Minutes
Tissue Typers Meeting
Tartu, 25th of September, 2020
Virtual meeting on Jitsi Meet platform

1. Kaie Lokk welcomed the participants and a short introduction round followed. Kaie Lokk was elected to act as the secretary and the chairman of the meeting. The agenda (attachment 1) was approved.

2. **News from the Scandiatransplant Office** – Ilse D. Weinreich (attachment 2)
   Ilse gave an overview of the updates introduced in YASWA since last year and updates to come
   - Approximately 15000 old cardboards with details (HLA etc.) are now scanned and uploaded in the system. These can be found under the Cardboard registry or directly from the patient's record, the tab Card exists if the patients has some old records.
   - By default, you are able to see the potential donors only from your own country. Now, with the "Visible to other countries" field it is possible to make the information available to other countries within Scandiatransplant. The information will be available for two days and it will return to not visible.
   - In the next update, there will be new QC – double-blinded entry of AB0 blood types on donors and recipients that was requested to make the security of the blood types better. It is voluntary. The update will be launched in the beginning of the October.
   - As a result of the last year's Tissue Typers meeting request, it is now possible for a patient to be active in both, STAMP and LAMP with different criteria.
   - STAMP log tab was made in order to make the evaluation and approval of STAMP candidates to be followed and recorded more efficiently. Comments and updates are now e-mailed to the STAMP committee and users working on the patient record. All the comments should be written directly to YASWA but not directly e-mailed to the person who asked the question.

3. **Outline for a possible STAMP publication** – Pernille B. Koefoed-Nielsen & Ilse D. Weinreich (attachment 3, only available by contacting the Scandiatransplant office)
   Last STAMP publication included data from March 2009 to February 2015, since then many changes have been introduced: TS as acceptance criteria, patients can enter STAMP immediately when listed on the regular waiting list, priority changed from 2->1, AB0 compatible matching, match extended with DRB3/4/5 DQA1 DPA1 DPB1.
   Suggestions for content:
   - 10-y allograft survival for STAMP
   - TS as an acceptance criterion
   - AB0 identical vs AB0 compatible
   - TS before and after updating the donor pool
   - Next step for STAMP (matching on all loci)

Ilse made a presentation how introducing TS and AB0 compatible changes have influenced the transplantation numbers. Ilse and Pernille are waiting response by 1st of November, who would like to contribute to the process of collecting data and writing manuscript.
Discussion: Jouni agreed that it is a good idea to make a publication, but since there is really a lot of data, maybe it can be someone's doctoral thesis. Mats agrees that this data can be divided maybe into two manuscripts – first describe changes in TS and HLA matching system and the second paper about clinical outcomes. Søren points out that the NKG could be against the publication. However, regarding timing – Eurotransplant will start full HLA matching in 2021 and it would be good to have the publication before that. Ilse and Pernille agree that two papers would be good idea and proceed with the first one immediately.

4. **Repeated mismatches and historical antibodies in kidney transplantation: centers policies for handling this**

   Copenhagen is going through evaluation and revision about historical antibodies and repeated mismatches and would like to hear other centers' strategies for these topics. Mats comments that they have been doing for 30 years peak positive and current negative transplantations without extra immunosuppression. Jouni says that they don't take historical antibodies into consideration when choosing immunosuppression, when they are not donor specific. But in the case where there are historical antibodies against repeated mismatched, the patient won't get transplanted. But in STAMP they transplant even against historical mismatches. If there has been at least one year since the peaking of the antibodies, it is considered increased risk but not contraindication for transplanting. Historical donor specific antibodies are reported, in case of current high DSA, and then ATG may be used. In Aarhus, they are following STAR report as a guideline to report repeated mismatches and pregnancies. In Gothenburg, historical antibodies and repeated mismatches are considered high risk but not contraindication to transplantation. For patients who are on STAMP, antibodies that have been negative for 2 years are allowed. In Oslo repeated mismatches are avoided when there has been historical antibodies, otherwise antibodies up to 1 year are looked back. In Lund historical antibodies are not considered as contraindication to transplantation, however they are reported and discussed with the clinician to state the immunologic risk of a specific patient. Elispot is used in Gothenburg as a research project, to look at the memory B cells, the topic was discussed at the last year meeting. Søren points out that as a clinician it is difficult to make a decision based on the risks that are reported. Instead, would it be possible to collect data from Scandiatransplant, to see what are the outcomes when transplanting with historical antibodies and/or repeated mismatches? It was decided that it would be a good idea to start working group to look into this problem. Mats points out that in his view STAMP patients should be evaluated only on the current immunization status, not on historical antibodies and therefore some patients should not be in STAMP at all, because of that. However, it was seen from Ilse's presentation that previously immunized patients are staying for a very long time on the waiting list, which is something that would be also interesting to look into.

