



User Guide

This report contains a wide range of useful information about the kidney-pancreas transplant program at University of Maryland Medical System (MDUM). The report has three main sections:

- A. Program Summary
- B. Waiting List Information
- C. Transplant Information

The Program Summary is a one-page summary highlighting characteristics of the program, including the number of candidates on the waiting list, the number of transplants performed at the program, the number of patients being cared for by the program, and patient outcomes, including outcomes while on the waiting list (the transplant rate and the death rate while on the waiting list) and outcomes after transplant (patient and graft survival probabilities). If the program performed transplants in both adults and children, survival probabilities for adults and children (pediatrics) are provided separately. For each of the outcomes measures presented, a comparison is provided showing what would be expected at this program if it were performing as similar programs around the country perform when treating similar patients. More details regarding these outcome measures are provided in Sections B and C of the report.

The Waiting List Information section contains more detailed information on how many candidates are on the waiting list at the program, the types of candidates on the waiting list, how long candidates typically have to wait for a transplant at this program, how frequently candidates successfully receive a transplant, and how often candidates on the waiting list die before receiving a transplant.

Table B1 shows the activity on this program's waiting list during two recent 1-year periods and provides comparisons to all programs within this program's OPTN region (see <http://optn.transplant.hrsa.gov/members/regions.asp> for information on OPTN regions) and the nation as a whole. Tables B2 and B3 describe the candidates on the waiting list at this program, with comparisons to candidates waiting in the same donor service area (OPO/DSA) the OPTN region, and the nation as a whole.

Table B4 shows how many candidates were removed from the waiting list because they received a transplant. The program's transplant rate is calculated as the number of candidates who received a transplant divided by the person-years observed at the program (person-years is a combination of how many candidates were on the waiting list along with how long each candidate was followed since some candidates are not on the waiting list for the entire year). The transplant rate and comparisons to what would be expected at this program are presented in Figures B1 and B2. Figure B1 shows the transplant rate compared to what was expected at this program. The expected transplant rate is an estimate of what we would expect at this program if it were performing transplants at rates similar to other programs in the US with similar candidates on their waiting lists. The expected rate is only an estimate, and is made with a certain level of uncertainty. This uncertainty is shown in Figure B2. Figure B2 displays the ratio of the observed to the expected transplant rate. A ratio of 1 indicates that the observed transplant rate was equal to the expected transplant rate, while a ratio less than 1 indicates the observed rate was lower than expected rate and a ratio greater than 1 indicates the observed rate was higher than the expected rate. However, the level of uncertainty must be considered when interpreting these numbers. The 95% interval is also shown on Figure B2. This interval provides a range within which the true ratio of observed to expected transplant rates is likely to be. If this



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confidence interval includes (crosses) 1.0, then we cannot say that this program's observed transplant rate is different from what would be expected. The observed deceased donor transplant rate at this program was 147.9 per 100 person-years. Transplant rates are also provided for adult and pediatric patients separately along with comparisons to adult and pediatric rates in the DSA, the OPTN region, and the nation. Please refer to the PSR Technical Methods documentation available at <http://www.srtr.org> for more detail regarding how expected rates are calculated.

The death rate (also known as the mortality rate) for candidates on the waiting list is presented in Table B5 and Figures B4-B6. These data are presented in the same way as the transplant rate data in the previous section. The intent of these tables and figures is to describe risk of death once candidates are listed rather than while they are listed. Therefore, time at risk and deaths after removal from the waiting list for reasons other than transplant, transfer to another transplant program, or recovery (no longer needing a transplant), and before any subsequent transplant, are included. As with transplant rates, mortality rates should be interpreted carefully taking into consideration the interval displayed in Figure B5. For a complete description of how observed and expected mortality rates are calculated, please refer to the technical documentation available at <http://www.srtr.org>.

Table B6 presents information on what happens to candidates on the waiting list by three different time points after listing: 6 months, 12 months, and 18 months. The table displays percentages of candidates who have died, been removed from the waiting list, been transplanted, or been transferred or lost-to-follow-up. Tables B7 and B8 provide more detail regarding how many candidates have received a deceased donor transplant by certain time points during the first 3 years after being put on the transplant waiting list. Each row of Tables B7 and B8 presents the percent of candidates who received a deceased donor transplant by each time point. Table B9 presents data on the time it took for different percentages of patients to be transplanted for candidates added to the list between 07/01/2012 and 12/31/2017. The time it took for 5% (the 5th percentile) of patients to receive a transplant at this program was 0.4 months. If "Not Observed" is displayed in the table, then too few candidates received transplants before 06/30/2018 to calculate a particular percentile of transplant times.

The Transplant Information section begins with descriptions of transplant recipients in Tables C1 and C2. Data on recipients of deceased donor transplants are presented (Tables C1D and C2D); if applicable, data on recipients of living donor transplants are presented separately (Tables C1L and C2L). Comparisons to the region and the nation as a whole are provided. A description of the deceased donors used at this program is provided in Table C3D, along with characteristics of living donors in Table C3L, if applicable. Finally, information on the transplant procedure for deceased and living donor transplants is presented in Tables C4D and C4L, respectively.

Starting with Table C5, transplant outcomes are presented along with comparisons to what would be expected at this program and what happened in the nation as a whole. Tables C5-C10 present information on graft survival (survival of the transplanted organ), with data presented separately for adult and pediatric recipients. Patients are followed from the time of transplant until either failure of the transplanted organ or death, whichever comes first. Please refer to the technical methods for more information on these calculations (<http://www.srtr.org>).

While Tables C5-C10 present data on graft survival, Tables C11-C16 present information on patient survival. For these tables, patients are followed from the time of transplant until death, regardless of



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whether the transplant is functioning or the patient required another transplant to survive.

Tables C17 and C18 summarize the multiorgan transplant outcomes at this program. The summary statistics in these tables are descriptive and are not risk-adjusted for different donor and candidate characteristics.

Additional information regarding the technical methods and the risk adjustment models used to estimate expected event rates is available on the SRTR website at <http://www.srtr.org>. We welcome and encourage feedback on these reports. Please feel free to share feedback with the SRTR at the following e-mail: srtr@srtr.org.



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A. Program Summary

Figure A1. Waiting list and transplant activity

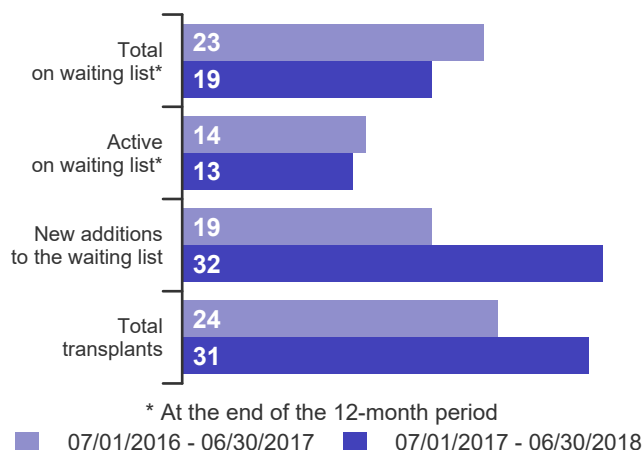
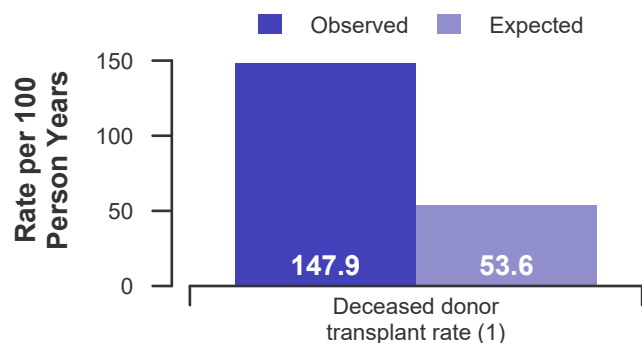


Table A1. Census of transplant recipients

Recipients	07/01/2016-06/30/2017	07/01/2017-06/30/2018
Transplanted at this center	24	31
Followed by this center*	130	133
...transplanted at this program	129	132
...transplanted elsewhere	1	1

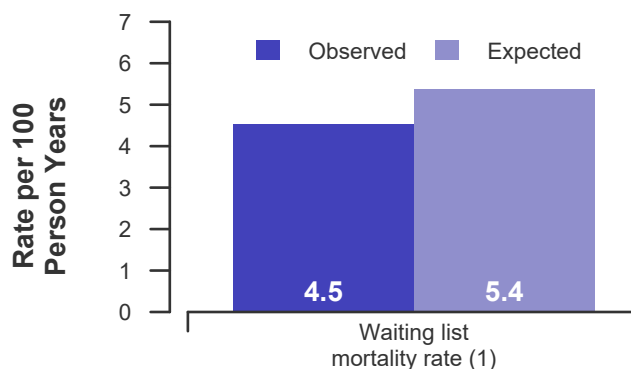
* Recipients followed are transplant recipients for whom the center has submitted a post-transplant follow-up form for a transplant that took place before the 12-month interval for each column.

