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Pre- and Posttransplant Outcomes for Kidney Multiorgan Transplant

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Background

To inform future allocation policy that better incorporates multiorgan candidates, this study summarizes for candidates who are waiting for a kidney multiorgan or kidney-alone transplant:

- Waitlist survival
- Posttransplant survival
- Time without an offer

Methods

Cohort:

- Patients waiting for a kidney between July 1, 2021, and December 31, 2023 (June 30, 2023, for waitlist mortality)
- Patients who underwent transplant after June 30, 2011, and alive without graft failure at any time July 1, 2021, through June 30, 2023

Models:

- Cox proportional hazards for survival outcomes
- Average time without an offer

Results

Heart-Kidney				
Allocation Category	1-year Waitlist Survival Mean	1-year Post Tx Survival Mean	Mean Time Without an Offer	Percent Without Any Offer
Adult status 1 or pediatric status 1A and primary blood type match with the donor; 500 nautical miles (NM)	51.7	90.1	4.3	26.0
Adult status 2 and primary blood type match with the donor; 500 NM	67.1	92.0	3.5	18.4
Adult status 3 or pediatric status 1B and primary blood type match with the donor; 500 NM	79.3	91.7	12.5	33.1
Adult status 4 and primary blood type match with the donor; 250 NM	91.4	92.2	34.6	35.8
Adult status 5 and primary blood type match with the donor; 250 NM	85.1	89.6	59.5	40.5
Adult status 6 or pediatric status 2 and primary blood type match with the donor; 250 NM	93.8	92.4	73.3	83.3

Liver-Kidney				
Description	1-year Waitlist Survival Mean	1-year Post Tx Survival Mean	Mean Time Without an Offer	Percent Without Any Offer
Status 1A ; 500 NM; any donor and any candidate blood type	82.0	88.7	0.7	25.0
Status 1B ; 500 NM; any donor and any candidate blood type	90.7	96.1	7.1	14.3
MELD/PELD score of at least 37 ; 500 NM; non-O donor; any candidate blood type	62.6	88.1	2.2	20.0
MELD or PELD score of at least 33 ; 500 NM; non-O donor blood type; any candidate blood type	68.9	88.1	2.3	22.8
MELD or PELD score of at least 29 ; 500 NM; non-O donor blood type; any candidate blood type	72.3	91.8	3.7	30.4
MELD or PELD score of at least 15 ; 500 NM; non-O donor blood type; any candidate blood type	82.1	91.2	16.7	11.4



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Results

Kidney Alone				
Description	1-year Waitlist Survival Mean	1-year Post Tx Survival Mean	Mean Time Without an Offer	Percent Without Any Offer
Candidates who are cPRA equal to 100% , blood type identical or permissible; 250 NM; donor blood type: any	94.5	94.3	178.2	72.1
Candidates who are medically urgent ; 250 NM; donor blood type: any	94.3	91.9	20.9	28.2
Candidates who are registered prior to age 18 years , blood type identical or permissible; 250 NM; donor blood type: any	98.7	97.2	44.4	51.7
Candidates who are prior living donor , blood type identical or permissible; 250 NM; donor blood type: any	95.9	93.8	36.7	25.4

Conclusions

- Posttransplant survival is quite high for kidney-alone and kidney multiorgan recipients.
- Waitlist survival and time without an offer vary substantially.
- Detailed outcomes accounting by allocation class can help set multiorgan allocation policy.



Transplantation

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