarhus University Hospital, Palle Juul-Jensens Boulevard 99, DK-8200 Aarhus N, relocation to C104 patiently accepted by all participants.

1. Bjarne Møller welcomed the participants – followed by a short presentation round. List of participants is enclosed.

2. Bjarne Møller was elected as chairman, Elin Jensen and Astrid Straarup were appointed to write the summary of the meeting.

3. The agenda was confirmed.

4. Election of the person that will give a report at the meeting of the council of representatives
The next meeting will take place in Aarhus as part of the Scandiatransplant 50-year jubilee on 9th of May 2019. Bjarne Kuno Møller was elected.

The next meeting of the Nordic Kidney Group will take place on 14th November 2018 at the Clarion Hotel, Copenhagen Airport. Helle Bruunsgaard will present the focus areas of the group at the meeting.

5. Use of p groups for HLA types in solid organ transplantation (Mette Christiansen)
Mette Christiansen presented a suggestion to use P groups in YASWA for the kidney waiting list patients. The presentation will be sent separately.
Conclusion:
Since Scandiatransplant is an organ sharing organization, the intermediate resolution (P groups) is considered unnecessary, and low resolution typings are sufficient for the time being with local interpretation of the results in the reports to clinicians. Thus, current practice is retained.

6. HLA-DP matching in the STAMP program (Mats, Ilse, Bjarne)
The work of the STAMP committee regarding HLA-DPB1 matching in the STAMP program was presented. The first steps towards DPB1 matching was taken in April 2018, but was rolled back as the STAMP steering committee realized some pitfalls that had not been identified. It is vital for the nephrology departments to have the HLA-DPB1 matching implemented as soon as possible. Furthermore, most of the laboratories have patients with DPB1 antibodies waiting to be accepted on STAMP.
Bjarne presented two possible solutions: Either to use G groups or only to match on the HLA-DPB1 types for which antibodies can be detected with the single antigen bead analyses.
Conclusion:

The tissue typers group agreed on the pragmatic solution to match only for antigens present in single antigen bead kits, and the Scandiatranplant office will adjust the matching algorithm accordingly.

7. STAMP program: Follow-up after the introduction of TS as acceptance criteria.
Ilse summarized the activity in the exchange program during the last year.
Transplantability score: It was introduced in November 2017, and immediately thereafter the donor pool was updated. It now consists of 2000 deceased donors including HLA typings on HLA-A, B,C,DRB1,DQB1. Definitions of TS and calculated PRA is found at:
http://www.scandiatransplant.org/data/TS CALC PRA.pdf.
An update of the calculation of TS in YASWA takes place each time the list of identified antibodies is updated.

Patients simultaneously on both STAMP and LAMP? This is on the to-do-list of Scandiatransplant office and it will be made possible in the future.

8. Update of the guidelines on routine HLA typing of deceased donors (DPB1 and DQA1)
Ilse: According to the minutes of Stockholm two years ago all agreed to implement DPB1 and DQA1 typing on deceased donors. All labs. are doing this now, thus the guidelines need to be updated accordingly.
Furthermore, it was disclosed that all labs. also type for DPA1, DRB3, DRB4 and DRB5, this should also be added to the guidelines.
The whole HLA typing result must be registered in the Scandiatransplant database by the donor center.
If kidneys are transplanted the HLA typed must be registered in YASWA during the on-call service.
DPB1 on 2nd field resolution. Updated guidelines:
http://www.scandiatransplant.org/members/sttg/HLAtypingondeceaseddonors_01_oct_2018.pdf

9. Revision of Kidney Exchange obligations (Pernille, Bjarne)
Pernille presented a proposal for new exchange obligations

1. AB0 compatibility for STAMP patients.
The suggestion to the NKG is to implement blood group compatibility for STAMP recipients. Data on the consequence of ABO compatibility for exchange activity will be made available for presentation at the NKG meeting.

2.
Move STAMP patients to exchange criterium one.
HI patients should be listed as STAMP patients when possible to give an incentive to conclude on acceptable mismatches for the patients. A short discussion resulted in the agreement that patients with lowest transplantability score should be given the highest priority. Furthermore, STAMP patients will be match on HLA-A, -B, -C,-DRB1,-DQB1 and soon DPB1, whereas current priority 1 is only match on broad HLA-A, B and DR.

3.Include other loci for matching.

There was no consensus to including more loci for non-immunized patients, whereas it is recommended for immunized patients to avoid sending kidneys to patients with donor specific antibodies.

It was suggested to included DSA in the exchange obligations, however this requires that all the labs report antibody specifications in YASWA.

Conclusion:

Suggestions 1+2 of this meeting will be presented to the NKG by Helle Bruunsgaard at the meeting on 14th November 2018.
Meanwhile, the tissue typers should start preparing to report antibody status into the YASWA.

10. Status STEP programme
Ilse Duus Weinreich gave an overview of the progress with the STEP program followed by an illustration of the STEP functionalities in YASWA (**attachment 10**).

It is important to point out that all centers participating in STEP must get the 'Fusion -> YASWA' data export up and running, as MFI/bead data is obligatory to make the STEP match run.

