

**OPTN Kidney Transplantation Committee  
Kidney Paired Donation Workgroup  
Histocompatibility Focus Group  
Meeting Summary  
February 1, 2022  
Conference Call**

**Peter Kennealey, MD, FACS, Chair**

## **Introduction**

A Histocompatibility Focus Group (the Focus Group) of the Kidney Paired Donation (KPD) Workgroup (the Workgroup) met via teleconference on 02/01/2022 to discuss the following agenda items:

1. Welcome and Review of Goals
2. Review of Histocompatibility-Related Policies
3. Discussion on Potential Updates
4. Project Timeline and Next Steps

The following is a summary of the Workgroup's discussions.

### **1. Welcome and Review of Goals**

The Histocompatibility Focus Group reviewed the goals of the KPD Policy Review project, and objectives for the group's discussions.

#### Data summary:

The goal of the project is to review existing KPD policy to ensure alignment with other OPTN policies, identify areas in need of clarification, and identify potential items for future Workgroup projects.

The Focus Group will review Histocompatibility policies and consult the Histocompatibility Committee and Minority Affairs Committee as needed to identify areas in need of modification and alignment:

- 13.5: OPTN KPD Histocompatibility Testing
- 13.7.A: Blood Type
- 13.7.B: Blood Type A, non-A1, and Blood Type AB, non-A1B Matching
- 13.10: OPTN KPD Crossmatching Requirements

#### Summary of discussion:

The group had no questions or comments.

### **2. Review of Histocompatibility-Related Policies**

The Focus Group reviewed the KPD histocompatibility-related policies, as well as other relevant histocompatibility-related OPTN policies.

#### Data summary:

OPTN Policies 13.5, 13.7, and 13.10:

- 13.5: OPTN KPD Histocompatibility Testing
  - 13.5.A: Human Leukocyte Antigen (HLA) Typing Requirements for OPTN KPD Candidates

- 13.5.B: Antibody Screening Requirements for OPTN KPD Candidates
- 13.5.C: HLA Typing Requirements for OPTN KPD Donors
- 13.5.D: Responding to OPTN KPD Match Offers
- 13.7: OPTN KPD Screening Criteria
  - 13.7.A: Blood Type
  - 13.7.B: Blood Type A, non-A1, and Blood Type AB, non-A1B Matching
  - 13.7.C: Unacceptable Antigens
- 13.10: OPTN KPD Crossmatching Requirements

Summary of discussion:

The Focus Group had no questions or comments.

**3. Discussion on Potential Updates**

The Focus Group discussed potential updates and modifications to the KPD histocompatibility-related policies.

Summary of discussion:

*13.5.A: HLA Typing Requirements for KPD Candidates, 13.5.B: Antibody Screening Requirements for OPTN KPD Candidates, and 13.5.C: HLA Typing Requirements for OPTN KPD Donors*

The Focus Group noted the updated typing requirements approved by the Board of Directors in December, 2021, and agreed on updates to correct typos and numbering.

*13.5.D: Responding to KPD Match Offers*

Staff explained that a transplant center refusing an offer for virtual or actual crossmatch are currently required to report why they declined due to crossmatch. Staff noted that initially, there was a large volume of crossmatch related refusals, and that the OPTN KPD program has sent out a set of questions to help transplant programs with the process and to collect better data. Staff shared that this data hasn't been reviewed recently, and asked if the data should still be collected.

One member asked if there were common causes for programs to decline the offer for positive crossmatch. Staff explained that the data has been pulled, but not analyzed. Staff noted that historically there were issues with loci DBQ and DPQ that weren't required initially. The member agreed that it doesn't make sense to collect data that isn't in use, but that it is important to analyze the current data set, to identify trends in crossmatch refusals and to determine whether the data should still be collected. The member pointed out that if most refusals were due to unacceptable antigens that were not required to be reported at the time, then the data may not need to be recorded so frequently.