5. **The Toronto approach to a sensitized lung transplant recipient** – Jussi Tikkanen (attachment 4)
   Jussi gave an overview about the outcomes of patients who were sensitized or had DSA at the time of the transplantation and presented the Toronto protocol adopted in 2008. Based on the protocol, patients who had positive virtual crossmatch at the time of the transplantation, they would receive plasmapheresis intraoperatively and post-operatively, altogether 7 runs, followed by IVIG. Also thymoglobulin as an induction agent.
   Followed discussion about complications of plasmapheresis, DQ matching, crossmatching and HLA outcomes. It would be interesting to see how matching in Scandiatransplant has affected the outcomes of lung transplantation patients.

6. **Lung transplantation of a highly sensitized patient with positive CDC crossmatch- our first experience with the "Toronto protocol".** – Helle Bruunsgaard
   Helle presented a case study about highly immunized lung transplantation patient with whom the Toronto protocol was used. First perioperative plasma exchange was planned, following 5 postoperative plasma exchange sessions during the first 2 weeks. Dosing of the ATG was based whether the patient had DSA-s and if crossmatch was positive or negative. The potential donor had altogether 8 mismatches and historical and current serum crossmatches were positive, with several high-level DSA-s. Post plasma exchange crossmatch turned negative with two medium level DSA-s. 2 weeks after the transplantation, the levels of DSA-s were high again, but they started to decline afterwards. 3 months later, they were again low level. Patient had one acute cellular rejection at 2 weeks. Patient is now at home and at good condition.
   Jouni asked whether this protocol could be used for kidney transplantation. Søren answered that this kind of protocol has been used for many years for living donors, but there is also publication for deceased donors. IdeS could be also a good option, although highly expensive.

7. **A scheme for pre-tx evaluation of thoracic transplant patients** - Jan Holgersson (attachment 5)
   Jan gave an overview how they evaluate thoracic patients based on the immunological risk. The risk assessment is based on mostly whether patient has HLA antibodies or not.

8. **STEP** - Ilse D. Weinreich (attachment 6)
   Ilse goes over the last STEP runs, which have been done in 2019 (3 runs), in 2020 there have been 3 runs. As a result, 7 cycles/runs have led to 16 pairs being part of the exchange. 12 cycles have been broken and 4 cycles are under evaluation. Reasons for broken cycles are: immunological reasons (7), covid-19 (2), lack of communication (1), pair changed decision (1), registration error (1). New feature from not long ago was a possibility to register AB0 types that are not acceptable for the patient. In addition, it is possible to use “Add conclusion” functionality, which will bring forward data from the previous sample where the conclusions are different from the default setting “M: MFI

cut-off". Importing data from Fusion to YASWA is still up and running in Gothenburg, Tartu, Aarhus/Odense, Stockholm, Uppsala, Skåne, Copenhagen; in progress in Helsinki and pending in Oslo. Not all countries are yet participating in STEP, Denmark and Sweden have enrolled several pairs, Estonia is not ready to participate yet, Finland is ready and is planning to participate in the next run, Iceland is ready but not yet decided on logistics, Norway is ready but are still working on legal issues and on transfer Fusion data to YASWA.

9. **Additional issues**

Next Scandiatransplant Tissue Typers' meeting will be held in Uppsala, Sweden, date TBA. The representative on NKG meeting was elected to be Kaie Lokk from Tartu, Estonia. Søren proposed that NKG and Tissue Typers' group should have virtual meeting to discuss few topics that would be beneficial to clinicians and broaden the discussions between these two groups. The idea was supported positively.

Participants:

Name	**Center**
Kaie Lokk	Tartu
Astra Västrik	Tartu
Ingrid Tagen	Tartu
Mats Bengtsson	Uppsala
Helle Bruunsgaard	Copenhagen
Anne Werner Hauge	Copenhagen
Søren Schwartz Sørensen	Copenhagen (NKG)
Ilse Duus Weinreich	Scandiatransplant
Christian Naper	Oslo
Tore Jensen	Oslo
Kristjana Bjarnadottir	Reykjavik
Pernille Koefoed-Nielsen	Aarhus
Bjarne Kuno Møller	Aarhus
Nicklas H. Staunstrup	Aarhus
Ann-Sofie Liedberg	Lund
Magnus Jöud	Lund
Jan Holgersson	Gothenborg
Jouni Lauronen	Helsinki
Juha Peräsaari	Helsinki
Jussi Tikkanen	Helsinki
Taina Jaatinen	Helsinki