Figure A2. Transplant rates
07/01/2017 - 06/30/2018



(1) Statistically higher ($p < 0.01$)

Figure A3. Waiting list mortality rates
07/01/2017 - 06/30/2018



(1) Not significantly different ($p = 0.999$)

Figure A4. First-year adult graft and patient survival: 07/01/2015 - 12/31/2017

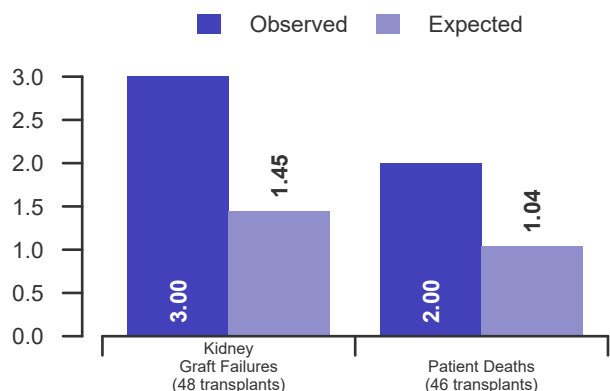


Figure A5. First-year pediatric graft and patient survival: 07/01/2015 - 12/31/2017

This center did not perform any transplants relevant to this figure during 07/01/2015-12/31/2017



B. Waiting List Information

Table B1. Waiting list activity summary: 07/01/2016 - 06/30/2018

Waiting List Registrations	Counts for this center		Activity for 07/01/2017 to 06/30/2018 as percent of registrants on waiting list on 07/01/2017		
	07/01/2016-06/30/2017	07/01/2017-06/30/2018	This Center (%)	OPTN Region (%)	U.S. (%)
On waiting list at start	37	23	100.0	100.0	100.0
Additions					
New listings at this center	19	32	139.1	94.4	73.8
Removals					
Transferred to another center	0	0	0.0	2.5	1.5
Received living donor transplant*	1	1	4.3	4.0	3.4
Received deceased donor transplant*	24	32	139.1	59.6	49.2
Died	4	1	4.3	3.5	5.1
Transplanted at another center	0	1	4.3	7.6	3.8
Deteriorated	1	1	4.3	7.6	4.8
Recovered	0	0	0.0	0.0	0.5
Other reasons	3	0	0.0	8.6	9.2
On waiting list at end of period	23	19	82.6	101.0	96.3

* These patients were removed from waiting list with removal code indicating transplant; this may not equal the number of transplants performed at this center during the specified period.



B. Waiting List Information

Table B2. Demographic characteristics of waiting list candidates**Candidates registered on the waiting list between 07/01/2017 and 06/30/2018**

Demographic Characteristic	New Waiting List Registrations 07/01/2017 to 06/30/2018 (%)			All Waiting List Registrations on 06/30/2018 (%)		
	This Center (N=32)	OPTN Region (N=187)	U.S. (N=1,285)	This Center (N=19)	OPTN Region (N=200)	U.S. (N=1,678)
All (%)	100.0	100.0	100.0	100.0	100.0	100.0
Ethnicity/Race (%)*						
White	53.1	45.5	51.0	52.6	48.5	52.3
African-American	34.4	41.7	30.4	31.6	36.0	27.8
Hispanic/Latino	3.1	8.0	13.5	5.3	12.0	15.1
Asian	9.4	4.8	3.7	10.5	3.0	3.4
Other	0.0	0.0	1.4	0.0	0.5	1.4
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Age (%)						
<2 years	0.0	0.0	0.0	0.0	0.0	0.0
2-11 years	0.0	0.5	0.1	0.0	0.5	0.1
12-17 years	0.0	0.5	0.1	0.0	0.5	0.1
18-34 years	6.2	18.2	24.4	26.3	22.5	25.9
35-49 years	50.0	54.5	53.2	42.1	54.5	53.3
50-64 years	40.6	25.7	21.5	31.6	22.0	20.3
65+ years	3.1	0.5	0.9	0.0	0.0	0.4
Other (includes prenatal)	0.0	0.0	0.0	0.0	0.0	0.0
Gender (%)						
Male	62.5	62.0	58.6	36.8	51.5	54.5
Female	37.5	38.0	41.4	63.2	48.5	45.5

* Race and ethnicity are reported together as a single data element, reflecting their data collection (either race or ethnicity is required, but not both). Patients formerly coded as white and Hispanic are coded as Hispanic. Race and ethnicity sum to 100%.



B. Waiting List Information

Table B3. Medical characteristics of waiting list candidates

Candidates registered on the waiting list between 07/01/2017 and 06/30/2018

Medical Characteristic	New Waiting List Registrations 07/01/2017 to 06/30/2018 (%)			All Waiting List Registrations on 06/30/2018 (%)		
	This Center (N=32)	OPTN Region (N=187)	U.S. (N=1,285)	This Center (N=19)	OPTN Region (N=200)	U.S. (N=1,678)
All (%)	100.0	100.0	100.0	100.0	100.0	100.0
Blood Type (%)						
O	50.0	45.5	48.6	36.8	44.5	49.8
A	31.2	35.8	34.1	47.4	34.5	30.3
B	18.8	15.0	13.8	5.3	17.5	16.8
AB	0.0	3.7	3.5	10.5	3.5	3.1
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Previous Transplant (%)						
Yes	12.5	7.5	6.2	21.1	10.0	9.8
No	87.5	92.5	93.8	78.9	90.0	90.2
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Initial CPRA (%)						
0-9%	71.9	73.8	77.7	63.2	74.0	73.4
10-79%	25.0	19.8	16.0	21.1	18.0	16.9
80+%	3.1	6.4	6.3	15.8	8.0	9.7
Unknown	0.0	0.0	0.0	0.0	0.0	0.0



B. Waiting List Information

Table B4D. Deceased donor transplant rates: 07/01/2017 - 06/30/2018

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
All Candidates				
Count on waiting list at start*	23	44	198	1,731
Person Years**	21.6	43.1	196.4	1,697.0
Removals for Transplant	32	38	118	851
Adult (18+) Candidates				
Count on waiting list at start*	23	44	198	1,729
Person Years**	21.6	43.1	196.4	1,695.8
Removals for transplant	32	38	118	849
Pediatric (<18) Candidates				
Count on waiting list at start*	--	--	--	--
Person Years**	--	--	--	--
Removals for transplant	--	--	--	--

Since candidates listed for combined liver-intestine transplants are also often listed for a pancreas for vascular continuity, candidates simultaneously listed for intestine transplants are not included in this table.

* Counts in this table may be lower than similar counts in other waiting list tables, such as Table B1. A small percentage (~1%) of patients are found to have died or been transplanted before being removed from the waiting list, so these patients are excluded if the event occurs prior to the start of the study period. Inactive time on the waiting list is included in the calculations for this table.

** Person years are calculated as days (converted to fractional years). The number of days from July 1 or from the date of first wait listing until death, transplant, removal from the waiting list or June 30.

