

## Provincial Donor Algorithms

Donor Type	Allocation Steps
<b>Donor &lt; 4 years</b>	<ol style="list-style-type: none"> <li>1. Medically urgent patients, ABO identical then compatible in donor region <sup>1,5</sup></li> <li>2. Longest waiting patients, ABO identical then compatible in donor region <sup>5</sup></li> <li>3. Longest waiting patients, ABO identical then compatible outside donor region <sup>4,5</sup></li> <li>4. Out of Province patients</li> <li>5. UNOS</li> </ol>
<b>Donor ≥ 4 &lt; 18 years</b>	<ol style="list-style-type: none"> <li>1. Medically urgent pediatric patients, ABO identical then compatible in donor region <sup>1</sup></li> <li>2. Pediatric patients, ABO identical then compatible &lt; 18 in donor region</li> <li>3. Pediatric patients, ABO identical then compatible &lt; 18 outside donor region <sup>4</sup></li> <li>4. Proceed to SCD &lt; 35 algorithm (step 1)</li> </ol>
<b>ECD Donor</b>	<ol style="list-style-type: none"> <li>1. Medically urgent patients, ABO identical then compatible in donor region <sup>1</sup></li> <li>2. Highly sensitized (PRA&gt;=80%) ECD patients with identical ABO in donor region <sup>2</sup></li> <li>3. Longest waiting ECD patients, ABO identical with PRA &gt;=20-79% in donor region<sup>2</sup></li> <li>4. Longest waiting ECD patients, ABO identical with PRA &lt;20% in donor region<sup>2</sup></li> <li>5. Highly sensitized (PRA&gt;=80%) ECD patients with compatible ABO in donor region <sup>2</sup></li> <li>6. Longest waiting ECD patients, ABO compatible with PRA &gt;=20-79% in donor region<sup>2</sup></li> <li>7. Longest waiting ECD patients, ABO compatible with PRA &lt;20% in donor region<sup>2</sup></li> <li>8. Longest waiting ECD patients, ABO identical then compatible, with PRA &lt;20% then &gt;=20% outside donor region <sup>2,4</sup></li> <li>9. Longest waiting non ECD patients with identical ABO, in donor region</li> <li>10. Longest waiting non ECD patients with identical ABO, with PRA &lt;20% then &gt;=20% outside donor region <sup>4</sup></li> </ol>
<b>SCD (&lt; 35 yrs) Donor</b>	<ol style="list-style-type: none"> <li>1. Medically urgent patients, ABO identical then compatible in donor region <sup>1</sup></li> <li>2. Kidney-Pancreas patients, ABO Identical then compatible <sup>3,4</sup></li> <li>3. Zero ABDR mismatch patients with identical ABO in donor region</li> <li>4. Zero ABDR mismatch patients with identical ABO outside donor region <sup>4</sup></li> <li>5. Highly sensitized (PRA&gt;=80%) patients with identical ABO in donor region</li> <li>6. Kidney list exchange patients with identical ABO in donor region</li> <li>7. Longest waiting patients &lt;= 55 yrs with identical ABO, with PRA &gt;=20-79% in donor region</li> <li>8. Longest waiting patients &lt;= 55 yrs with identical ABO, with PRA &lt;20 in donor region</li> <li>9. Longest waiting patients &gt; 55 yrs with identical ABO, with PRA &gt;=20-79% in donor region</li> <li>10. Longest waiting patients &gt;55 yrs with identical ABO, with PRA &lt;20 in donor region</li> <li>11. Proceed to SCD &gt;= 35 algorithm (step 9)</li> </ol>
<b>SCD(&gt;= 35yrs) Donor</b>	<ol style="list-style-type: none"> <li>1. Medically urgent patients, ABO identical then compatible in donor region <sup>1</sup></li> <li>2. Kidney-Pancreas patients, ABO Identical then compatible <sup>3,4</sup></li> <li>3. Zero ABDR mismatch patients with identical ABO in donor region</li> <li>4. Zero ABDR mismatch patients with identical ABO outside donor region <sup>4</sup></li> <li>5. Highly sensitized (PRA&gt;=80%) patients with identical ABO in donor region</li> <li>6. Kidney list exchange patients with identical ABO in donor region</li> <li>7. Longest waiting patients with identical ABO, with PRA &gt;=20-79% in donor region</li> <li>8. Longest waiting patients with identical ABO, with PRA &lt; 20% in donor region</li> <li>9. Longest waiting patients with identical ABO, with PRA &lt;20% then &gt;= 20% outside donor region <sup>4</sup></li> <li>10. Out of Province patients</li> <li>11. UNOS</li> </ol>
<b>Anonymous/LE Living Donor</b>	<ol style="list-style-type: none"> <li>1. Medically urgent patients, ABO identical then compatible in donor hospital <sup>1</sup></li> <li>2. Zero ABDR mismatch patients with identical ABO in donor hospital</li> <li>3. Highly sensitized (PRA&gt;=80%) patients with identical ABO in donor hospital</li> <li>4. Longest waiting patients with identical ABO in donor hospital</li> </ol>

