Histocompatibility Committee Report

OPTN/UNOS Board of Directors
Lee Ann Baxter-Lowe, PhD Chair
Dolly Tyan, PhD Vice Chair
June 23-24, 2014
Ongoing Committee Projects

- Histocompatibility Bylaws Rewrite Phase II
- Deceased Donor HLA Typing Requirements
Histo Bylaws Rewrite Phase 2

Spring 2013
- Bylaws Phase I recommendations released
- Approved November, 2013
- Effective Feb. 1, 2014

Fall 2014
- Phase II recommendations released
- Will be presented to Board in June 2015
Add General Supervisor as key personnel

Recognize foreign equivalent education and experience

Create pathway for review of laboratories with HLA typing errors that result in incompatible transplants or re-allocation to someone other than intended recipient
Improving virtual crossmatching with complete and consistent deceased donor HLA typing requirements
## Current HLA Typing Requirements for Deceased Donors

<table>
<thead>
<tr>
<th>Organ</th>
<th>A</th>
<th>B</th>
<th>Bw4</th>
<th>Bw6</th>
<th>C</th>
<th>DR</th>
<th>DR5 1</th>
<th>DR5 2</th>
<th>DR5 3</th>
<th>DPB</th>
<th>DQA</th>
<th>DQB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kidney</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Pancreas</td>
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<tr>
<td>Kidney-Pancreas</td>
<td>●</td>
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<td>●</td>
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<td>●</td>
</tr>
<tr>
<td>Heart*</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<td>●</td>
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</tr>
<tr>
<td>Lung*</td>
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<td>●</td>
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<td>●</td>
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<tr>
<td>Liver</td>
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<tr>
<td>Pancreas Islet</td>
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</tbody>
</table>

*For deceased heart and lung donors, if a transplant hospital requires donor HLA typing prior to submitting a final organ acceptance, it must communicate this request to the OPO and the OPO must provide the HLA information required in the table above and document this request. The transplant hospital may request HLA-DPB typing, but the OPO need only provide it if its affiliated laboratory performs related testing.
Goals of the Proposal

- Promote transplant safety by communicating critical information on deceased donors (DD) to be used for determining donor and recipient compatibility and/or post transplant monitoring.

- Expedite allocation by improving virtual crossmatching and preventing unexpected positive crossmatches that result in discards or increased cold ischemia time.
Complete, consistent list of HLA loci reported on all deceased donors

- For deceased liver and thoracic donors, HLA typing required only if requested

Molecular typing performed on all deceased donors

- Require HLA-DQA and HLA-DPB typing and reporting for all kidney, kidney-pancreas, and pancreas donors
DQA & DPB
% of OPTN KPD Candidates with HLA-DPB and DQA UAs

N=431

Note that for kidney waiting list: 84% have CPRA 0-79%, 4% - 80-94%, 5% - 95-99 and 6% - 100%
% of NKR Candidates with HLA-DP Unacceptable Antigens

26% of all NKR candidates have HLA-DP unacceptable antigens

Supporting Evidence

DPB Typed Deceased Donors

<table>
<thead>
<tr>
<th>Year</th>
<th>% of HLA typed deceased donors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>0.1%</td>
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<tr>
<td>2006</td>
<td>0.1%</td>
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<tr>
<td>2007</td>
<td>0.5%</td>
</tr>
<tr>
<td>2008</td>
<td>1%</td>
</tr>
<tr>
<td>2009</td>
<td>3%</td>
</tr>
<tr>
<td>2010</td>
<td>6%</td>
</tr>
<tr>
<td>2011</td>
<td>10%</td>
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<tr>
<td>2012</td>
<td>17%</td>
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<tr>
<td>2013</td>
<td>29% (Jan - Sept)</td>
</tr>
</tbody>
</table>

OPTN

UNOS DONATE LIFE

UNITED NETWORK FOR ORGAN SHARING
Two Programming Options

#1
• DonorNet® Only

#2
• DonorNet® and Waitlist℠
Pro:
• Allows deceased donor HLA info to be reported for these types
• Slight reduction in IT programming estimate (still in large category)

Con:
• Patient safety concerns
• Burdensome for transplant programs
• Inconsistent with programming for all other HLA reporting and the KPD program
DonorNet® and Waitlist℠

Pro:
- Eliminates patient safety concerns
- Less burdensome to transplant programs
- Consistent with KPD programming
- Supported by community (based on feedback from regions, ASHI, Kidney Committee, Pancreas Committee, Operations and Safety Committees)

Con:
- Higher IT programming cost (very large category)
Specific Feedback

- What additional info would you like to see when this is presented for decision in November?