Figure B1D. Observed and expected deceased donor transplant rates: 07/01/2017 - 06/30/2018

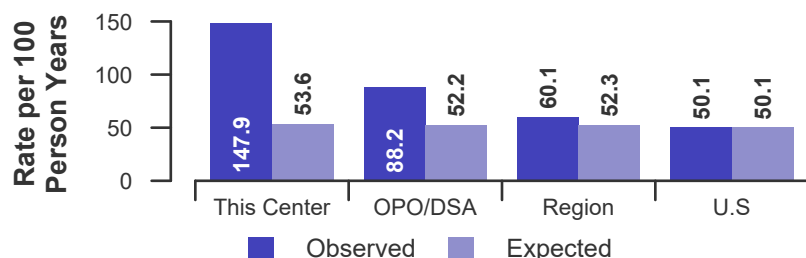


Figure B2D. Ratio of observed to expected deceased donor

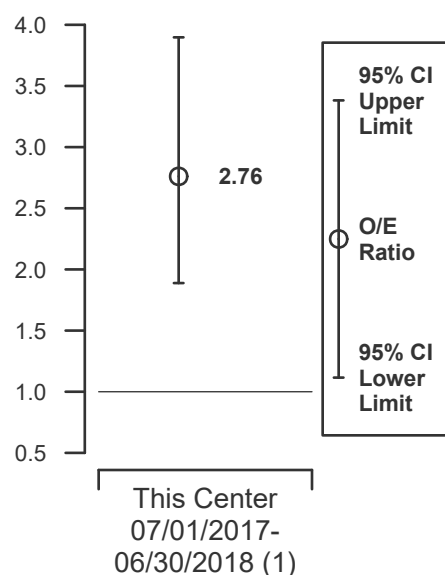
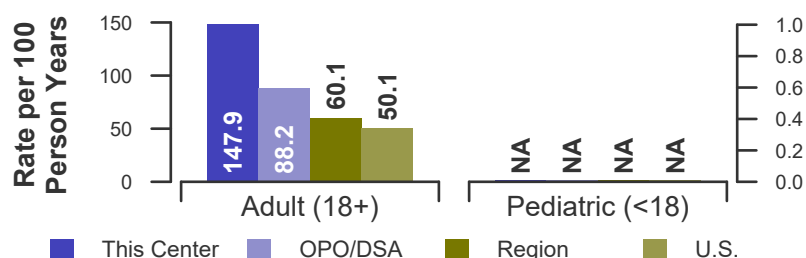


Figure B3D. Observed adult (18+) and pediatric (<18) deceased donor transplant rates: 07/01/2017 - 06/30/2018



(1) Higher than expected
($p < 0.01$, 95% CI=[1.89, 3.90])



B. Waiting List Information

Table B5. Waiting list mortality rates: 07/01/2017 - 06/30/2018

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
All Candidates				
Count on waiting list at start*	23	44	198	1,731
Person Years**	22.1	44.6	212.6	1,808.9
Number of deaths	1	3	10	101
Adult (18+) Candidates				
Count on waiting list at start*	23	44	198	1,729
Person Years**	22.1	44.6	212.6	1,807.8
Number of deaths	1	3	10	101
Pediatric (<18) Candidates				
Count on waiting list at start*	--	--	--	--
Person Years**	--	--	--	--
Number of deaths	--	--	--	--

Since candidates listed for combined liver-intestine transplants are also often listed for a pancreas for vascular continuity, candidates simultaneously listed for intestine transplants are not included in this table.

* Counts in this table may be lower than similar counts in other waiting list tables, such as Table B1. A small percentage (~1%) of patients are found to have died or been transplanted before being removed from the waiting list, so these patients are excluded if the event occurs prior to the start of the study period. Inactive time on the waiting list is included in the calculations for this table.

** Person years are calculated as days (converted to fractional years). The number of days from July 1 or from the date of first wait listing until death, transplant, 60 days after recovery, transfer or June 30.

Figure B4. Observed and expected waiting list mortality rates: 07/01/2017 - 06/30/2018

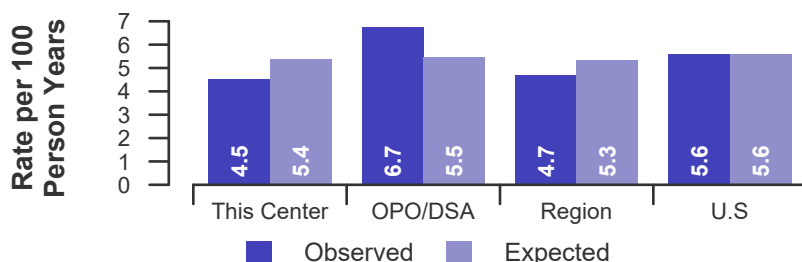


Figure B6. Observed adult (18+) and pediatric (<18) waiting list mortality rates: 07/01/2017 - 06/30/2018

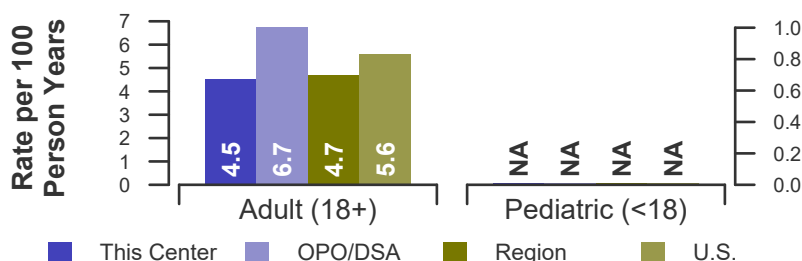
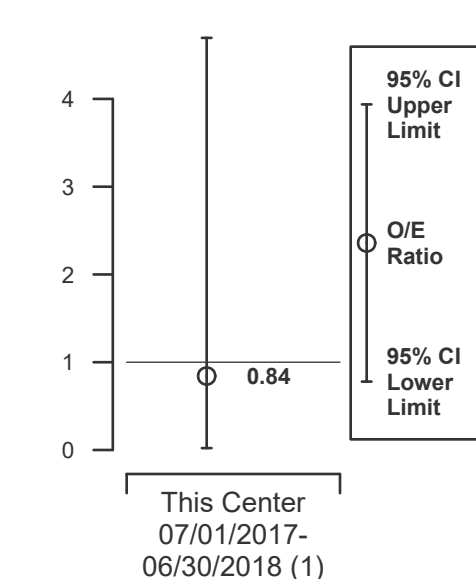


Figure B5. Ratio of observed to expected waiting list mortality rates



(1) Not significantly different (p=0.999, 95% CI=[0.02, 4.70])



B. Waiting List Information

Table B6. Waiting list candidate status after listing
Candidates registered on waiting list between 01/01/2016 and 12/31/2016

