OPTN

Notice of OPTN Policy Changes

Require Reporting of HLA Critical Discrepancies and Crossmatching Events to the OPTN

Sponsoring Committee:	**Histocompatibility Committee**
Policies Affected:	***4.4 Critical HLA Discrepancies in Candidate, Donor, and Recipient HLA Typing Results***
	4.4.B Requirements to Resolve Critical Discrepant Donor and Recipient HLA Typing Result
	4.11.B HLA Unacceptable Antigen Equivalences
	18.5.D Required Reporting by Histocompatibility Laboratories (New)
Public Comment:	**July 31, 2024-September 24, 2024**
Board Approved:	**December 2-3, 2024**
Effective Date:	**March 5, 2025**

Purpose of Policy Changes

This proposal will require reporting of critical discrepancies in HLA typing to the OPTN to bring insight into the root cause and use the gained information to reduce the total number of HLA critical discrepancies. *OPTN Policy 4.4.A* requires reporting of critical discrepancies to transplant programs and organ procurement organizations. When identified before transplant, these discrepancies may require re-allocation, which can impact system efficiency and impact organ quality through increased cold ischemic time. When identified after transplant, they may be a patient safety concern due to their potential to cause an immunologic reaction in the recipient(s). This proposal modifies the definition of a critical discrepancy. A human leukocyte antigen (HLA) critical discrepancy is a difference among non-equivalent values. Typing reported from a low-resolution method by serologic nomenclature that have values within the same serologic split antigen group or within the same P group according to International Immunogenetics Information System/Human Leucocyte Antigen (IMGT/HLA) are considered equivalent. For typing reported at the two-field resolution, values within the same P group according to IMGT/HLA are considered equivalent. Other reporting includes if incorrect donor or candidate sample was used for a physical crossmatch or if an incorrect candidate HLA antibody sample was analyzed for a virtual crossmatch per program testing agreement. Reducing HLA critical discrepancies would increase patient safety and increase system efficiency.

Proposal History

- The Subcommittee reviewed data from labs with discrepant typings in 2022 from their quarterly reports obtained from data within the Data System for the OPTN
- Committee reviewed aggregate data of discrepant typing events voluntarily reported to OPTN Patient Safety Portal. Committee identified the gap and need to have more comprehensive information on all discrepancies
- The Committee developed a public comment proposal
- The proposal received overall support for all components during July 31, 2024-September 24, 2024 public comment
- The Committee changed the critical discrepancy definition to include low-resolution and two-field typing and reporting time from 24-hours to 72-hours following public comment, as per community-recommended changes. They also adjusted language in *Table 18-6* for clarity, stating that now that discovering labs must report if "an incorrect candidate HLA antibody sample was analyzed for a virtual crossmatch per program testing agreement."

Summary of Changes

- Requires reporting to the OPTN Patient Safety Portal for:
    - HLA critical discrepancies
    - If an incorrect sample is used for a physical crossmatch
    - When an incorrect candidate HLA antibody test is analyzed for a virtual crossmatch
- When these events occur, the discovering lab must make the report to OPTN Patient Safety Reporting Portal within 72 hours of discovery

Implementation

This proposal would require histocompatibility laboratories to report HLA critical discrepancies and crossmatching events to the OPTN within 72 hours of discovery. Upon review of the reported incident, members may be requested to perform root cause analyses to determine the cause of the HLA critical discrepancy and implement corrective action plans as needed.

There is no anticipated impact on OPOs or transplant hospitals.

The OPTN is expected to receive approximately 40-50 additional reports to the OPTN Patient Safety Reporting Portal per year, increasing the quantity of patient safety cases the OPTN Membership and Professional Standards Committee reviews. The OPTN will use the information submitted in the OPTN Patient Safety Reporting Portal as the basis for their inquiry to the member. Based on historical information, it is possible that additional MPSC engagement and monitoring could arise from the findings of the review. This includes any component of monitoring or member action outlined in the *OPTN Management and Membership Policies: Appendix L: Reviews and Actions.*

Affected Policy Language

New language is underlined (example) and language that is deleted is struck through (~~example~~).

4.4: Critical HLA Discrepancies in Candidate, Donor, and Recipient HLA Typing Results

~~For the purposes of this policy, a~~ A human leukocyte antigen (HLA) critical discrepancy is a difference among non-equivalent values, ~~according to Policy 4.10: Reference Tables of HLA Antigen Values and Split 4 Equivalences,~~ at one or more loci in a candidate's, donor's, or recipient's HLA typing.

- For typing reported from a low-resolution method by serologic nomenclature, values within the same serologic split antigen group or within the same P group according to IMGT/HLA are considered equivalent.
- For typing reported at the two-field resolution, values within the same P group according to IMGT/HLA are considered equivalent.

[…]

4.4.B: Requirement to Resolve and Report to the OPTN Critical Discrepant Donor and Recipient HLA Typing Results

The laboratory director of each laboratory involved in ~~the~~ a candidate, donor, or recipient critical HLA typing discrepancy, or their designee, must identify the correct HLA typing. The laboratory director of the laboratory who discovers the critical HLA typing discrepancy, or their designee, must report the critical HLA typing discrepancy to the OPTN via the OPTN Improving Patient Safety Portal within 72 hours of discovery of the discrepancy. Each laboratory director involved in the critical HLA typing discrepancy, or their designee, must ~~and~~ report the reason for the discrepancy to the OPTN within 60 days of ~~discovery of the discrepancy~~ the initial report.

4.11.B: HLA Unacceptable Antigen Equivalences

At the time of the match run, if an antigen or epitope is entered as unacceptable for a candidate, then the candidate will not appear on the match run for donors reported with any of the equivalent antigens described in Tables 4-7, 4-8, 4-9, 4-10, 4-11, 4-12, 4-13, 4-14, 4-15, and 4-16 below. CPRA calculations include all donor alleles equivalent to a candidate's reported unacceptable antigens, alleles, and epitopes. ~~HLA values listed below as equivalent for the purposes of unacceptable antigen screening are also equivalent for the purposes of reporting HLA typing, with the exception of epitope-based unacceptable antigen assignments in the Table 4-16.~~

18.5.D: Required Reporting by Histocompatibility Laboratories

Histocompatibility laboratories must report the following events to the OPTN according to *Table 18-6* below.

Table 18-6: Required Reporting by Histocompatibility Laboratories

Discovering Laboratories must report if:	To the:	Within 72 hours after:
A donor, candidate, or recipient HLA typing critical discrepancy occurs, as defined by OPTN *Policy 4.4: Critical HLA Discrepancies in Candidate, Donor, and Recipient HLA Typing Results*	OPTN Patient Safety Reporting Portal	The laboratory becomes aware
An incorrect donor or candidate sample was used for a physical crossmatch	OPTN Patient Safety Reporting Portal	The laboratory becomes aware
An incorrect candidate HLA antibody sample was analyzed for a virtual crossmatch per program testing agreement	OPTN Patient Safety Reporting Portal	The laboratory becomes aware

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