## Out-of-Province Donor Algorithms

Donor Type	Allocation Steps
<b>Out-of-Province / Donor &lt; 4 years <sup>4</sup></b>	<ol style="list-style-type: none"> <li>1. Longest waiting patients, ABO identical then compatible in Ottawa and London <sup>4</sup></li> </ol>
<b>Out-of-Province / Donor ≥ 4 &lt; 18 years <sup>4</sup></b>	<ol style="list-style-type: none"> <li>1. Pediatric patients, ABO identical then compatible &lt; 18 in province <sup>4</sup></li> <li>2. Proceed to Out-of-Province / SCD &lt; 35 algorithm (step 1)</li> </ol>
<b>Out-of-Province / ECD/ Donor <sup>4</sup></b>	<ol style="list-style-type: none"> <li>1. Longest waiting ECD patients, ABO identical then compatible , with PRA &lt;20%then &gt;=20% in province <sup>2,4</sup></li> </ol>
<b>Out-of-Province / SCD (&lt; 35 yrs) Donor <sup>4</sup></b>	<ol style="list-style-type: none"> <li>1. Longest waiting patients &lt;= 55 yrs with identical ABO, with PRA &lt;20% then &gt;= 20% in province <sup>4</sup></li> <li>2. Longest waiting patients &gt;55yrs with identical ABO, with PRA &lt;20% then &gt;= 20% in province <sup>4</sup></li> </ol>
<b>Out-of-Province / SCD (&gt;= 35yrs) Donor <sup>4</sup></b>	<ol style="list-style-type: none"> <li>1. Longest waiting patients with identical ABO, with PRA &lt;20% then &gt;= 20% in province <sup>4</sup></li> </ol>

## Notes

<sup>1</sup>Cardiomyopathy associated with uremia,, or loss of dialysis access in patient with reasonable survival expectation

<sup>2</sup>See ECD policy

<sup>3</sup>K/P donor defined as, < 55 years old, 30-100 kg, CrCl > 100 only. Minimum of 2 KP's donated per annum by Hamilton & Ottawa. No minimum KP donation by Kingston. London K/P's donors allocated to London KP transplant program.

<sup>4</sup>Prior to T-cell cross match results being entered, untested patients may appear on allocation. After T-cell cross match results are entered, only negative patients may appear inside selected donor region, while both negative and untested patients may appear outside donor region.

<sup>5</sup>TGLN will only offer these types of Kidney's en bloc to Ottawa and London Kidney transplant Programs

### **Principles of Kidney Allocation Policy**

- **Kidneys from DCD donors will be allocated the same as kidneys from NDD donors**
- Serology positive donors will be allocated to serology positive patients (positive HCV donor to HCV positive + HCV RNA positive patients , positive HbcAb donor to HbsAB positive patients)
- One kidney remains in local region unless the donor region KTP declines or defers kidney(s) (pediatric exempted)
- For kidney only donors, that are not able to be recovered by donor region 1 kidney will be allocated to the program listing the longest waiting who are able to recover the kidney's and the remaining kidney will stay in the donor region
- In circumstances where conflict exists or an Ontario Kidney Transplant Program requests deviation from algorithm, TGLN's (CMO) is consulted for final decision
- L kidney to be allocated to KP or where there is no K/P recovery to the program recovering kidneys, this assignment may be altered at the discretion of the surgical recovery team
- Patient are eligible for listing on the Ontario kidney waiting list prior to start of dialysis (when GFR < 15 ml/min x 2 occasions estimated or measured), but will not accrue waiting times until dialysis begins.
- Patients with a primary nonfunctioning of a renal transplant (graft failure necessitating dialysis at less than 30 days post-transplant) may be re-listed with a list date of initial dialysis start. In situation of poor initial function with early graft loss can be adjudicated in real time
- For the purposes of Kidney allocation, the donor region (unless otherwise specified) is the region from where consent for organ donation is documented.
- If a kidney is accepted for a specific recipient, the proposed recipient will be called in for assessment. In order to optimize logistics and minimize cold ischemic time, if that recipient is found to be unsuitable for transplantation, the kidney may be reallocated to another patient in the intended recipient's Kidney Transplant Program.
- All deceased/living donations, transplants and transfers between centers will be reported to TGLN within 24 hours for tracking purposes. TGLN records reasons for not accepting patients, as indicated by the algorithm.
- Donor region Kidney Transplant program conducts HLA testing, even in the event that the program does not accept kidney from the donor. Tissue typing results are entered HLA lab prior to TGLN allocation of the kidney.
- TGLN will not allocate to patients with a known positive T-cell IgG cross match against their donor.
- The deceased donor waiting list will support anonymous donations and list exchange for incompatible living donor-recipient pairs.
- Pediatric recipients are defined as patients < 18 years of age
- TGLN will not offer HbsAg, HIV and HTLV positive kidneys

### **Expanded Criteria Donor Policy (ECD)**

#### **DEFINITION OF ECD DONOR**

All donors  $\geq$  60 years of age

**OR**

Donors age 50-59 with at least 2 of 3 of the following:

- i) CVA as cause of death (definition – also known as stroke, occurring when there is an occlusion of an arterial vessel going to the brain or when is bleeding into the brain)
- ii) Pre-existing HTN
- iii) eGFR  $\leq$  70ml/min

#### **A) SINGLE KIDNEY ALLOCATION**

ECD with calculated eGFR > 70 ml/min

For ECD kidneys offered to the Toronto region one kidney will be allocated to SMH and one to TGH

#### **B) For DOUBLE KIDNEY ALLOCATION**

For Toronto region, offer to TGH only when ECD with eGFR < 70 ml/min

All other regions KTP will assess suitability for singles/doubles at time of offer

### **Definition of an ECD Recipient**

Patients who consent to receive ECD kidneys who meet the following criteria: (Toronto, Hamilton, Kingston)

- Patients > 60 years old
- Diabetics > 50 years old; or
- Other Significant co morbidities as determined by the attending transplant doctor.

Patients > 60 years of age (London, Ottawa)