Waiting list status (survival status)	This Center (N=15)			U.S. (N=1,234)		
	Months Since Listing			Months Since Listing		
	6	12	18	6	12	18
Kidney						
Alive on waiting list (%)	60.0	20.0	13.3	60.9	39.3	27.6
Died on the waiting list without transplant (%)	0.0	0.0	0.0	0.5	1.9	2.8
Removed without transplant (%):						
Condition worsened (status unknown)	0.0	0.0	0.0	0.8	1.7	2.7
Condition improved (status unknown)	0.0	0.0	0.0	0.1	0.2	0.2
Refused transplant (status unknown)	0.0	0.0	0.0	0.1	0.2	0.2
Other	6.7	6.7	6.7	0.8	2.9	4.4
Transplant (living or deceased donor) (%):						
Functioning (alive)	33.3	73.3	40.0	32.2	45.3	37.2
Failed-Retransplanted (alive)	0.0	0.0	0.0	0.0	0.0	0.0
Failed-alive not retransplanted	0.0	0.0	0.0	0.3	0.6	0.5
Died	0.0	0.0	0.0	0.5	0.6	1.1
Status Yet Unknown*	0.0	0.0	40.0	3.2	6.5	22.2
Lost or Transferred (status unknown) (%)	0.0	0.0	0.0	0.6	0.9	1.3
TOTAL (%)	100.0	100.0	100.0	100.0	100.0	100.0
Total % known died on waiting list or after transplant	0.0	0.0	0.0	1.0	2.5	3.8
Total % known died or removed as unstable	0.0	0.0	0.0	1.8	4.2	6.5
Total % removed for transplant	33.3	73.3	80.0	36.1	53.0	60.9
Total % with known functioning transplant (alive)	33.3	73.3	40.0	32.2	45.3	37.2
Pancreas						
Alive on waiting list (%)	60.0	20.0	13.3	60.9	39.3	27.6
Died on the waiting list without transplant (%)	0.0	0.0	0.0	0.5	1.9	2.8
Removed without transplant (%):						
Condition worsened (status unknown)	0.0	0.0	0.0	0.8	1.7	2.7
Condition improved (status unknown)	0.0	0.0	0.0	0.1	0.2	0.2
Refused transplant (status unknown)	0.0	0.0	0.0	0.1	0.2	0.2
Other	6.7	6.7	6.7	0.8	2.9	4.4
Transplant (living or deceased donor) (%):						
Functioning (alive)	33.3	60.0	26.7	26.6	36.5	30.1
Failed-Retransplanted (alive)	0.0	0.0	0.0	0.0	0.0	0.0
Failed-alive not retransplanted	0.0	6.7	6.7	2.4	3.0	2.5
Died	0.0	0.0	0.0	0.6	0.6	1.0
Status Yet Unknown*	0.0	6.7	46.7	6.6	12.9	27.4
Lost or Transferred (status unknown) (%)	0.0	0.0	0.0	0.6	0.9	1.3
TOTAL (%)	100.0	100.0	100.0	100.0	100.0	100.0
Total % known died on waiting list or after transplant	0.0	0.0	0.0	1.1	2.5	3.7
Total % known died or removed as unstable	0.0	0.0	0.0	1.9	4.2	6.4
Total % removed for transplant	33.3	73.3	80.0	36.1	53.0	60.9
Total % with known functioning transplant (alive)	33.3	60.0	26.7	26.6	36.5	30.1

* Follow-up form covering specified time period not yet completed, and possibly has not become due.



B. Waiting List Information

Table B7. Percent of candidates with deceased donor transplants: demographic characteristics
Candidates registered on the waiting list between 07/01/2012 and 06/30/2015

Characteristic	N	Percent transplanted at time periods since listing									
		This Center				N	United States				
		30 day	1 year	2 years	3 years		30 day	1 year	2 years	3 years	
All	66	3.0	24.2	53.0	57.6	3,648	5.6	39.0	51.4	56.2	
Ethnicity/Race*											
White	41	4.9	29.3	56.1	61.0	2,148	5.3	38.4	51.4	56.3	
African-American	19	0.0	21.1	47.4	52.6	861	5.8	37.5	48.7	53.5	
Hispanic/Latino	1	0.0	0.0	0.0	0.0	480	7.5	44.0	55.2	60.4	
Asian	5	0.0	0.0	60.0	60.0	121	4.1	44.6	59.5	60.3	
Other	0	--	--	--	--	38	0.0	26.3	34.2	42.1	
Unknown	0	--	--	--	--	0	--	--	--	--	
Age											
<2 years	0	--	--	--	--	1	0.0	0.0	0.0	0.0	
2-11 years	0	--	--	--	--	2	0.0	50.0	50.0	50.0	
12-17 years	0	--	--	--	--	6	16.7	33.3	33.3	50.0	
18-34 years	11	0.0	27.3	63.6	63.6	956	5.4	39.5	52.9	57.2	
35-49 years	33	3.0	21.2	51.5	57.6	1,896	5.4	39.8	52.5	57.4	
50-64 years	22	4.5	27.3	50.0	54.5	779	6.4	36.7	47.1	52.2	
65+ years	0	--	--	--	--	8	0.0	25.0	25.0	25.0	
Other (includes prenatal)	0	--	--	--	--	0	--	--	--	--	
Gender											
Male	37	5.4	27.0	59.5	64.9	2,136	6.1	42.2	55.2	60.1	
Female	29	0.0	20.7	44.8	48.3	1,512	5.0	34.5	46.0	50.6	

* Race and ethnicity are reported together as a single data element, reflecting their data collection (either race or ethnicity is required, but not both). Patients formerly coded as white and Hispanic are coded as Hispanic. Race and ethnicity sum to 100%.



B. Waiting List Information

Table B8. Percent of candidates with deceased donor transplants: medical characteristics**Candidates registered on the waiting list between 07/01/2012 and 06/30/2015**

Characteristic	N	Percent transplanted at time periods since listing									
		This Center				N	United States				
		30 day	1 year	2 years	3 years		30 day	1 year	2 years	3 years	
All	66	3.0	24.2	53.0	57.6	3,648	5.6	39.0	51.4	56.2	
Blood Type											
O	25	8.0	16.0	64.0	64.0	1,716	5.8	36.8	49.4	54.0	
A	29	0.0	24.1	44.8	51.7	1,304	5.6	41.6	54.3	59.6	
B	8	0.0	50.0	62.5	62.5	487	3.7	35.3	46.0	50.7	
AB	4	0.0	25.0	25.0	50.0	141	10.6	55.3	67.4	70.2	
Previous Transplant											
Yes	10	0.0	0.0	20.0	30.0	305	3.9	19.3	25.9	29.5	
No	56	3.6	28.6	58.9	62.5	3,343	5.8	40.8	53.7	58.6	
Peak PRA/CPRA											
0-9%	56	3.6	26.8	58.9	64.3	3,055	5.9	41.3	54.4	59.4	
10-79%	6	0.0	16.7	33.3	33.3	373	5.4	34.0	44.2	48.8	
80+%	4	0.0	0.0	0.0	0.0	220	1.8	15.5	21.4	23.6	
Unknown	0	--	--	--	--	0	--	--	--	--	
Years Since Diabetes Onset											
0-20	9	11.1	44.4	77.8	77.8	906	6.0	40.9	52.6	57.3	
20-30	20	5.0	25.0	55.0	65.0	1,419	5.2	38.7	52.0	56.9	
30 +	30	0.0	23.3	50.0	53.3	1,080	4.9	35.6	48.3	53.7	
Unknown	7	0.0	0.0	28.6	28.6	243	9.9	49.0	56.4	58.4	



B. Waiting List Information

Table B9. Time to transplant for waiting list candidates*

Candidates registered on the waiting list between 07/01/2012 and 12/31/2017

Percentile	Center	Months to Transplant**		U.S.
		OPO/DSA	Region	
5th	0.4	0.8	0.9	0.7
10th	1.2	1.3	1.5	1.2
25th	3.0	4.7	4.6	4
50th (median time to transplant)	11.2	12.3	14.2	12.8
75th	29.5	60.4	Not Observed	Not Observed

* If cells contain "Not Observed" fewer than that percentile of patients had received a transplant. For example, the 50th percentile of time to transplant is the time when 50% of candidates have received transplants. If waiting times are long, then the 50th percentile may not be observed during the follow-up period for this table. Also, if more than 50% of candidates are removed from the list due to death or other reasons before receiving transplants, then the 50th percentile of time to transplant will not be observed.

** Censored on 06/30/2018. Calculated as the months after listing, during which the corresponding percent of all patients initially listed had received a transplant.



C. Transplant Information

Table C1D. Deceased donor transplant recipient demographic characteristics
Patients transplanted between 07/01/2017 and 06/30/2018

Characteristic	Percentage in each category		
	Center (N=31)	Region (N=116)	U.S. (N=824)
Ethnicity/Race (%)*			
White	48.4	39.7	50.8
African-American	41.9	48.3	30.5
Hispanic/Latino	6.5	8.6	14.7
Asian	3.2	3.4	2.4
Other	0.0	0.0	1.6
Unknown	0.0	0.0	0.0
Age (%)			
<2 years	0.0	0.0	0.0
2-11 years	0.0	0.0	0.1
12-17	0.0	0.0	0.0
18-34	3.2	16.4	22.0
35-49 years	54.8	56.0	54.1
50-64 years	35.5	25.9	22.8
65+ years	6.5	1.7	1.0
Unknown	0.0	0.0	0.0
Gender (%)			
Male	58.1	62.9	63.0
Female	41.9	37.1	37.0

* Race and ethnicity are reported together as a single data element, reflecting their data collection (either race or ethnicity is required, but not both). Patients formerly coded as white and Hispanic are coded as Hispanic. Race and ethnicity sum to 100%.