It was decided to set up a STEP/YASWA workshop to be held at Kastrup Airport with the participation of two persons from each center. Ilse will set a date.
All participants were very satisfied with the work done by Ilse and the staff at the Scandiatransplant office.

11. Scandiatransplant guidelines for blood volume drawn from child organ donors (**attachment 11**) Pernille Koefoed-Nielsen
The transplant surgeons in Aarhus and Odense have requested the tissue typing group to consider common guidelines for required blood volume drawn from child donors. The group agreed on the proposed reduced volumes, and it was underlined that the laboratories should be encouraged to use spleen cells for crossmatching instead of peripheral blood.
Karolinska opposed to receive peripheral blood for crossmatch drawn in EDTA tubes before they have validated EDTA tubes in their flow-cytotoxic crossmatch. Until that, they accepted to have spleen for crossmatching. The agreed document is now available on the Scandiatransplant webpage http://www.scandiatransplant.org/organ-allocation/Scandiatransplantguidelinesforbloodvolumedrawnfromchildorgandonors.pdf
In order to inform all relevant persons, it was decided that Pernille should send the information to each of the organ groups and the transplant coordinators.

12. Cells for crossmatch drawn in EDTA tubes
Pernille Koefoed-Nielsen presented the validation of cells for crossmatch isolated from EDTA tubes. The isolated cells were comparable in regards to number of cells harvested, viability (both frozen and fresh), spontaneous cell lysis and crossmatch results from EDTA tubes and CPD tubes

respectively. Reykjavik have been using cells isolated from EDTA tubes for several years with excellent results.

13. Volume when sending sera from heart and lung patients for crossmatch and other relevant information from the Scandiatransplant office

The Scandiatransplant office has had complaints that laboratories do not receive 1 mL of serum for crossmatch on immunized heart and lung patients. Copenhagen are working on solving the issue and will in the future adhere to sending 1 mL on each patient.

14. HLA antibody detection and identification. Should we use kits from both vendors? (attachment 14)

Pernille Koefoed-Nielsen presented the results of the questionnaire about the experience of the laboratories within Scandiatransplant with using kits for HLA antibody screening and identification from Immucor.

Aarhus have tested the kits from Immucor with the last EPT sending from ETRL. For antibodies with MFI>3-4,000 MFI the results were comparable, but with antibodies with MFI below 3,000 the Immucor kits missed approximately half of the specificities. This is also the experience from other laboratories (Leiden) and publications that compare the kits from the two vendors. At the moment in Denmark there is no economical gain by changing from Onelambda to immucor.

Uppsala also have validated the Immucor kits and presently use it for the HLA antibody identification for sera from new patients that have not previously been analyzed by the OneLambda kit. Furthermore, they will use it for sera where results imply false positive reactions.

Conclusion:

Developments by the two main vendors will have the attention of all centers in the future, and no recommendation on the use of one or the other kit can be given for the time being.

15. Routine screening for HLA antibodies, every three months?

At the tissue typers meeting last year is was discussed if the laboratories should proceed with the 3 monthly routine screening or could increase the intervals. The clinicians have suggested to increase the interval due to the economical considerations.

Bjarne Møller presented data from Aarhus to support the continuous screening for HLA antibodies every three month for all patients on the kidney waiting list.

It is important to have regular assessments of the antibody profile for patients on waiting list. Thus, it is difficult to keep up with all events that triggers immune activation and immune response if patients are not evaluated on a regular basis. Additionally, we rely increasingly on virtual crossmatching that needs to be based on precise antibody profiles. Routine screening for HLA antibodies every three months is a common practice in larger international organisations and programs. Stockholm argues that less frequent screening might be sufficient, but the tissue typers group agrees that evidence must be provided for the clinical consequences if time intervals are increased for routine screening for HLA antibodies before the current procedures should be changed.

Conclusion:

The tissue typers group recommends continuation of current practice of routine screening for HLA antibodies every three months.

16. Additional issues

- Soeren Schwartz Soerensen: Do we have to perform the crossmatch in the donor centre, or could we accept to perform a virtual crossmatch and then ship the organ (pancreas)? Our recommendation is a virtual crossmatch and not to send serum – there were no objections to that.
- Mats Bengtsson has discussed the quality assurance of our STAMP program with Eurotransplant, by letting Eurotransplant perform antibody specification of patients on STAMP and compare the recommended acceptable mismatches, we might have an assessment of the efficiency of our decentralized approach in Scandiatransplant.
- Conclusion:
  - Mats contacts the Eurotransplant reference laboratory for information on logistics and costs. The information is distributed by e-mail to all labs.
  - Scandiatransplant office randomly chooses one patient on the STAMP list from each center, and every center covers the analysis cost for their own patient.
  - Norway, however, cannot participate for medico-legal reasons.

17. Next meeting

It was decided that the next meeting should be held in Gothenburg on the 20th of September 2019.

We will stick with the rotating principle and include Estonia in the rotation, so the meeting in 2020 will be held in Estonia.