Advanced Kidney Donation for a Sensitized Transplant Candidate: A Case Study

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Introduction

Voucher donations are on the rise, but is donating in advance right for everyone?

• Donors in the National Kidney Registry accounted for 20% of the living donor transplants in the U.S. in 2022.
• Rapid increase in voucher utilization
• 6 voucher patients in NKR with cPRA 99.99-100% waiting >1 year.

(NKR Quarterly Report Q4 2022)

(Excludes KFL Internal Direct)
Case Profile

Transplant Candidate

• 23-year-old female
• Congenital renal dysplasia
• 2 prior transplants
• Calculated panel reactive antibodies (cPRA) at time of listing was 70%
Case Profile

Living Donor Candidate

• 31-year-old male
• Active lifestyle
• Social media contact
• Incompatible – multiple DSAs
• Interested in paired donation
Kidney Paired Donation

- Donor Education:
  - Unknown wait to find a match
  - Possibility of never finding a match

Requested advanced donation to allow recovery in time for ski season.
NKR Voucher Program

Donation in advance of recipient’s activation.
Allows donor to specify timeframe.

cPRA After Advanced Donation

- Nov-19: 70%
- Jan-20: 83%
- Mar-20: 99%
- Jun-20: 100%

(Donation)
The Wait

• Donor and voucher holder became friends
• Patient’s fiancé very motivated to help facilitate a transplant
• Repeated education about challenges w/100% cPRA
• Donor completes post-donation follow-up
• Voucher holder pursues dual-listing
• Dialysis access increasingly limited
Was advanced donation appropriate?
Three Years Later…

**PRA drops to 97%**

- Low-eplet mismatch becomes available in NKR
- Voucher holder successfully transplanted
Was the donor informed of the risks (and benefits) of advanced donation?

After stating his understanding of the risks, did he still want to proceed?

☑ Yes.
In Hindsight:

(Donation)

- 99%
- 99% - 100%
- 83%
- 70%
- 56%
- 56%

Dates:
- Dec-17
- Feb-18
- May-18
- Jul-19
- Nov-19
- Jan-20
- Mar-20
- Jun-20

Legend:
- cPRA
- Historical cPRA
Discussion

• Comprehensive patient education is imperative:
  – Donor: The recipient might never find a match
  – Voucher Recipient: No guarantee of a transplant
  – cPRA can fluctuate over time
  – Highly sensitized patients receive priority on deceased donor waiting list

• NKR has revised voucher program policies:
  – Now allows more than one voucher holder
  – Currently not transferrable
Conclusion

• Advanced donation is a great option for many donors

• Risk remains that the gift of a voucher may never be realized as intended
  – Some donors may not be comfortable with the risk or may feel regret

• In all cases (but especially with sensitized patients), both the donor and recipient should be well-informed about the risks and limitations of the voucher program

• Proactive discussion and preparation benefits everyone involved when unexpected situations occur.
  – Donor and voucher holder
  – Transplant team
References

• “Quarterly Report Q4 2022”, National Kidney Registry.