C. Transplant Information

Table C2D. Deceased donor transplant recipient medical characteristics
Patients transplanted between 07/01/2017 and 06/30/2018

Characteristic	Percentage in each category		
	Center (N=31)	Region (N=116)	U.S. (N=824)
Blood Type (%)			
O	45.2	55.2	48.7
A	38.7	34.5	37.9
B	16.1	7.8	10.7
AB	0.0	2.6	2.8
Previous Transplant (%)			
Yes	12.9	5.2	3.3
No	87.1	94.8	96.7
Peak PRA/CPRA Prior to Transplant (%)			
0-9%	74.2	73.3	72.8
10-79%	22.6	23.3	23.2
80+ %	3.2	3.4	4.0
Unknown	0.0	0.0	0.0
Body Mass Index (%)			
0-20	3.2	6.9	10.4
21-25	35.5	40.5	45.1
26-30	54.8	45.7	37.5
31+	6.5	4.3	6.6
Unknown	0.0	2.6	0.4



C. Transplant Information

Table C3D. Deceased donor characteristics**Transplants performed between 07/01/2017 and 06/30/2018**

Donor Characteristic	Percentage in each category		
	Center (N=31)	Region (N=116)	U.S. (N=824)
Cause of Death (%)			
Deceased: Stroke	9.7	10.3	8.9
Deceased: MVA	12.9	14.7	24.3
Deceased: Other	77.4	75.0	66.9
Ethnicity/Race (%)*			
White	80.6	73.3	63.1
African-American	12.9	16.4	20.3
Hispanic/Latino	0.0	6.0	13.6
Asian	6.5	4.3	2.7
Other	0.0	0.0	0.4
Not Reported	0.0	0.0	0.0
Age (%)			
<2 years	0.0	0.0	0.0
2-11 years	0.0	0.9	3.2
12-17	9.7	12.1	19.1
18-34	54.8	69.0	66.5
35-49 years	35.5	18.1	11.2
50-64 years	0.0	0.0	0.1
65+ years	0.0	0.0	0.0
Unknown	0.0	0.0	0.0
Gender (%)			
Male	64.5	69.0	71.7
Female	35.5	31.0	28.3
Blood Type (%)			
O	45.2	55.2	48.8
A	38.7	36.2	39.7
B	16.1	7.8	10.7
AB	0.0	0.9	0.8
Unknown	0.0	0.0	0.0

* Race and ethnicity are reported together as a single data element, reflecting their data collection (either race or ethnicity is required, but not both). Patients formerly coded as white and Hispanic are coded as Hispanic. Race and ethnicity sum to 100%.



C. Transplant Information

Table C4D. Deceased donor transplant characteristics
Transplants performed between 07/01/2017 and 06/30/2018

Transplant Characteristic	Percentage in each category		
	Center (N=31)	Region (N=116)	U.S. (N=824)
Cold Ischemic Time (Hours): Local (%)			
Deceased: 0-11 hr	82.4	77.3	78.4
Deceased: 12-21 hr	17.6	18.2	19.8
Deceased: 22-31 hr	0.0	0.0	0.3
Deceased: 32-41 hr	0.0	0.0	0.0
Deceased: 42+ hr	0.0	0.0	0.2
Not Reported	0.0	4.5	1.3
Cold Ischemic Time (Hours): Shared (%)			
Deceased: 0-11 hr	28.6	46.4	51.0
Deceased: 12-21 hr	64.3	50.0	48.0
Deceased: 22-31 hr	7.1	3.6	0.5
Deceased: 32-41 hr	0.0	0.0	0.5
Deceased: 42+ hr	0.0	0.0	0.0
Not Reported	0.0	0.0	0.0
Level of Mismatch (%)			
A Locus Mismatches (%)			
0	3.2	6.0	6.4
1	45.2	38.8	45.5
2	51.6	55.2	48.1
Not Reported	0.0	0.0	0.0
B Locus Mismatches (%)			
0	0.0	1.7	1.7
1	32.3	26.7	23.8
2	67.7	71.6	74.5
Not Reported	0.0	0.0	0.0
DR Locus Mismatches (%)			
0	3.2	5.2	5.8
1	54.8	41.4	40.8
2	41.9	53.4	53.4
Not Reported	0.0	0.0	0.0
Total Mismatches (%)			
0	0.0	0.9	0.2
1	0.0	0.9	0.2
2	0.0	2.6	2.9
3	12.9	6.9	10.8
4	32.3	26.7	27.4
5	41.9	38.8	36.4
6	12.9	23.3	22.0
Not Reported	0.0	0.0	0.0
Dialysis in First Week After Transplant (%)			
Yes	19.4	12.9	9.2
No	80.6	83.6	90.3
Not Reported	0.0	3.4	0.5
Sharing (%)			
Local	54.8	75.9	76.0
Shared	45.2	24.1	24.0
Median Time in Hospital After Transplant*	9.0 Days	9.0 Days	8.0 Days

* Kidney-pancreas transplants only. Other multiple organ transplants are excluded from this statistic.



C. Transplant Information

Table C5DKI. Adult (18+) 1-month survival with a functioning deceased donor kidney graft
Simultaneous pancreas-kidney transplants performed between 07/01/2015 and 12/31/2017
Deaths and retransplants are considered graft failures

	MDUM	U.S.
Number of transplants evaluated	48	1,927
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	97.92%	98.70%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	98.82%	--
Number of observed graft failures (including deaths) during the first month after transplant	1	25
Number of expected graft failures (including deaths) during the first month after transplant	0.57	25
Estimated hazard ratio*	1.17	1.00
95% credible interval for the hazard ratio**	[0.24, 2.81]	--

* The hazard ratio provides an estimate of how University of Maryland Medical System (MDUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MDUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.24, 2.81], indicates the location of MDUM's true hazard ratio with 95% probability. The best estimate is 17% higher risk of kidney graft failure compared to an average program, but MDUM's performance could plausibly range from 76% reduced risk up to 181% increased risk.

Figure C1DKI. Adult (18+) 1-month deceased donor kidney graft failure HR estimate

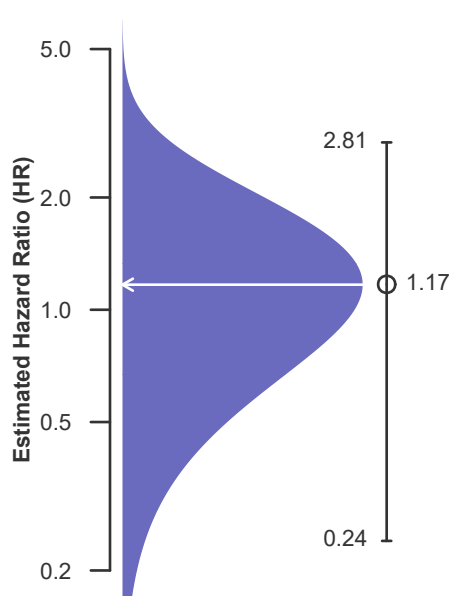
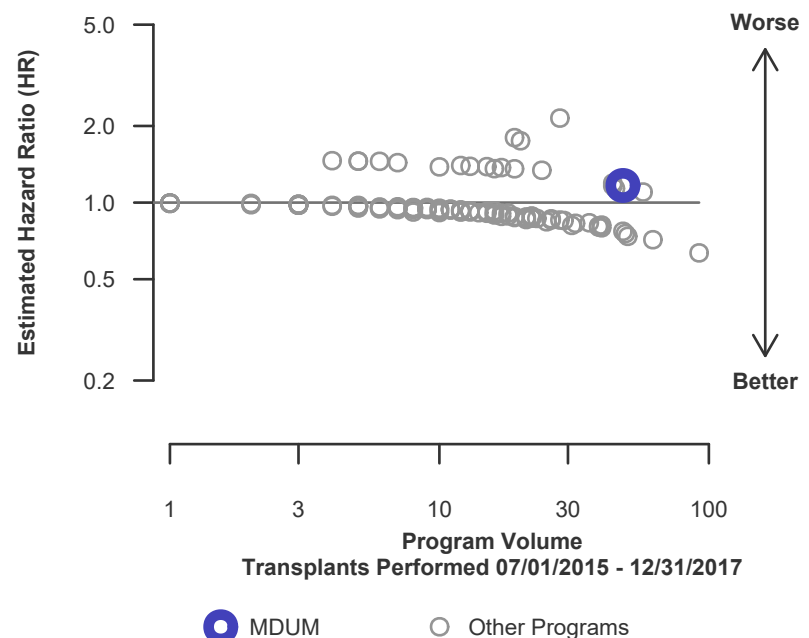


