

**Supplemental Digital Content:**

<b>SDC, Table S1. Operational Principals – Canadian KPD Program</b>
Exclude transplants with a donor specific antibody irrespective of antigen specificity, flow-cross match results, or antibody titre.
Exclude ABO incompatible transplants.
No bridge donations. The last kidney in a domino change will be allocated to the deceased donor waiting list.
Encourage participation of non-directed donors. The last transplant in a domino chain involving a non-directed donor would be allocated to the deceased donor waiting list in the center identifying the donor.
Maximum chain length capped at five transplants to facilitate rapid completion of chains and minimize risk of donor default.
No shipping of donor organs. Donors travel to transplanting center.
The transplanting center assumes responsibility for donor and candidate evaluation and transplantation.

**SDC, Table S2. Points Based Matching Algorithm –Canadian KPD Program**

Match Point Attribute	Rationale	Points
Any transplant	Maximize number of transplants per match cycle	100
cPRA $\geq$ 80%	Increase transplantation of sensitized patients	125
ABO Match: O to O	Maintain access for blood group O recipients	75
Pediatric Recipient	Prioritize patients who benefit most from transplantation	75
Recipient is Prior Living Donor	Recognize prior societal contribution	75
ABDR 0/6 Mismatch	Optimize transplant outcome	75
Dialysis exposure	Minimize exposure to dialysis	Days/30
Geography: Same City	Maximize efficiency/ minimize donor travel	25
Donor/Recip Age $\Delta \leq$ 30 years	Optimize transplant outcome	5
EBV Negative to Negative	Optimize transplant outcome	5

**Figure Legends:**

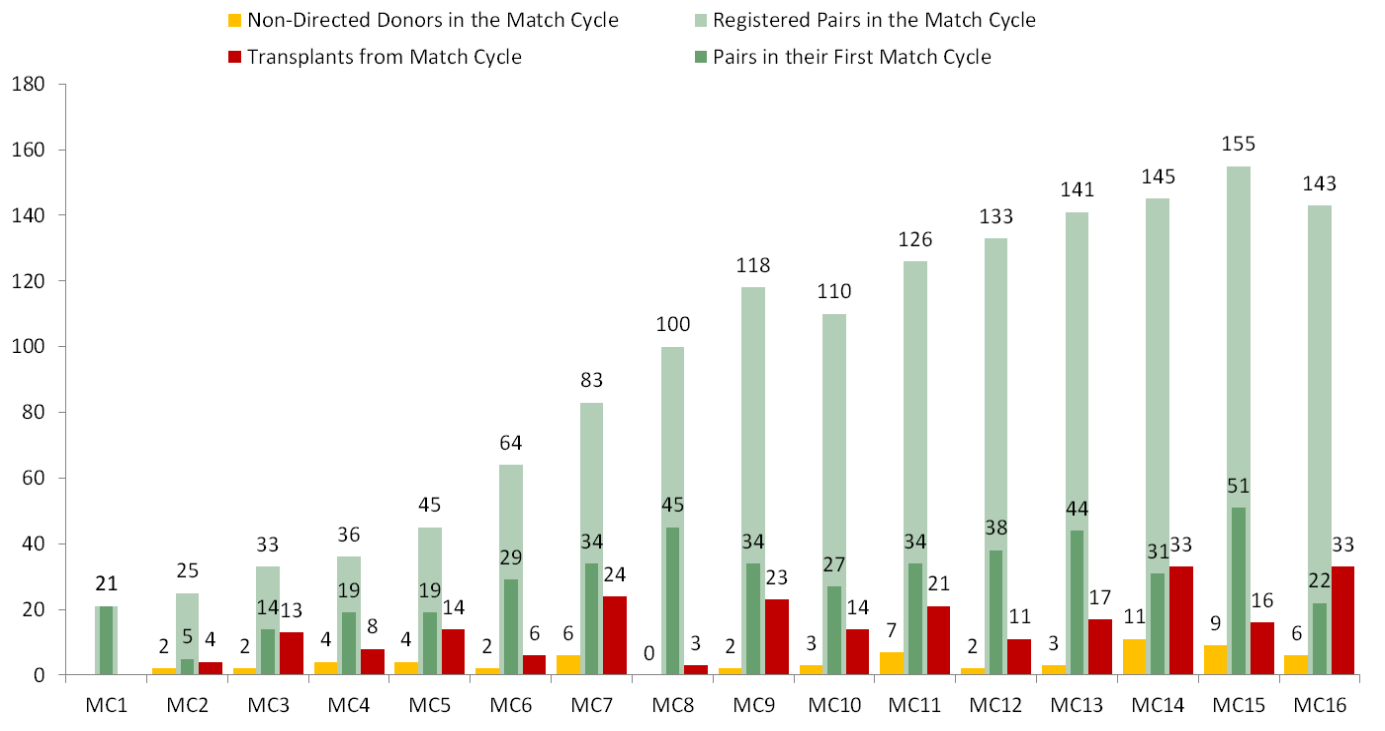
**SDC, Figure S1.** Activity in KPD program by match cycle.

**SDC, Figure S2.** Days to transplantation from date of first participation in a match cycle. Left Panel, non-blood group O candidates; Right Panel blood group O candidates.

**SDC, Figures:**

**SDC, Figure S1:**

**SDC, Figure 1 - Activity in KPD program by match cycle.**



**SDC, Figure S2:**