The Focus Group recommended reviewing current data to determine if the policy should remain. Additionally, the Focus Group recommended developing a data review process for the data collected if the Workgroup decides the policy should not be changed.

*13.7.B: Blood Type A, non-A1, and Blood Type AB, non-A1B Matching*

Staff explained that the current policy requires blood type B candidates to have an IgG antibody titer value less than 1:8 in order to be eligible to be matched to a blood type A, non-A1, or a blood type AB, non-A1B potential donor, or for a blood type O candidate to be eligible to match to a blood type A, non-A1.

One member remarked that there is variability in what centers accept in terms of titer values, with some programs okay with 1:16 and others uncomfortable at 1:4. The member suggested asking programs

what cut offs they use. Another member agreed, noting that variability in program comfort levels with different titers may not be as helpful in establishing a specific titer threshold.

Staff noted that Kidney policies related to blood type B don't include a specific titer value, and instead requires the transplant program to establish a written policy regarding a certain titer threshold. The Focus Group agreed that the language requiring transplant programs to establish their own policy makes more sense. One member asked if there would be a timeframe involved, as the Kidney policy requires the program to confirm the titers every 90 days. Another member agreed that this time frame made sense. Staff will determine if there would be any system impact for this change to inform the Workgroup's consideration of this policy.

#### *13.10: OPTN KPD Crossmatching Requirements*

Staff explained that current policy requires the transplant program to perform a physical crossmatch, but does not specify when. Transplant programs most often interpret this policy such that every crossmatch must be a physical crossmatch, including the initial. Staff shared that the Histocompatibility Committee recently discussed this, and supported maintaining the requirements for a physical crossmatch, but agreed that at least requiring a physical final crossmatch would be the minimum. One member agreed, noting that a surprise positive crossmatch can easily upend a KPD chain, and that virtual crossmatching is not sensitive enough to reliably catch everything. Another member agreed, sharing that the investment of physical crossmatch is valuable in context of maintaining KPD chains.

Staff asked if there were scenarios where a virtual would be acceptable initially, such as when a candidate isn't sensitized. One member commented that it could be argued a 0 percent calculated panel reactive antigen (CPRA) candidate wouldn't need a physical, but that even these candidates can have unexpected crossmatches. The member noted that some programs don't account for uncommon assays. The member continued that, where a last minute positive crossmatch can upend a large chain of paired donors and candidates, physical crossmatching is worth it.

One member remarked that virtual crossmatches are most beneficial to reduce the amount of time pre-transplant devoted to crossmatch, particularly in post-clamp deceased donor kidney transplant scenarios. The member continued that with KPD, time is not as limited, and there is enough time to perform physical crossmatches. Because of this, the member noted that KPD should not rely on virtual crossmatch, even for unsensitized patients.

A member pointed out that there is a considerable lack of standardization among different labs, and that the safest way to reduce error and inconsistency is to perform physical crossmatch.

Staff asked if high resolution typing requirements should be put into policy. One member noted that requiring higher resolution typing could considerably disadvantage smaller labs with limited access to high resolution. The member added that, most of the time, high resolution isn't needed for solid organs. Another member pointed out that high resolution typing isn't necessary if there is a physical crossmatch.

The Focus Group agreed that high resolution typing could be a recommendation, but not a requirement.

#### **4. Project Timeline and Next Steps**

The Focus Group reviewed the project timeline and next steps for the KPD policy review project, as well as the policy modification categories used to estimate project size and organize potential KPD policy modification projects.

**Upcoming Meeting**

TBD

## **Attendance**

- **Committee Members**
  - Valia Bravo-Egana
  - Aneesha Shetty
  - Stephen Gray
- **UNOS Staff**
  - Lindsay Larkin
  - Ruthanne Leishman
  - Meghan Oley
  - Kayla Temple

\*Due to technological issues, the full attendance for the KPD Histocompatibility Focus Group meeting on 2/1/2022 could not be recorded.