Figure C2DKI. Adult (18+) 1-month deceased donor kidney graft failure HR program comparison





C. Transplant Information

Table C6DKI. Adult (18+) 1-year survival with a functioning deceased donor kidney graft
Simultaneous pancreas-kidney transplants performed between 07/01/2015 and 12/31/2017
Deaths and retransplants are considered graft failures

	MDUM	U.S.
Number of transplants evaluated	48	1,927
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	92.93%	96.36%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	96.69%	--
Number of observed graft failures (including deaths) during the first year after transplant	3	65
Number of expected graft failures (including deaths) during the first year after transplant	1.45	65
Estimated hazard ratio*	1.45	1.00
95% credible interval for the hazard ratio**	[0.47, 2.97]	--

* The hazard ratio provides an estimate of how University of Maryland Medical System (MDUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MDUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.47, 2.97], indicates the location of MDUM's true hazard ratio with 95% probability. The best estimate is 45% higher risk of kidney graft failure compared to an average program, but MDUM's performance could plausibly range from 53% reduced risk up to 197% increased risk.

Figure C3DKI. Adult (18+) 1-year deceased donor kidney graft failure HR estimate

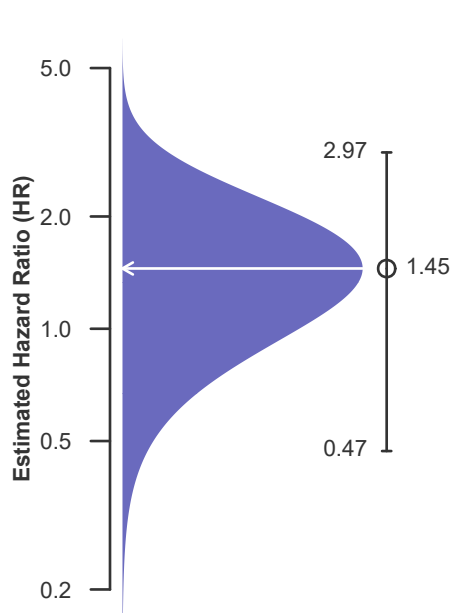
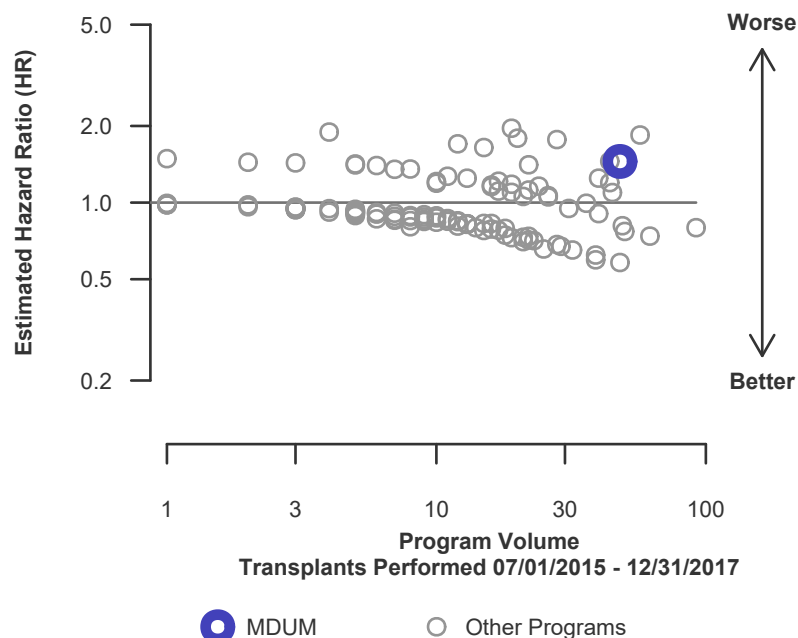


Figure C4DKI. Adult (18+) 1-year deceased donor kidney graft failure HR program comparison





C. Transplant Information

Table C7DKI. Adult (18+) 3-year survival with a functioning deceased donor kidney graft
Simultaneous pancreas-kidney transplants performed between 01/01/2013 and 06/30/2015
Deaths and retransplants are considered graft failures

	MDUM	U.S.
Number of transplants evaluated	25	1,824
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	92.00%	91.34%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	91.41%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	2	158
Number of expected graft failures (including deaths) during the first 3 years after transplant	2.18	158
Estimated hazard ratio*	0.96	1.00
95% credible interval for the hazard ratio**	[0.26, 2.10]	--

* The hazard ratio provides an estimate of how University of Maryland Medical System (MDUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MDUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.26, 2.10], indicates the location of MDUM's true hazard ratio with 95% probability. The best estimate is 4% lower risk of kidney graft failure compared to an average program, but MDUM's performance could plausibly range from 74% reduced risk up to 110% increased risk.

Figure C5DKI. Adult (18+) 3-year deceased donor kidney graft failure HR estimate

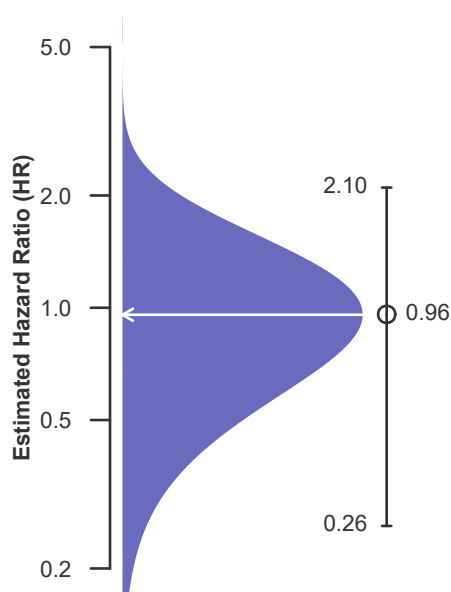
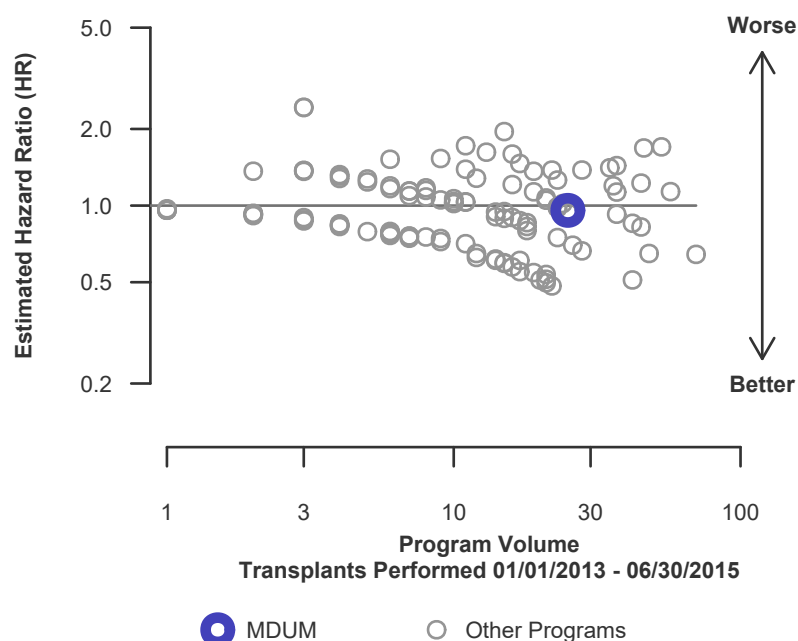


