

Minutes from the Tissue Typers' Meeting in Gothenburg September 20, 2019

1. Jan Holgersson greeted all welcome, and was elected to act as secretary and chairman of the meeting. The agenda (attachment 1) was approved.
2. Ilse Duus Weinreich of Scandiatransplant presented "10 years with STAMP" (attachment 2). A discussion followed on the work of the STAMP committee. Jouni Lauronen remarked that one should preferably handle one patient at the time. Perhaps there should be a few more representatives in the STAMP committee? Ilse suggested that one should at least include one representative from Tartu (currently there are two representatives from each country). It was suggested that Helle Bruunsgaard bring our suggestion to the Nordic Kidney Group that there should be a representative from Estonia in the STAMP committee. Helle brought up the need for a more direct communication with the STAMP committee. It would be desirable to be able to add comments from the TX center as well as the steering committee to the new "keeping track during evaluation feature" in YASWA presented by Ilse.
3. Ilse and Mats Bengtsson presented "Next STEP for STAMP" (attachment 3), including some examples of the positive consequences of including DRB3/4/5, DQA and DPA in the STAMP matching algorithm. Based on the work done in the STEP program, Bjarne Møller and Mats B proposed to:
 - Include DRB3/4/5 in the STAMP algorithm
 - Include DQA1 and DPA1 as well
 - Include DP in TS calculation
 - If more antigens included they should also be included
 - DP and other antigens also included in the STAMP QC part
 - Next step would be to include combos and allele specific antibodies.
 - Requires in-silico matching

A discussion followed. Bjarne remarked that much is already done in order to accomplish this since we already do the typing for STEP. Jouni remarked that it has to be done in steps, starting with a revision of YASWA. He also remarked that a 4-digit level assignment of the donors may be difficult for the technicians. Mats responded that low resolution typing of DRB3/4/5, DQA and DPA would be enough. Helle asked: what about low expressing antigens and what about MFI:s? Jouni stated that the centers themselves can decide which antigens to add as acceptable/not acceptable and an explanation can be given to the STAMP committee in the "Note/Comments" field.

The Tissue Typers' group decided to pass the proposal (attachment 4) on to the Nordic Kidney Group (NKG) and Søren Schwarz Sørensen via Helle Bruunsgaard.

It was asked when it could be implemented in YASWA, and it was estimated that it would take 6 months following the approval by the NKG.

4. Next Matthias Niemann gave a presentation entitled "Computational Simulations Demonstrate the Feasibility and Benefit of T Cell Epitope Matching in Deceased Donor Kidney Allocation" (attachment 5). Matthias presented data supporting the fact that T cell

HLA epitope mismatching correlates to the development of de novo DSA and decreased long term function and survival.

A discussion followed as to how Scandiatransplant could potentially benefit from utilizing the PIRCHE algorithm in deceased kidney allograft allocation.

5. Next followed a joint meeting between the Tissue Typers and the STEP committee. See presentation in attachment 6. With regard to exchange of blood samples for STEP pairs, it was suggested to send the same samples as previously discussed for pediatric patients. Mats and Helle will come up with a proposition on what samples to send. Pernille Koefoed-Nielsen remarked that the STEP program has worked quite well, especially the function that allows going in and adjust antibody reactivities as acceptable or unacceptable. Evaluation of non-bead data was discussed for instance if a patient has antibodies against DRB1*13:01 and *13:03, and the donor is DRB1*13:02 which is not represented on the beads . It was decided that more experience is needed before any changes are made in YASWA and the labs. must carefully consider this in their evaluation
6. Anna Lundgren gave a talk on ” Analyses of allo specific memory B-cells in kidney transplantation patients – added diagnostic value?”. It was concluded that more research is needed in order to investigate the potential clinical significance in transplantation of memory B-cells producing HLA antibodies upon stimulation.
7. Next Jouni discussed the significance of autoreactive HLA antibodies, i.e. antibodies with a specificity suggesting reactivity with the patient’s own HLA antigens (attachment 7). Two major strategies appeared to be used by the different centers. If of low reactivity, some centers would simply increase the MFI cut-off. Bjarne commented that would potentially make some HLA antibodies of low reactivity negative despite the fact that they may be true antibodies. Other centers would in the report state that the patient had what appeared as autoreactive HLA antibodies, the clinical significance of which is unclear.
8. Next Scandiatransplant Tissue Typers’ meeting will be held in Tallinn, Estonia, on September 25, 2020