Figure C6DKI. Adult (18+) 3-year deceased donor kidney graft failure HR program comparison





C. Transplant Information

**Table C8DKI. Pediatric (<18) 1-month survival with a functioning deceased donor kidney graft
Simultaneous pancreas-kidney transplants performed between 07/01/2015 and 12/31/2017
Deaths and retransplants are considered graft failures**

This center did not perform any
transplants relevant to
this table during
07/01/2015-12/31/2017

**Figure C7DKI. Pediatric (<18)
1-month deceased donor kidney
graft failure HR estimate**

This center did not perform any
transplants relevant to
this figure during
07/01/2015-12/31/2017

**Figure C8DKI. Pediatric (<18) 1-month deceased donor kidney
graft failure HR program comparison**

This center did not perform any
transplants relevant to
this figure during
07/01/2015-12/31/2017



C. Transplant Information

**Table C9DKI. Pediatric (<18) 1-year survival with a functioning deceased donor kidney graft
Simultaneous pancreas-kidney transplants performed between 07/01/2015 and 12/31/2017
Deaths and retransplants are considered graft failures**

This center did not perform any
transplants relevant to
this table during
07/01/2015-12/31/2017

**Figure C9DKI. Pediatric (<18)
1-year deceased donor kidney
graft failure HR estimate**

This center did not perform any
transplants relevant to
this figure during
07/01/2015-12/31/2017

**Figure C10DKI. Pediatric (<18) 1-year deceased donor kidney
graft failure HR program comparison**

This center did not perform any
transplants relevant to
this figure during
07/01/2015-12/31/2017



C. Transplant Information

**Table C10DKI. Pediatric (<18) 3-year survival with a functioning deceased donor kidney graft
Simultaneous pancreas-kidney transplants performed between 01/01/2013 and 06/30/2015
Deaths and retransplants are considered graft failures**

This center did not perform any
transplants relevant to
this table during
01/01/2013-06/30/2015

**Figure C11DKI. Pediatric (<18)
3-year deceased donor kidney
graft failure HR estimate**

This center did not perform any
transplants relevant to
this figure during
01/01/2013-06/30/2015

**Figure C12DKI. Pediatric (<18) 3-year deceased donor kidney
graft failure HR program comparison**

This center did not perform any
transplants relevant to
this figure during
01/01/2013-06/30/2015



C. Transplant Information

Table C11D. Adult (18+) 1-month patient survival (deceased donor graft recipients)
Simultaneous pancreas-kidney transplants performed between 07/01/2015 and 12/31/2017
Retransplants excluded

	MDUM	U.S.
Number of transplants evaluated	46	1,905
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	97.83%	99.42%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.31%	--
Number of observed deaths during the first month after transplant	1	11
Number of expected deaths during the first month after transplant	0.32	11
Estimated hazard ratio*	1.29	1.00
95% credible interval for the hazard ratio**	[0.27, 3.12]	--

* The hazard ratio provides an estimate of how University of Maryland Medical System (MDUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MDUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.27, 3.12], indicates the location of MDUM's true hazard ratio with 95% probability. The best estimate is 29% higher risk of patient death compared to an average program, but MDUM's performance could plausibly range from 73% reduced risk up to 212% increased risk.

Figure C13D. Adult (18+) 1-month patient death HR estimate (deceased donor grafts)

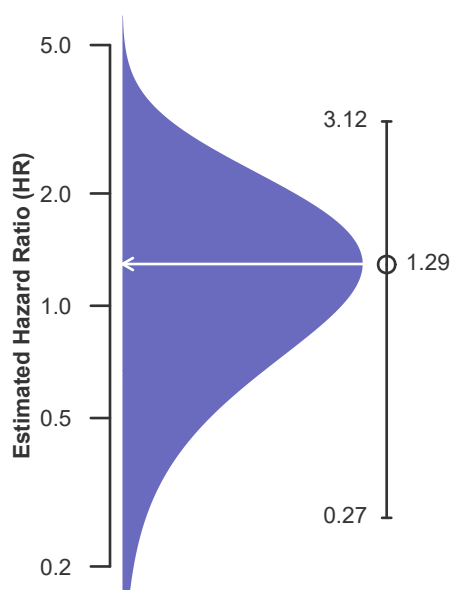
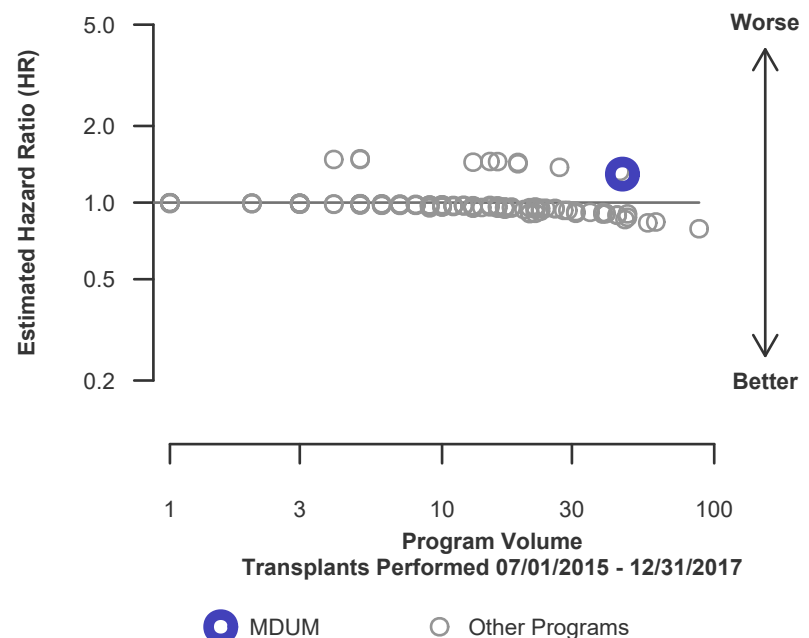


Figure C14D. Adult (18+) 1-month patient death HR program comparison (deceased donor grafts)





C. Transplant Information

Table C12D. Adult (18+) 1-year patient survival (deceased donor graft recipients)
Simultaneous pancreas-kidney transplants performed between 07/01/2015 and 12/31/2017
Retransplants excluded

	MDUM	U.S.
Number of transplants evaluated	46	1,905
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	95.65%	97.76%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	97.33%	--
Number of observed deaths during the first year after transplant	2	39
Number of expected deaths during the first year after transplant	1.04	39
Estimated hazard ratio*	1.32	1.00
95% credible interval for the hazard ratio**	[0.36, 2.88]	--

* The hazard ratio provides an estimate of how University of Maryland Medical System (MDUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MDUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.36, 2.88], indicates the location of MDUM's true hazard ratio with 95% probability. The best estimate is 32% higher risk of patient death compared to an average program, but MDUM's performance could plausibly range from 64% reduced risk up to 188% increased risk.

Figure C15D. Adult (18+) 1-year patient death HR estimate (deceased donor grafts)

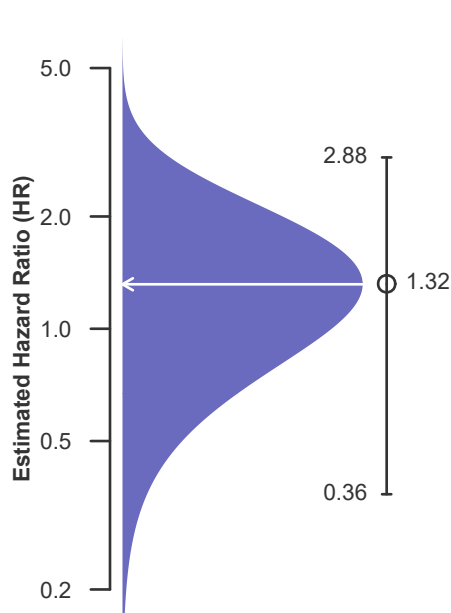
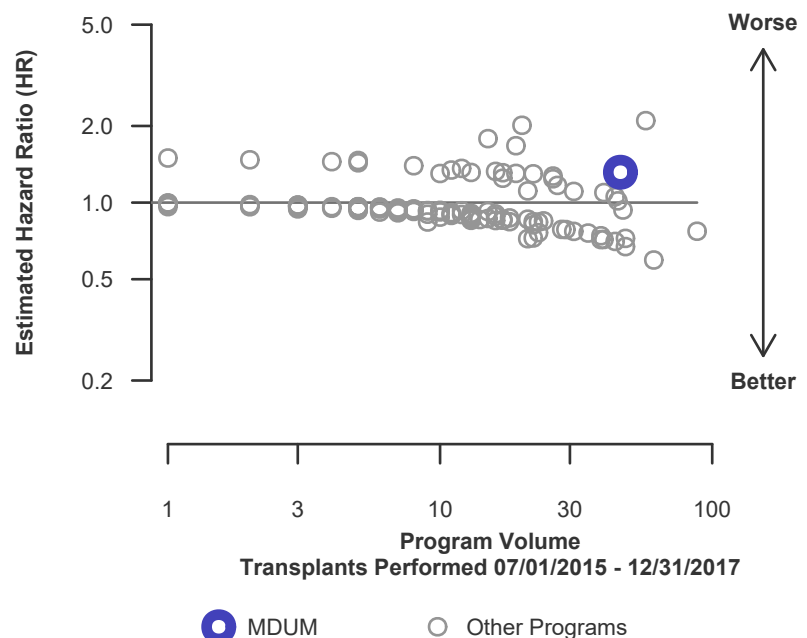


Figure C16D. Adult (18+) 1-year patient death HR program comparison (deceased donor grafts)





C. Transplant Information

Table C13D. Adult (18+) 3-year patient survival (deceased donor graft recipients)
Simultaneous pancreas-kidney transplants performed between 01/01/2013 and 06/30/2015
Retransplants excluded

	MDUM	U.S.
Number of transplants evaluated	24	1,791
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	100.00%	95.53%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	95.00%	--
Number of observed deaths during the first 3 years after transplant	0	80
Number of expected deaths during the first 3 years after transplant	1.24	80
Estimated hazard ratio*	0.62	1.00
95% credible interval for the hazard ratio**	[0.07, 1.72]	--

* The hazard ratio provides an estimate of how University of Maryland Medical System (MDUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MDUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.07, 1.72], indicates the location of MDUM's true hazard ratio with 95% probability. The best estimate is 38% lower risk of patient death compared to an average program, but MDUM's performance could plausibly range from 93% reduced risk up to 72% increased risk.

Figure C17D. Adult (18+) 3-year patient death HR estimate (deceased donor grafts)

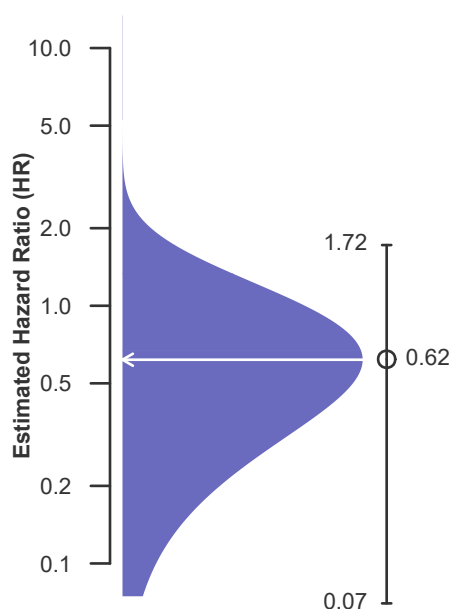
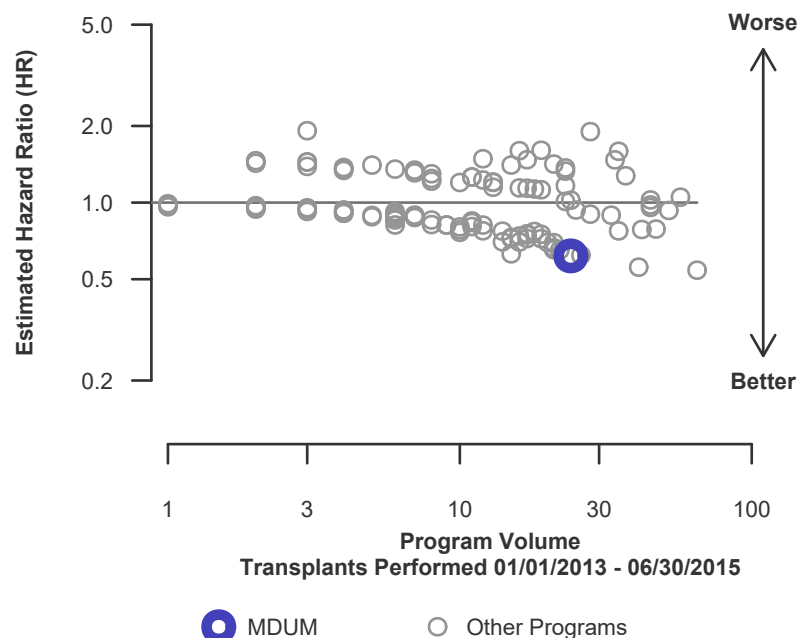


Figure C18D. Adult (18+) 3-year patient death HR program comparison (deceased donor grafts)





C. Transplant Information

Table C14D. Pediatric (<18) 1-month patient survival (deceased donor graft recipients)
Simultaneous pancreas-kidney transplants performed between 07/01/2015 and 12/31/2017
Retransplants excluded

This center did not perform any
transplants relevant to
this table during
07/01/2015-12/31/2017

Figure C19D. Pediatric (<18)
1-month patient death HR
estimate (deceased donor grafts)

This center did not perform any
transplants relevant to
this figure during
07/01/2015-12/31/2017

Figure C20D. Pediatric (<18) 1-month patient death HR
program comparison (deceased donor grafts)

This center did not perform any
transplants relevant to
this figure during
07/01/2015-12/31/2017



C. Transplant Information

Table C15D. Pediatric (<18) 1-year patient survival (deceased donor graft recipients)
Simultaneous pancreas-kidney transplants performed between 07/01/2015 and 12/31/2017
Retransplants excluded

This center did not perform any
transplants relevant to
this table during
07/01/2015-12/31/2017

Figure C21D. Pediatric (<18)
1-year patient death HR estimate
(deceased donor grafts)

This center did not perform any
transplants relevant to
this figure during
07/01/2015-12/31/2017

Figure C22D. Pediatric (<18) 1-year patient death HR program
comparison (deceased donor grafts)

This center did not perform any
transplants relevant to
this figure during
07/01/2015-12/31/2017



C. Transplant Information

Table C16D. Pediatric (<18) 3-year patient survival (deceased donor graft recipients)
Simultaneous pancreas-kidney transplants performed between 01/01/2013 and 06/30/2015
Retransplants excluded

This center did not perform any
transplants relevant to
this table during
01/01/2013-06/30/2015

**Figure C23D. Pediatric (<18)
3-year patient death HR estimate
(deceased donor grafts)**

This center did not perform any
transplants relevant to
this figure during
01/01/2013-06/30/2015

**Figure C24D. Pediatric (<18) 3-year patient death HR program
comparison (deceased donor grafts)**

This center did not perform any
transplants relevant to
this figure during
01/01/2013-06/30/2015